IBM Db2 Web Query for i
New Features

Release 2.2.1

Contents

Contents

Db2 Web Query Version 2.2.1 - March 2022 - HF13

This documentation describes advisories, known issues, web browser support, and mobile support for the March 2022 - 2.2.1 HF13 release.

Note: The March 2022 HF13 release is a maintenance release only. No new features were introduced in this hotfix.

This document is intended for all levels of users, including application developers, administrators, and end users. It is also intended to serve as a quick reference for users upgrading from a prior version.

In this chapter:

❏ Advisories

❏ Known Issues

❏ Browser Information

Advisories

The following topic describes an advisory for Db2 Web Query.

Multiple Vulnerabilities affect IBM Db2 Web Query for i

IBM Db2 Web Query for i is vulnerable to denial of service in Apache Commons Compress (CVE-2021-36090), arbitrary code execution in Apache Log4j (CVE-2021-44832), and cross-site scripting in TIBCO WebFOCUS (CVE-2021-35493). Apache Commons Compress is used by Db2 Web Query for zipping and unzipping objects, such as import and export packages via Change Management or log files via the Administration Console. Apache Log4j is used by Db2 Web Query for i for generating logs and diagnostic traces in some of its components. TIBCO WebFOCUS is used as the underlying base product for Db2 Web Query for i. IBM has addressed the vulnerabilities in this hotfix by upgrading to Apache Commons Compress 1.21 and Apache Log4j 2.17.1, and by upgrading to remediated components of TIBCO WebFOCUS Release 8206. For more details, refer to the Security Bulletin at:

https://www.ibm.com/support/pages/node/6567195

Known Issues

The following topics describe known issues in Db2 Web Query.

Developer Workbench

This section addresses the known issues for Developer Workbench.

❏ When connecting to the Web Query Reporting Server from the Data Management Console (DMC), a Version Mismatch warning message occurs, as shown in the following image. You may press *Yes* to continue.
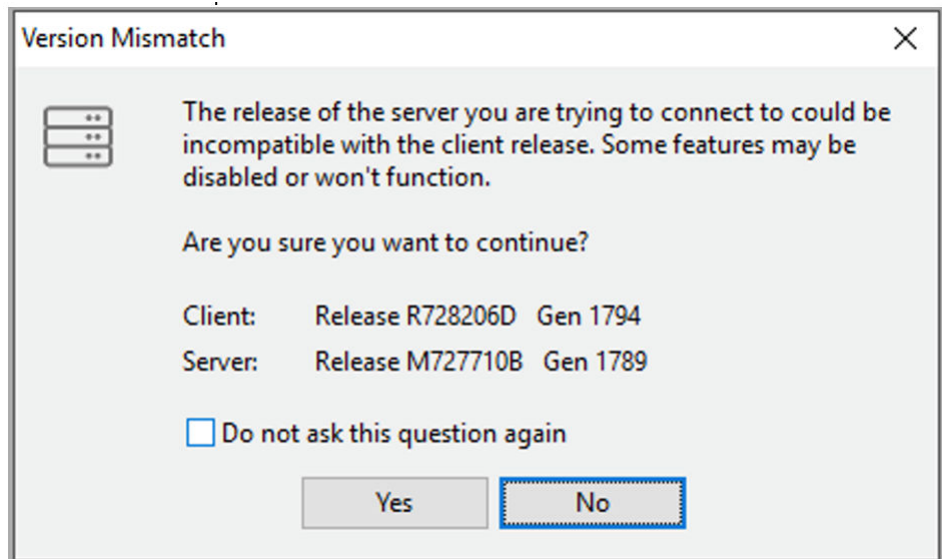
Note: If you receive a Version Mismatch warning and your Client Gen number is prior to 1794, then you should download and install the HF13 version of Developer Workbench.

❏ When using the SQL Report Wizard, the connection selection shows 'no connection', as shown in the following image.
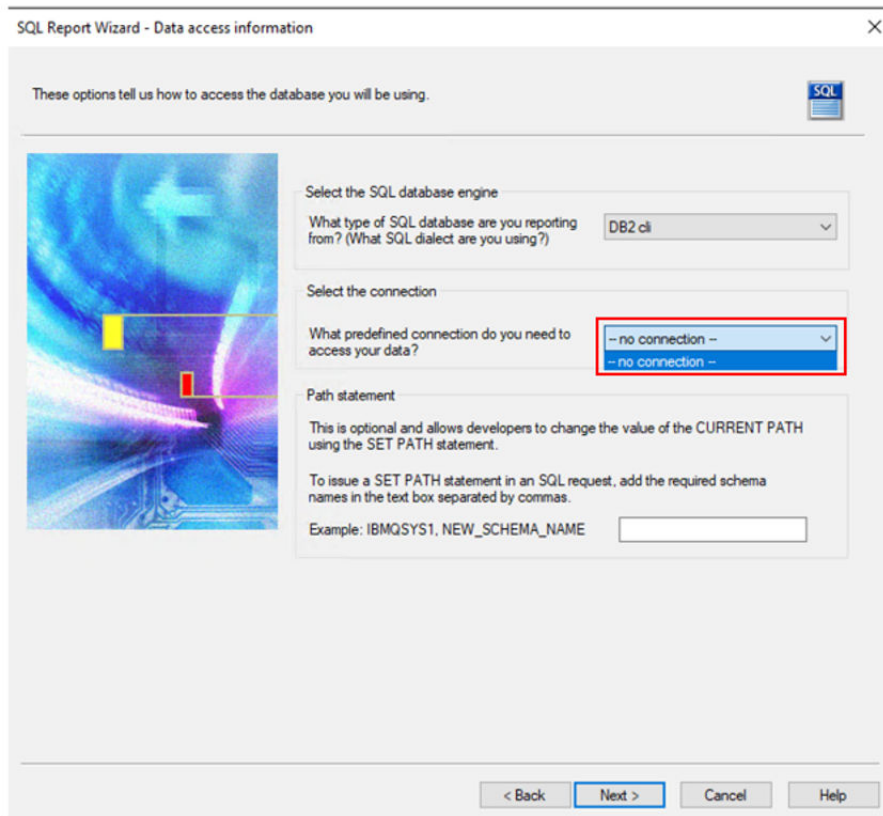
Note: To display or edit existing SQL reports, a workaround is for a Web Query administrator to text edit the report from the Web Query home page. To create a new SQL report, some workaround options are to instead create the report using EZ-Report or to duplicate an existing SQL report and text edit the SQL statement.

❑ When using Developer Workbench, you may receive a warning message when refreshing a synonym.If you receive a warning message, you need to refresh the synonym from the Web Query Reporting Server Console.

1. From the Console, right-click the synonym, select *Metadata Management*, and then select *Refresh*, as shown in the following image.

The Refresh synonym pane opens, as shown in the following image.

2. Select the DBMS catalog columns for your requirements from the list. This will override attributes from the existing synonym.

3. Click *Next*.

REST-Based Application Extension (WQRAX)

This section addresses the known issues for the REST-Based Application Extension (WQRAX).

❏ Certain types of reports, including visualizations which utilize some maps, will not render properly when invoked through WQRAX. This will be resolved in an upcoming PTF.

❏ You must edit HTML Composer dashboards that were created prior to Web Query 2.1.0 group PTF level 13 or 2.1.1 group PTF level 2 for compatibility with current fix levels. Otherwise, they will not run in WQRAX after applying this Hotfix.

Workaround: Either edit and save the HTML file in the Developer Workbench HTML canvas, which will make the changes automatically, or edit and save the HTML dashboard, using the following steps:

1. Sign in to Web Query using a Web Query Administrator user ID.

2. On the BI Portal resource tree, right-click the HTML dashboard file and select *Edit*.

    Note: if you do not see an Edit option, then the dashboard is already at a current version and these steps do not apply.

3. In the text editor, click *Search* and then *Find*.

4. Type */webquery/ibi_html* in the Find What: box.

5. Type *./ibi_html* in the Replace With: box.

6. Click the *Replace All* button.

7. Click the *Save* button on the toolbar.

8. Click *File* and then *Exit*.

Business Intelligence Portal

This section addresses the known issues for BI Portal.

Upload Data and Upload Wizard

❏ NLS characters are not supported in the following places when using the Upload Data and Upload Wizard:

❏ Excel Worksheet name.

❏ Folder name from where the Upload Wizard is being launched.

Workaround: Use invariant (A-Z and 0-9) characters. Support for NLS characters will be added in a future Hotfix.

❏ Run-Time Enablement (RTE) may cause the Upload Wizard to fail. This will happen if the user's current library (CURLIB) is not defined in the user's active RTE environment. The Upload Wizard writes out a temporary file during the upload process.

Workaround: It is recommended to add both QGPL and the user's CURLIB (if different from the default, QGPL) to the user's active RTE environment using the WRKWQRTE command.

Metadata Wizard

❏ The Adapters for Query/400, DB Heritage, and JD Edwards should not be used during the Import Metadata step as these are multi-step Create Synonym processes, which are not yet supported by the Metadata Wizard.

Workaround: Use the Metadata New option to create synonyms for these Adapter types.

InfoAssist

This section addresses the known issues for InfoAssist.

❏ The 2014 Demographic layers do not render on an ESRI map.

❏ At run time, a report will fail if empty filter values are entered for simple parameter prompts. To resolve the issue, the Web Query administrator can configure a setting to allow empty values, as follows.

1. In the Administration Console, on the *Configuration* tab, click *Custom Settings*.

2. To permit the use of empty fields in filter prompts, type the command:

```
IBIAP_allow_empty_field=YES
```

Type it under the final comment statement at the top of the Custom Settings text box or under the most recent custom setting entry, as shown in the following image.

3. To store the settings in an encrypted format, select the *Encrypt* check box.

4. When your configuration is complete, click *Save*.

5. When you receive a confirmation message, click *OK*.

6. When the Custom Setting page clears, click *Custom Settings* under the Application Settings folder to see your updated comments, settings, or commands in the Custom Settings text box.

7. If you later decide to prohibit the use of empty fields, change the command to:

   `IBIAP_allow_empty_field=NO`

   Alternatively, you can delete the following command from the Custom Settings page or convert it to a comment if you plan to reactivate this feature.

   `IBIAP_allow_empty_field=YES`

8. When your configuration is complete, click *Save*.

JD Edwards Adapters

This section addresses the known issue for the JD Edwards Adapters.

❏ To use the Alternate Language option in the Adapter for JD Edwards EnterpriseOne and the Adapter for JD Edwards World:

1. Configure the adapter with *UDC Direct File Access* unchecked.

2. Run the *Refresh Metadata* with *Alternate Language File* unchecked.

   This step will create the udcdicdb table.

3. Run the *Refresh Metadata* with *Alternate Language File* checked and enter the default language code.

   This step will create the altdicdb table.

4. Create all the synonyms needed.

Note: Steps 2 and 3 need to be run, as needed, whenever UDC descriptions are updated.

Report Broker

This section addresses the known issue for Report Broker.

❑ Migration of Public Distribution Lists will generate the following error:

```
ERROR IBFSService                      - setShares - opShareBasic/
opShareAdvanced to this resource denied - user:qwqadmin res:/WFC/
Repository/untitled/ReportBroker/~ownerID/distribution_list.adr
[2014-03-11 00:00:00,605] ERROR IBFSAddrBookConverter          -
Failed to share '/WFC/Repository/untitled/ReportBroker/~ownerID/
distribution_list.adr' with IBFS:/SSYS/GROUPS/EVERYONE
```

The distribution list will be migrated as a private object. To make this published:

1. Move the distribution list to a published folder.

2. Right-click on the distribution list and select the *Publish* option.

Spreadsheet Client

This section addresses the known issues for Spreadsheet Client.

❑ The data source is not correct when creating a report using metadata that is under the user's top-level folder. Spreadsheet Client only creates metadata in the baseapp folder.

❑ Populating a spreadsheet using a large Excel Add-in request (25 columns, 200K rows) does not return output.

National Language Support

This section addresses the known issues for National Language Support (NLS).

❑ When the Reporting Server runs in CCSID 285, HTML dashboards fail with JavaScript errors if running in a Firefox or Internet Explorer browser. This is caused by an encoding problem in the IBM Websphere Application Server plugin. To resolve the problem, apply the following PTF for your release level of product 5770DG1:

   ❑ 7.2: SI69444

   ❑ 7.3: SI69363

❑ Some of the Retail Sample reports will not run in NLS or DBCS languages. This issue will be resolved in an upcoming PTF.

DataMigrator/Data Management Console

Important: The renaming of Application Directories in the Data Management Console is not recommended as it may result in execution failures with the contents of the Application Directory.

Browser Information

The following topics describe information for the available web and mobile browsers for Web Query 2.2.1.

Web Browsers

The following browsers are certified for Web Query and Developer Workbench.

❏ Microsoft Edge™ 44

❏ Google Chrome™ 90

❏ Mozilla Firefox® 88

Release 2.2.1 Notes

❏ Simple HTML Web Query reports can be viewed on any browser.

❏ Chart/Graph request notes:

  ❏ *Browser-generated graphs* refer to graphs that are rendered inside the browser using HTML5 (and JavaScript). Browser-generated graphs are utilized in both standard HTML5 output ("FORMAT JSCHART"), and in Active Technologies ("FORMAT AHTML").

  ❏ *Server-generated graphs* refer to graph requests that are generated on the Reporting Server and then embedded as a bitmap or vector image in a document or webpage. This includes the following output formats:

    ❏ Bitmap: PNG, JPG

    ❏ Vector: PDF (but not active PDF), SVG

❏ Support for presenting images and graphs in HTML, DHTML, and DHTML compound reports is provided using an image embedding facility based on the client browser. Output generated by Internet Explorer browsers or in scenarios where the browser is unknown (such as when distributed by Report Broker) supports image inclusion through the creation of a web archive file (.mht). For all other browsers, images are base64 encoded within the generated .htm file.

❏ Drill-down links do not work when using an embedded PDF viewer available in some browser versions. Refer to the browser's configuration information on how to change the Application Options settings for the relevant content types so that the browser will automatically use Adobe Reader.

❏ Adobe Reader support:

❏ Acrobat Reader DC is certified

❏ Adobe XI is supported

❏ Adobe X is supported

Mobile Browser Information

If you are planning to use Web Query on mobile devices, note the following regarding mobile browser support. If you will be using Web Query on the Windows operating system, see the Web Browser support information.

Note: Browsers released after the production date of a Web Query version are subject to certification.

InfoAssist is not supported on mobile devices.

The following devices were used in testing Web Query 2.2.1:

❏ iOS 12

❏ Android 8.0, 7.1

❏ Db2 Web Query mobile app

Usage Considerations:

❏ Report Broker interfaces are supported on tablets.

❏ HTML reporting Table of Contents (BYTOC) feature is not supported.

❏ Viewing PDF, Excel, and PowerPoint documents may require a third-party helper app.

❏ To open active report content, JavaScript needs to be enabled in your web browser. On mobile devices, please use the Db2 Web Query mobile app. If not installed, download it from the App Store for iOS devices or from the Google Play Store for Android devices.

Chapter 2

Db2 Web Query Version 2.2.1 - January 2022 - HF12

This documentation describes advisories, known issues, web browser support, and mobile support for the January 2022 - 2.2.1 HF12 release.

Note: The January 2022 HF12 release is a maintenance release only. No new features were introduced in this hotfix.

This document is intended for all levels of users, including application developers, administrators, and end users. It is also intended to serve as a quick reference for users upgrading from a prior version.

In this chapter:

❏   Advisories

❏   Known Issues

❏   Browser Information

Advisories

The following topic describes an advisory for Db2 Web Query.

Vulnerability in Apache Log4j affects IBM Db2 Web Query for i

There is a vulnerability in Apache Log4j, as described by CVE-2021-45105. Apache Log4j is used by Db2 Web Query for i for generating logs and diagnostic traces in some of its components. This hotfix addresses the vulnerability. For more details, refer to the Security Bulletin at:

https://www.ibm.com/support/pages/node/6537454

Known Issues

The following topics describe known issues in Db2 Web Query.

Developer Workbench

This section addresses the known issue for Developer Workbench.

❏   When using Developer Workbench, you may receive a warning message when refreshing a synonym.

If you receive a warning message, you need to refresh the synonym from the Web Query Reporting Server Console.

1. From the Console, right-click the synonym, select *Metadata Management*, and then select *Refresh*, as shown in the following image.

The Refresh synonym pane opens, as shown in the following image.

2. Select the DBMS catalog columns for your requirements from the list. This will override attributes from the existing synonym.

3. Click *Next*.

REST-Based Application Extension (WQRAX)

This section addresses the known issues for the REST-Based Application Extension (WQRAX).

❏ Certain types of reports, including visualizations which utilize some maps, will not render properly when invoked through WQRAX. This will be resolved in an upcoming PTF.

❏ You must edit HTML Composer dashboards that were created prior to Web Query 2.1.0 group PTF level 13 or 2.1.1 group PTF level 2 for compatibility with current fix levels. Otherwise, they will not run in WQRAX after applying this Hotfix.

Workaround: Either edit and save the HTML file in the Developer Workbench HTML canvas, which will make the changes automatically, or edit and save the HTML dashboard, using the following steps:

1. Sign in to Web Query using a Web Query Administrator user ID.

2. On the BI Portal resource tree, right-click the HTML dashboard file and select *Edit*.

   Note: if you do not see an Edit option, then the dashboard is already at a current version and these steps do not apply.

3. In the text editor, click *Search* and then *Find*.

4. Type */webquery/ibi_html* in the Find What: box.

5. Type *./ibi_html* in the Replace With: box.

6. Click the *Replace All* button.

7. Click the *Save* button on the toolbar.

8. Click *File* and then *Exit*.

Business Intelligence Portal

This section addresses the known issues for BI Portal.

Upload Data and Upload Wizard

❏ NLS characters are not supported in the following places when using the Upload Data and Upload Wizard:

❏ Excel Worksheet name.

❏ Folder name from where the Upload Wizard is being launched.

Workaround: Use invariant (A-Z and 0-9) characters. Support for NLS characters will be added in a future Hotfix.

❏ Run-Time Enablement (RTE) may cause the Upload Wizard to fail. This will happen if the user's current library (CURLIB) is not defined in the user's active RTE environment. The Upload Wizard writes out a temporary file during the upload process.

Workaround: It is recommended to add both QGPL and the user's CURLIB (if different from the default, QGPL) to the user's active RTE environment using the WRKWQRTE command.

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❏ The Adapters for Query/400, DB Heritage, and JD Edwards should not be used during the Import Metadata step as these are multi-step Create Synonym processes, which are not yet supported by the Metadata Wizard.

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1. In the Administration Console, on the *Configuration* tab, click *Custom Settings*.

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Type it under the final comment statement at the top of the Custom Settings text box or under the most recent custom setting entry, as shown in the following image.

3. To store the settings in an encrypted format, select the *Encrypt* check box.

4. When your configuration is complete, click *Save*.

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6. When the Custom Setting page clears, click *Custom Settings* under the Application Settings folder to see your updated comments, settings, or commands in the Custom Settings text box.

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8. When your configuration is complete, click *Save*.

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❏ Some of the Retail Sample reports will not run in NLS or DBCS languages. This issue will be resolved in an upcoming PTF.

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❏ Drill-down links do not work when using an embedded PDF viewer available in some browser versions. Refer to the browser's configuration information on how to change the Application Options settings for the relevant content types so that the browser will automatically use Adobe Reader.

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❏ HTML reporting Table of Contents (BYTOC) feature is not supported.

❏ Viewing PDF, Excel, and PowerPoint documents may require a third-party helper app.

❏ To open active report content, JavaScript needs to be enabled in your web browser. On mobile devices, please use the Db2 Web Query mobile app. If not installed, download it from the App Store for iOS devices or from the Google Play Store for Android devices.

Chapter **3**

Db2 Web Query Version 2.2.1 - December 2021 - HF11

This documentation describes advisories, new features, known issues, web browser support, and mobile support for the December 2021 - 2.2.1 HF11 release.

This document is intended for all levels of users, including application developers, administrators, and end users. It is also intended to serve as a quick reference for users upgrading from a prior version.

In this chapter:

❏ Advisories

❏ Db2 Web Query for i Enhancements

❏ Known Issues

❏ Browser Information

Advisories

The following topic describes an advisory for Db2 Web Query.

Multiple Vulnerabilities in Apache Log4j affect IBM Db2 Web Query for i

There are multiple vulnerabilities in Apache Log4j, as described by CVE-2021-44228 and CVE-2021-45046. Apache Log4j is used by Db2 Web Query for i for generating logs and diagnostic traces in some of its components. This hotfix addresses these vulnerabilities. For more details, refer to the Security Bulletin at:

https://www.ibm.com/support/pages/node/6529238

Db2 Web Query for i Enhancements

The following are new feature enhancements that apply to Db2 Web Query for i.

Passing Values to a Drill-Down Report or Linked Report

The recent group PTF level for Release 2.2.1 allows you to pass one or more values from a source report to a parameter in a target report. This can be used when the source and target reports contain single-select or multi-select parameters and use drill downs or auto-linking. The values selected in the source report will be passed to the target report, so the target only displays information for the chosen values. Note that if the target report expects one value and multiple values are passed from the source report, no output will be returned from the target report.

Consider the following example. You have a stock report that shows the quantity in stock for each product type and a price report that shows each product type and the price of each model in every type. You want to select product types in the stock report and then drill down to see the price report information for only those product types. Below is a procedure for achieving this.

1. Create the price report that sums the price by product type and model, as shown in the following image.
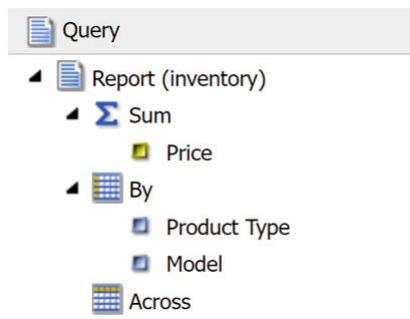
2. Create a dynamic, multi-select parameter filter on the product type column, as shown in the following image.
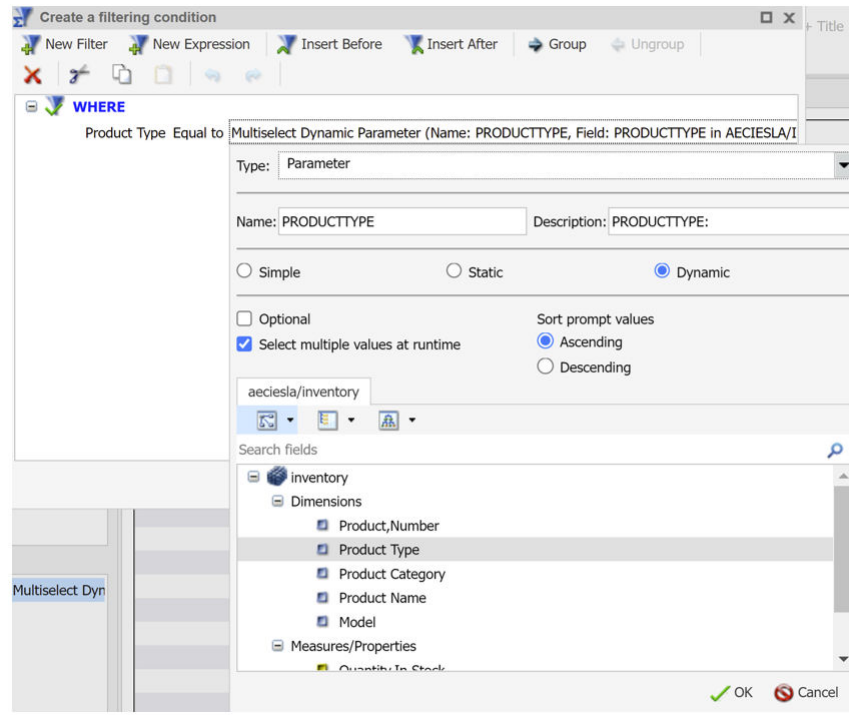
3. Save and close this report.

4. Create the stock report that the sums the quantity in stock for each product type, as shown in the following image.
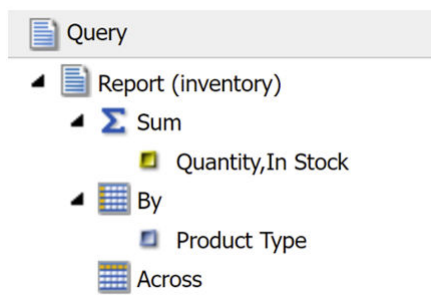
5. Create a dynamic, multi-select parameter filter on the product type column, as shown in the following image.
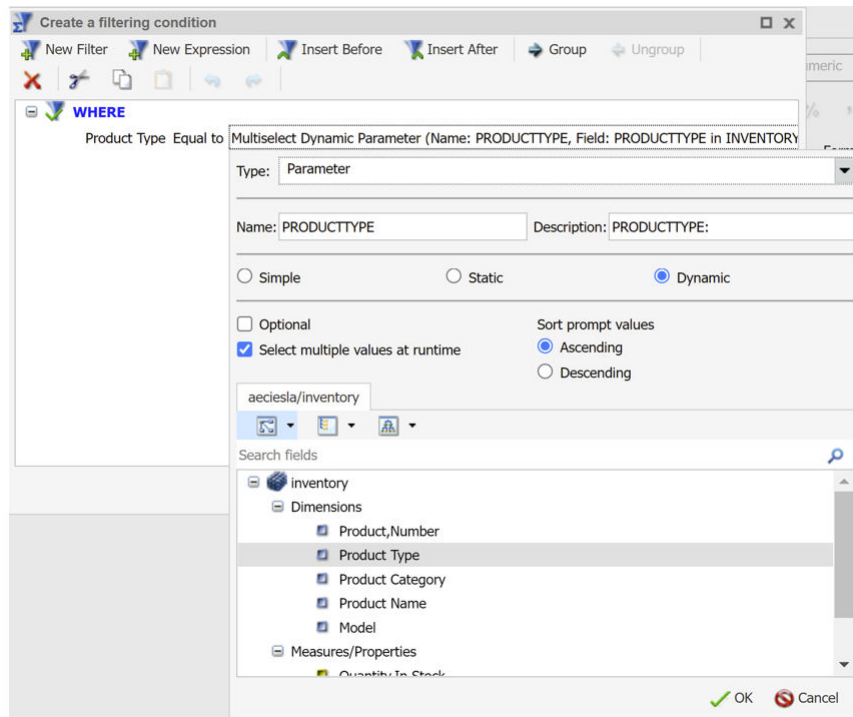
6. Create a drill down on the product type column and select the price report as the target. Under parameters, click the *Add Parameter* button and set Name to *PRODUCTTYPE*. To pass multiple values to the price report, set Type to *Constant* and type *&PRODUCTTYPE* in the Value field, as shown in the following image.

To pass one value to the price report, set Type to *Field* and Value to *Product Type*, as shown in the following image.

7. Click *OK* to save the drill-down settings.

8. Save and close this report.

Now, when you run the stock report, you will be prompted to select the product types you wish to view. Then, you see the option to drill down on product type. Click one of the product types. The price report runs and displays only the models and prices for the product types you selected.

When you run the price report by itself, you will be prompted to select the product types for which you wish to see model and price information.

Known Issues

The following topics describe known issues in Db2 Web Query.

Developer Workbench

This section addresses the known issues for Developer Workbench.

❏ When connecting to the Web Query Reporting Server from the Data Management Console (DMC), a Version Mismatch warning message occurs, as shown in the following image. You may press *Yes* to continue. The warning will be removed in a future hotfix.

❏ When using Developer Workbench, you may receive a warning message when refreshing a synonym.

If you receive a warning message, you need to refresh the synonym from the Web Query Reporting Server Console.

1. From the Console, right-click the synonym, select *Metadata Management*, and then select *Refresh*, as shown in the following image.

The Refresh synonym pane opens, as shown in the following image.

2. Select the DBMS catalog columns for your requirements from the list. This will override attributes from the existing synonym.

3. Click *Next*.

REST-Based Application Extension (WQRAX)

This section addresses the known issues for the REST-Based Application Extension (WQRAX).

❑ Certain types of reports, including visualizations which utilize some maps, will not render properly when invoked through WQRAX. This will be resolved in an upcoming PTF.

❑ You must edit HTML Composer dashboards that were created prior to Web Query 2.1.0 group PTF level 13 or 2.1.1 group PTF level 2 for compatibility with current fix levels. Otherwise, they will not run in WQRAX after applying this Hotfix.

Workaround: Either edit and save the HTML file in the Developer Workbench HTML canvas, which will make the changes automatically, or edit and save the HTML dashboard, using the following steps:

1. Sign in to Web Query using a Web Query Administrator user ID.

2. On the BI Portal resource tree, right-click the HTML dashboard file and select *Edit*.

Note: if you do not see an Edit option, then the dashboard is already at a current version and these steps do not apply.

3. In the text editor, click *Search* and then *Find*.

4. Type */webquery/ibi_html* in the Find What: box.

5. Type *./ibi_html* in the Replace With: box.

6. Click the *Replace All* button.

7. Click the *Save* button on the toolbar.

8. Click *File* and then *Exit*.

Business Intelligence Portal

This section addresses the known issues for BI Portal.

Upload Data and Upload Wizard

❏ NLS characters are not supported in the following places when using the Upload Data and Upload Wizard:

❏ Excel Worksheet name.

❏ Folder name from where the Upload Wizard is being launched.

Workaround: Use invariant (A-Z and 0-9) characters. Support for NLS characters will be added in a future Hotfix.

❏ Run-Time Enablement (RTE) may cause the Upload Wizard to fail. This will happen if the user's current library (CURLIB) is not defined in the user's active RTE environment. The Upload Wizard writes out a temporary file during the upload process.

Workaround: It is recommended to add both QGPL and the user's CURLIB (if different from the default, QGPL) to the user's active RTE environment using the WRKWQRTE command.

Metadata Wizard

❏ The Adapters for Query/400, DB Heritage, and JD Edwards should not be used during the Import Metadata step as these are multi-step Create Synonym processes, which are not yet supported by the Metadata Wizard.

Workaround: Use the Metadata New option to create synonyms for these Adapter types.

InfoAssist

This section addresses the known issues for InfoAssist.

❏ The 2014 Demographic layers do not render on an ESRI map.

❑ At run time, a report will fail if empty filter values are entered for simple parameter prompts. To resolve the issue, the Web Query administrator can configure a setting to allow empty values, as follows.

1. In the Administration Console, on the *Configuration* tab, click *Custom Settings*.

2. To permit the use of empty fields in filter prompts, type the command:

   `IBIAP_allow_empty_field=YES`

   Type it under the final comment statement at the top of the Custom Settings text box or under the most recent custom setting entry, as shown in the following image.

3. To store the settings in an encrypted format, select the *Encrypt* check box.

4. When your configuration is complete, click *Save*.

5. When you receive a confirmation message, click *OK*.

6. When the Custom Setting page clears, click *Custom Settings* under the Application Settings folder to see your updated comments, settings, or commands in the Custom Settings text box.

7. If you later decide to prohibit the use of empty fields, change the command to:

   `IBIAP_allow_empty_field=NO`

   Alternatively, you can delete the following command from the Custom Settings page or convert it to a comment if you plan to reactivate this feature.

   `IBIAP_allow_empty_field=YES`

8. When your configuration is complete, click *Save*.

JD Edwards Adapters

This section addresses the known issue for the JD Edwards Adapters.

❏ To use the Alternate Language option in the Adapter for JD Edwards EnterpriseOne and the Adapter for JD Edwards World:

1. Configure the adapter with *UDC Direct File Access* unchecked.

2. Run the *Refresh Metadata* with *Alternate Language File* unchecked.

    This step will create the udcdicdb table.

3. Run the *Refresh Metadata* with *Alternate Language File* checked and enter the default language code.

    This step will create the altdicdb table.

4. Create all the synonyms needed.

Note: Steps 2 and 3 need to be run, as needed, whenever UDC descriptions are updated.

Report Broker

This section addresses the known issue for Report Broker.

❏ Migration of Public Distribution Lists will generate the following error:

```
ERROR IBFSService                      - setShares - opShareBasic/
opShareAdvanced to this resource denied - user:qwqadmin res:/WFC/
Repository/untitled/ReportBroker/~ownerID/distribution_list.adr
[2014-03-11 00:00:00,605] ERROR IBFSAddrBookConverter        -
Failed to share '/WFC/Repository/untitled/ReportBroker/~ownerID/
distribution_list.adr' with IBFS:/SSYS/GROUPS/EVERYONE
```

The distribution list will be migrated as a private object. To make this published:

1. Move the distribution list to a published folder.

2. Right-click on the distribution list and select the *Publish* option.

Spreadsheet Client

This section addresses the known issues for Spreadsheet Client.

❏ The data source is not correct when creating a report using metadata that is under the user's top-level folder. Spreadsheet Client only creates metadata in the baseapp folder.

❏ Populating a spreadsheet using a large Excel Add-in request (25 columns, 200K rows) does not return output.

National Language Support

This section addresses the known issues for National Language Support (NLS).

❏ When the Reporting Server runs in CCSID 285, HTML dashboards fail with JavaScript errors if running in a Firefox or Internet Explorer browser. This is caused by an encoding problem in the IBM Websphere Application Server plugin. To resolve the problem, apply the following PTF for your release level of product 5770DG1:

  ❏ 7.2: SI69444

  ❏ 7.3: SI69363

❏ Some of the Retail Sample reports will not run in NLS or DBCS languages. This issue will be resolved in an upcoming PTF.

DataMigrator/Data Management Console

Important: The renaming of Application Directories in the Data Management Console is not recommended as it may result in execution failures with the contents of the Application Directory.

Browser Information

The following topics describe information for the available web and mobile browsers for Web Query 2.2.1.

Web Browsers

The following browsers are certified for Web Query and Developer Workbench.

❏ Microsoft Edge™ 44

❏ Google Chrome™ 90

❏ Mozilla Firefox® 88

Release 2.2.1 Notes

❏ Simple HTML Web Query reports can be viewed on any browser.

❏ Chart/Graph request notes:

  ❏ *Browser-generated graphs* refer to graphs that are rendered inside the browser using HTML5 (and JavaScript). Browser-generated graphs are utilized in both standard HTML5 output ("FORMAT JSCHART"), and in Active Technologies ("FORMAT AHTML").

❏ *Server-generated graphs* refer to graph requests that are generated on the Reporting Server and then embedded as a bitmap or vector image in a document or webpage. This includes the following output formats:

❏ Bitmap: PNG, JPG

❏ Vector: PDF (but not active PDF), SVG

❏ Support for presenting images and graphs in HTML, DHTML, and DHTML compound reports is provided using an image embedding facility based on the client browser. Output generated by Internet Explorer browsers or in scenarios where the browser is unknown (such as when distributed by Report Broker) supports image inclusion through the creation of a web archive file (.mht). For all other browsers, images are base64 encoded within the generated .htm file.

❏ Drill-down links do not work when using an embedded PDF viewer available in some browser versions. Refer to the browser's configuration information on how to change the Application Options settings for the relevant content types so that the browser will automatically use Adobe Reader.

❏ Adobe Reader support:

❏ Acrobat Reader DC is certified

❏ Adobe XI is supported

❏ Adobe X is supported

Mobile Browser Information

If you are planning to use Web Query on mobile devices, note the following regarding mobile browser support. If you will be using Web Query on the Windows operating system, see the Web Browser support information.

Note: Browsers released after the production date of a Web Query version are subject to certification.

InfoAssist is not supported on mobile devices.

The following devices were used in testing Web Query 2.2.1:

❏ iOS 12

❏ Android 8.0, 7.1

❏ Db2 Web Query mobile app

Usage Considerations:

❏ Report Broker interfaces are supported on tablets.

❏ HTML reporting Table of Contents (BYTOC) feature is not supported.

❏ Viewing PDF, Excel, and PowerPoint documents may require a third-party helper app.

❏ To open active report content, JavaScript needs to be enabled in your web browser. On mobile devices, please use the Db2 Web Query mobile app. If not installed, download it from the App Store for iOS devices or from the Google Play Store for Android devices.

Db2 Web Query Version 2.2.1 - May 2021 - HF10

This documentation describes new features, known issues, web browser support, and mobile support for the May 2021 - 2.2.1 HF10 release.

This document is intended for all levels of users, including application developers, administrators, and end users. It is also intended to serve as a quick reference for users upgrading from a prior version.

In this chapter:

❏ Db2 Web Query for i Enhancements

❏ Changes in Behavior

❏ Known Issues

❏ Browser Information

Db2 Web Query for i Enhancements

The following are new feature enhancements that apply to Db2 Web Query for i.

EZ-Report

EZ-Report is a utility located in the *IBM Db2 Web Query Information* folder. As the name implies, EZ-Report allows for simple, fast creation of a report. Once you specify an SQL statement or a file/table, and the name and location for the report, the report and underlying metadata are created automatically.

The IBM Db2 Web Query Information folder is available to Web Query administrators. The following image shows the location of the utility in the repository tree.
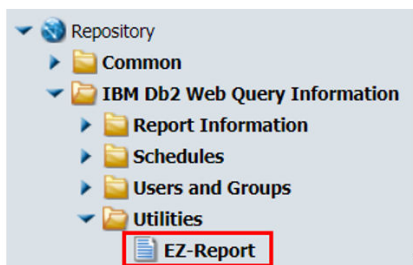
EZ-Report provides a jump-start when getting started with the Web Query product or working a proof of concept evaluation. It removes the complexity of first having to create the metadata, by automatically generating metadata for the SQL statement. It quickly gives you a report using your own data.

You can easily customize the report. For example, you can add subtotals, create additional filters, add traffic lighting, or add drill downs. You can imbed the report into documents or executive dashboards. You can reuse the metadata for other reports or share it in the server path of other application folders.

Early versions of EZ-Report, which were available for release 2.2.1 with group PTF level 8 or 9, required the user to register a licensed user ID for creating and publishing the report in the Web Query repository. EZ-Report now includes a Validation List parameter for providing the credentials.

For more information on EZ-Report, refer to the Documentation link on the Web Query wiki at:

http://ibm.biz/db2wqwiki.

CRTWQSYN Support for Special Characters

The Create Web Query Synonym command (CRTWQSYN) is enhanced to support the following table of special characters. Similar to creating synonyms from the Web Query metadata editor, if a special character exists in a Db2 file name, it will be converted to an underscore in the synonym.

Character	Description	Character	Description
-	dash	%	percent
	space	|	vertical bar
\	backslash	&	ampersand
/	forward slash	(	open parenthesis
,	comma	)	closed parenthesis
$	dollar sign	<	less than
.	period	>	greater than
;	semicolon	=	equal
+	plus	*	asterisk

Field Names in the ALIAS Attribute

When using Business Views (BV), you can use the SET EXTASNAMES command to include either the fully qualified BV field name or the real field name in the ALIAS attribute in a HOLD Master File.

The syntax is:

```
SET EXTASNAMES={FULL|NAME}
```

where:

FULL

Includes the fully qualified BV field name in the ALIAS attribute in a HOLD Master File. FULL is the default value.

NAME

Enables the previous behavior, which includes the real field name in the ALIAS attribute in a HOLD Master File.

If you create a HOLD Master File using the SET EXTASNAME=FULL command, you will see fully qualified BV field names for the ALIAS attributes, as shown in the following Master File.

```
FILENAME=HOLD, SUFFIX=DB2, $
SEGMENT=SEG01, SEGTYPE=S0, $
FIELDNAME=DC#, ALIAS=BTGDTA010_DC41QUO00.BTGDTA010_DC41QUO00.ACOD41,
USAGE=A5, ACTUAL=A5, $
FIELDNAME=STORE, ALIAS=BTGDTA010_DC41QUO00.BTGDTA010_DC41QUO00.STOR41,
USAGE=A3, ACTUAL=A3, $
FIELDNAME=HOMESTORE, ALIAS=J003_BTGWEBQRY_VW02PAY00.STORE, USAGE=A3,
ACTUAL=A3, $
.
.
.
```

If you create a HOLD Master File using the SET EXTASNAME=NAME command, you will see real field names for the ALIAS attributes, as shown in the following sample Master File.

```
FILENAME=HOLD, SUFFIX=DB2, $
SEGMENT=SEG01, SEGTYPE=S0, $
FIELDNAME=DC#, ALIAS=ACOD41, USAGE=A5, ACTUAL=A5, $
FIELDNAME=STORE, ALIAS=STOR41, USAGE=A3, ACTUAL=A3, $
FIELDNAME=HOMESTORE, ALIAS=STORE, USAGE=A3, ACTUAL=A3, $
FIELDNAME=ORDE41, ALIAS=ORDE41, USAGE=A8, ACTUAL=A8, $
.
.
.
```

Note: A Web Query administrator can change the EXTASNAME setting from the Reporting Server Console. The setting will apply to the Web Query installation, as opposed to one user or one report. To change the setting:

1. Expand *Reporting Servers* in the Repository Tree.

2. Right-click *EDASERVE* and select *Reporting Server Console*, as shown in the following image.

3. Select the *Workspace* icon, as shown in the following image.
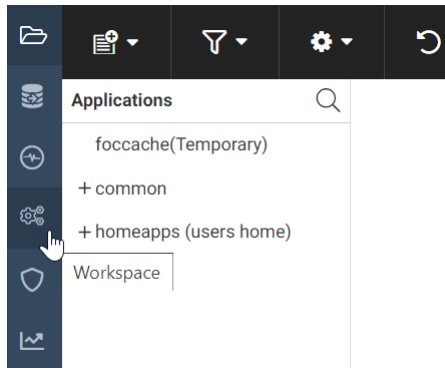
4. Expand *Configuration Files*, right-click *Server Profile - edasprof.prf*, and click *Edit*, as shown in the following image.
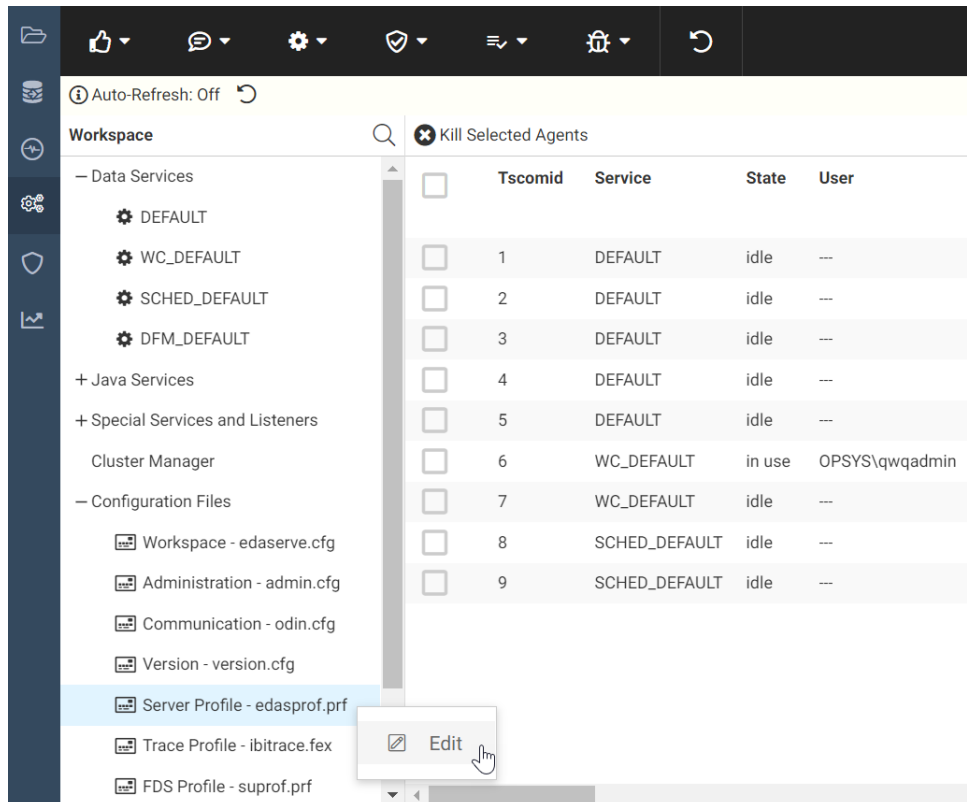
5. Add the SET EXTASNAMES command to the edasprof file. You can place the SET command anywhere in the file, but if you want the setting to be in effect for a procedure you are running, in this case QU2PROF, place the SET command before the EX QU2PROF line, as shown in the following code.

```
-*********************************************************
-* Profile generated on 23 April 2021 at 00:18:56
-*********************************************************
-*
APP PATH IBISAMP
-*
ENGINE DB2 SET CONNECTION_ATTRIBUTES *LOCAL/,
-* Special Settings
ENGINE INT SET DECOMPOSE-DATE ON
ENGINE INT SET ETL-TRG-DBMS DB2/*LOCAL
ENGINE DIREXCEL SET EXCEL-SHEET SINGLE
SET EXTASNAMES=FULL
EX QU2PROF
-*
```

Important: Changing the default value, FULL, will create issues if you have created metadata and reports on a Web Query release 2.2.1 group PTF level 7 or higher. If you change the default value, you will need to re-create any metadata and any reports that were created after the upgrade to Web Query 2.2.1 HF7 or higher.

Creating Language Resource Files

Before you can configure the Db2 Web Query interface to create reports using data in a language which is not, by default, included in the Dynamic Language Switch function (for example, Greek or Thai), you must execute the Language Resource Files utility. The Language Resource Files utility creates the necessary resource files.

The below example describes how to create Greek resource files and configure your environment.

Before proceeding to step 1, check the following system values:

❏ QCCSID must be 875

❏ QLOCALE must be /QSYS.LIB/EL_GR.LOCALE

Step 1. Run the CreateLangResAS4.sh Utility

Note: Make sure the Web server and Application server for that environment have been stopped before proceeding with the following steps.

1. From QSHell, set the JAVA_HOME parameter as follows:

```
export -s JAVA_HOME=/QOpenSys/QIBM/ProdData/JavaVM/jdk80/32bit
```

2. From QSH, navigate to the following directory and run CreateLangResAS4.sh:

   `/QIBM/prodData/qwebqry/base80/utilities/lang`

3. For the Db2 WebQuery language code prompt, type *EL*.

4. For the Java language code prompt, type *el*, as shown in the following image.

5. For the Db2 Web Query installation path, type */QIBM/ProdData/QWEBQRY/base80*.

6. Type *C* to continue.

7. Press Enter to finish.

   You will receive a message that EL resources have been created successfully, as shown in the following image.

8. Restart the Web server and Application server.

Step 2. Enable Greek in the Web Query Administration Console

1. Login to DB2 Web Query, using the QWQADMIN user ID. For example:

   http://mysystem.abc.acme.com:12331/webquery

2. Open the Administration Console, as shown in the following image.
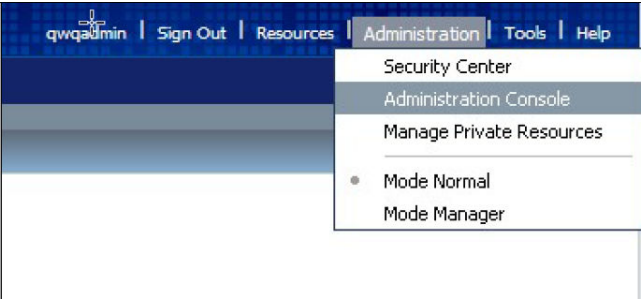
3. Under the Configuration section, select *Dynamic Language Switch*, and then select *Greek*, as shown in the following image.
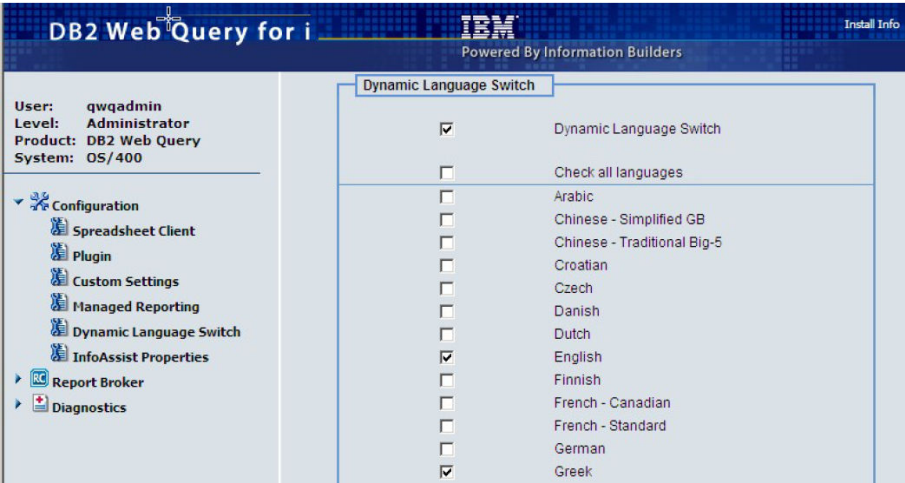
4. Click *Save*.

Step 3. Perform the NLS Configuration Step

Run the Web Query NLS Configuration command (WQSETNLS) to set the server code page and language:

WQSETNLS VALUE(875)

Step 4. Restart Db2 Web Query and Sign On

Sign on to DB2 Web Query, using the Greek option, as shown in the following image.

Web Query Single Sign On

The trust_verify setting controls the behavior of the single sign on for Web Query when a user's IBM i password is expired. The setting controls whether the server should allow the user's SSO connection or fail it with an authorization error.

The default value is trust_verify=y, which will fail the Web Query login if the user's password is expired. If the setting is changed from the default trust_verify=y to trust_verify=n, the setting will be included in the edaserve.cfg file. The default behavior is unchanged when upgrading to group PTF level 10 from a prior release or fix level of Web Query.

A Web Query administrator can set the trust_verify setting from the Access Control tab on the Db2 Web Query Server Console, as shown in the following image.
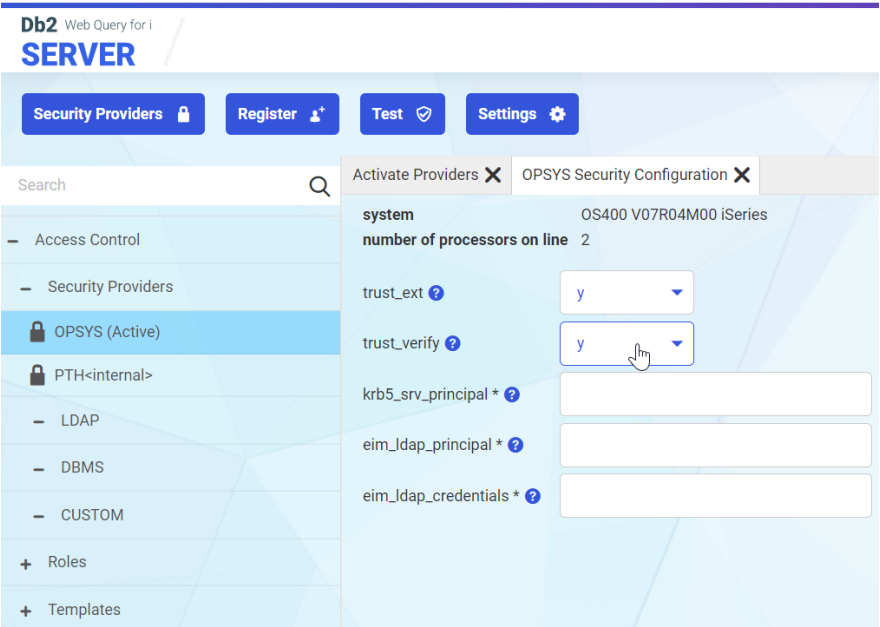
Changes in Behavior

The following topics describe changes in behavior for Db2 Web Query 2.2.1 Hotfix 10.

RUNWQFEX Validation Lists

A security enhancement to Web Query validation lists requires that existing validation lists specified on the Run Web Query Fex (RUNWQFEX) command be recreated for release 2.2.1. To recreate a validation list, use the Create Web Query Password (CRTWQPWD) command. If the validation list is not recreated, the RUNWQFEX command will fail with message QWQ0633.

WQRAX Properties

When changing a user name or password for WQRAX authentication, an administrator must now go to:

`http://<server>:12331/wqrax/config`

Known Issues

The following topics describe known issues that will be addressed in a future version of Db2 Web Query.

Developer Workbench

This section addresses the known issue for Developer Workbench.

❑ When using Developer Workbench, you may receive a warning message when refreshing a synonym.

If you receive a warning message, you need to refresh the synonym from the Web Query Reporting Server Console.

1. From the Console, right-click the synonym, select *Metadata Management*, and then select *Refresh*, as shown in the following image.

The Refresh synonym pane opens, as shown in the following image.

2. Select the DBMS catalog columns for your requirements from the list. This will override attributes from the existing synonym.

3. Click *Next*.

REST-Based Application Extension (WQRAX)

This section addresses the known issues for the REST-Based Application Extension (WQRAX).

❏ Certain types of reports, including visualizations which utilize some maps, will not render properly when invoked through WQRAX. This will be resolved in an upcoming PTF.

❏ You must edit HTML Composer dashboards that were created prior to Web Query 2.1.0 group PTF level 13 or 2.1.1 group PTF level 2 for compatibility with current fix levels. Otherwise, they will not run in WQRAX after applying this Hotfix.

Workaround: Either edit and save the HTML file in the Developer Workbench HTML canvas, which will make the changes automatically, or edit and save the HTML dashboard, using the following steps:

1. Sign in to Web Query using a Web Query Administrator user ID.

2. On the BI Portal resource tree, right-click the HTML dashboard file and select *Edit*.

Note: if you do not see an Edit option, then the dashboard is already at a current version and these steps do not apply.

3. In the text editor, click *Search* and then *Find*.

4. Type */webquery/ibi_html* in the Find What: box.

5. Type *./ibi_html* in the Replace With: box.

6. Click the *Replace All* button.

7. Click the *Save* button on the toolbar.

8. Click *File* and then *Exit*.

Business Intelligence Portal

This section addresses the known issues for BI Portal.

Upload Data and Upload Wizard

❏ NLS characters are not supported in the following places when using the Upload Data and Upload Wizard:

  ❏ Excel Worksheet name.

  ❏ Folder name from where the Upload Wizard is being launched.

  Workaround: Use invariant (A-Z and 0-9) characters. Support for NLS characters will be added in a future Hotfix.

❏ Run-Time Enablement (RTE) may cause the Upload Wizard to fail. This will happen if the user's current library (CURLIB) is not defined in the user's active RTE environment. The Upload Wizard writes out a temporary file during the upload process.

  Workaround: It is recommended to add both QGPL and the user's CURLIB (if different from the default, QGPL) to the user's active RTE environment using the WRKWQRTE command.

Metadata Wizard

❏ The Adapters for Query/400, DB Heritage, and JD Edwards should not be used during the Import Metadata step as these are multi-step Create Synonym processes, which are not yet supported by the Metadata Wizard.

  Workaround: Use the Metadata New option to create synonyms for these Adapter types.

InfoAssist

This section addresses the known issues for InfoAssist.

❏ The 2014 Demographic layers do not render on an ESRI map.

❏ At run time, a report will fail if empty filter values are entered for simple parameter prompts. To resolve the issue, the Web Query administrator can configure a setting to allow empty values, as follows.

1. In the Administration Console, on the *Configuration* tab, click *Custom Settings*.

2. To permit the use of empty fields in filter prompts, type the command:

   `IBIAP_allow_empty_field=YES`

   Type it under the final comment statement at the top of the Custom Settings text box or under the most recent custom setting entry, as shown in the following image.

3. To store the settings in an encrypted format, select the *Encrypt* check box.

4. When your configuration is complete, click *Save*.

5. When you receive a confirmation message, click *OK*.

6. When the Custom Setting page clears, click *Custom Settings* under the Application Settings folder to see your updated comments, settings, or commands in the Custom Settings text box.

7. If you later decide to prohibit the use of empty fields, change the command to:

   `IBIAP_allow_empty_field=NO`

   Alternatively, you can delete the following command from the Custom Settings page or convert it to a comment if you plan to reactivate this feature.

   `IBIAP_allow_empty_field=YES`

8. When your configuration is complete, click *Save*.

JD Edwards Adapters

This section addresses the known issue for the JD Edwards Adapters.

❏ To use the Alternate Language option in the Adapter for JD Edwards EnterpriseOne and the Adapter for JD Edwards World:

1. Configure the adapter with *UDC Direct File Access* unchecked.

2. Run the *Refresh Metadata* with *Alternate Language File* unchecked.

   This step will create the udcdicdb table.

3. Run the *Refresh Metadata* with *Alternate Language File* checked and enter the default language code.

   This step will create the altdicdb table.

4. Create all the synonyms needed.

Note: Steps 2 and 3 need to be run, as needed, whenever UDC descriptions are updated.

Report Broker

This section addresses the known issue for Report Broker.

❏ Migration of Public Distribution Lists will generate the following error:

```
ERROR IBFSService                        - setShares - opShareBasic/
opShareAdvanced to this resource denied - user:qwqadmin res:/WFC/
Repository/untitled/ReportBroker/~ownerID/distribution_list.adr
[2014-03-11 00:00:00,605] ERROR IBFSAddrBookConverter         -
Failed to share '/WFC/Repository/untitled/ReportBroker/~ownerID/
distribution_list.adr' with IBFS:/SSYS/GROUPS/EVERYONE
```

The distribution list will be migrated as a private object. To make this published:

1. Move the distribution list to a published folder.

2. Right-click on the distribution list and select the *Publish* option.

Spreadsheet Client

This section addresses the known issues for Spreadsheet Client.

❏ The data source is not correct when creating a report using metadata that is under the user's top-level folder. Spreadsheet Client only creates metadata in the baseapp folder.

❏ Populating a spreadsheet using a large Excel Add-in request (25 columns, 200K rows) does not return output.

National Language Support

This section addresses the known issues for National Language Support (NLS).

❏ When the Reporting Server runs in CCSID 285, HTML dashboards fail with JavaScript errors if running in a Firefox or Internet Explorer browser. This is caused by an encoding problem in the IBM Websphere Application Server plugin. To resolve the problem, apply the following PTF for your release level of product 5770DG1:

   ❏ 7.2: SI69444

   ❏ 7.3: SI69363

❏ Some of the Retail Sample reports will not run in NLS or DBCS languages. This issue will be resolved in an upcoming PTF.

DataMigrator/Data Management Console

Important: The renaming of Application Directories in the Data Management Console is not recommended as it may result in execution failures with the contents of the Application Directory.

Advisories

The following topics describe advisories for Db2 Web Query.

Microsoft® Internet Explorer® End-of-Life and Db2 Web Query Notice

Effective April 1, 2021, all new releases of Db2 Web Query and Developer Workbench will no longer support Internet Explorer 11 as a certified browser.

You can continue to utilize Internet Explorer with Db2 Web Query and Developer Workbench, but features are not guaranteed to work correctly. New features released in future releases are supported and available only on modern browsers, including Mozilla Firefox, Microsoft Edge, and Google Chrome.

For more information about the lifecycle of Internet Explorer 11 from Microsoft, see the following statements:

Lifecycle policy for Internet Explorer

Microsoft 365 apps say farewell to Internet Explorer 11

Esri Mapping Demographic Layers 2010-2014 Retirement Statement

The Esri® Mapping Demographic Layers for years 2010, 2011, 2012, 2013, and 2014, which can be used with Web Query, will no longer be supported as a result of their *retirement by Esri*. In a future release or hotfix, you will no longer be able to configure these layers. If you have charts created in Web Query 2.2.1 InfoAssist that reference these layers, you must manually edit them to remove the reference, otherwise these layers may not render.

The following Demographic Layers have been retired by Esri and may not be available in Web Query:

❏ USA Health Care Spending 2014

❏ USA Population Change 2000-2010

❏ USA Population Change 2010-2012

❏ USA Population Density 2012

❏ USA Population Density 2013

❏ USA Population Density 2014

❏ USA Population Older than Age 64

❏ USA Population Younger than Age 18

❏ USA Projected Population Growth 2012-2017

❏ USA Restaurant Spending 2014

❏ USA Tapestry Segmentation 2012

❏ USA Tapestry Segmentation 2014

❏ USA Unemployment Rate 2012

To learn more about the retirement of layers from Esri, visit *http://doc.arcgis.com/en/esri-demographics/reference/legacy-demographic-maps.htm*.

Browser Information

The following topics describe information for the available web and mobile browsers for Web Query 2.2.1.

Web Browsers

The following browsers are certified for Web Query and Developer Workbench.

❏ Microsoft Edge™ 44

❏ Google Chrome™ 88

❏ Mozilla Firefox® 85

Release 2.2.1 Notes

❏ Simple HTML Web Query reports can be viewed on any browser.

❏ Chart/Graph request notes:

 ❏ *Browser-generated graphs* refer to graphs that are rendered inside the browser using HTML5 (and JavaScript). Browser-generated graphs are utilized in both standard HTML5 output ("FORMAT JSCHART"), and in Active Technologies ("FORMAT AHTML").

 ❏ *Server-generated graphs* refer to graph requests that are generated on the Reporting Server and then embedded as a bitmap or vector image in a document or webpage. This includes the following output formats:

  ❏ Bitmap: PNG, JPG

  ❏ Vector: PDF (but not active PDF), SVG

❏ Support for presenting images and graphs in HTML, DHTML, and DHTML compound reports is provided using an image embedding facility based on the client browser. Output generated by Internet Explorer browsers or in scenarios where the browser is unknown (such as when distributed by Report Broker) supports image inclusion through the creation of a web archive file (.mht). For all other browsers, images are base64 encoded within the generated .htm file.

❏ Drill-down links do not work when using an embedded PDF viewer available in some browser versions. Refer to the browser's configuration information on how to change the Application Options settings for the relevant content types so that the browser will automatically use Adobe Reader.

❏ Adobe Reader support:

 ❏ Acrobat Reader DC is certified

 ❏ Adobe XI is supported

❏   Adobe X is supported

Mobile Browser Information

If you are planning to use Web Query on mobile devices, note the following regarding mobile browser support. If you will be using Web Query on the Windows operating system, see the Web Browser support information.

Note: Browsers released after the production date of a Web Query version are subject to certification.

InfoAssist is not supported on mobile devices.

The following devices were used in testing Web Query 2.2.1:

❏   iOS 12

❏   Android 8.0, 7.1

❏   Db2 Web Query mobile app

Usage Considerations:

❏   Report Broker interfaces are supported on tablets.

❏   HTML reporting Table of Contents (BYTOC) feature is not supported.

❏   Viewing PDF, Excel, and PowerPoint documents may require a third-party helper app.

❏   To open active report content, JavaScript needs to be enabled in your web browser. On mobile devices, please use the Db2 Web Query mobile app. If not installed, download it from the App Store for iOS devices or from the Google Play Store for Android devices.

Db2 Web Query Version 2.2.1 - June 2020 - HF9

This documentation describes new features, known issues, web browser support, and mobile support for the June 2020 - 2.2.1 Hotfix 9 release.

This document is intended for all levels of users, including application developers, administrators, and end users. It is also intended to serve as a quick reference for users upgrading from a prior version.

In this chapter:

Db2 Web Query for i Enhancements

The following are new feature enhancements that apply to Db2 Web Query for i.

Scheduler Edition and Runtime User Edition

Two new editions are introduced into the Web Query product suite. They provide cost-effective options for customers needing a step-up in capabilities between the entry level Express Edition and the full function Standard Edition. The new editions are described as:

❏ **Scheduler Edition (feature 5109)**

This edition includes all the function of Express Edition, in addition to support for scheduling and distribution of reports. There are two ways you can schedule reports. From the BI Portal, you can use the GUI interface to schedule reports to run immediately on a scheduled time (every day, once a week, and so on.). Scheduled reports can be distributed through email or FTP servers, to printers, or to the Web Query repository. You have the option to distribute the report to a single address or to a group of recipients using a distribution list, distribution file, or dynamic list options.

Reports can be distributed in whole or can be intelligently burst by a key field, ensuring only relevant sections are sent to recipients. Reports can be delivered in several output formats, such as PDF, spreadsheets, or other PC file formats. The second mechanism to schedule and distribute reports is through a CL Command provided in Scheduler Edition (also included in Standard Edition). The CL Command method can be run from your IBM i job scheduler and features a bit more flexibility in naming the output file and pushing to a network drive, in addition to email and FTP

You can upgrade from Express Edition into Scheduler Edition, and upgrade from Scheduler Edition into Standard Edition. Scheduler Edition is mutually exclusive with Runtime Edition. If you need both functions, you should upgrade into Standard Edition.

❏ **Runtime User Edition (feature 5110)**

This edition includes all the function of Express Edition, in addition to support for Runtime Group Users. Runtime group licenses (two licenses come with each core of Runtime User Edition and you can add more, if desired) are based on IBM i group profiles. You can have thousands of users in an IBM i group profile, then attach it to a Runtime Group license. By doing so, every user in that group can run reports concurrently under that single license.

You can upgrade from Express Edition into Runtime User Edition, and upgrade from Runtime User Edition into Standard Edition. Runtime User Edition is mutually exclusive with Scheduler Edition. If you need both functions, you should upgrade into Standard Edition.

If you install the Scheduler Edition or Runtime User Edition, it is recommended that you request a Web Query EZ-install package from *qu2@us.ibm*. You can also contact qu2 for questions regarding ordering or licensing of the new editions.

All Web Query editions have a free 70-day trial.

Synonym Fields and Text Search Utilities

Two new utilities are provided in the IBM Db2 Web Query Information folder. Available to Web Query administrators, they provide an easy way to find fields in synonyms and to find text strings in Web Query objects. The utilities are conveniently front-ended as reports. They are located under the Utilities subfolder, under the IBM Db2 Web Query Information top-level folder, as shown in the following image.
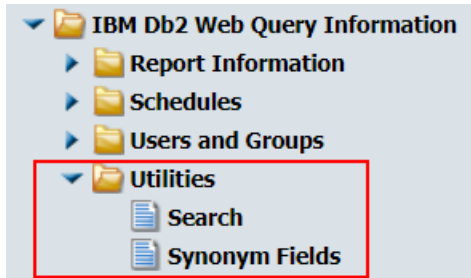
The Search utility allows administrators to search both synonyms and Web Query repository objects for a text string. Some example uses are to:

❏ Search reports for filter conditions.

❏ Search synonyms for table or field references.

❏ Locate report dependencies in drill downs or schedules.

The search string is case insensitive and allows spaces. Repository object types that can be searched are HTML pages, reports, and schedules. Synonyms that are searched, also referred to as metadata, include Master and Access Files located in the integrated file system (IFS). To narrow a search, the user can specify one or more top-level folders or object types. The filters also allow the user to specify an output format, as shown in the following image.
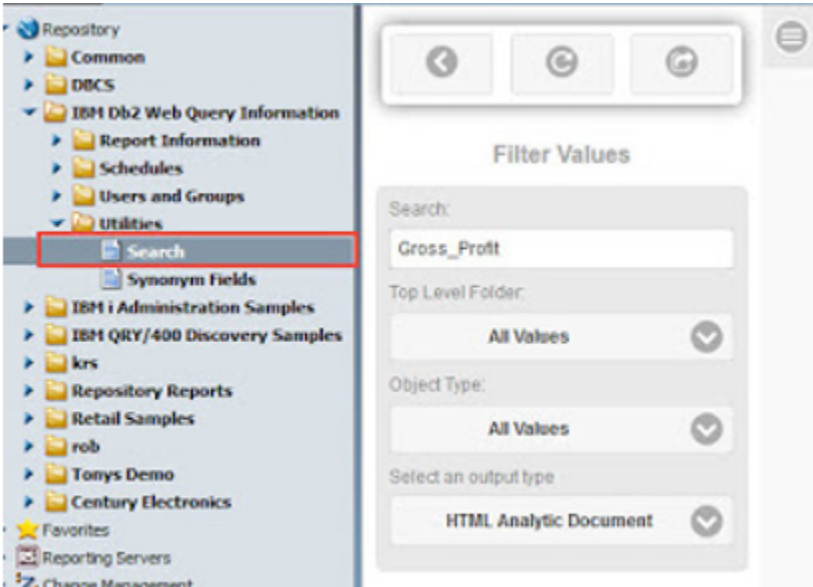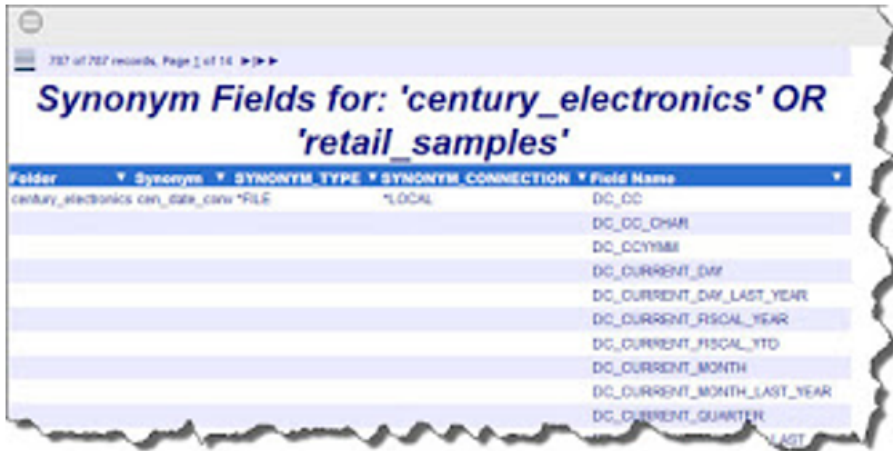
Sample output from the Search report is shown in the following image. It lists the folders, object names, object types, and full paths where the string was found.

The Synonym Fields utility lists the synonyms associated with one or more folder applications. Synonyms comprise the metadata layer, an abstraction of the data source that improves the use of the data for report authors. The report makes it easy to know which synonyms contain the fields of interest, including defined and computed fields, when creating new reports or performing metadata cleanup.

The following image shows sample output from the Synonym Fields report.

Mobile App

A new Db2 Web Query mobile app is available for Android™ and iOS®. The Db2 Web Query Mobile app empowers users of iPad and iPhone devices, or Android phones and tablets, with robust, go-anywhere reporting and analysis. The apps allow users to manipulate data from a variety of sources in an almost unlimited number of ways in just a couple taps. Users can manage their business dashboards and content for viewing and interactive analysis, even when they are not connected to the Internet.

To download the Db2 Web Query app from the Apple store:

1. Tap the *App Store* icon.

2. In the Search box, type *Db2 Web Query*.

3. In the selection list, tap *Db2 Web Query*.

4. Tap the *Db2 Web Query* icon.

5. Tap *GET*.

6. Tap *INSTALL*.

7. Type your Apple® ID and password, if required, or use Touch ID, and tap *OK*.

To download the Db2 Web Query app from the Android store:

1. Tap the *Play Store* icon.

2. In the Search box, type *Db2 Web Query*.

3. In the selection list, tap *Db2 Web Query*.

4. Tap the *Db2 Web Query* icon.

5. Tap *INSTALL*.

   The Db2 Web Query app will be downloaded to your device.

The Db2 Web Query mobile app is a replacement for the prior version of the WebFOCUS and Mobile Faves apps. However, when upgrading to the new mobile app, it is necessary to reconfigure the site connections. The new app is compatible with Web Query 2.2.0 and higher.

Items in the Favorites folder will display on the mobile launch page. The existing Mobile Favorites folder on the portal tree will be merged with the Favorites folder. Any existing Mobile Favorites from previous Web Query releases will be automatically migrated into the Favorites folder and given a localized Mobile Faves tag. No extra steps are required to view your existing Faves content. To add new reports to Favorites, right-click the report and select *Add to Favorites*.

Changes in Behavior

The following topics describe changes in behavior for Db2 Web Query 2.2.1 Hotfix 9.

Report Run History

The Report Run History report in the IBM Db2 Web Query Information folder has been fixed to display names that contain non-English characters.

Note: The length and CCSID of the full path field in the underlying repository table, QWQARUNLOG, has consequently changed. This is an internal table and IBM reserves the right to change its contents.

Report Name Field

The Report Name field in all reports in the IBM Db2 Web Query Information folder has been changed to display the report title, instead of the report file name. The Full Path field will continue to display the report file name.

Known Issues

The following topics describe known issues that will be addressed in a future version of Db2 Web Query.

Developer Workbench

This section addresses the known issue for Developer Workbench.

❏ When using Developer Workbench, you may receive a warning message when refreshing a synonym.

If you receive a warning message, you need to refresh the synonym from the Web Query Reporting Server Console.

1. From the Console, right-click the synonym, select *Metadata Management*, and then select *Refresh*, as shown in the following image.

The Refresh synonym pane opens, as shown in the following image.

2. Select the DBMS catalog columns for your requirements from the list. This will override attributes from the existing synonym.

3. Click *Next*.

REST-Based Application Extension (WQRAX)

This section addresses the known issues for the REST-Based Application Extension (WQRAX).

❑ Certain types of reports, including visualizations which utilize some maps, will not render properly when invoked through WQRAX. This will be resolved in an upcoming PTF.

❑ You must edit HTML Composer dashboards that were created prior to Web Query 2.1.0 group PTF level 13 or 2.1.1 group PTF level 2 for compatibility with current fix levels. Otherwise, they will not run in WQRAX after applying this Hotfix.

Workaround: Either edit and save the HTML file in the Developer Workbench HTML canvas, which will make the changes automatically, or edit and save the HTML dashboard using Web Query 2.2.0, using the following steps:

1. Sign in to Web Query using a Web Query Administrator user ID.

2. On the BI Portal resource tree, right-click the HTML dashboard file and select *Edit*.

Note: if you do not see an Edit option, then the dashboard is already at a current version and these steps do not apply.

3. In the text editor, click *Search* and then *Find*.

4. Type */webquery/ibi_html* in the Find What: box.

5. Type *./ibi_html* in the Replace With: box.

6. Click the *Replace All* button.

7. Click the *Save* button on the toolbar.

8. Click *File* and then *Exit*.

Business Intelligence Portal

This section addresses the known issues for BI Portal.

Upload Data and Upload Wizard

❏ NLS characters are not supported in the following places when using the Upload Data and Upload Wizard:

  ❏ Excel Worksheet name.

  ❏ Folder name from where the Upload Wizard is being launched.

  Workaround: Use invariant (A-Z and 0-9) characters. Support for NLS characters will be added in a future Hotfix.

❏ Run-Time Enablement (RTE) may cause the Upload Wizard to fail. This will happen if the user's current library (CURLIB) is not defined in the user's active RTE environment. The Upload Wizard writes out a temporary file during the upload process.

  Workaround: It is recommended to add both QGPL and the user's CURLIB (if different from the default, QGPL) to the user's active RTE environment using the WRKWQRTE command.

Metadata Wizard

❏ The Adapters for Query/400, DB Heritage, and JD Edwards should not be used during the Import Metadata step as these are multi-step Create Synonym processes, which are not yet supported by the Metadata Wizard.

  Workaround: Use the Metadata New option to create synonyms for these Adapter types.

InfoAssist

This section addresses the known issues for InfoAssist.

❏ The 2014 Demographic layers do not render on an ESRI map.

❑ At run time, a report will fail if empty filter values are entered for simple parameter prompts. To resolve the issue, the Web Query administrator can configure a setting to allow empty values, as follows.

1. In the Administration Console, on the *Configuration* tab, click *Custom Settings*.

2. To permit the use of empty fields in filter prompts, type the command:

   `IBIAP_allow_empty_field=YES`

   Type it under the final comment statement at the top of the Custom Settings text box or under the most recent custom setting entry, as shown in the following image.

3. To store the settings in an encrypted format, select the *Encrypt* check box.

4. When your configuration is complete, click *Save*.

5. When you receive a confirmation message, click *OK*.

6. When the Custom Setting page clears, click *Custom Settings* under the Application Settings folder to see your updated comments, settings, or commands in the Custom Settings text box.

7. If you later decide to prohibit the use of empty fields, change the command to:

   `IBIAP_allow_empty_field=NO`

   Alternatively, you can delete the following command from the Custom Settings page or convert it to a comment if you plan to reactivate this feature.

   `IBIAP_allow_empty_field=YES`

8. When your configuration is complete, click *Save*.

JD Edwards Adapters

This section addresses the known issue for the JD Edwards Adapters.

❏ To use the Alternate Language option in the Adapter for JD Edwards EnterpriseOne and the Adapter for JD Edwards World:

1. Configure the adapter with *UDC Direct File Access* unchecked.

2. Run the *Refresh Metadata* with *Alternate Language File* unchecked.

   This step will create the udcdicdb table.

3. Run the *Refresh Metadata* with *Alternate Language File* checked and enter the default language code.

   This step will create the altdicdb table.

4. Create all the synonyms needed.

Note: Steps 2 and 3 need to be run, as needed, whenever UDC descriptions are updated.

Report Broker

This section addresses the known issue for Report Broker.

❏ Migration of Public Distribution Lists will generate the following error:

```
ERROR IBFSService                      - setShares - opShareBasic/
opShareAdvanced to this resource denied - user:qwqadmin res:/WFC/
Repository/untitled/ReportBroker/~ownerID/distribution_list.adr
[2014-03-11 00:00:00,605] ERROR IBFSAddrBookConverter        -
Failed to share '/WFC/Repository/untitled/ReportBroker/~ownerID/
distribution_list.adr' with IBFS:/SSYS/GROUPS/EVERYONE
```

The distribution list will be migrated as a private object. To make this published:

1. Move the distribution list to a published folder.

2. Right-click on the distribution list and select the *Publish* option.

Spreadsheet Client

This section addresses the known issue for Spreadsheet Client.

❏ Populating a spreadsheet using a large Excel Add-in request (25 columns, 200K rows) does not return output.

National Language Support

This section addresses the known issues for National Language Support (NLS).

❏ When the Reporting Server runs in CCSID 285, HTML dashboards fail with JavaScript errors if running in a Firefox or Internet Explorer browser. This is caused by an encoding problem in the IBM Websphere Application Server plugin. To resolve the problem, apply the following PTF for your release level of product 5770DG1:

   ❏ 7.2: SI69444

   ❏ 7.3: SI69363

❏ Some of the Retail Sample reports will not run in NLS or DBCS languages. This issue will be resolved in an upcoming PTF.

DataMigrator/Data Management Console

Important: The renaming of Application Directories in the Data Management Console is not recommended as it may result in execution failures with the contents of the Application Directory.

Metadata

This section addresses the known issues for metadata.

❏ Creating a synonym for a Query/400 file from the right-click folder Metadata Edit option does not generate the associated Web Query procedure in the repository. To create Query/400 synonyms, right-click a folder and select the *Metadata New* option.

❏ Creating a synonym for a Query/400 file fails when it is launched from a subfolder.

Advisories

The following topics describe advisories for Db2 Web Query.

Esri Mapping Demographic Layers 2010-2014 Retirement Statement

The Esri® Mapping Demographic Layers for years 2010, 2011, 2012, 2013, and 2014, which can be used with Web Query, will no longer be supported as a result of their *retirement by Esri*. In a future release or hotfix, you will no longer be able to configure these layers. If you have charts created in Web Query 2.2.1 InfoAssist that reference these layers, you must manually edit them to remove the reference, otherwise these layers may not render.

The following Demographic Layers have been retired by Esri and may not be available in Web Query:

❏ USA Health Care Spending 2014

❏ USA Population Change 2000-2010

❏ USA Population Change 2010-2012

❏ USA Population Density 2012

❏ USA Population Density 2013

❏ USA Population Density 2014

❏ USA Population Older than Age 64

❏ USA Population Younger than Age 18

❏ USA Projected Population Growth 2012-2017

❏ USA Restaurant Spending 2014

❏ USA Tapestry Segmentation 2012

❏ USA Tapestry Segmentation 2014

❏ USA Unemployment Rate 2012

To learn more about the retirement of layers from Esri, visit *http://doc.arcgis.com/en/esri-demographics/reference/legacy-demographic-maps.htm*.

Browser Information

The following topics describe information for the available web and mobile browsers for Web Query 2.2.1.

Web Browsers

The following browsers are certified for Web Query and Developer Workbench.

❏ Microsoft Edge™ 44

❏ Internet Explorer® 11

❏ Google Chrome™ 80

❏ Mozilla Firefox® Quantum 73

Release 2.2.1 Notes

❏ Simple HTML Web Query reports can be viewed on any browser.

❏ Chart/Graph request notes:

  ❏ *Browser-generated graphs* refer to graphs that are rendered inside the browser using HTML5 (and JavaScript). Browser-generated graphs are utilized in both standard HTML5 output ("FORMAT JSCHART"), and in Active Technologies ("FORMAT AHTML").

  ❏ *Server-generated graphs* refer to graph requests that are generated on the Reporting Server and then embedded as a bitmap or vector image in a document or webpage. This includes the following output formats:

    ❏ Bitmap: PNG, JPG

    ❏ Vector: PDF (but not active PDF), SVG

❏ Support for presenting images and graphs in HTML, DHTML, and DHTML compound reports is provided using an image embedding facility based on the client browser. Output generated by Internet Explorer browsers or in scenarios where the browser is unknown (such as when distributed by Report Broker) supports image inclusion through the creation of a web archive file (.mht). For all other browsers, images are base64 encoded within the generated .htm file.

❏ Drill-down links do not work when using an embedded PDF viewer available in some browser versions. Refer to the browser's configuration information on how to change the Application Options settings for the relevant content types so that the browser will automatically use Adobe Reader.

❏ Adobe Reader support:

  ❏ Acrobat Reader DC is certified

  ❏ Adobe XI is supported

  ❏ Adobe X is supported

❏ If you are using Internet Explorer® 11 on a Windows® 2012 R2 OS and you attempt to run an object (such as a report or chart in InfoAssist+), Internet Explorer 11 opens it in a new window instead of targeting the object to a specific frame. For example, in InfoAssist, the New Window Runtime opens a new browser window that shows the running image, which then replaces that page with the output. Since Internet Explorer 11 does not allow the replacement of that window, it opens a new window instead.

This browser limitation can be remedied by an administrator. For more information, see *https://social.msdn.microsoft.com/Forums/ie/en-US/a5c294e2-e407-491d-ba6a-b7f7edbcabaf/ie11-cant-post-form-data-to-specific-frame-or-window-dialog-opened-via-windowopen?forum=iewebdevelopment*

Mobile Browser Information

If you are planning to use Web Query on mobile devices, note the following regarding mobile browser support. If you will be using Web Query on the Windows operating system, see the Web Browser support information.

Note: Browsers released after the production date of a Web Query version are subject to certification.

InfoAssist is not supported on mobile devices.

The following devices were used in testing Web Query 2.2.1:

❑ iOS 12

❑ Android 8.0, 7.1

❑ Db2 Web Query mobile app

Usage Considerations:

❑ Report Broker interfaces are supported on tablets.

❑ HTML reporting Table of Contents (BYTOC) feature is not supported.

❑ Viewing PDF, Excel, and PowerPoint documents may require a third-party helper app.

❑ To open active report content, JavaScript needs to be enabled in your web browser. On mobile devices, please use the Db2 Web Query mobile app. If not installed, download it from the App Store for iOS devices or from the Google Play Store for Android devices.

Db2 Web Query Version 2.2.1 - April 2020 - HF8

This documentation describes new features, known issues, web browser support, and mobile support for the April 2020 - 2.2.1 Hotfix 8 release.

This document is intended for all levels of users, including application developers, administrators, and end users. It is also intended to serve as a quick reference for users upgrading from a prior version.

In this chapter:

❏ Db2 Web Query for i Enhancements

❏ Known Issues

❏ Browser Information

Db2 Web Query for i Enhancements

The following is a new feature enhancement that applies to Db2 Web Query for i.

Sorting Dynamic Prompts in Ascending or Descending Order

The Dynamic Prompt functionality has been enhanced to allow you to sort values that display at run time within dynamic prompts, in either ascending or descending order. This is particularly useful, for example for numeric values, to place the highest or lowest values at the top of the selection list, and for dates to choose whether the date values will be presented with the most recent at the top or at the bottom of the list. You can also specify sorting for categorical values with ease using Dynamic Prompts.

Prompts are created using the filtering functionality in InfoAssist. The dynamic parameters that you specify become the prompts that are used at run time. When creating a dynamic parameter, you specify the field to provide the values for selection within the filter at run time, whether the values should be single or multiselect, and the sort order for the list. By default, the sorting on the prompt values is set to ascending order, however, you can select descending to reverse the order.

The following image is an example of the dynamic parameter dialog box, where you can change the sort order of the prompt values.

Known Issues

The following topics describe known issues that will be addressed in a future version of Db2 Web Query.

Mobile App

The mobile app for Android™ devices is temporarily unavailable on the Google Play™ Store. If you previously downloaded the mobile app for Android, you may use it with this hotfix.

REST-Based Application Extension (WQRAX)

This section addresses the known issues for the REST-Based Application Extension (WQRAX).

❑ Certain types of reports, including visualizations which utilize some maps, will not render properly when invoked through WQRAX. This will be resolved in an upcoming PTF.

❑ You must edit HTML Composer dashboards that were created prior to Web Query 2.1.0 group PTF level 13 or 2.1.1 group PTF level 2 for compatibility with current fix levels. Otherwise, they will not run in WQRAX after applying this Hotfix.

Workaround: Either edit and save the HTML file in the Developer Workbench HTML canvas, which will make the changes automatically, or edit and save the HTML dashboard using Web Query 2.2.0, using the following steps:

1. Sign in to Web Query using a Web Query Administrator user ID.

2. On the BI Portal resource tree, right-click the HTML dashboard file and select *Edit*.

   Note: if you do not see an Edit option, then the dashboard is already at a current version and these steps do not apply.

3. In the text editor, click *Search* and then *Find*.

4. Type */webquery/ibi_html* in the Find What: box.

5. Type *./ibi_html* in the Replace With: box.

6. Click the *Replace All* button.

7. Click the *Save* button on the toolbar.

8. Click *File* and then *Exit*.

Business Intelligence Portal

This section addresses the known issues for BI Portal.

Upload Data and Upload Wizard

❏ NLS characters are not supported in the following places when using the Upload Data and Upload Wizard:

  ❏ Excel Worksheet name.

  ❏ Folder name from where the Upload Wizard is being launched.

  Workaround: Use invariant (A-Z and 0-9) characters. Support for NLS characters will be added in a future Hotfix.

❏ Run-Time Enablement (RTE) may cause the Upload Wizard to fail. This will happen if the user's current library (CURLIB) is not defined in the user's active RTE environment. The Upload Wizard writes out a temporary file during the upload process.

  Workaround: It is recommended to add both QGPL and the user's CURLIB (if different from the default, QGPL) to the user's active RTE environment using the WRKWQRTE command.

Metadata Wizard

❏ The Adapters for Query/400, DB Heritage, and JD Edwards should not be used during the Import Metadata step as these are multi-step Create Synonym processes, which are not yet supported by the Metadata Wizard.

  Workaround: Use the Metadata New option to create synonyms for these Adapter types.

InfoAssist

This section addresses the known issues for InfoAssist.

❏ The 2014 Demographic layers do not render on an ESRI map.

❏ At run time, a report will fail if empty filter values are entered for simple parameter prompts. To resolve the issue, the Web Query administrator can configure a setting to allow empty values, as follows.

  1. In the Administration Console, on the *Configuration* tab, click *Custom Settings*.

  2. To permit the use of empty fields in filter prompts, type the command:

     ```
     IBIAP_allow_empty_field=YES
     ```

Type it under the final comment statement at the top of the Custom Settings text box or under the most recent custom setting entry, as shown in the following image.

Custom Settings

```
<VER 1>
# Copyright 1996-2011 Information Builders, Inc. All rights reserved.
# $Revision: 1.7 $
# place any variables here from cgivars.wfs that you wish to override.
IBIAP_allow_empty_field=YES
```

3. To store the settings in an encrypted format, select the *Encrypt* check box.

4. When your configuration is complete, click *Save*.

5. When you receive a confirmation message, click *OK*.

6. When the Custom Setting page clears, click *Custom Settings* under the Application Settings folder to see your updated comments, settings, or commands in the Custom Settings text box.

7. If you later decide to prohibit the use of empty fields, change the command to:

   `IBIAP_allow_empty_field=NO`

   Alternatively, you can delete the following command from the Custom Settings page or convert it to a comment if you plan to reactivate this feature.

   `IBIAP_allow_empty_field=YES`

8. When your configuration is complete, click *Save*.

JD Edwards Adapters

This section addresses the known issue for the JD Edwards Adapters.

❑ To use the Alternate Language option in the Adapter for JD Edwards EnterpriseOne and the Adapter for JD Edwards World:

1. Configure the adapter with *UDC Direct File Access* unchecked.

2. Run the *Refresh Metadata* with *Alternate Language File* unchecked.

   This step will create the udcdicdb table.

3. Run the *Refresh Metadata* with *Alternate Language File* checked and enter the default language code.

   This step will create the altdicdb table.

4. Create all the synonyms needed.

Note: Steps 2 and 3 need to be run, as needed, whenever UDC descriptions are updated.

Report Broker

This section addresses the known issue for Report Broker.

❏ Migration of Public Distribution Lists will generate the following error:

```
ERROR IBFSService                      - setShares - opShareBasic/
opShareAdvanced to this resource denied - user:qwqadmin res:/WFC/
Repository/untitled/ReportBroker/~ownerID/distribution_list.adr
[2014-03-11 00:00:00,605] ERROR IBFSAddrBookConverter        -
Failed to share '/WFC/Repository/untitled/ReportBroker/~ownerID/
distribution_list.adr' with IBFS:/SSYS/GROUPS/EVERYONE
```

The distribution list will be migrated as a private object. To make this published:

1. Move the distribution list to a published folder.

2. Right-click on the distribution list and select the *Publish* option.

Spreadsheet Client

This section addresses the known issue for Spreadsheet Client.

❏ Populating a spreadsheet using a large Excel Add-in request (25 columns, 200K rows) does not return output.

National Language Support

This section addresses the known issues for National Language Support (NLS).

❏ When the Reporting Server runs in CCSID 285, HTML dashboards fail with JavaScript errors if running in a Firefox or Internet Explorer browser. This is caused by an encoding problem in the IBM Websphere Application Server plugin. To resolve the problem, apply the following PTF for your release level of product 5770DG1:

  ❏ 7.2: SI69444

  ❏ 7.3: SI69363

❏ Some of the Retail Sample reports will not run in NLS or DBCS languages. This issue will be resolved in an upcoming PTF.

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Important: The renaming of Application Directories in the Data Management Console is not recommended as it may result in execution failures with the contents of the Application Directory.

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This section addresses the known issues for metadata.

❏ Creating a synonym for a Query/400 file from the right-click folder Metadata Edit option does not generate the associated Web Query procedure in the repository. To create Query/400 synonyms, right-click a folder and select the *Metadata New* option.

❏ Creating a synonym for a Query/400 file fails when it is launched from a subfolder.

Advisories

The following topics describe advisories for Db2 Web Query.

Esri Mapping Demographic Layers 2010-2014 Retirement Statement

The Esri® Mapping Demographic Layers for years 2010, 2011, 2012, 2013, and 2014, which can be used with Web Query, will no longer be supported as a result of their *retirement by Esri*. In a future release or hotfix, you will no longer be able to configure these layers. If you have charts created in Web Query 2.2.1 InfoAssist that reference these layers, you must manually edit them to remove the reference, otherwise these layers may not render.

The following Demographic Layers have been retired by Esri and may not be available in Web Query:

❏ USA Health Care Spending 2014

❏ USA Population Change 2000-2010

❏ USA Population Change 2010-2012

❏ USA Population Density 2012

❏ USA Population Density 2013

❏ USA Population Density 2014

❏ USA Population Older than Age 64

❏ USA Population Younger than Age 18

❏ USA Projected Population Growth 2012-2017

❏ USA Restaurant Spending 2014

❏ USA Tapestry Segmentation 2012

❏ USA Tapestry Segmentation 2014

❏ USA Unemployment Rate 2012

To learn more about the retirement of layers from Esri, visit *http://doc.arcgis.com/en/esri-demographics/reference/legacy-demographic-maps.htm*.

Browser Information

The following topics describe information for the available web and mobile browsers for Web Query 2.2.1.

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The following browsers are certified for Web Query and Developer Workbench.

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❏ Internet Explorer® 11

❏ Google Chrome™ 80

❏ Mozilla Firefox® Quantum 73

Release 2.2.1 Notes

❏ Simple HTML Web Query reports can be viewed on any browser.

❏ Chart/Graph request notes:

  ❏ *Browser-generated graphs* refer to graphs that are rendered inside the browser using HTML5 (and JavaScript). Browser-generated graphs are utilized in both standard HTML5 output ("FORMAT JSCHART"), and in Active Technologies ("FORMAT AHTML").

  ❏ *Server-generated graphs* refer to graph requests that are generated on the Reporting Server and then embedded as a bitmap or vector image in a document or webpage. This includes the following output formats:

    ❏ Bitmap: PNG, JPG

    ❏ Vector: PDF (but not active PDF), SVG

❏ Support for presenting images and graphs in HTML, DHTML, and DHTML compound reports is provided using an image embedding facility based on the client browser. Output generated by Internet Explorer browsers or in scenarios where the browser is unknown (such as when distributed by Report Broker) supports image inclusion through the creation of a web archive file (.mht). For all other browsers, images are base64 encoded within the generated .htm file.

❏ Drill-down links do not work when using an embedded PDF viewer available in some browser versions. Refer to the browser's configuration information on how to change the Application Options settings for the relevant content types so that the browser will automatically use Adobe Reader.

❏ Adobe Reader support:

  ❏ Acrobat Reader DC is certified

  ❏ Adobe XI is supported

  ❏ Adobe X is supported

❏ If you are using Internet Explorer® 11 on a Windows® 2012 R2 OS and you attempt to run an object (such as a report or chart in InfoAssist+), Internet Explorer 11 opens it in a new window instead of targeting the object to a specific frame. For example, in InfoAssist, the New Window Runtime opens a new browser window that shows the running image, which then replaces that page with the output. Since Internet Explorer 11 does not allow the replacement of that window, it opens a new window instead.

This browser limitation can be remedied by an administrator. For more information, see *https://social.msdn.microsoft.com/Forums/ie/en-US/a5c294e2-e407-491d-ba6a-b7f7edbcabaf/ie11-cant-post-form-data-to-specific-frame-or-window-dialog-opened-via-windowopen?forum=iewebdevelopment*

Mobile Browser Information

If you are planning to use Web Query on mobile devices, note the following regarding mobile browser support. If you will be using Web Query on the Windows operating system, see the Web Browser support information.

Note: Browsers released after the production date of a Web Query version are subject to certification.

InfoAssist is not supported on mobile devices.

The following devices were used in testing Web Query 2.2.1:

❏ iOS 12

❏ Android 8.0, 7.1

❏ Mobile Faves 3.2.2 iOS, 3.2.2 Android

Usage Considerations:

❏ Report Broker interfaces are supported on tablets.

❏ HTML reporting Table of Contents (BYTOC) feature is not supported.

❏ Viewing PDF, Excel, and PowerPoint documents may require a third-party helper app.

❏ To open active report content, JavaScript needs to be enabled in your web browser. On mobile devices, please use the Mobile Faves app. If not installed, download it from the App Store for iOS devices or from the Google Play Store for Android devices.

Db2 Web Query Version 2.2.1 - December 2019 - HF7

This documentation describes new features, known issues, web browser support, and mobile support for the December 2019 - 2.2.1 Hotfix 7 release.

This document is intended for all levels of users, including application developers, administrators, and end users. It is also intended to serve as a quick reference for users upgrading from a prior version.

In this chapter:

❏ Server and Adapter Enhancements

❏ Db2 Web Query for i Enhancements

❏ DataMigrator Enhancements

❏ Changes in Behavior

❏ Known Issues

❏ Browser Information

Server and Adapter Enhancements

The server provides a wide range of capabilities and tools for adapter configuration, metadata creation, application and path management, security control, communications configuration, and for monitoring, tuning, and troubleshooting server performance. Authorized users can perform most server administration tasks from a graphical Web Console. The server supports Web Query reporting functions, extraction, load, and transformation functions, and analysis and data access control functions.

Modern Design of Server Web Console

The server Web Console has been modernized with the use of Google material design icons and the Awesome font, as shown in the following image. The sidebar provides access to the different features of the Web Console. By default, icon text does not show on the menu bar or sidebar.
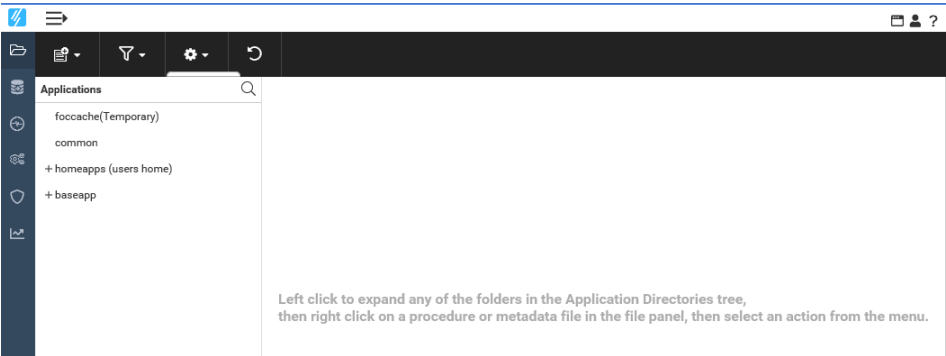
You can display the names of the resources on the sidebar by clicking the hamburger menu icon above the menu bar, as shown in the following image.

The names of the resources on the sidebar are shown in the following image.
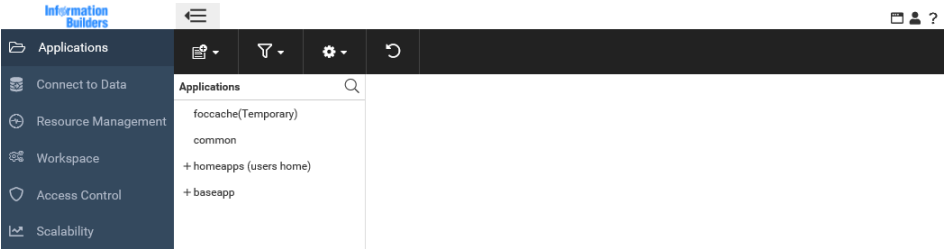
You can display the icon text on the ribbon by clicking the *Toggle Ribbon Icon Text* button on the top right of the Web Console menu bar, as shown in the following image.
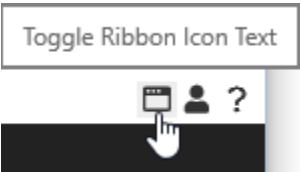
The icon text on the ribbon is shown in the following image.
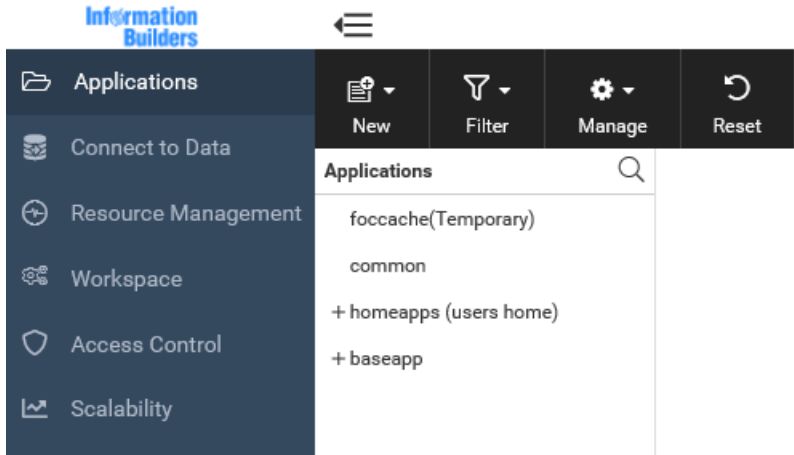
Web Console Ribbon

Web Console functionality is available through a ribbon at the top of the page. By default, the icon text does not display, but you can turn it on using the *Toggle Ribbon Icon Text* button at the top right of the page.

The ribbon available from the Applications page is shown in the following image.
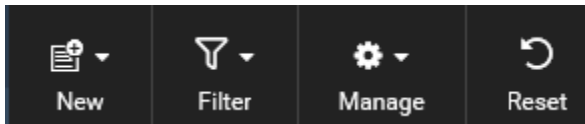
The interface includes the following menus at the top right of the page, as shown in the following image.

On the right area of the Web Console menu bar, a menu under the user ID of the connected user is displayed, if the server is running with security on. If it is not running with security on, a User menu appears. In addition, there is a button to toggle the ribbon icon text and a help menu to open the help content.

The ribbon provides the same options that are available from the right-click menus of the nodes on the resources pane.

Web Console Hover Menu

Pages and panes in the Web Console can be rearranged, resized, or closed using the Hover menu. The Hover menu appears when you point your cursor to the top right corner of a pane, as shown in the following image.

This menu contains the following options, some of which depend on the page that is open:

❏ **Drag and drop.** Allows you to move the page within the Web Console interface. A shaded area indicates where the page will be placed.

You can also access this option by pointing to the top of the right pane. The cursor becomes a four-headed arrow, indicating that you can move the page.

❏ **Menu.** The menu contains options to control the layout of the pane of the Web Console. The following options are available:

❏ **Maximize.** The selected tab fills the Web Console interface, except for the ribbon and sidebar.

❏ **Close.** Closes the selected tab.

❏ **Keep recent.** Opens a submenu for configuring how many tabs or panes to keep.

❏ **View most recent only.** Shows only the most recently opened tab.

❏ **View maximum set.** Shows up to the maximum number of tabs, as set in the Layout Options. Once this value is exceeded, the oldest tab is closed each time a new tab opens.

❏ **View all.** Shows all tabs. If there are too many tabs to fit onto the screen, you can navigate using the left and right arrow buttons that appear.

❏ **Layout Options.** Opens the Layout Options dialog box. The Layout Options dialog box provides the following options:

❏ **Hover-tab.** Allows you to select whether the hover menu should be above the content or on top of the content.

❏ **Frame bar.** Allows you to select whether to show or hide a small pane between the sidebar and the resources pane that contains icons that let you show or hide each frame on the page.

You can always show the frame bar, always hide the frame bar, or show only hidden frames and nested layouts, which is the default.

❑ **Max content per frame.** Allows you to specify the maximum number of tabs to show when the View maximum set option is selected.

❑ **Show Layout Tree.** Shows the properties of the container and frames.

❑ **Maximize.** The selected tab fills the Web Console interface, except for the ribbon and sidebar.

❑ **Close.** Closes the selected tab.

Ribbon Options

The ribbon icon on the top-right of the page provides the following option:

❑ **Toggle Ribbon Icon Text.** This option toggles the text describing each icon on the ribbon on and off.

User Menu Options

The following options are available from the User menu on the right portion of the page.

❑ **End Current Session or Sign In As Different User**

If the server is not running with security, this option enables you to end the current session. If the server is running with security, this option enables you to sign in as a different user.

❑ **My Console**

These options provide users with functionality that supports the tasks they are authorized to perform. The options that a user has under My Console depend on the user role and general privileges assigned to the user.

In the descriptions that follow, each option applies to the user who is connected to the current Web Console session.

❑ **Show My General Privileges.** Shows the privileges set by the Server Administrator for the user who is logged in to the current Web Console session. Privileges can be customized for each role, group, or user.

❑ **Change My Password.** Enables you to specify a new password to replace your current password. When you click this console option, a dialog box displays. Supply the requested information, and click *Update*.

❑ **Manage My Agents.** Enables you to monitor and manage Data Service Agents, based on your role and privileges. For example, if you are a Basic user, by default you can monitor and manage your own agents (that is, the agents that match your user ID). If granted the applicable privileges, you can also monitor, or monitor and manage, the agents of the other users in your group (that is, users with the same group ID).

When you click *Manage My Agents*, a Performance Report for Data Service Agents is displayed, showing statistics for the agents that you are authorized to see. You can customize and filter the report to display only those statistics that you are interested in.

❑ **Save My Last Report.** Saves the last report (procedure) that you ran with the values that you chose for the amper variables. The report is saved as a new, separate procedure. You can run the saved report without having to manually supply the values for the amper variables as you did before.

When you click this console option, you can select the application directory in which to save the report and type a file name for the report.

❑ **Edit My Profile.** Enables you to make changes to your current user profile settings.

❑ **Login Info**

This option displays user login status and browser-related information. Login status information includes user name, group, and role, location of all profiles (user, group, and role) if they exist, and type of authentication (explicit or cookie). HTTP information reflects the properties of the current browser session, for example, the cookie.

❑ **Enable Traces**

This option enables traces to provide diagnostics assistance.

❑ **Preferences**

The Preferences option enables you to indicate preferences for Run Options, Web Console Appearance, Reporting Options, and Diagnostic Options, as shown in the following image.

Run Options are:

❑ **Default Data Service.** The choices for Default Data Service are DEFAULT, WC_DEFAULT, SCHED_DEFAULT, and DFM_DEFAULT. The default value is WC_DEFAULT.

❑ **Maximum number of seconds before the popup timer appears**

Web Console Appearance options are:

❑ **Ribbon's Text.** The choices are Adhere to server appearance default, Icon Hide, and Show. The default value is Show.

❑ **Report Style.** The choices are Warm, Standard, and Flat. The default value is Warm.

❑ **Default page on User Login.** The choices are Applications, Adapters, Resource Management, Workspace/Monitor, Access Control, and Scalability. The default value is Applications.

❑ **Show warning when leaving page.** The choices are Yes and No. The default value is Yes.

Reporting Options are:

❑ **Maximum number of rows for test reports.** The default value is 50.

❑ **Maximum number of columns for test reports.** The default value is 999999.

❑ **Maximum number of rows for Feature Importances test reports.** The default value is 2000.

❑ **Maximum number of identical error messages.** The default value is 10.

❑ **Omit missing (null) values in Data Profiling charts.** The choices are Yes and No. The default value is No.

Diagnostic Options are:

❑ **Enable recording.** The choices are Yes and No. The default value is No.

Indicate your preferences, and click *Update*.

❑ **Language**

This option controls the language in which the Web Console is displayed. For example, all menu options are translated into the selected language. This console option is available if the server is configured for National Language Support (NLS).

Note: The available languages depend on the code page set in the NLS Configuration Wizard. For example:

❑ If you select a European language code page, the Western languages will be available, as well as English.

❑ If you select a Japanese code page, Japanese will be available, as well as English, but not Western European languages.

❑ If you select a Unicode code page, all localized languages will be available.

Redesign of Connect to Data Page

The Connect to Data (Adapters) page has been redesigned to have separate lists for desktop files and server data sources, as shown in the following image.
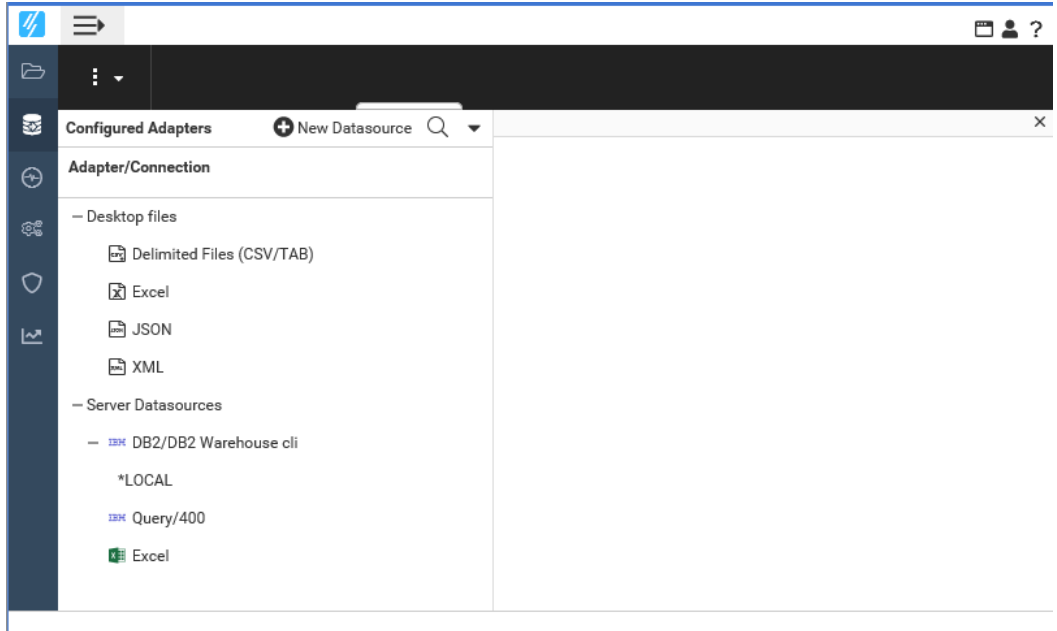
❑ The *Desktop files* list displays files that you can upload.

❑ The *Server Datasources* list shows all adapters and connections that have been configured. If a connection has already been configured for an adapter, an asterisk (*) is displayed next to the connection.

Many of the options for adapters and connections, such as configuring a new connection or creating a synonym, open in a new panel on the Connect to Data page.

Reference: **Server Datasources List**

The Server Datasources panel lists all adapters and connections that have been configured. You can create synonyms and cluster business views from this panel, add new or duplicate connections, remove connections, and view and edit properties.

Adapter Menu

By right-clicking an adapter name, you open a context menu. The items on the menu may differ for different categories of adapters. For an SQL adapter, the following options are available.

❏ **Add Connection.** Opens the *Add Connection* page to configure a new connection for the adapter.

❏ **Change Settings.** Opens the *Change Settings* page for this adapter so you can edit the settings specific to this adapter.

 Note: Once saved in the server profile edasprof, the settings will have global effects.

❏ **Remove.** Removes the configuration for this adapter.

❏ **Help.** Opens the help file for this adapter.

❏ **Prerequisites.** Provides requirements for third-party software and how to connect to the software.

Connection Menu

By right-clicking a connection name, you open a context menu with all or some of the following options, depending on the adapter.

❏ **Show DBMS objects.** Opens a panel for creating synonyms using this connection.

 Note: For delimited files and Excel files, the corresponding option is to Show files. When you click this option, a file picker dialog box opens. When you select a file, the Create Synonym page opens for the selected file.

❏ **Properties.** Opens the Change Connect Parameters page for the connection.

❏ **Test.** Tests access to the DBMS. If successful, a report is displayed showing connection information for the DBMS.

❏ **Duplicate Connection.** Opens a Duplicate Connection panel with the same connection name, suffixed with _dup, and the same server as the original connection. You can use this to connect to a different database than the one in the original connection, or use a different type of security model.

❏ **Configure Bulk Load.** For some adapters, opens a bulk load configuration page.

❏ **Test Bulk.** Tests whether extended bulk load is available and displays a message.

❏ **Test DBMS Case Sensitivity.** Displays a panel with information about case sensitivity for this DBMS.

❏ **Impact Analysis.** Displays a list of files that reference this connection.

❏ **Delete.** Deletes the connection.

Procedure: **How to Configure a New Adapter**

1. Click *New Datasource* on the Connect to Data action bar.

   The available adapters are shown in the following image.
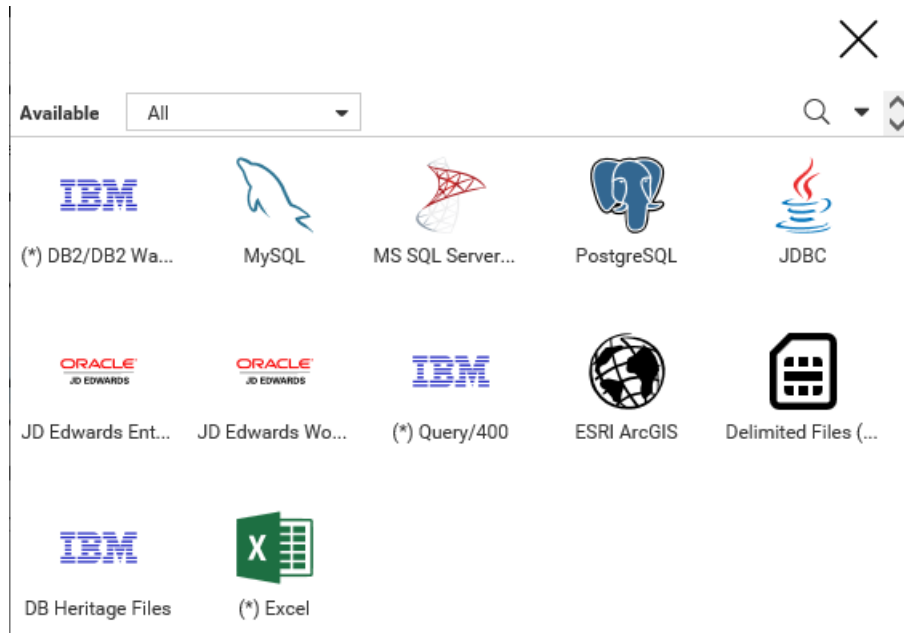
2. To select a category of adapter to display on the list, select the category from the *Available* drop-down menu. Adapters are grouped as follows:

   ❏ All

   ❏ SQL

   ❏ ERP

   ❏ Procedures

   ❏ GIS

   ❏ Files

3. Instead of displaying the available adapters as icons, you can display them as a list by clicking *View as Details* on the Available pane menu, as shown in the following image.
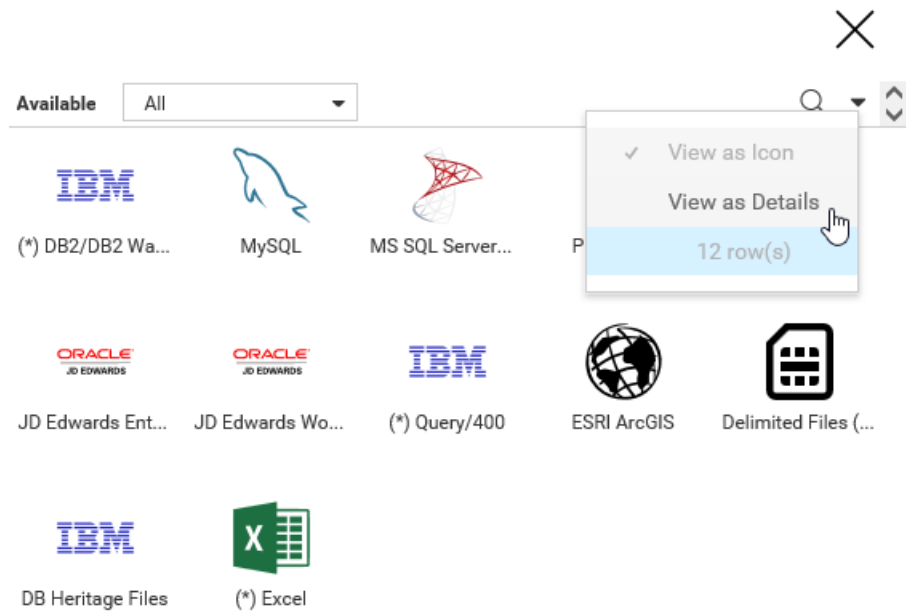
The available adapters display as a list, as shown in the following image.
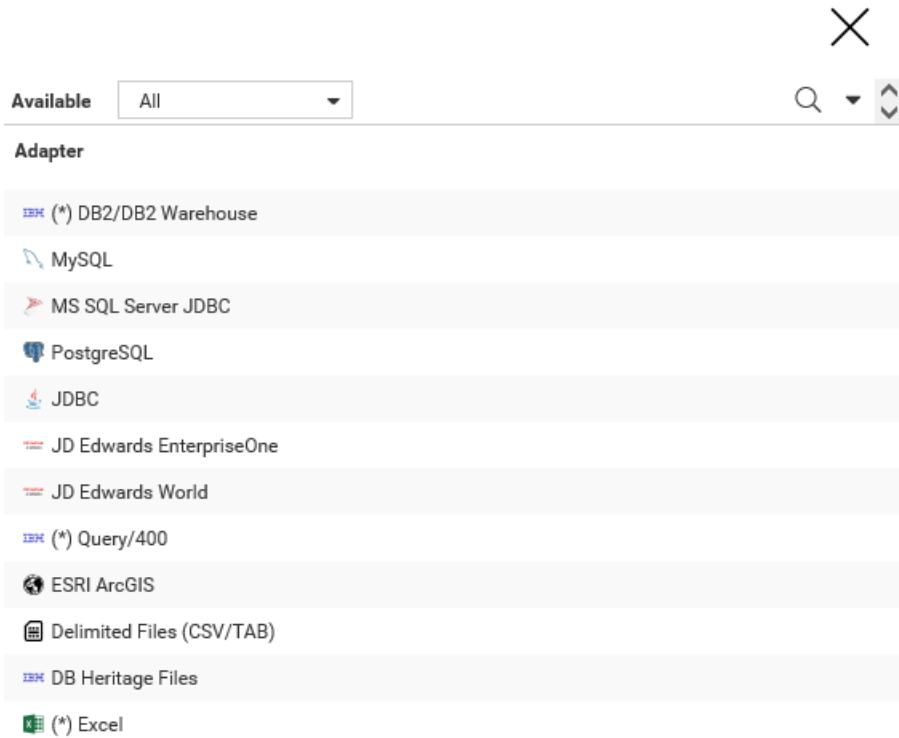
Reference: Creating a Synonym

To create a synonyms, right-click a connection and click *Show files* (for delimited and Excel files) or *Show DBMS objects* from the context menu.

For delimited or Excel files, a file picker dialog box opens. Select a file and click *OK*.

For an SQL adapter, the Available Objects page opens, as shown in the following image.

Creating a Synonym for an SQL Adapter

The Show DBMS Objects page has been designed so that you can enter all the parameters needed to create or update base synonyms or create a cluster synonym on a single page.

Select the object type from which to show objects.

You can search for objects by entering a term in the search text box and clicking *Search*, as shown in the following image.

From the Create group, you can select *Base Synonyms* (for individual tables or objects), or *Cluster Synonym*.

Base Synonyms

To create base synonyms, select the check box next to one or more tables for which you want to create a synonym. You can edit the Default Synonym Name value. When you are finished, select the *Base Synonyms* option. The synonyms are created and added to the application specified.

Cluster Synonym

When you select *Cluster Synonym* from the Create group, the DBMS objects list changes so that you can both select objects to add to the cluster and assign them as facts or dimensions, as shown in the following image.

You can select each fact and dimension manually or you can right-click a fact table to display related dimensions, as shown in the following image:
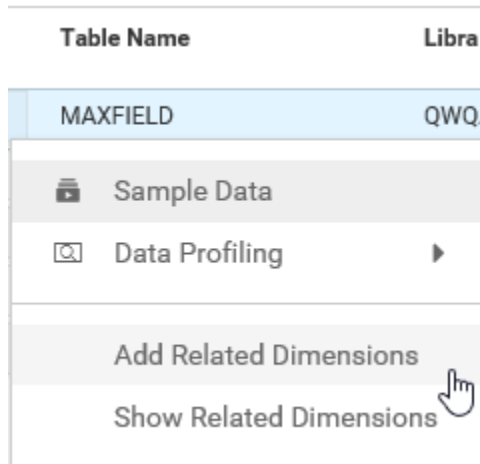
❏ **Add Related Dimensions.** Selects all related dimensions automatically.

❏ **Show Related Dimensions.** Displays a report of related dimensions.

When you have selected the fact and dimension tables, click *Create Cluster Synonym* on the ribbon.

The Save As dialog box opens with a default name for the cluster in the application directory selected on the Show DBMS Objects page. You can change directories and edit the name.

Click *OK* to create the cluster.

Reference: **Connect to Data Ribbon Options**

On the Web Console Connect to Data page, the Options menu on the ribbon contains the following options:

❏ **Common Settings.** Customizes data type mappings and other miscellaneous settings that are common to multiple adapters. Adapter-specific settings are customizable as well, and can be accessed by right-clicking a configured adapter and selecting *Change Settings* from the context menu.

❏ **Edit Server Profile.** Opens the Server profile in a text editor to enable updates.

❏ **Complete Adapter List.** Displays a report listing all adapters by category and their properties, such as support for Unicode, bulk load, and change data capture.

❏ **SQL APT Status.** Displays a report listing all SQL functions and keywords. The report indicates, for each SQL adapter, whether the function or keyword is passed to the SQL engine as is, converted to the DBMS-specific version of SQL, or not converted or passed so that it will be processed by Web Query.

❏ **SQL Optimization Report.** Displays a report identifying whether Web Query functions are optimized for each SQL adapter. You can select an adapter subcategory and a type of function.

❏ **Data Types.** Displays a data type report for all SQL adapters, a subcategory of SQL adapters, or a specific adapter. You can also select a specific server data type for the report. The report shows how the DBMS data type is mapped to server USAGE and ACTUAL formats.

❏ **Adapters License Count.** Displays a report showing your license code, the number of adapters you are licensed to configure, and the number of configured adapters.

❏ **Enable Sampling.** Uses a representative sample of the data for analysis, instead of using all of the data.

❏ **Troubleshooting Tips.** Provides troubleshooting tips for the selected adapter.

❏ **Diagnostics.** For internal use only.

Modern Design of the Data Management Console

The Data Management Console has been modernized with the use of Google material design icons and the Awesome font.

Working With Data Flows

A data flow contains the parameters for extracting information from data sources and loading it into data targets. You create data flows in the Web Console using the data flow workspace. The data flow generates an SQL request that extracts data from the sources, transforms it to meet the specifications of the target, and loads it into the target.

Typically, you build a data flow from a set of objects that identify data sources, data targets, data columns to include, and business rules governing how data is extracted, transformed, and loaded to form a data warehouse, data mart, or any other type of target.

You can join or union multiple data sources, filter and sort the extracted source data, and specify column mappings from the source to the target.

To create a data flow, from the Applications resource on the Web Console, right-click an application, select *New*, and then select *Flow*, as shown in the following image.
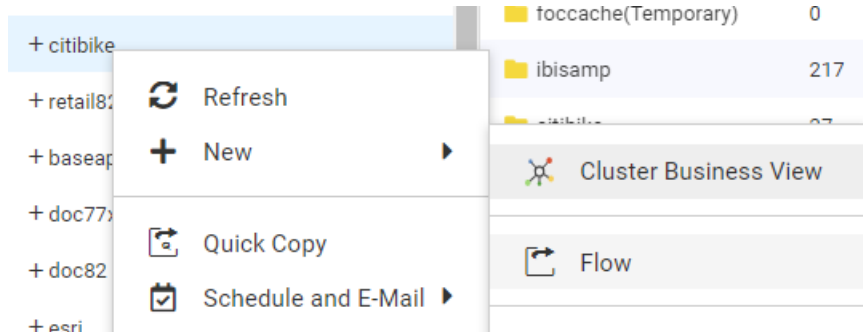
Preparing Data With a Flow

Before you load data into your target data source, you can enhance it for your needs. This massaging of the data prior to loading is called *data preparation*. You can take advantage of the data preparation options to, for example, convert numeric codes to meaningful attributes, discard erroneous data, smooth out ragged data into manageable bins, and blend descriptive data from additional data sources.

The data preparation calculations that create new fields use some of the same tools that are available in the Metadata Editor. However, when the calculations are added in the Metadata Editor, they are added to the synonym. The data remains the same, but the calculations are performed every time the field is referenced in a request against the synonym. When you create new fields in a data flow and then run the flow, the calculated values are loaded into the target data source as field values, not calculations.

To schedule flows or send email, the scheduler must be running and set to autostart, as shown in the following image.
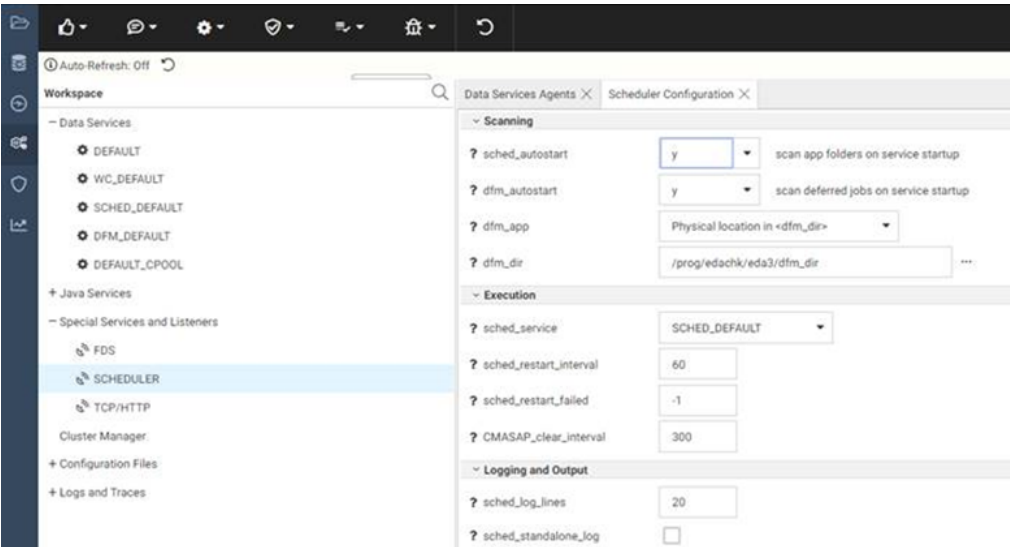
For email, you need to configure an SMPT server and specify the user, as shown in the following image.
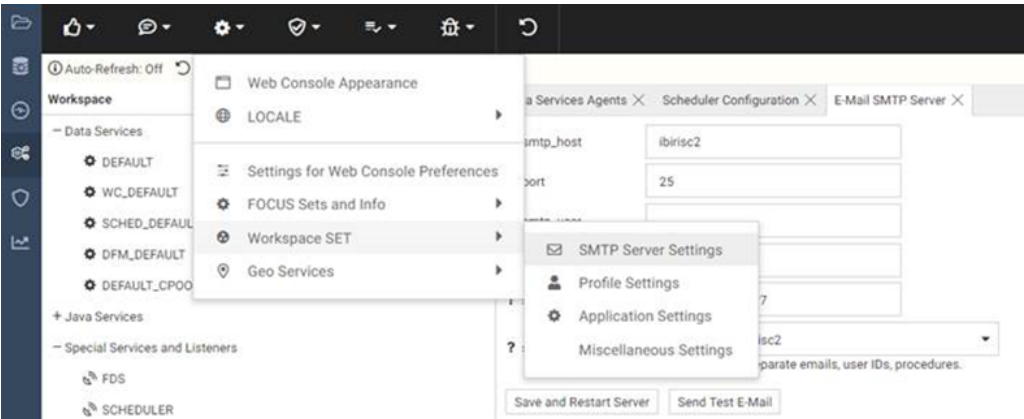
Setting Defaults for Upload Target Parameters

New parameters have been added to the Settings for Web Console Preferences page to enable you to implement default targets for Upload, Quick Copy, and Custom Copy.

To set your target parameters, go to the Web Console Workspace page, click *Settings*, and then click *Settings for Web Console Preferences*.

The Settings for Web Console Preferences page opens. The new section is named Target Defaults, as shown in the following image.

You can set values for the following parameters.

❏ **ETL-TRG-DBMS.** Select a target adapter and connection from the drop-down list for target tables in Upload, Quick Copy, and Custom Copy.

❏ **ETL-TRG-SQL.** Select *Yes* or *No* to enable or disable SQL targets. The default value is Yes.

❏ **ETL-TRG-APP.** Type the name of the target application directory for target tables in Upload, Quick Copy, and Custom Copy, or click the ellipsis (. . .) to select an application directory.

❏ **ETL-TRG-BULK.** Select *Yes* or *No* to use or disable bulk load in Upload, Quick Copy, and Custom Copy. The default value is Yes for any DBMS that supports bulk load.

❏ **ETL-TRG-PROMPT.** Select *Yes* or *No* to enable load option prompts. The default value is Yes.

❏ **ETL-TRG-PREFIX.** Select *Yes* or *No* to prepend the user ID to the synonym name, table name, or dataset. The default value is No.

You can also issue these settings in any supported profile, using the following syntax.

```
ENGINE INT SET ETL-TRG-DBMS dbms/connection

ENGINE INT SET ETL-TRG-SQL {YES|NO}

ENGINE INT SET ETL-TRG-APP appname

ENGINE INT SET ETL-TRG-BULK {YES|NO}

ENGINE INT SET ETL-TRG-PROMPT {YES|NO}
```

```
ENGINE INT SET ETL-TRG-PREFIX {YES|NO}
```

For example:

```
ENGINE INT SET ETL-TRG-DBMS DB2/CON03
ENGINE INT SET ETL-TRG-APP mycompany
ENGINE INT SET ETL-TRG-PROMPT NO
```

Configuring Geographic Information

Geographic roles have been unified to access 58 world administrative boundaries down to the postal code level. The server has a geographic configuration editor for customizing the list of geographic roles, basemaps, reference layers, and demographic layers. A customized geographic role can reference either an uploaded shapefile or an existing Esri Feature Layer.

Note:

❏ You must configure the Adapter for ESRI ArcGIS in order to use many of the geographic features.

❏ The server must be configured for Unicode.

Procedure: **How to Edit Geographic Configuration Settings**

By default, the server is configured for unified geographic roles. The configuration is controlled by these settings.

1. Go to the Web Console Workspace page, click *Settings*, and then select *Geo Services*, as shown in the following image.
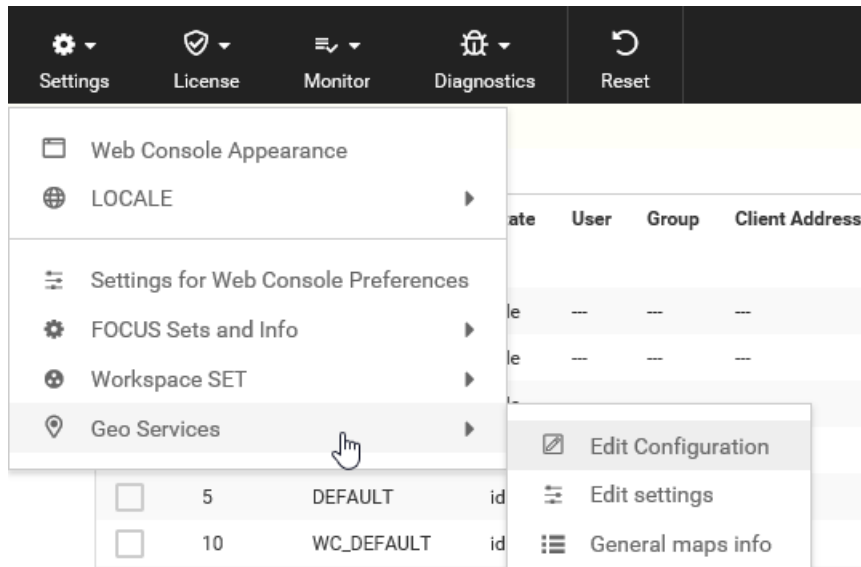
2. Select *Edit settings* from the context menu to open the Change Setting for GEO services page, as shown in the following image.

3. The following settings control unified geographic roles.

❏ **GEOROLES-AUTO.** Automatically assigns a geographic role, based on the field name. For example, field name COUNTRY_NAME will be assigned the geographic role COUNTRY.

❏ **GEO_UNIFIED_ROLE.** This compatibility setting must be turned on (the default) to activate unified geographic roles. Turn it off to use geographic roles from prior releases. On indicates that the new shorter set of geographic roles that combines subsets of previously used roles will be used. Off will use geographic roles from previously shipped releases. The default value is On.

❏ **GEO_MAP_PROVIDER.** Assigns names of the providers of geographic maps. The list of names should be separated with slashes to be used by transformation code for mapping. The currently supported set of providers includes WFRS (geographic boundaries distributed in the Reporting Server) and ESRI. The default value is Esri and WFRS MBR.

❑ **GEO_ALIASING.** On enables aliasing to map administrative entities. Aliasing is a mechanism to support alternative names/spellings to the administrative names used as keys to find the corresponding geometry. Caution, incorrect results will be reported on a map in the case where the column data contains variations of names/spellings for the same administrative entity (resolved to the same key). Alias names are stored in .csv files. Shipped aliasing files are located in the geomaps subdirectory of the etc folder under EDAHOME. The naming convention is geo_srv_dbl_*geo_role*. Each data file has an associated synonym with the same name. Aliasing is currently supported for the four geo roles COUNTRY, STATE, COUNTY, and CITY. The STATE aliasing data file includes the valid country name for each state. COUNTY and CITY files include valid country and state names. *Valid* means the actual key value used to fetch a geometry. The default value is On.

❑ **GEO_ALIASING_APP.** Sets an application name for user-added .csv files with aliases. DEFAULT means no user files. User-added alias data files are supported for the four geo roles COUNTRY, STATE, COUNTY, and CITY (see the description for the GEO_ALIASING setting). The default value is DEFAULT, which uses the server aliasing files.

The best practice is to copy the desired .csv file from the _edahome/etc/geomaps folder to the application folder named in this setting, and edit it, changing aliases or adding records with new ones. There are four FOCEXECs named geo_srv_mapkey_<geo_role> that have the mandatory parameter ISO2 country name. The following is a request example that reports city names for South Africa sorted by state/province name.

```
EX geo_srv_mapkey_city ISO2='ZA'
```

The following is an example of user-created records (based on the obtained report):

```
"South Africa", "Gauteng", "Johannesburg", "City of Johannesburg"
"South Africa", "Western Cape", "Paarl", "Drakenstein"
```

❑ **GEO_ALIASING_FIPS.** On enables FIPS aliasing to United States map administrative entities. This setting requires GEO_ALIASING to be On. The data file with the United State FIPS aliases is processed as an extension to the main aliases data file. The default value is On.

❑ **GEO_COUNTRY.** Assigns a default value for an automatically added DEFINE field with GEOGRAPHIC_ROLE 'Country'. This mechanism is in effect during the create metadata process when the setting GEOROLES-AUTO is On and a column with geo role COUNTRY is not detected. The generated DEFINE field will be used to create geo hierarchies required in mapping. The default value is 'United States'.

❑ **GEOROLE_2_MBRLEVEL.** CUSTOM enables customized per country mapping of the georoles (STATE, COUNTY, and CITY) to the MBR administrative levels. STANDARD sets uniform mapping of geo roles (STATE, COUNTY, and CITY) to the MBR administrative levels. STANDARD sets uniform mapping of geo roles (STATE, COUNTY, and CITY) for all countries to the MBR administrative levels (1, 3, and 5 respectively). There is a geo_role2mbrlev FOCEXEC to list countries with customized administrative levels. The report does not depend on this setting.

4. Click *Save*.

Procedure: How to Edit the Geographic Configuration

The GEO configuration editor provides a tool for editing or adding properties for geographic roles, basemaps, reference layers, and demographic layers. In addition, it enables you to add maps and shapefiles to the configuration.

1. Go to the Web Console Workspace page, click *Settings*, and then select *Geo Services*.

2. Select *Edit Configuration* from the context menu to open the GEO configuration editor, as shown in the following image.
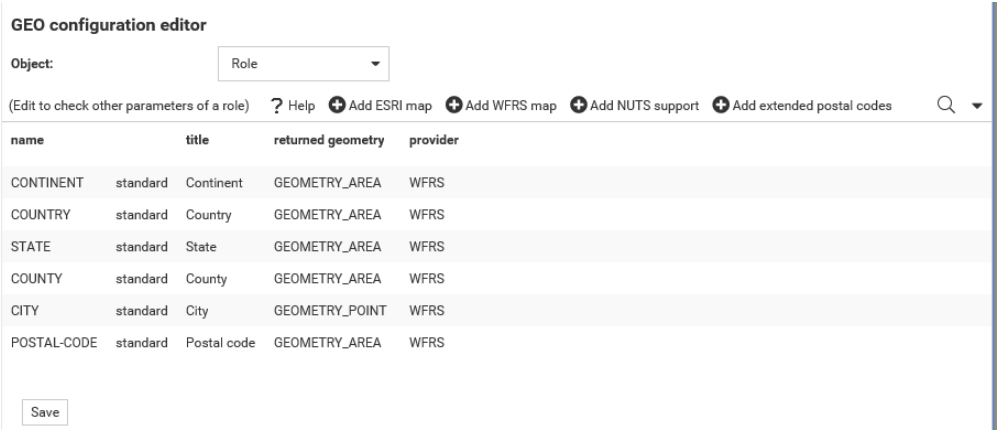
You can select the following objects from the Object drop-down list.

❑ Role

❑ Basemap

❑ ContextLayer

You can edit the properties for a basemap or context layer (reference layer or demographic layer), or add a new one. You cannot edit the properties of a standard geographic role. To add a customized geographic role, you first add an Esri map or a shapefile (WFRS map) and assign the geographic role to the map or shapefile.

The following standard unified geographic roles are configured by default and cannot be changed. These geographic roles create a hierarchy that can be used to drill down or up between levels of administration in maps, reports, or charts.

❏ CONTINENT

❏ COUNTRY

❏ STATE

❏ COUNTY

❏ CITY

❏ POSTAL CODE

The following describes columns for geographic roles in the configuration editor.

name

Is the unique name of the geographic role. It cannot contain spaces, but it can contain underscores (_).

Next to the name is an indicator of whether the role is a standard role or a customized role.

title

Is the description of the geographic role that is displayed in reports and in drop-down lists in the Web Query tools.

returned geometry

Is the type of geographic data returned from the map service for rendering on the map.

Valid values include:

❏ GEOMETRY_AREA

❏ GEOMETRY_POINT

❏ GEOMETRY_LINE

3. To add a new basemap or customize an existing basemap, select *Basemap* from the Object drop-down list.

The following image shows the GEO configuration editor with the Basemap object selected.
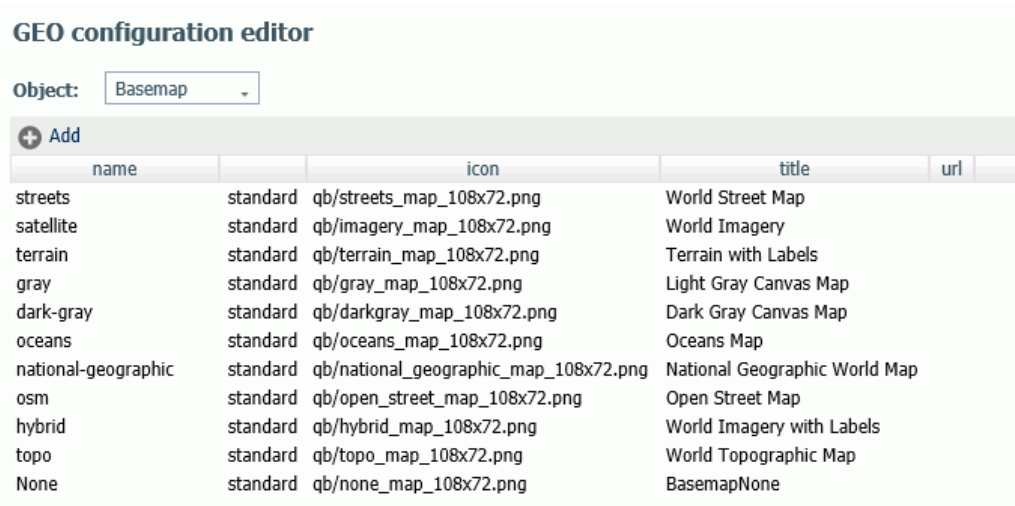
The following is a description of the properties used for basemap configuration.

name

>   Is the name of the basemap.
>
>   Next to the name is an indicator of whether the basemap is a standard basemap or a customized basemp.

icon

>   Is the name of the thumbnail for the basemap (for a standard basemap) or the URL to the thumbnail (for a customized basemap) that will appear on the Basemap drop-down list in the Web Query tools or the Change Basemap map widget.

title

>   Is a title to display on the Basemap drop-down list in the Web Query tools or the Change Basemap map widget.

type

>   Valid values are tiled and vector.

url

>   Is the URL to the map service that provides the basemap, for a customized basemap. For a standard basemap, the URL is already stored in the server geographic configuration file and is not displayed.

add-on JSON

Specifies additional JSON properties for rendering the map.

❏ To customize the properties of an existing basemap, click the down arrow next to a basemap name or right-click the basemap row and click *Customize BASEMAP*.

The Customize Basemap dialog box opens, as shown in the following image.

Customize BASEMAP:streets

name:	streets
icon:	qb/streets_map_108x72.png
title:	World Street Map
type:	tiled ▼
url:	
	Verify
add-on JSON:	

OK   Cancel

Edit the properties you want to change. If you change the URL, you can click *Verify* to make sure the map service is valid and accessible.

When you are finished, click *OK*, then click *Save* on the GEO configuration editor Basemap page.

❏ To add a new basemap to the configuration, click *Add*.

The *Create a BASEMAP* dialog box opens, as shown in the following image.

Create a BASEMAP

name:

icon:

title:

type: tiled   ▼

url:

Verify

add-on JSON:

OK   Cancel

Type a name for the basemap, a URL to the thumbnail, a title to display, and the URL to the map service that provides the basemap, and click *Verify*.

When you have configured the properties, click *OK*, then click *Save* on the GEO configuration editor Basemap page.

4. To add a new context layer or customize an existing context layer, select *ContextLayer* from the Object drop-down list.

The following image shows the GEO configuration editor with the ContextLayer object selected.

The following is a description of the properties used for context layer configuration.

name

Is the name of the context layer.

Next to the name is an indicator of whether the context layer is a standard context layer or a customized context layer.

authorization

Is the type of authentication needed to access this context layer. Valid values are:

❏ **silent.** Credentials for your ArcGIS application are provided in the connection string of the Adapter for Esri ArcGIS.

❏ **none.** No authorization is needed.

❏ **named.** User credentials are provided in the connection string of the Adapter for Esri ArcGIS.

❏ **on premises.** User credentials for a locally hosted ArcGIS server are provided in the connection string of the Adapter for Esri ArcGIS.

`layer type`

Is the type of context layer. For a cached layer, the layer type is tile. For a layer that is rendered dynamically, the layer type is featurelayer.

`title`

Is a title to display on the demographic layer drop-down list in the Web Query tools.

`uri`

Is the URL to the map service that provides the context layer.

`add-on JSON`

Specifies additional JSON properties needed for rendering the context layer. For example, smartMapping properties define the border styles within the context layer.

❏ To customize the properties of an existing context layer, right-click the context layer row and click *Customize context layer*.

The Customize CONTEXTLAYER dialog box opens, as shown in the following image.

Edit the properties you want to change. If you change the URI, you can click *Verify* to make sure the map service is valid and accessible.

When you are finished, click *OK*, then click *Save* on the GEO configuration editor Context Layer page.

❏ To add a new context layer to the configuration, click *Add*.

The *Create a Custom CONTEXTLAYER* dialog box opens, as shown in the following image.

Create a Custom CONTEXTLAYER

name:

authorization: none   ▼

layer Type: tile   ▼

title:

add-on JSON:

uri:

Verify

OK   Cancel

Type a name for the context layer, the authorization type, a layer type, a title to display, any additional JSON needed for rendering the context layer, and the URI to the map service that provides the context layer, and click *Verify*.

When you have configured the properties, click *OK*, then click *Save* on the GEO configuration editor Context Layer page.

Reference: **Editing the List of Geographic Roles**

To add a geographic role to the configuration, you can add a new Esri map or a shapefile hosted by the Server and associate a geographic role with the new map. You can also implement NUTS geographic roles support.

Adding a New Role for an Esri Map

To add an Esri geographic role, click *Add ESRI map* on the GEO configuration editor.

The *Create a new ESRI map role* dialog box opens, as shown in the following image.

Configure the following map service properties.

`name`

Is a name for the geographic role.

`title`

Is a title to display in the Web Query tools.

`returned geography`

Select the type of geometry that is returned from the map service for this role. Valid values are:

❏ **GEOMETRY_AREA.** Returns JSON polygon definitions.

❏ **GEOMETRY_LINE.** Returns JSON line definitions.

❏ **GEOMETRY_POINT.** Returns a JSON point.

`url`

Is the URL to the map service that provides the geographic data.

Click *Verify* after entering the URL to verify that the map service is available by going to the specified URL.

`Service parameters`

Add as parameters any additional geographic roles needed to identify the exact location of the new role. For example, a city name needs state and country parameters.

The following properties add the Web Query Regions role to the configuration.

Edit geography role REGION ✕

Associated mapping service properties

name:	REGION
title:	WF_REGIONS
returned geometry:	GEOMETRY_AREA ▾
provider:	ESRI ▾
authorization:	none ▾
url:	http://services7.arcgis.com/L95Wwv9OjR(

❮ ▭ ❯

Verify

Service parameters: ⊕ Add   🔍 ▾

position	GEO role	parameter name
1	REGION	SUB_REGION
2	▾	

OK   Cancel

Note: The *parameter name* corresponds to the field name in the FeatureLayer referenced in the following URL:

```
http://services7.arcgis.com/L95Wwv9OjRQ0tjAs/ArcGIS/rest/services/
wfretail_sub_regions/FeatureServer/0
```

Click *OK* when you have finished configuring the properties.

The new role is added to the configuration as a customized role, as shown in the following image.

GEO configuration editor

Object: Role   ▼

(Edit to check other parameters of a role)   ? Help   ⊕ Add ESRI map   ⊕ Add WFRS map   ⊕ Add NUTS support   ⊕ Add extended postal codes

name		title	returned geometry	provider
REGION	customized	WF_REGIONS	GEOMETRY_AREA	ESRI
CONTINENT	standard	Continent	GEOMETRY_AREA	WFRS
COUNTRY	standard	Country	GEOMETRY_AREA	WFRS
STATE	standard	State	GEOMETRY_AREA	WFRS
COUNTY	standard	County	GEOMETRY_AREA	WFRS
CITY	standard	City	GEOMETRY_POINT	WFRS
POSTAL-CODE	standard	Postal code	GEOMETRY_AREA	WFRS

Click *Save* to save this role to the configuration.

The following image shows an example of using the Web Query Regions geographic role in a map request.
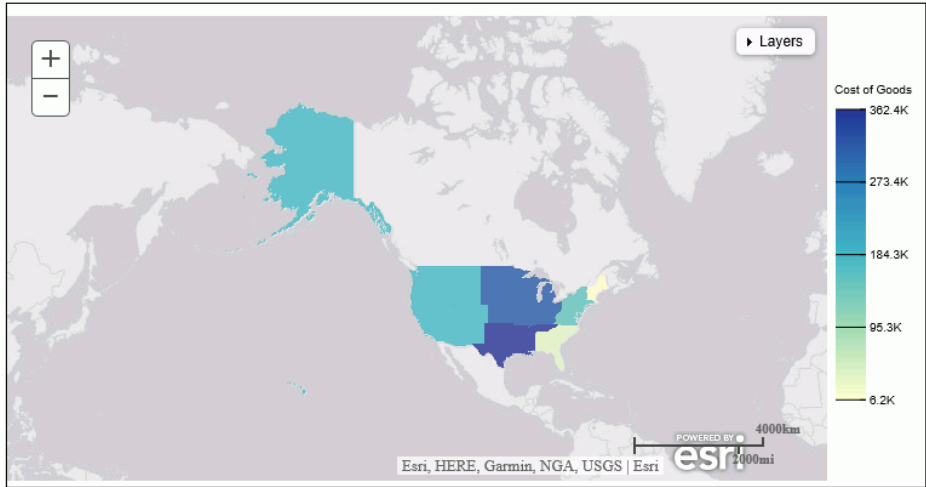
Adding a New Role for a Server-Hosted Map

A server-hosted map is based on a shapefile. You must upload the shapefile (.dbf) to an application folder accessible to the server. The server will transform it to ibijson format.

An ESRI shape file is actually a collection of at least four files:

❏ **.dbf file.** The .dbf file is a standard database file used to store attribute data and object IDs. A .dbf file is mandatory for shape files.

❏ **.shp file.** The .shp file is a mandatory Esri file that gives features their geometry. Every shapefile has its own .shp file that represents spatial vector data.

❏ **.shx file.** The .shx file is a mandatory Esri shape index position file. This type of file is used to search forward and backward.

❏ **.prj file.** The .prj file is an optional file that contains the metadata associated with the shapefiles coordinate and projection system.

All files must have exactly the same name and be located in the same directory. If they are not, the shapefile conversion will fail.

When there are several possible keys associated with a geometry, a drop-down list of detected key names will be displayed. Select any one of these fields. No selection is required when there is a single geometry key.

The shapefile should only be in the GCS_WGS_1984 - World Geodetic System 1984 (decimal degrees) coordinate system.

To add a geographic role for a Server-hosted map, click *Add WFRS map* on the GEO configuration editor.

The *Add WFRS hosted map* dialog box opens, as shown in the following image.

Configure the following properties.

role name

Is a name for the geographic role.

Geometry type

Select either POLYGON or POINT from the drop-down list.

Esri shape

Type the name of the application directory where the shapefile resides, or click the ellipsis (...) to navigate to the application directory. Then select the .dbf file for the role.

Load to app

Type the name of the application directory where you want to place the ibijson file, or click the ellipsis (...) to navigate to the application directory.

Quantization type

Quantization is the process of transforming a large set of input values to a smaller set of values. When transforming the shapefile, the server will quantize points that are too close together in order to optimize map rendering performance. Two methods are available for quantization, LINEAR or GRID. The default is LINEAR.

Quantization_X

Is the threshold value for the x-axis.

Quantization_Y

Is the threshold value for the y-axis.

If the map has multiple keys, a drop-down list displays so that you can select one.

Click *OK* when you have finished configuring the properties.

The new role is added to the configuration as a customized role.

Click *Save* to save this role to the configuration.

You can test the role by right-clicking the role in the configuration editor and clicking *Test*. A sample map will be generated, as shown in the following image.
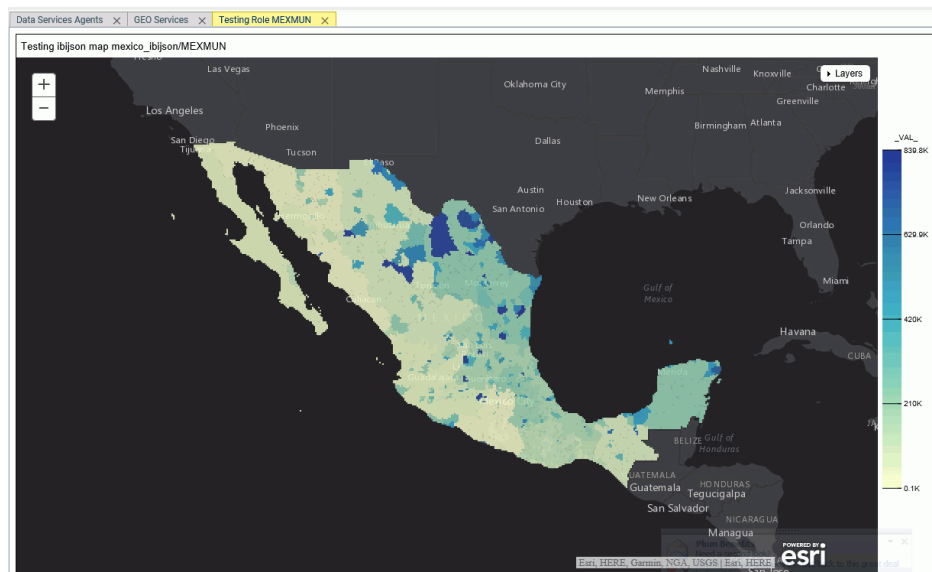
Adding NUTS Support

Nomenclature of territorial units for statistics (NUTS) are geographic roles specific to the European Union.

To add NUTS geographic roles to the configuration, click *Add NUTS support* on the GEO configuration editor.

The NUTS geographic roles are added, as shown in the following image.
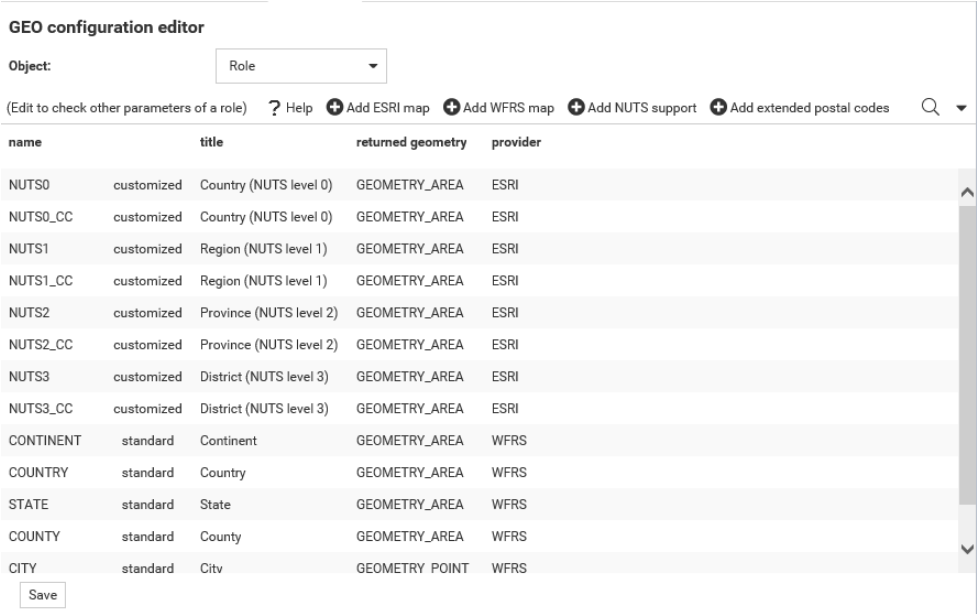
Click *Save* to save these roles to the configuration.

Adding Support for Extended Postal Codes

Click *Add extended postal codes* to add support for Level 1 and Level 2 postal codes used in certain countries.

Customizing Vocabulary Rules

For each geographic role, a set of vocabulary rules define how to recognize when a field name should automatically be assigned to that role. If you right-click a role, you can click *Customize vocabulary* from the context menu.

Elements in a rule are connected by the Boolean logic operation OR (only one needs to be satisfied). Each vocabulary element contains words enclosed with special characters. Words in the rule element are connected by the Boolean logic operation AND (all need to be satisfied).

A word may be prefixed and/or suffixed with the percent character (%), which is a placeholder for any sequence of characters. If an element contains more than one word, each word has to be prefixed by the character plus (+) or minus (-). Plus indicates that the word must be found in the column name. Minus indicates that word must not be found in the column name.

For example, the following are the vocabulary rules for the role COUNTRY.

Customize vocabulary for geography role COUNTRY   ✕

Vocabularies: ⊕ Add optional   🔍

Value

| +country-%capital%-%population% |
| +%_country-%capital%-%population% |
| +country_%capital%-%population% |
| +%_country_%-%capital%-%population% |

OK   Cancel

To add another rule, click *Add optional*.

When you are finished, click *OK*.

Click *Save* to save these rules to the configuration.

SQL Adapters

This section provides descriptions of new features for SQL adapters.

SQL Adapters: Optimization of Simplified Statistical Functions

Simplified statistical functions can now be optimized to SQL for those adapters that support statistical functions. To determine which adapters support optimization of the simplified statistical functions, run the SQL Optimization Report from the Web Console Connect to Data page, as shown in the following image.
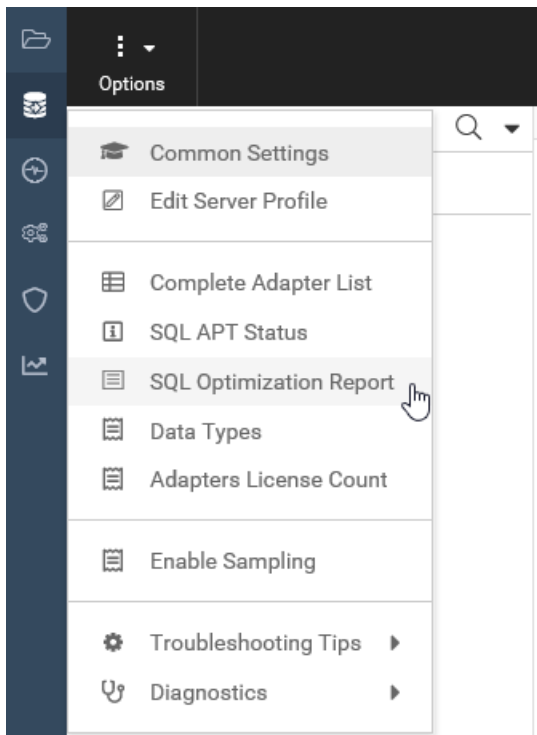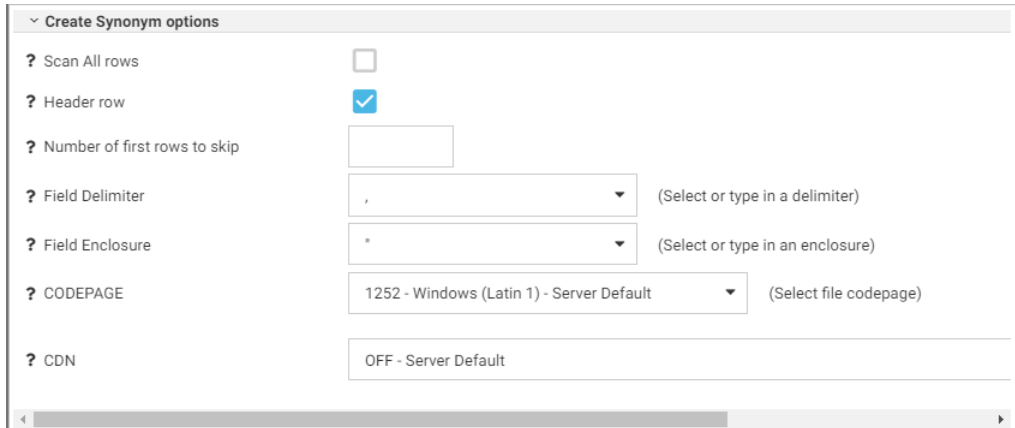
Sequential and Indexed Adapters

This section provides new feature descriptions for sequential and indexed adapters.

Adapter for Delimited Files: Skip Rows Before Header

When you upload or create a synonym for a delimited file, you can indicate that a header row exists that provides column names. Sometimes, delimited files have other rows above the header row. These rows may be blank or may contain general heading information that do not provide attributes that should be included in the synonym. The synonym creation parameters screen for delimited files now provides an option for indicating the number of rows that need to be skipped before the header row, as shown in the following image.

Enter the number of rows to skip in the field labeled *Number of first rows to skip*.

For example, in the following image, the header row is row 5.

	A	B	C	D	E	F
1	Data Source	World Development Indicators				
2						
3	Last Updated	8/28/2018				
4						
5	Country Nam	Country Code	Indicator Name	Indicator Code	1960	1961
6	Aruba	ABW	Population, total	SP.POP.TOTL	54211	55438
7	Afghanistan	AFG	Population, total	SP.POP.TOTL	8996351	9166764
8	Angola	AGO	Population, total	SP.POP.TOTL	5643182	5753024
9	Albania	ALB	Population, total	SP.POP.TOTL	1608800	1659800
10	Andorra	AND	Population, total	SP.POP.TOTL	13411	14375
11	Arab World	ARB	Population, total	SP.POP.TOTL	92490932	95044497
12	United Arab E	ARE	Population, total	SP.POP.TOTL	92634	101078
13	Argentina	ARG	Population, total	SP.POP.TOTL	20619075	20953077
14	Armenia	ARM	Population, total	SP.POP.TOTL	1874120	1941491
15	American San	ASM	Population, total	SP.POP.TOTL	20013	20486

Entering 4 in the Number of first rows to skip field adds the following attribute in the Access File.

```
SKIP_ROWS=4
```

This number is used both when creating the synonym and reading the data. The *Show file* option that is available when creating a synonym now shows all lines, including blank lines, to aid you in determining how many lines should be skipped.

Adapter for Excel: Creating a Synonym for Crosstabbed Data

Synonyms can now be automatically created in a crosstab format for data in Excel Worksheets.

When you create a synonym using the Adapter for Excel, there is now a check box labeled Crosstab for each Worksheet, as shown in the following image.

When selected, the header rows, up to the number specified, are un-pivoted to become data values.

The following shows a partial Excel Spreadsheet open in the Data Management Console. The headers include Product Category, a value for Product Category, Product Subcategory, and a value for Product Subcategory.

	ROWID	REPORT_RETAIL_WF_RETAIL_LITE_RPT_FEX	FIELD_2	FIELD_3	FIELD_4	FIELD_5	FIELD_6	FIELD_7	FIELD_8
1	2	.	Product,Category	.	.	.	.	.	.
2	3	.	Accessories	.	.	Camcorder	.	.	Computers
3	4	.	Product,Subcategory	.	.	.	.	.	.
4	5	.	Charger	Headphones	Universal Remote Controls	Handheld	Professional	Standard	Smartphone
5	6	Store Name	.	.	.	.	.	.	.
6	7	Amsterdam	2724	5738	4471	6276	339	4649	4881
7	8	Anchorage	575	1269	966	1309	72	1039	1169
8	9	Arlington	420	857	750	1037	67	774	849
9	10	Athens	39	81	47	98	4	65	47
10	11	Atlanta	820	1708	1356	1923	97	1475	1674
11	12	Bangalore	79	187	144	196	7	168	121
12	13	Bangkok	1	3	4	8	2	20	7
13	14	Barcelona	92	239	145	204	10	164	130
14	15	Beijing	3	12	7	11	.	8	2
15	16	Belfast	1	6	5	2	.	6	1
16	17	Berlin	2477	5286	4370	6118	292	4558	4901
17	18	Boise	163	249	182	305	18	229	205
18	19	Boston	397	1022	723	1026	55	771	899

LOOPBACK: Related

With Crosstab not checked, the resulting Master File has a field for every column on the Spreadsheet. The following is a partial list of fields for the Spreadsheet:

```
FIELDNAME=PRODUCT_CATEGORY_ACCESSORIES_PRODUCT_SUBCATEGORY,
ALIAS='Product,Category_Accessories_Product,Subcategory', USAGE=A8V,
ACTUAL=A8V,
     MISSING=ON,
     TITLE='Product,Category_Accessories_Product,Subcategory', $
   FIELDNAME=FIELD_3, ALIAS=FIELD_3, USAGE=A12V, ACTUAL=A12V,
     MISSING=ON,
     TITLE='FIELD_3', $
   FIELDNAME=FIELD_4, ALIAS=FIELD_4, USAGE=A31V, ACTUAL=A31V,
     MISSING=ON,
     TITLE='FIELD_4', $
   FIELDNAME=CAMCORDER, ALIAS=Camcorder, USAGE=A10V, ACTUAL=A10V,
     MISSING=ON,
     TITLE='Camcorder', $
   FIELDNAME=FIELD_6, ALIAS=FIELD_6, USAGE=A15V, ACTUAL=A15V,
     MISSING=ON,
     TITLE='FIELD_6', $
   FIELDNAME=FIELD_7, ALIAS=FIELD_7, USAGE=A10V, ACTUAL=A10V,
     MISSING=ON,
     TITLE='FIELD_7', $
   FIELDNAME=COMPUTERS, ALIAS=Computers, USAGE=A12V, ACTUAL=A12V,
     MISSING=ON,
     TITLE='Computers', $
   FIELDNAME=FIELD_9, ALIAS=FIELD_9, USAGE=A7V, ACTUAL=A7V,
     MISSING=ON,
     TITLE='FIELD_9', $
   FIELDNAME=MEDIA_PLAYER, ALIAS='Media Player', USAGE=A8V, ACTUAL=A8V,
     MISSING=ON,
     TITLE='Media Player', $
```

With Crosstab checked, multiple measures unchecked, and five header rows specified, PRODUCT_CATEGORY becomes one dimension field, PRODUCT_SUBCATEGORY becomes a second dimension field, and the numeric values in the Spreadsheet become a measure field. The first column (containing store names) becomes an alphanumeric field. For example:

LOOPBACK: Data for foccache/cross_demo_sheet1. Limit 500 rows.

Double the Row Limit

	Store Name	Product Category	Product Subcategory	Measure
1	Amsterdam	Accessories	Charger	2724
2	Amsterdam	Accessories	Headphones	5738
3	Amsterdam	Accessories	Universal Remote Controls	4471
4	Amsterdam	Camcorder	Handheld	6276
5	Amsterdam	Camcorder	Professional	339
6	Amsterdam	Camcorder	Standard	4649
7	Amsterdam	Computers	Smartphone	4881
8	Amsterdam	Computers	Tablet	2841
9	Amsterdam	Media Player	Blu Ray	17439
10	Amsterdam	Media Player	DVD Players	1232
11	Amsterdam	Media Player	DVD Players - Portable	361
12	Amsterdam	Media Player	Streaming	1591
13	Amsterdam	Stereo Systems	Boom Box	619
14	Amsterdam	Stereo Systems	Home Theater Systems	10059

The resulting Master File follows:

```
FILENAME=RETAIL_CROSS_CROSS_ON, SUFFIX=DIREXCEL,
 DATASET=ibisamp/retail_cross.xlsx, BV_NAMESPACE=OFF, $
  SEGMENT=RETAIL_CROSS_CROSS_ON, SEGTYPE=S0, $
    FIELDNAME=DHL1, ALIAS=DHL1, USAGE=A20V, ACTUAL=A20V,
      MISSING=ON,
      TITLE='DHL1', $
    FIELDNAME=DVL1_PRODUCT_CATEGORY, ALIAS='Product,Category',
      USAGE=A20V, ACTUAL=A20V,
      MISSING=ON,
      TITLE='Product,Category', $
    FIELDNAME=DVL2_PRODUCT_SUBCATEGORY, ALIAS='Product,Subcategory',
      USAGE=A31V, ACTUAL=A31V,
      MISSING=ON,
      TITLE='Product,Subcategory', $
    FIELDNAME=REPORT_RETAIL_WF_RETAIL_LITE_RPT_FEX,
      ALIAS='Report retail/wf_retail_lite_rpt.fex',
      USAGE=I9, ACTUAL=A11V,
      MISSING=ON,
      TITLE='Report retail/wf_retail_lite_rpt.fex', $
  FOLDER=MG_RETAIL_CROSS_CROSS_ON, PARENT=.,
    DV_ROLE=MEASURE,
    DESCRIPTION='Measure Groups', $
  FOLDER=RETAIL_CROSS_CROSS_ON, PARENT=MG_RETAIL_CROSS_CROSS_ON,
    DESCRIPTION='Retail_cross_cross_on', $
    FIELDNAME=REPORT_RETAIL_WF_RETAIL_LITE_RPT_FEX,
      BELONGS_TO_SEGMENT=RETAIL_CROSS_CROSS_ON, $
  FOLDER=DIM_RETAIL_CROSS_CROSS_ON, PARENT=.,
    DV_ROLE=DIMENSION,
    DESCRIPTION='Dimensions', $
  FOLDER=RETAIL_CROSS_CROSS_ON1, PARENT=DIM_RETAIL_CROSS_CROSS_ON,
    DESCRIPTION='Retail_cross_cross_on', $
    FIELDNAME=DHL1, BELONGS_TO_SEGMENT=RETAIL_CROSS_CROSS_ON, $
  FOLDER=DVL, PARENT=RETAIL_CROSS_CROSS_ON1,
    DESCRIPTION='DVL', $
    FIELDNAME=DVL1_PRODUCT_CATEGORY,
      BELONGS_TO_SEGMENT=RETAIL_CROSS_CROSS_ON,
      DV_ROLE=LEVEL,   $
    FIELDNAME=DVL2_PRODUCT_SUBCATEGORY,
      BELONGS_TO_SEGMENT=RETAIL_CROSS_CROSS_ON,
      DV_ROLE=LEVEL,   $
```

You can now issue a request to produce a report similar to the report shown in the following image.

Store	Category	Subcategory	Measure
Amsterdam	Accessories	Charger	2724
		Headphones	5738
		Universal Remote Controls	4471
	Camcorder	Handheld	6276
		Professional	339
		Standard	4649
	Computers	Smartphone	4881
		Tablet	2841
	Media Player	Blu Ray	17439
		DVD Players	1232
		DVD Players - Portable	361
		Streaming	1591
	Stereo Systems	Boom Box	619
		Home Theater Systems	10059
		Receivers	3833
		Speaker Kits	6257
		iPod Docking Station	7939
	Televisions	CRT TV	333
		Flat Panel TV	2293
		Portable TV	517
	Video Production	Video Editing	4897
Anchorage	Accessories	Charger	575
		Headphones	1269
		Universal Remote Controls	966
	Camcorder	Handheld	1309
		Professional	72
		Standard	1039
	Computers	Smartphone	1169
		Tablet	962
	Media Player	Blu Ray	3588
		Streaming	343
	Stereo Systems	Home Theater Systems	2191
		Receivers	805
		Speaker Kits	1441
		iPod Docking Station	1651
	Televisions	Flat Panel TV	459
	Video Production	Video Editing	1066

Db2 Web Query for i Enhancements

The following new features and enhancements apply to Db2 Web Query for i.

Sparkline Visuals

Two new sparkline key performance indicator (KPI) charts are available for Visualizations. Sparkline is a microchart that has no titles, labels, or legends. It is a single line chart that is intended to be drawn in a very small area to show the shape of the variation, without axes or coordinates. A sparkline can be embedded in text or tables. The following image shows an example of a sparkline chart.

You can select a sparkline chart when creating or editing a visualization. Click the *Home* tab on the ribbon, then click the *Visual* group, and then select the chart from the *Change* options. The new Visual selections are:

❏ Sparkline KPI: KPI Widget using the jQuery Sparkline plug-in, as shown in the following image.
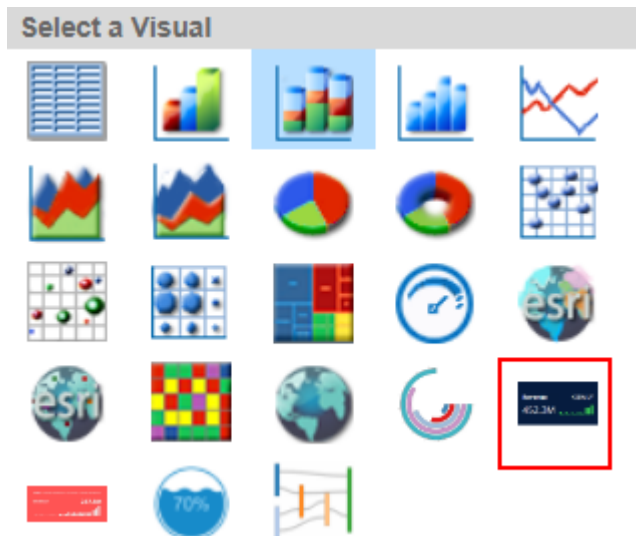
❏ KPI with Sparkline Large: KPI with jQuery Sparkline plug-in - Large, as shown in the following image.
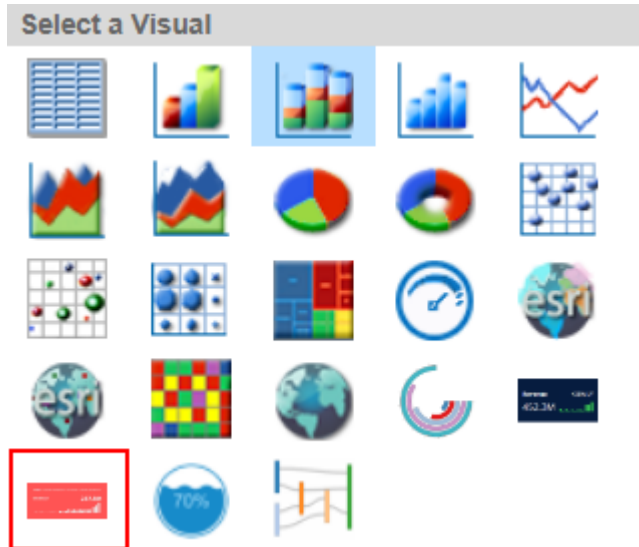
Upload Data Types

The Upload data option, available by right-clicking a repository folder, moves a file from a user workstation to the transient storage on the IBM i. There the file can then be prepared for metadata, using default options or by adding joins, dimensions, virtual fields, or other attributes. When you are done preparing the metadata, the file is loaded into the target Db2 environment and is available as a data source for reporting.

In this hotfix, two new data types, JSON and XML, are supported for Upload,

The following image shows the list of supported data types.
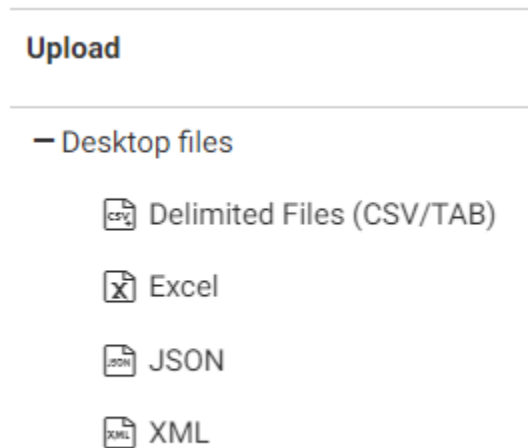
Trace Option for CFGWQSSO

A new parameter, TRACE, was added to the Configure Web Query SSO (CFGWQSSO) command. It provides a convenient way to enable tracing, when necessary, to debug the underlying Kerberos environment. More specifically, it enables Liberty Web Application Server security traces and Java Generic Security Service (JGSS) tracing for SPNEGO.

The parameter values are as follows:

❏ ***OFF.** Turns tracing off. This is the default value.

❏ ***ON.** Turns tracing on.

❏ ***SAME.** No changes to tracing.

DataMigrator Enhancements

This section describes the new features for DataMigrator.

DataMigrator represents a broad category of tools designed to facilitate and automate the extraction and integration of data. From source extraction through target load, data is transformed through the application of business rules. Once the transformation is complete, the data is loaded into table structures that have been optimized for a particular application.

Data Management Console

The following section provides descriptions of new features for the Data Management Console (DMC).

Data Type Icons

In the Data Management Console, field names are shown with an icon that identifies the data type of the field. For example:
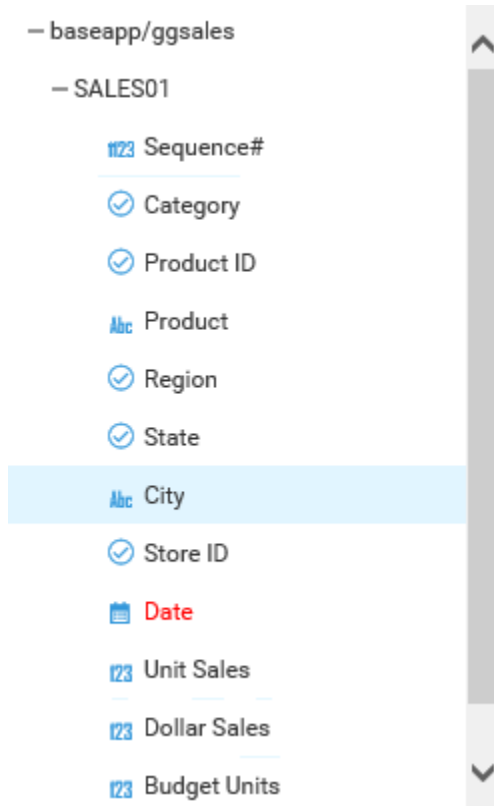
Group and Replace

In the synonym editor, the *Group and Replace* option provides a new user interface to simplify adding a field that groups together similar related values.

To implement Group and Replace, right-click a field in the synonym editor, point to *New Expression*, and click *Group and Replace*.

A group field is created with all values ungrouped.

You can create new subgroups either by selecting *Create a New Group* from the pull-down menu, or by right-clicking a value on the list and clicking *Make a new group*.

The options available on the pull-down menu are shown in the following image.

```
···   Display                    ▶

⊞   Add All
⊟   Create a New Group
◇   Ungroup All

⊟   Recreate groups by Metaphone
⊟   Recreate groups by SoundEx

☑   Edit properties
⊟   Hide Group Card
```
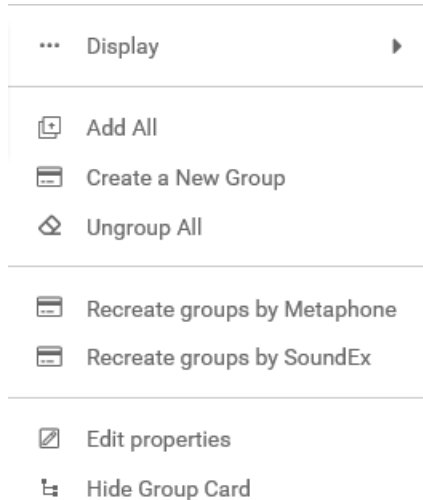
You can perform the following operations using this menu.

❏ Display the group frame as a single list or a double list.

❏ Add all of the values to a group.

❏ Create a new group.

❏ Ungroup all of the values.

❏ Recreate groups phonetically using either the Metaphone or Soundex algorithm. Soundex calculates a code for alphanumeric values so that if they sound the same but are spelled differently, they will still have the same code. Metaphone is an improved version of Soundex that takes into account anomalies in English spelling and pronunciation.

❏ Edit the properties of the group field, such as its name.

❏ Hide the group.

Once you have created a subgroup, you can drag values into that subgroup. To facilitate this operation, *Double List* was selected from the *Display* option on the pull-down menu, as shown in the following image.
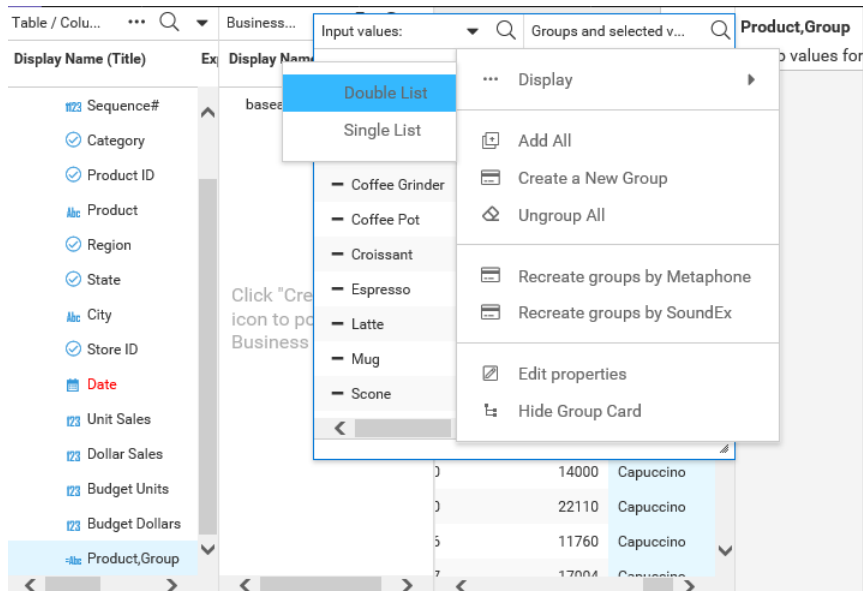
Data and Process Flows

The following section provides descriptions of new features for data and process flows.

Formatted Files With Excel Format Now Use .XLSX

DataMigrator customers that create a formatted file with a specified format of EXL2K (excel) can now create Excel files in the .xlsx format that is found in Excel 2007 and later. You can create an Excel worksheet by adding a new target to a data flow, selecting *Formatted File* as the adapter, and selecting *EXL2K* from the Format drop-down menu.

Enhancements to Join Profiling

Along with the Join Profiling report option, there is a new Join Profiling Chart available. This chart shows a horizontal bar chart that represents the number of rows that would be returned from each table when a Left Outer, Right Outer, Full Outer, and Inner Join is run. You can access this new chart by clicking the *Join Profiler* button in the Join Editor dialog box.

Ability to Disable the Automatically Connect Object Feature

Currently, when you add an object to a Data Flow, the object automatically gets connected to the SQL object in the workspace. A new option for Data Flows allows you to disable this automatic connection. You can find this option in the Data Flow Designer section of the Options dialog box.

Data Profiling

The following section provides descriptions of new features for data profiling.

Data Profiling Enhancement - Forecast and Distribution Charts

Data Profiling provides data characteristics for the columns in a synonym. This release introduces two new options: Forecast Chart and Distribution Chart.

The Forecast Chart allows data profiling on numeric fields, and displays the values used for both the actual data values and forecast values in a bar chart. For the selected numeric field, you can specify the field to sort by, the number of predictions you wish to see, and the forecast type. The Forecast Chart is available for numeric fields only.

The Distribution Chart feature displays the most frequent values, along with a report that shows the basic data profiling statistics for the field

Reporting

The following section provides descriptions of new features for reporting.

New Dependencies Analysis Column

The Dependencies Analysis report for a DataMigrator flow or synonym shows all of the synonyms and flows that it references.

A new column in the report shows the last modified date for each dependent file.

Changes in Behavior

The following topics describe changes in behavior for Db2 Web Query 2.2.1 Hotfix 7.

Creating a Template Folder

When creating a template folder in the Synonym Editor, the predefined folders are not created.

To create the predefined folders, click the *Create Template Folders* icon, as shown in the following image.

The Filters and Variables, Measure Groups, and Dimensions folders are created, as shown in the following image.

Landing Page for Ports 12331 and 12336

The landing page has changed for the following URLs:

```
http://[system]:12331
http://[system]:12336
```

When accessing the port URLs directly, you will now see the following message, instead of the Welcome to Liberty page.

> ## Not Found
>
> This port is reserved for IBM Db2 Web Query for i. The log-in page for Web Query is at http://[system]:12331/webquery. If you received this message while accessing the log-in page, please wait a minute and try again.

You might also see the new message after a Web Query startup, when immediately accessing the login URL http://[*system*]:12331/webquery. Although WRKWEBQRY status may show Active, the message will be issued if the back-end startup processing needs more time to finish. The new Not Found message will be issued, instead of the previous Context Root Not Found error. If you see the message, simply wait a minute or two and try again.

Event Log

The event log, which contains diagnostic data for the Web Query client, has been renamed to event.log. At the end of each day, the event log is renamed for backup and a new event.log file is created. The backup file is named event-yyyy-mm-dd-#.log, where *yyyy-mm-dd* is the current date. The log files reside on the IBM i in directory /qibm/userdata/qwebqry/base80/logs.

Mobile Favorites

The Mobile Favorites folder on the Web Query portal has been merged with the Favorites folder. Existing Mobile Favorites from previous releases will be migrated automatically into the Favorites folder. To add new reports to the Favorites app, right-click the report and select *Add to Favorites*. Items in the Favorites folder will display on the mobile launch page.

Mobile App

The mobile app is a simple, intuitive app that empowers users of mobile devices with robust, easy-to-use reporting and analysis. The app, through integration with Active Technologies, delivers rich, interactive analytic functionality to mobile devices, fully exploiting the device's native gestures.

The mobile app for iOS devices, such as an Apple® iPad® or iPhone®, has been renamed from Mobile Faves to WebFOCUS. To download the free WebFOCUS app:

1. Tap the *App Store* icon.

2. Type *WebFOCUS* in the Search box.

3. Tap *WebFOCUS* in the selection list.

4. Tap the *WebFOCUS* icon.

5. Tap *FREE*.

6. Tap *INSTALL*.

7. Type your Apple® ID and password, if required, or use Touch ID, and tap *OK*.

   The WebFOCUS app will be downloaded to your device.

Output Formats

Two changes were made to the output format selection for reports and charts:

❑ The Active Report option is renamed to HTML Analytic Document.

❑ The Active Flash and Active PDF options are removed.

Adobe published a support notice on July 25, 2017 for *Flash & The Future of Interactive Content*. The notice, at *https://theblog.adobe.com/adobe-flash-update/*, includes plans to end-of-life Flash and to stop updating and distributing the Flash Player in 2020. Adobe is encouraging content creators to migrate any existing Flash content to other formats. Web Query developers are encouraged to migrate existing reports from Active Flash or Active PDF (APDF) to another format.

The Flex Software Development Kit (SDK), previously included to support these formats, is no longer shipped with the Reporting Server. Existing reports with Active Flash or Active PDF will fail to run. Web Query developers should edit existing reports that use these formats, to change them from Active Flash or Active PDF (APDF) to another output format.

Known Issues

The following topics describe known issues that will be addressed in a future version of Db2 Web Query.

Mobile App

The mobile app for Android™ devices is temporarily unavailable on the Google Play™ Store. If you previously downloaded the mobile app for Android, you may use it with this hotfix.

Internal Error With Map Charts

When creating a map chart, an Internal Error occurs if the field specified for the Location Layer is not part of a geographic hierarchy. To work around the issue, restructure the location fields in the metadata into a geographical hierarchy, such as Country-> State-> City. A fix will be provided in a future PTF or release.

Kerberos

The redirection URL has changed for users in an SSO-enabled environment that click *Sign Out* on the Web Query portal. The previous /logon/logoff.jsp URL will no longer sign out. To specify the new URL, follow these steps:

1. Sign in to Web Query with the administrative profile, QWQADMIN, or as a Web Query administrator.

2. From the Administration menu, select *Administration Console*.

3. On the Web Query Administration Console, click the *Configuration* tab, as shown in the following image.

4. Click *Security*, as shown in the following image.

5. Set the Sign-out URL to /signout, as shown in the following image.

6. Click *Save*.

REST-Based Application Extension (WQRAX)

This section addresses the known issues for the REST-Based Application Extension (WQRAX).

❏ Certain types of reports, including visualizations which utilize some maps, will not render properly when invoked through WQRAX. This will be resolved in an upcoming PTF.

❏ You must edit HTML Composer dashboards that were created prior to Web Query 2.1.0 group PTF level 13 or 2.1.1 group PTF level 2 for compatibility with current fix levels. Otherwise, they will not run in WQRAX after applying this Hotfix.

Workaround: Either edit and save the HTML file in the Developer Workbench HTML canvas, which will make the changes automatically, or edit and save the HTML dashboard using Web Query 2.2.0, using the following steps:

1. Sign in to Web Query using a Web Query Administrator user ID.

2. On the BI Portal resource tree, right-click the HTML dashboard file and select *Edit*.

   Note: if you do not see an Edit option, then the dashboard is already at a current version and these steps do not apply.

3. In the text editor, click *Search* and then *Find*.

4. Type */webquery/ibi_html* in the Find What: box.

5. Type *./ibi_html* in the Replace With: box.

6. Click the *Replace All* button.

7. Click the *Save* button on the toolbar.

8. Click *File* and then *Exit*.

Business Intelligence Portal

This section addresses the known issues for BI Portal.

Upload Data and Upload Wizard

❏ NLS characters are not supported in the following places when using the Upload Data and Upload Wizard:

❏ Excel Worksheet name.

❏ Folder name from where the Upload Wizard is being launched.

Workaround: Use invariant (A-Z and 0-9) characters. Support for NLS characters will be added in a future Hotfix.

❏ Run-Time Enablement (RTE) may cause the Upload Wizard to fail. This will happen if the user's current library (CURLIB) is not defined in the user's active RTE environment. The Upload Wizard writes out a temporary file during the upload process.

Workaround: It is recommended to add both QGPL and the user's CURLIB (if different from the default, QGPL) to the user's active RTE environment using the WRKWQRTE command.

Metadata Wizard

❏ The Statistics Report in the Utilities folder does not run. This will be resolved in a future PTF.

❏ The Adapters for Query/400, DB Heritage, and JD Edwards should not be used during the Import Metadata step as these are multi-step Create Synonym processes, which are not yet supported by the Metadata Wizard.

Workaround: Use the Metadata New option to create synonyms for these Adapter types.

InfoAssist

This section addresses the known issues for InfoAssist.

❏ Synonyms that use one-part naming cannot be refreshed using a Refresh or Update function. Instead, it is necessary to recreate the synonyms that need changing, overwriting the existing synonyms. It is recommended that before recreating a synonym, you first copy any customizations, such as Define or Compute fields that were added, so that you can paste them back in and recover them after the recreate. The Refresh and Update functions for one-part naming will be addressed in a future hotfix.

❏ The 2014 Demographic layers do not render on an ESRI map.

❑ At run time, a report will fail if empty filter values are entered for simple parameter prompts. To resolve the issue, the Web Query administrator can configure a setting to allow empty values, as follows.

1. In the Administration Console, on the *Configuration* tab, click *Custom Settings*.

2. To permit the use of empty fields in filter prompts, type the command:

   `IBIAP_allow_empty_field=YES`

   Type it under the final comment statement at the top of the Custom Settings text box or under the most recent custom setting entry, as shown in the following image.

   ## Custom Settings

   ```
   <VER 1>
   # Copyright 1996-2011 Information Builders, Inc. All rights reserved.
   # $Revision: 1.7 $
   # place any variables here from cgivars.wfs that you wish to override.
   IBIAP_allow_empty_field=YES
   ```

3. To store the settings in an encrypted format, select the *Encrypt* check box.

4. When your configuration is complete, click *Save*.

5. When you receive a confirmation message, click *OK*.

6. When the Custom Setting page clears, click *Custom Settings* under the Application Settings folder to see your updated comments, settings, or commands in the Custom Settings text box.

7. If you later decide to prohibit the use of empty fields, change the command to:

   `IBIAP_allow_empty_field=NO`

   Alternatively, you can delete the following command from the Custom Settings page or convert it to a comment if you plan to reactivate this feature.

   `IBIAP_allow_empty_field=YES`

8. When your configuration is complete, click *Save*.

JD Edwards Adapters

This section addresses the known issues for the JD Edwards Adapters.

To use the Alternate Language option in the Adapter for JD Edwards EnterpriseOne and the Adapter for JD Edwards World:

1. Configure the adapter with *UDC Direct File Access* unchecked.

2. Run the *Refresh Metadata* with *Alternate Language File* unchecked.

   This step will create the udcdicdb table.

3. Run the *Refresh Metadata* with *Alternate Language File* checked and enter the default language code.

   This step will create the altdicdb table.

4. Create all the synonyms needed.

Note: Steps 2 and 3 need to be run, as needed, whenever UDC descriptions are updated.

Report Broker

This section addresses the known issue for Report Broker.

❑ Migration of Public Distribution Lists will generate the following error:

```
ERROR IBFSService                      - setShares - opShareBasic/
opShareAdvanced to this resource denied - user:qwqadmin res:/WFC/
Repository/untitled/ReportBroker/~ownerID/distribution_list.adr
[2014-03-11 00:00:00,605] ERROR IBFSAddrBookConverter          -
Failed to share '/WFC/Repository/untitled/ReportBroker/~ownerID/
distribution_list.adr' with IBFS:/SSYS/GROUPS/EVERYONE
```

The distribution list will be migrated as a private object. To make this published:

1. Move the distribution list to a published folder.

2. Right-click on the distribution list and select the *Publish* option.

Spreadsheet Client

This section addresses the known issue for Spreadsheet Client.

❑ Populating a spreadsheet using a large Excel Add-in request (25 columns, 200K rows) does not return output.

National Language Support

This section addresses the known issues for National Language Support (NLS).

❑ When the Reporting Server runs in CCSID 285, HTML dashboards fail with JavaScript errors if running in a Firefox or Internet Explorer browser. This is caused by an encoding problem in the IBM Websphere Application Server plugin. To resolve the problem, apply the following PTF for your release level of product 5770DG1:

  ❑ 7.2: SI69444

  ❑ 7.3: SI69363

❑ Running an active Flash or active PDF report with the following configuration will result in an *Error compiling Active Flex Report* message:

  ❑ Reporting Server configured for a DBCS language, for example, Japanese, Chinese, Korean.

  ❑ Portal UI configured for English.

  Workaround: Configure the Portal UI for the same language as the Reporting Server.

❑ In Turkish, running an active Flash or active PDF report in InfoAssist or from BI Portal generates a FOC3357 error message.

  Workaround: Edit the /QIBM/UserData/qwebqry/base80/client/wfc/etc/nlscfg.err file and add the following line to the end of the file:

```
ENCODING = Cp1026
```

  Also, edit the /QIBM/UserData/qwebqry/ibi/srv77/wfs/etc/odin.cfg file by modifying the JSCOM3 Listener block to include an additional argument on the JVM_OPTIONS parameter, as follows:

```
;JSCOM3 Listener
NODE = JSS
BEGIN
  PROTOCOL = TCP
  CLASS = JAVASERVER
  PORT = 12335
  AWT_HEADLESS = Y
  JVM_OPTIONS = -Djava.version=1.6|-Duser.language=en
  JVM_MAX_HEAP = 512
  IBI_CLASSPATH = /home/sqljdbc40/sqljdbc.jar:/home/sqljdbc20/sqljdbc.jar
END
```

❑ Some of the Retail Sample reports will not run in NLS or DBCS languages. This issue will be resolved in an upcoming PTF.

DataMigrator/Data Management Console

Important: The renaming of Application Directories in the Data Management Console is not recommended as it may result in execution failures with the contents of the Application Directory.

Metadata

This section addresses the known issues for metadata.

❏ Creating a synonym for a Query/400 file from the right-click folder Metadata Edit option does not generate the associated Web Query procedure in the repository. To create Query/400 synonyms, right-click a folder and select the *Metadata New* option.

❏ Creating a synonym for a Query/400 file fails when it is launched from a subfolder.

Online Help

This section addresses the known issue for Online Help.

❏ Online Help is not translated in Japanese. Translation will be available in a future release of Db2 Web Query.

Advisories

The following topics describe advisories for Db2 Web Query.

Adapter for Query/400

Web Query provides the ability to use a Query/400 query definition (*QRYDFN) as a source of data in a report. This capability is provided through the Web Query Adapter for Query/400. In the rare case where the Web Query report is run by a user who is not authorized to its own user profile, it is possible for Web Query to inadvertently delete the file referenced in the Query/400 definition. This occurs because the user is not authorized to the job's QTEMP library. The problem has been fixed in this hotfix. While it is rare for a user to not be authorized to its own user profile, users of the Adapter for Query/400 should apply the latest Web Query group PTF to avoid any potential issues.

Esri Mapping Demographic Layers 2010-2014 Retirement Statement

The Esri® Mapping Demographic Layers for years 2010, 2011, 2012, 2013, and 2014, which can be used with Web Query, will no longer be supported as a result of their *retirement by Esri*. In a future release or hotfix, you will no longer be able to configure these layers. If you have charts created in Web Query 2.2.1 InfoAssist that reference these layers, you must manually edit them to remove the reference, otherwise these layers may not render.

The following Demographic Layers have been retired by Esri and may not be available in Web Query:

❑ USA Health Care Spending 2014

❑ USA Population Change 2000-2010

❑ USA Population Change 2010-2012

❑ USA Population Density 2012

❑ USA Population Density 2013

❑ USA Population Density 2014

❑ USA Population Older than Age 64

❑ USA Population Younger than Age 18

❑ USA Projected Population Growth 2012-2017

❑ USA Restaurant Spending 2014

❑ USA Tapestry Segmentation 2012

❑ USA Tapestry Segmentation 2014

❑ USA Unemployment Rate 2012

To learn more about the retirement of layers from Esri, visit *http://doc.arcgis.com/en/esri-demographics/reference/legacy-demographic-maps.htm*.

Browser Information

The following topics describe information for the available web and mobile browsers for Web Query 2.2.1.

Web Browsers

The following browsers are certified for Web Query and Developer Workbench.

❑ Microsoft Edge™ 44

❑ Internet Explorer® 11

❑ Google Chrome™ 76

❑ Mozilla Firefox® Quantum 68

Release 2.2.1 Notes

❏ Simple HTML Web Query reports can be viewed on any browser.

❏ Chart/Graph request notes:

 ❏ *Browser-generated graphs* refer to graphs that are rendered inside the browser using HTML5 (and JavaScript). Browser-generated graphs are utilized in both standard HTML5 output ("FORMAT JSCHART"), and in Active Technologies ("FORMAT AHTML").

 ❏ *Server-generated graphs* refer to graph requests that are generated on the Reporting Server and then embedded as a bitmap or vector image in a document or webpage. This includes the following output formats:

  ❏ Bitmap: PNG, JPG

  ❏ Vector: PDF (but not active PDF), SVG

❏ Support for presenting images and graphs in HTML, DHTML, and DHTML compound reports is provided using an image embedding facility based on the client browser. Output generated by Internet Explorer browsers or in scenarios where the browser is unknown (such as when distributed by Report Broker) supports image inclusion through the creation of a web archive file (.mht). For all other browsers, images are base64 encoded within the generated .htm file.

❏ Drill-down links do not work when using an embedded PDF viewer available in some browser versions. Refer to the browser's configuration information on how to change the Application Options settings for the relevant content types so that the browser will automatically use Adobe Reader.

❏ Adobe Reader support:

 ❏ Acrobat Reader DC is certified

 ❏ Adobe XI is supported

 ❏ Adobe X is supported

❏ If you are using Internet Explorer® 11 on a Windows® 2012 R2 OS and you attempt to run an object (such as a report or chart in InfoAssist+), Internet Explorer 11 opens it in a new window instead of targeting the object to a specific frame. For example, in InfoAssist+, the New Window Runtime opens a new browser window that shows the running image, which then replaces that page with the output. Since Internet Explorer 11 does not allow the replacement of that window, it opens a new window instead.

This browser limitation can be remedied by an administrator. For more information, see *https://social.msdn.microsoft.com/Forums/ie/en-US/a5c294e2-e407-491d-ba6a-b7f7edbcabaf/ie11-cant-post-form-data-to-specific-frame-or-window-dialog-opened-via-windowopen?forum=iewebdevelopment*

Mobile Browser Information

If you are planning to use Web Query on mobile devices, note the following regarding mobile browser support. If you will be using Web Query on the Windows operating system, see the Web Browser support information.

Note: Browsers released after the production date of a Web Query version are subject to certification.

InfoAssist is not supported on mobile devices.

The following devices were used in testing Web Query 2.2.1:

❏ iOS 12

❏ Android 8.0, 7.1

❏ Mobile Faves 3.2.2 iOS, 3.2.2 Android

Usage Considerations:

❏ Report Broker interfaces are supported on tablets.

❏ HTML reporting Table of Contents (BYTOC) feature is not supported.

❏ Viewing PDF, Excel, and PowerPoint documents may require a third-party helper app.

❏ To open active report content, JavaScript needs to be enabled in your web browser. On mobile devices, please use the Mobile Faves app. If not installed, download it from the App Store for iOS devices or from the Google Play Store for Android devices.

Chapter 8

Db2 Web Query Version 2.2.1 - May 2019 - HF6

This documentation describes new features, known issues, web browser support, and mobile support for the May 2019 - 2.2.1 Hotfix 6 release.

This document is intended for all levels of users, including application developers, administrators, and end users. It is also intended to serve as a quick reference for users upgrading from a prior version.

In this chapter:

❏ Db2 Web Query for i Enhancements

❏ Change in Behavior

❏ Known Issues

❏ Browser Information

Db2 Web Query for i Enhancements

The following new features and enhancements apply to Db2 Web Query for i.

IBM i 7.4 Support

Db2 Web Query version 2.2.1 is supported to run on IBM i 7.4. Before starting Web Query for the first time on i 7.4, you must apply the Web Query group PTF for i 7.4, SF99653. Note that the IBM Technology for Java SE 8 32-bit feature (5770-JV1 option 16) was refreshed for i 7.4 and is also required for Web Query.

Mandatory Access Control

Mandatory access control (MAC), also referred to as non-discretionary access control, is a security strategy that applies to multiple user environments. Compared to other popular security strategies, MAC enforces the strictest level of control. It is typically used by governments and military to protect highly classified secrets, but many banking and enterprise businesses also need to comply with MAC.

A key differentiator for MAC is that it restricts individual resource owners from granting or denying access to their resources. MAC is enforced consistently across an information system, including database and file systems, by a central authority. With MAC, it is easier for IT administrators to keep track of who has access to what because only they control it. Users or owners cannot change the access of other users or objects. By contrast, discretionary access control (DAC), which is a common security strategy default, allows each user to control access to their own resources.

System administrators can now optionally enable Web Query for MAC. When doing so, the sign on password for the QWQADMIN user profile will be removed. QWQADMIN will continue to own Web Query objects and run the server jobs, but users will be unable to sign in as QWQADMIN. Removing the password restricts the owner privileges of QWQADMIN.

A QWQADMIN sign on is no longer required to perform Web Query administrative tasks. Administrators can use their own ID to manage Web Query, rather than share the QWQADMIN profile. This enforces the security principal that each user should be uniquely identified in a system and that each operation should be accountable to only one user. Security Center and console functions can be performed by Web Query administrators. Web Query administrators themselves can be managed by an IT administrator using the Register Web Query User (REGWQUSR) and Remove Web Query User (RMVWQUSR) commands.

For information on how to enable Web Query for MAC, see the Mandatory Access Control link on the Web Query wiki at *http://ibm.biz/db2wq-docs*.

DLTLICPGM Automatically Releases Users

For earlier levels of Web Query, if Web Query is deleted from a partition, using either DLTLICPGM or GO LICPGM option 12, any user licenses not freed up in the Web Query Security Center become orphaned licenses. This includes user-registered licenses for Developers, Developer Workbench Users, and Runtime Groups.

Since license keys and their usage limits apply across all partitions of a system, these orphaned licenses on the partition can cause problems if Web Query is installed on another partition on the same system. Orphaned licenses are not reused and instead *take* usage slots from the Web Query license on the active Web Query partition. To ultimately release the orphaned licenses, Web Query must be reinstalled on the orphaned partition so that the licenses are visible and no longer orphaned.

Starting with HF6, all user-registered licenses will automatically be released when the Web Query *BASE option (feature 5050) is deleted. This prevents user licenses from becoming orphaned.

Further, if a backup of a Web Query HF6 (or later) instance is restored to a partition, an attempt is made at startup to automatically reacquire licenses for any users that had been defined in that Web Query instance.

Spreadsheet Client Add-In

The Excel add-in for the Spreadsheet Client is refreshed in this hotfix. This resolves a problem with newer versions of Excel where a blank frame is opened on top of the Excel spreadsheet when editing query parameters. Users of the Spreadsheet Client should download the add-in feature to their workstation and replace the existing feature in Excel. The following are example steps for replacing the add-in feature. Note that the steps to insert the add-in may vary slightly, depending on the Excel version.

1. Copy the add-in file, wqsclient.xla, from the IBM i at /QIBM/ProdData/QWEBQRY/base80/ utilities/quickdata to the PC at *drive*:\Users*userid*\AppData\Roaming\Microsoft\AddIns\, where *userid* Is the user name used to sign in to the PC.

2. Launch Microsoft Excel.

3. On the Insert tab, expand *My Add-Ins*, then click *Manage Other Add-Ins*.

4. Click *Go*, to manage Excel Add-Ins.

5. Select *Web Query Spreadsheet Client* and click *OK*.

6. Close and open Microsoft Excel.

Change in Behavior

The following topics describe changes in behavior for Db2 Web Query 2.2.1 Hotfix 6.

Change Management

When exporting a scenario in Change Management, you can expand the Reporting Server tree, expand the EDASERVE node, open an application folder, and select specific metadata files to include in the package. The Export function now shows Master Files by their file name, rather than by the text description of the underlying table. This makes it easier to pair the Master (.mas) and Access (.acx) Files, helping to ensure all necessary files are included in the Change Management package.

Default Output Format

When creating charts in InfoAssist+, the default output format is HTML. It is recommended that Web Query administrators change the default format to HTML5 as a global change for all users. HTML5 is required for map chart types.

To change the default output format for charts, the Web Query administrator should follow these steps:

1. Click *Administration*, then click *Administration Console*.

2. Click the *Configuration* tab.

3. Select *InfoAssist+ Properties*.

4. Scroll down to the *Tool Options Dialog Defaults* section.

5. For Chart Output Format, select *HTML5* from the drop-down menu, as shown in the following image.
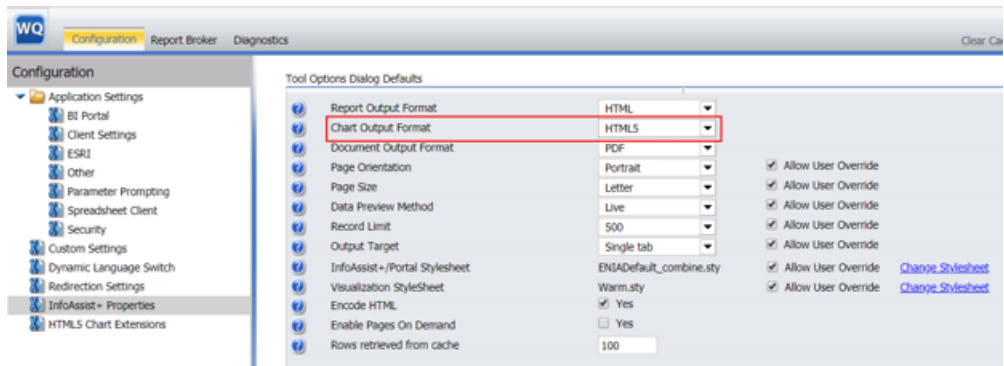
6. Scroll down and click *Save*.

InfoAssist+ Documents

When creating or editing InfoAssist+ documents, the Insert Existing feature allows you to select existing reports and charts from a list and insert them into the document. Only charts and reports whose output format is compatible with the output format of the InfoAssist+ document will show in the selection list. To include HTML5 charts in the document, choose *active report* as the document output format.

LOCALE Requirement

Web Query uses Qshell (QSH) to run scripts. For the scripts to run correctly, the Web Query environment must be configured with a matching CCSID and LOCALE. The locale determines information about the language and country or region, including how QSH should sort and classify characters when running the scripts.

Web Query now ensures that a locale is set for the QWQADMIN profile. Also, when running a Web Query command, such as STRWEBQRY, it enforces that the current user profile in the job has a locale set. If the profile specifies LOCALE(*SYSVAL), then the system value QLOCALE must be set to a value other than *NONE or the Web Query command will fail.

For more information, see *https://www.ibm.com/support/knowledgecenter/en/ssw_ibm_i_71/ rzahz/rzahznls.htm*.

Known Issues

The following topics describe known issues that will be addressed in a future version of Db2 Web Query.

Kerberos

The redirection URL has changed for users in an SSO-enabled environment that click *Sign Out* on the Web Query portal. The previous /logon/logoff.jsp URL will no longer sign out. To specify the new URL, follow these steps:

1. Sign in to Web Query with the administrative profile, QWQADMIN, or as a Web Query administrator.

2. From the Administration menu, select *Administration Console*.

3. On the Web Query Administration Console, click the *Configuration* tab, as shown in the following image.

4. Click *Security*, as shown in the following image.

5. Set the Sign-out URL to /signout, as shown in the following image.

6. Click *Save*.

REST-Based Application Extension (WQRAX)

This section addresses the known issues for the REST-Based Application Extension (WQRAX).

❏ Certain types of reports, including visualizations which utilize some maps, will not render properly when invoked through WQRAX. This will be resolved in an upcoming PTF.

❏ You must edit HTML Composer dashboards that were created prior to Web Query 2.1.0 group PTF level 13 or 2.1.1 group PTF level 2 for compatibility with current fix levels. Otherwise, they will not run in WQRAX after applying this Hotfix.

Workaround: Either edit and save the HTML file in the Developer Workbench HTML canvas, which will make the changes automatically, or edit and save the HTML dashboard using Web Query 2.2.0, using the following steps:

1. Sign in to Web Query using a Web Query Administrator user ID.

2. On the BI Portal resource tree, right-click the HTML dashboard file and select *Edit*.

   Note: if you do not see an Edit option, then the dashboard is already at a current version and these steps do not apply.

3. In the text editor, click *Search* and then *Find*.

4. Type */webquery/ibi_html* in the Find What: box.

5. Type *./ibi_html* in the Replace With: box.

6. Click the *Replace All* button.

7. Click the *Save* button on the toolbar.

8. Click *File* and then *Exit*.

Business Intelligence Portal

This section addresses the known issues for BI Portal.

Upload Data and Upload Wizard

❏ NLS characters are not supported in the following places when using the Upload Data and Upload Wizard:

  ❏ Excel Worksheet name.

  ❏ Folder name from where the Upload Wizard is being launched.

  Workaround: Use invariant (A-Z and 0-9) characters. Support for NLS characters will be added in a future Hotfix.

❏ Run-Time Enablement (RTE) may cause the Upload Wizard to fail. This will happen if the user's current library (CURLIB) is not defined in the user's active RTE environment. The Upload Wizard writes out a temporary file during the upload process.

  Workaround: It is recommended to add both QGPL and the user's CURLIB (if different from the default, QGPL) to the user's active RTE environment using the WRKWQRTE command.

Metadata Wizard

❏ The Statistics Report in the Utilities folder does not run. This will be resolved in a future PTF.

❏ The Adapters for Query/400, DB Heritage, and JD Edwards should not be used during the Import Metadata step as these are multi-step Create Synonym processes, which are not yet supported by the Metadata Wizard.

  Workaround: Use the Metadata New option to create synonyms for these Adapter types.

InfoAssist+

This section addresses the known issues for InfoAssist+.

❏ The 2014 Demographic layers do not render on an ESRI map.

❏ At run time, a report will fail if empty filter values are entered for simple parameter prompts. To resolve the issue, the Web Query administrator can configure a setting to allow empty values, as follows.

  1. In the Administration Console, on the *Configuration* tab, click *Custom Settings*.

  2. To permit the use of empty fields in filter prompts, type the command:

     ```
     IBIAP_allow_empty_field=YES
     ```

Type it under the final comment statement at the top of the Custom Settings text box or under the most recent custom setting entry, as shown in the following image.

3. To store the settings in an encrypted format, select the *Encrypt* check box.

4. When your configuration is complete, click *Save*.

5. When you receive a confirmation message, click *OK*.

6. When the Custom Setting page clears, click *Custom Settings* under the Application Settings folder to see your updated comments, settings, or commands in the Custom Settings text box.

7. If you later decide to prohibit the use of empty fields, change the command to:

   `IBIAP_allow_empty_field=NO`

   Alternatively, you can delete the following command from the Custom Settings page or convert it to a comment if you plan to reactivate this feature.

   `IBIAP_allow_empty_field=YES`

8. When your configuration is complete, click *Save*.

JD Edwards Adapters

This section addresses the known issues for the JD Edwards Adapters.

To use the Alternate Language option in the Adapter for JD Edwards EnterpriseOne and the Adapter for JD Edwards World:

1. Configure the adapter with *UDC Direct File Access* unchecked.

2. Run the *Refresh Metadata* with *Alternate Language File* unchecked.

   This step will create the udcdicdb table.

3. Run the *Refresh Metadata* with *Alternate Language File* checked and enter the default language code.

   This step will create the altdicdb table.

4. Create all the synonyms needed.

Note: Steps 2 and 3 need to be run, as needed, whenever UDC descriptions are updated.

Report Broker

This section addresses the known issue for Report Broker.

❏ Migration of Public Distribution Lists will generate the following error:

```
ERROR IBFSService                       - setShares - opShareBasic/
opShareAdvanced to this resource denied - user:qwqadmin res:/WFC/
Repository/untitled/ReportBroker/~ownerID/distribution_list.adr
[2014-03-11 00:00:00,605] ERROR IBFSAddrBookConverter       -
Failed to share '/WFC/Repository/untitled/ReportBroker/~ownerID/
distribution_list.adr' with IBFS:/SSYS/GROUPS/EVERYONE
```

The distribution list will be migrated as a private object. To make this published:

1. Move the distribution list to a published folder.

2. Right-click on the distribution list and select the *Publish* option.

Spreadsheet Client

This section addresses the known issue for Spreadsheet Client.

❏ Populating a spreadsheet using a large Excel Add-in request (25 columns, 200K rows) does not return output.

National Language Support

This section addresses the known issues for National Language Support (NLS).

❏ When the Reporting Server runs in CCSID 285, HTML dashboards fail with JavaScript errors if running in a Firefox or Internet Explorer browser. This is caused by an encoding problem in the IBM Websphere Application Server plugin. To resolve the problem, apply the following PTF for your release level of product 5770DG1:

  ❏ 7.2: SI69444

  ❏ 7.3: SI69363

❏ Running an active Flash or active PDF report with the following configuration will result in an *Error compiling Active Flex Report* message:

  ❏ Reporting Server configured for a DBCS language, for example, Japanese, Chinese, Korean.

❑ Portal UI configured for English.

Workaround: Configure the Portal UI for the same language as the Reporting Server.

❑ In Turkish, running an active Flash or active PDF report in InfoAssist+ or from BI Portal generates a FOC3357 error message.

Workaround: Edit the /QIBM/UserData/qwebqry/base80/client/wfc/etc/nlscfg.err file and add the following line to the end of the file:

```
ENCODING = Cp1026
```

Also, edit the /QIBM/UserData/qwebqry/ibi/srv77/wfs/etc/odin.cfg file by modifying the JSCOM3 Listener block to include an additional argument on the JVM_OPTIONS parameter, as follows:

```
;JSCOM3 Listener
NODE = JSS
BEGIN
  PROTOCOL = TCP
  CLASS = JAVASERVER
  PORT = 12335
  AWT_HEADLESS = Y
  JVM_OPTIONS = -Djava.version=1.6|-Duser.language=en
  JVM_MAX_HEAP = 512
  IBI_CLASSPATH = /home/sqljdbc40/sqljdbc.jar:/home/sqljdbc20/sqljdbc.jar
END
```

❑ Some of the Retail Sample reports will not run in NLS or DBCS languages. This issue will be resolved in an upcoming PTF.

DataMigrator/Data Management Console

Important: The renaming of Application Directories in the Data Management Console is not recommended as it may result in execution failures with the contents of the Application Directory.

Metadata

This section addresses the known issues for metadata.

❑ Creating a synonym for a Query/400 file from the right-click folder Metadata Edit option does not generate the associated Web Query procedure in the repository. To create Query/400 synonyms, right-click a folder and select the *Metadata New* option.

❑ Creating a synonym for a Query/400 file fails when it is launched from a subfolder.

Online Help

This section addresses the known issue for Online Help.

❏ Online Help is not translated in Japanese. Translation will be available in a future release of Db2 Web Query.

Advisories

The following topics describe advisories for Db2 Web Query.

Esri Mapping Demographic Layers 2010-2014 Retirement Statement

The Esri® Mapping Demographic Layers for years 2010, 2011, 2012, 2013, and 2014, which can be used with Web Query, will no longer be supported as a result of their *retirement by Esri*. In a future release or hotfix, you will no longer be able to configure these layers. If you have charts created in Web Query 2.2.1 InfoAssist+ that reference these layers, you must manually edit them to remove the reference, otherwise these layers may not render.

The following Demographic Layers have been retired by Esri and may not be available in Web Query:

❏ USA Health Care Spending 2014

❏ USA Population Change 2000-2010

❏ USA Population Change 2010-2012

❏ USA Population Density 2012

❏ USA Population Density 2013

❏ USA Population Density 2014

❏ USA Population Older than Age 64

❏ USA Population Younger than Age 18

❏ USA Projected Population Growth 2012-2017

❏ USA Restaurant Spending 2014

❏ USA Tapestry Segmentation 2012

❏ USA Tapestry Segmentation 2014

❏ USA Unemployment Rate 2012

To learn more about the retirement of layers from Esri, visit *http://doc.arcgis.com/en/esri-demographics/reference/legacy-demographic-maps.htm*.

Active Flash and Active PDF

Adobe published a support notice on July 25, 2017 for *Flash & The Future of Interactive Content*. The notice, at *https://theblog.adobe.com/adobe-flash-update/*, includes plans to end-of-life Flash and to stop updating and distributing the Flash Player in 2020. Adobe is encouraging content creators to migrate any existing Flash content to other formats.

Below is the list of currently supported output formats for Web Query reports.
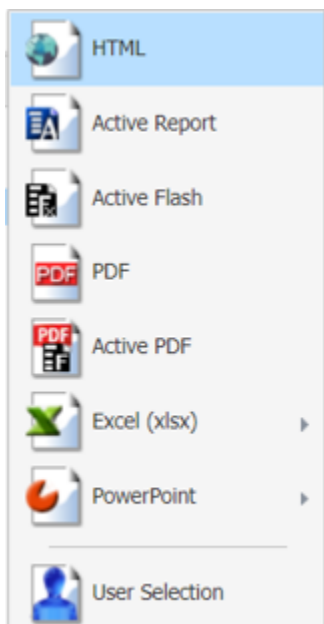
Web Query developers are encouraged to migrate existing reports from active Flash or active PDF (APDF) to another format. To discourage creation of new reports in Active Flash or Active PDF, the formats will be removed from the selection list in the future. Existing reports with Active Flash or Active PDF output may continue to run, so long as Active Flash is available.

For any concerns, contact *qu2@us.ibm.com*.

Browser Information

The following topics describe information for the available web and mobile browsers for Web Query 2.2.1.

Web Browsers

The following browsers are certified for Web Query and Developer Workbench.

❏ Microsoft Edge™ 41

❏ Internet Explorer® 11

❏ Google Chrome™ 66

❏ Mozilla Firefox® Quantum 60

Release 2.2.1 Notes

❏ Simple HTML Web Query reports can be viewed on any browser.

❏ Chart/Graph request notes:

   ❏ *Browser-generated graphs* refer to graphs that are rendered inside the browser using HTML5 (and JavaScript). Browser-generated graphs are utilized in both standard HTML5 output ("FORMAT JSCHART"), and in Active Technologies ("FORMAT AHTML").

   ❏ *Server-generated graphs* refer to graph requests that are generated on the Reporting Server and then embedded as a bitmap or vector image in a document or webpage. This includes the following output formats:

      ❏ Bitmap: PNG, JPG

      ❏ Vector: PDF (but not active PDF), SVG

❏ Support for presenting images and graphs in HTML, DHTML, and DHTML compound reports is provided using an image embedding facility based on the client browser. Output generated by Internet Explorer browsers or in scenarios where the browser is unknown (such as when distributed by Report Broker) supports image inclusion through the creation of a web archive file (.mht). For all other browsers, images are base64 encoded within the generated .htm file.

❏ Drill-down links do not work when using an embedded PDF viewer available in some browser versions. Refer to the browser's configuration information on how to change the Application Options settings for the relevant content types so that the browser will automatically use Adobe Reader.

❏ Adobe Reader support:

   ❏ Acrobat Reader DC is certified

❏ Adobe XI is supported

❏ Adobe X is supported

❏ If you are using Internet Explorer® 11 on a Windows® 2012 R2 OS and you attempt to run an object (such as a report or chart in InfoAssist+), Internet Explorer 11 opens it in a new window instead of targeting the object to a specific frame. For example, in InfoAssist+, the New Window Runtime opens a new browser window that shows the running image, which then replaces that page with the output. Since Internet Explorer 11 does not allow the replacement of that window, it opens a new window instead.

This browser limitation can be remedied by an administrator. For more information, see *https://social.msdn.microsoft.com/Forums/ie/en-US/a5c294e2-e407-491d-ba6a-b7f7edbcabaf/ie11-cant-post-form-data-to-specific-frame-or-window-dialog-opened-via-windowopen?forum=iewebdevelopment*

Mobile Browser Information

If you are planning to use Web Query on mobile devices, note the following regarding mobile browser support. If you will be using Web Query on the Windows operating system, see the Web Browser support information.

Note: Browsers released after the production date of a Web Query version are subject to certification.

InfoAssist+ is not supported on mobile devices.

The following devices were used in testing Web Query 2.2.1:

❏ iOS 11.3, 11.2.6, 11.0, 10.21, 9.3 iPad and iPhone

❏ Android 8.0, 7.0, 6.0 tablet and phone

❏ Mobile Faves 3.2.2, 3.2.1.5

❏ AirWatch 5.9 with iOS 10

Usage Considerations:

❏ Report Broker interfaces are supported on tablets.

❏ HTML reporting Table of Contents (BYTOC) feature is not supported.

❏ Viewing PDF, Excel, and PowerPoint documents may require a third-party helper app.

❑ To open active report content, JavaScript needs to be enabled in your web browser. On mobile devices, please use the Mobile Faves app. If not installed, download it from the App Store for iOS devices or from the Google Play Store for Android devices.

This documentation describes new features, known issues, web browser support, and mobile support for the December 2018 - 2.2.1 Hotfix 5 release.

This document is intended for all levels of users, including application developers, administrators, and end users. It is also intended to serve as a quick reference for users upgrading from a prior version.

In this chapter:

❏   Db2 Web Query for i Enhancements

❏   Developer Workbench

❏   Spreadsheet Client

❏   Change in Behavior

❏   Known Issues

❏   Browser Information

Db2 Web Query for i Enhancements

The following new features and enhancements apply to Db2 Web Query for i.

Automatic Relicensing of Users

There are specific situations with hardware upgrades and trial expirations where users who were registered to Web Query may "lose" their licenses. Web Query may start successfully, but users will be unable to log in and scheduled reports will fail to run. For these situations, all user-registered licenses may be affected, including those for developers, run-time groups, and Developer Workbench users. At a minimum, the situation can be confusing. This hotfix simplifies the recovery from these licensing error situations.

The situations that can lead to licensing errors include:

❏   Performing a full system save operation on one system and restoring to another, for example, when upgrading to new hardware. License keys and user license registrations are not restored, since licensing is unique for each system serial number. License keys must be acquired and separately managed on the target system.

❏ The 70-day trial period for Web Query expires before license keys are added. In this case, the user licenses will be released by the IBM i license manager. While user licenses can be re-added once license keys are added, the need to re-add may not be obvious.

❏ FlashCopy, a function of IBM storage systems, allows creation of a point-in-time copy of a partition. It provides an option for online backups and, as such, does include the licenses. However, some administrators choose to release the user licenses on the FlashCopy backup rather than purchase duplicate licenses. If the user licenses are released and if it is ever necessary to recover the production partition from the backup, or to run production from the FlashCopy partition, the licenses will need to be recovered.

Note that in all situations mentioned above, the customer is still required to acquire and apply the proper license keys to the system. This step does not change.

What has changed is that Web Query will now try to detect these situations during startup and, assuming proper license keys have been applied, will attempt to automatically relicense the users to license manager. The conditions that must be met for this automatic relicense to occur are:

❏ There are currently *no* licensed developer users, run-time groups, or Developer Workbench users registered in license manager (only the license key is applied).

❏ There are users registered in the Web Query repository.

❏ There are enough licenses available to license *all* the repository registered users.

If all the conditions are met, Web Query will automatically relicense the active users to license manager. Any users with Inactive status in the repository will remain unlicensed.

RUNWQFEX Enhancement

The Run Web Query Fex (RUNWQFEX) CL command allows you to specify the mail host server when running a report for *EMAIL output. The command now allows you to additionally specify credentials for the mail host server, using the optional Email Validation List (EMAILVLDL) parameter. A validation list object securely stores user authentication information. The validation list will be used when making the connection to the email server. You can create a validation list using the Create Web Query Password (CRTWQPWD) command.

New Date Procedures

A date conversion table, also known as a date dimension table, is used to convert a value that represents a date into many different representations of that date. The table has one row for each day between a specified range of dates, usually from the first day of a starting year to the last day of an ending year. Multiple columns are provided that represent the date in various ways, for example, which day of the week or day of the year it is. The table also has additional columns that represent the date in many traditional date formats and data types.

In general usage, a date conversion table is 'joined' to an existing file which has a date column in some traditional form, and the resulting join can be used to easily access the different representations of that date.

The QWQCENT library has an older form of a date conversion table called DATE_CONV. While this table has been quite useful, customers have asked for an updated version of a date conversion table and for a way to create a date conversion table themselves.

What is now being provided are two new SQL procedures available in the QWQCENT library for creating a customized date conversion table.

The procedures are:

❏ CREATE_DATE_TABLE

❏ ADD_DATE_MARKER

CREATE_DATE_TABLE

The CREATE_DATE_TABLE procedure creates and populates a date conversion table and builds a view over the table.

Note: The procedure must be called through an SQL interface, *NOT* a CL interface.

The call syntax is:

```
CALL QWQCENT.CREATE_DATE_TABLE('<lib>','<datefile>',<startyear>,<endyear>)
```

where:

<lib>

varchar(128)

Is the library name where you want the date conversion table created. The default value is QWQCENT.

<datefile>

varchar(128)

Is the date conversion *view* to be created. The default value is DATE_DIM. An underlying table will be created and its name will be the specified name with suffix *_T*.

<startyear>

int

Is the starting year. Valid values are 1 to 9999. The default value is the current year.

<endyear>

int

Is the end year. Valid values are <startyear> to 9999. The default value is the current year.

Example: CREATE_DATE_TABLE Examples

Example 1:

CALL QWQCENT.CREATE_DATE_TABLE

The QWQCENT.DATE_DIM_T table and QWQCENT.DATE_DIM view are created. The table is populated with all dates from 20*xx*-01-01 to 20*xx*-12-31, where *xx* is the year in which the procedure is run.

Example 2:

CALL QWQCENT.CREATE_DATE_TABLE('LIB1','DATES',2000,2030)

The LIB1.DATES_T table and LIB1.DATES view are created. The table is populated with all dates from 2000-01-01 to 2030-12-31.

Example 3:

CALL QWQCENT.CREATE_DATE_TABLE('LIB1','AYEAR')

The LIB1.AYEAR_T table and LIB1.AYEAR view are created. The table is populated with all dates from 20*xx*-01-01 to 20*xx*-12-31, where *xx* is the year in which the procedure is run.

ADD_DATE_MARKER

The ADD_DATE_MARKER procedure adds a specified 'marker' date as a row to the specified (existing) date conversion table. Most businesses have a special 'date' value that represents a special case. This procedure provides a way to put a row in the date conversion table to represent that special value. Once the row is added, you may need to do a subsequent update of the join column or columns of interest with the actual special value representation in your existing file.

Note: The procedure must be called through an SQL interface, *NOT* a CL interface.

The call syntax is:

```
CALL QWQCENT.ADD_DATE_MARKER ('<lib>','<datefile>',<markerdate>)
```

where:

<lib>

Is the library name of the existing date conversion table. The default value is QWQCENT.

<datefile>

Is the existing date conversion table. The default value is DATE_DIM_T.

<markerdate>

Is the marker date. The default value is 9999-12-31.

Example: ADD_DATE_MARKER Examples

Example 1:

```
CALL QWQCENT.ADD_DATE_MARKER
```

The date row for 9999-12-31 is added to the QWQCENT.DATE_DIM_T table.

Example 2:

```
CALL QWQCENT.ADD_DATE_MARKER ('LIB1','DATES_T','0001-01-01')
```

The date row 0001-01-01 is added to the LIB1.DATES_T table.

Example 3:

```
CALL QWQCENT.ADD_DATE_MARKER ('LIB1','AYEAR_T')
```

The date row 9999-12-31 is added to the LIB1.DATES_T table.

Example 4:

```
UPDATE QWQCENT.DATE_DIM_T
SET YYMMDD_DEC = 999999
WHERE DATEKEY = '9999-12-31'
```

The join column is updated to the marker value 999999.

Developer Workbench

The following are new features and enhancements for Developer Workbench.

Developer Workbench Installation

The Developer Workbench installation program has been enhanced to support upgrade installations for Release 2.2.1. This enhancement enables you to upgrade Developer Workbench instances and preserve existing configurations.

Note: Uninstall existing Developer Workbench software before proceeding with a new full installation (Full Install option).

During the Developer Workbench installation, if the installation detects an existing Developer Workbench 2.2.1 release, the following Choose Install Set dialog box opens, as shown in the following image.
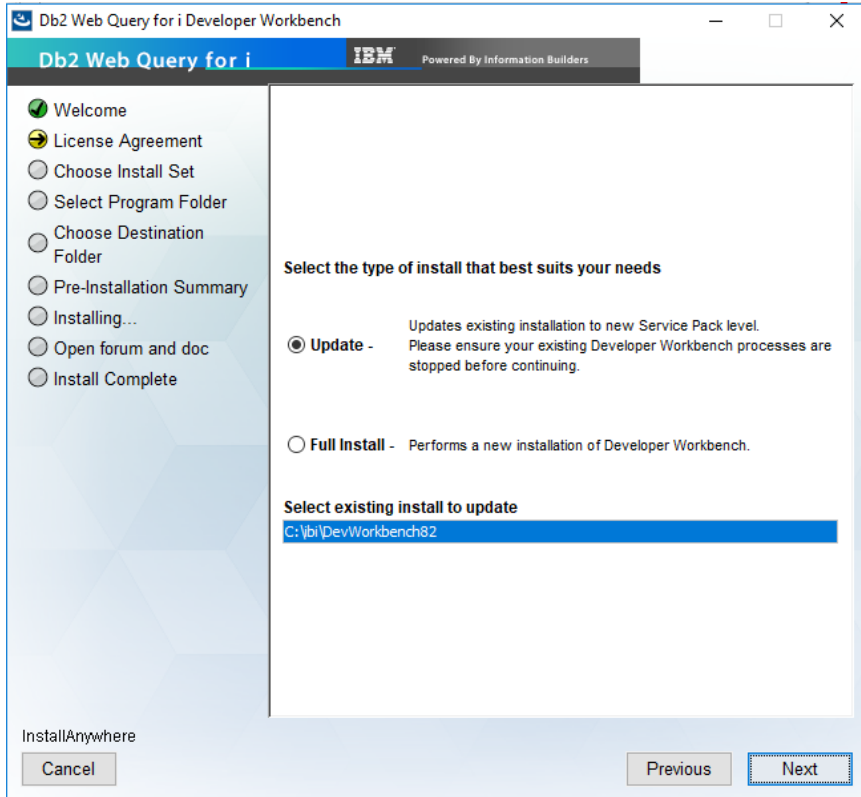
❑ To update your existing installation to the new release, select *Update*.

❑ To install a new, full installation of Developer Workbench, select *Full Install*.

Spreadsheet Client

The following are new features and enhancements for the Web Query Spreadsheet Client.

Microsoft Excel 2016

The Spreadsheet Client, which enables you to connect Excel directly to Db2 Web Query reporting tools, now supports Microsoft Excel 2016.

Change in Behavior

The following topic describes a change in behavior for Db2 Web Query.

RUNBRSCHED and RUNWEBQRY Commands

The Run a Report Broker Schedule (RUNBRSCHED) and Run Web Query Report (RUNWEBQRY) CL commands now run in the Web Query subsystem, QWEBQRY21. They use the Web Query job description, QWEBQRYJOB, and output queue, QWEBQRYOUT. The job description and output queue reside in the library QWEBQRY.

Known Issues

The following topics describe known issues that will be addressed in a future version of Db2 Web Query.

Kerberos

The redirection URL has changed for users in an SSO-enabled environment that click *Sign Out* on the Web Query portal. The previous /logon/logoff.jsp URL will no longer sign out. To specify the new URL, follow these steps:

1. Sign in to Web Query with the administrative profile, QWQADMIN, or as a Web Query administrator.

2. From the Administration menu, select *Administration Console*.

3. On the Web Query Administration Console, click the *Configuration* tab, as shown in the following image.

4. Click *Security*, as shown in the following image.

5. Set the Sign-out URL to /signout, as shown in the following image.

6. Click *Save*.

REST-Based Application Extension (WQRAX)

This section addresses the known issues for the REST-Based Application Extension (WQRAX).

❏ Certain types of reports, including visualizations which utilize some maps, will not render properly when invoked through WQRAX. This will be resolved in an upcoming PTF.

❏ You must edit HTML Composer dashboards that were created prior to Web Query 2.1.0 group PTF level 13 or 2.1.1 group PTF level 2 for compatibility with current fix levels. Otherwise, they will not run in WQRAX after applying this Hotfix.

Workaround: Either edit and save the HTML file in the Developer Workbench HTML canvas, which will make the changes automatically, or edit and save the HTML dashboard using Web Query 2.2.0, using the following steps:

1. Sign in to Web Query using a Web Query Administrator user ID.

2. On the BI Portal resource tree, right-click the HTML dashboard file and select *Edit*.

    Note: if you do not see an Edit option, then the dashboard is already at a current version and these steps do not apply.

3. In the text editor, click *Search* and then *Find*.

4. Type */webquery/ibi_html* in the Find What: box.

5. Type *./ibi_html* in the Replace With: box.

6. Click the *Replace All* button.

7. Click the *Save* button on the toolbar.

8. Click *File* and then *Exit*.

Business Intelligence Portal

This section addresses the known issues for BI Portal.

Upload Data and Upload Wizard

❏ NLS characters are not supported in the following places when using the Upload Data and Upload Wizard:

❏ Excel Worksheet name.

❏ Folder name from where the Upload Wizard is being launched.

Workaround: Use invariant (A-Z and 0-9) characters. Support for NLS characters will be added in a future Hotfix.

❏ Run-Time Enablement (RTE) may cause the Upload Wizard to fail. This will happen if the user's current library (CURLIB) is not defined in the user's active RTE environment. The Upload Wizard writes out a temporary file during the upload process.

Workaround: It is recommended to add both QGPL and the user's CURLIB (if different from the default, QGPL) to the user's active RTE environment using the WRKWQRTE command.

Metadata Wizard

❏ The Statistics Report in the Utilities folder does not run. This will be resolved in a future PTF.

❏ The Adapters for Query/400, DB Heritage, and JD Edwards should not be used during the Import Metadata step as these are multi-step Create Synonym processes, which are not yet supported by the Metadata Wizard.

Workaround: Use the Metadata New option to create synonyms for these Adapter types.

InfoAssist+

This section addresses the known issue for InfoAssist+.

❏ The 2014 Demographic layers do not render on an ESRI map.

JD Edwards Adapters

This section addresses the known issues for the JD Edwards Adapters.

To use the Alternate Language option in the Adapter for JD Edwards EnterpriseOne and the Adapter for JD Edwards World:

1. Configure the adapter with *UDC Direct File Access* unchecked.

2. Run the *Refresh Metadata* with *Alternate Language File* unchecked.

   This step will create the udcdicdb table.

3. Run the *Refresh Metadata* with *Alternate Language File* checked and enter the default language code.

   This step will create the altdicdb table.

4. Create all the synonyms needed.

Note: Steps 2 and 3 need to be run, as needed, whenever UDC descriptions are updated.

Report Broker

This section addresses the known issue for Report Broker.

❑ Migration of Public Distribution Lists will generate the following error:

```
ERROR IBFSService                      - setShares - opShareBasic/
opShareAdvanced to this resource denied - user:qwqadmin res:/WFC/
Repository/untitled/ReportBroker/~ownerID/distribution_list.adr
[2014-03-11 00:00:00,605] ERROR IBFSAddrBookConverter        -
Failed to share '/WFC/Repository/untitled/ReportBroker/~ownerID/
distribution_list.adr' with IBFS:/SSYS/GROUPS/EVERYONE
```

The distribution list will be migrated as a private object. To make this published:

1. Move the distribution list to a published folder.

2. Right-click on the distribution list and select the *Publish* option.

Spreadsheet Client

This section addresses the known issue for Spreadsheet Client.

❑ Populating a spreadsheet using a large Excel Add-in request (25 columns, 200K rows) does not return output.

National Language Support

This section addresses the known issues for National Language Support (NLS).

❑ When running the Reporting Server with CCSID 285:

❑ There is a problem returning a list of metadata from Developer Workbench and from the Reporting Server dialog on the portal tree.

❑ Certain Visualizations hang with a 'Loading' message.

❑ Running an active Flash or active PDF report with the following configuration will result in an *Error compiling Active Flex Report* message:

❑ Reporting Server configured for a DBCS language, for example, Japanese, Chinese, Korean.

❑ Portal UI configured for English.

Workaround: Configure the Portal UI for the same language as the Reporting Server.

❑ In Turkish, running an active Flash or active PDF report in InfoAssist+ or from BI Portal generates a FOC3357 error message.

Workaround: Edit the /QIBM/UserData/qwebqry/base80/client/wfc/etc/nlscfg.err file and add the following line to the end of the file:

```
ENCODING = Cp1026
```

Also, edit the /QIBM/UserData/qwebqry/ibi/srv77/wfs/etc/odin.cfg file by modifying the JSCOM3 Listener block to include an additional argument on the JVM_OPTIONS parameter, as follows:

```
;JSCOM3 Listener
NODE = JSS
BEGIN
  PROTOCOL = TCP
  CLASS = JAVASERVER
  PORT = 12335
  AWT_HEADLESS = Y
  JVM_OPTIONS = -Djava.version=1.6|-Duser.language=en
  JVM_MAX_HEAP = 512
  IBI_CLASSPATH = /home/sqljdbc40/sqljdbc.jar:/home/sqljdbc20/sqljdbc.jar
END
```

❑ Some of the Retail Sample reports will not run in NLS or DBCS languages. This issue will be resolved in an upcoming PTF.

DataMigrator/Data Management Console

Important: The renaming of Application Directories in the Data Management Console is not recommended as it may result in execution failures with the contents of the Application Directory.

Metadata

This section addresses the known issues for metadata.

❏ Creating a synonym for a Query/400 file from the right-click folder Metadata Edit option does not generate the associated Web Query procedure in the repository. To create Query/400 synonyms, right-click a folder and select the *Metadata New* option.

❏ Creating a synonym for a Query/400 file fails when it is launched from a subfolder.

Online Help

This section addresses the known issue for Online Help.

❏ Online Help is not translated in Japanese. Translation will be available in a future release of Db2 Web Query.

Documentation Updates

The following are enhancements to documentation, which will be included in the core content for Hotfix 6.

Metadata Levels Hierarchy

You can create a levels hierarchy using Developer Workbench or the Web Query browser.

Procedure: **How to Create a Levels Hierarchy Using Developer Workbench**

1. Open a synonym to launch the Synonym Editor.
2. On the ribbon, in the Tools group, click *Business View*, to display the Business View panel.

3. On the Business View panel, add a Dimension folder. Right-click *Dimensions*, select *Insert*, and then select *New Dimension Folder*, as shown in the following image.
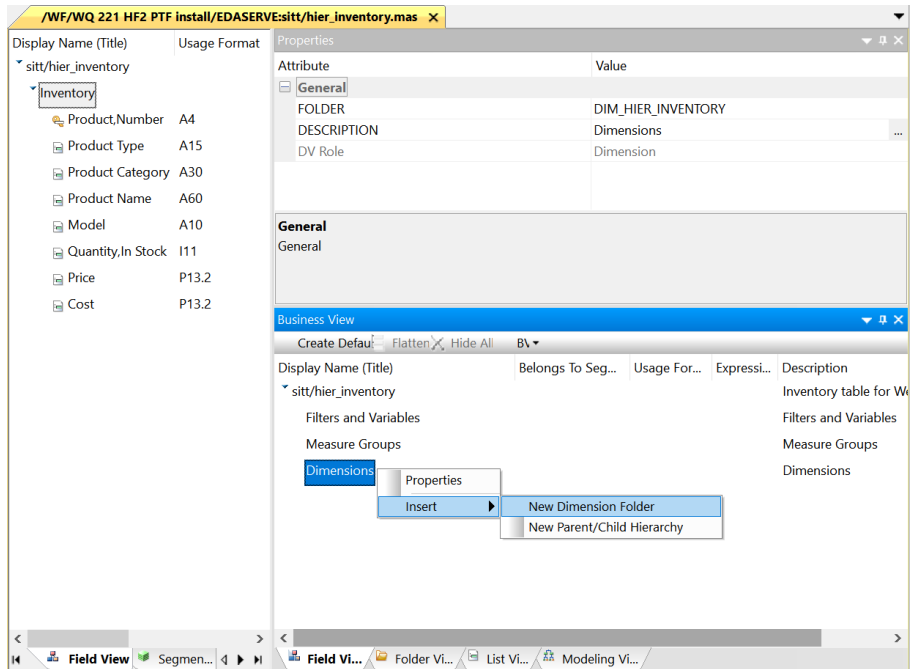
4. On the Business View panel, insert a Levels Hierarchy. Right-click a dimension folder, select *Insert*, and then select *New Levels Hieracrchy*, as shown in the following image.
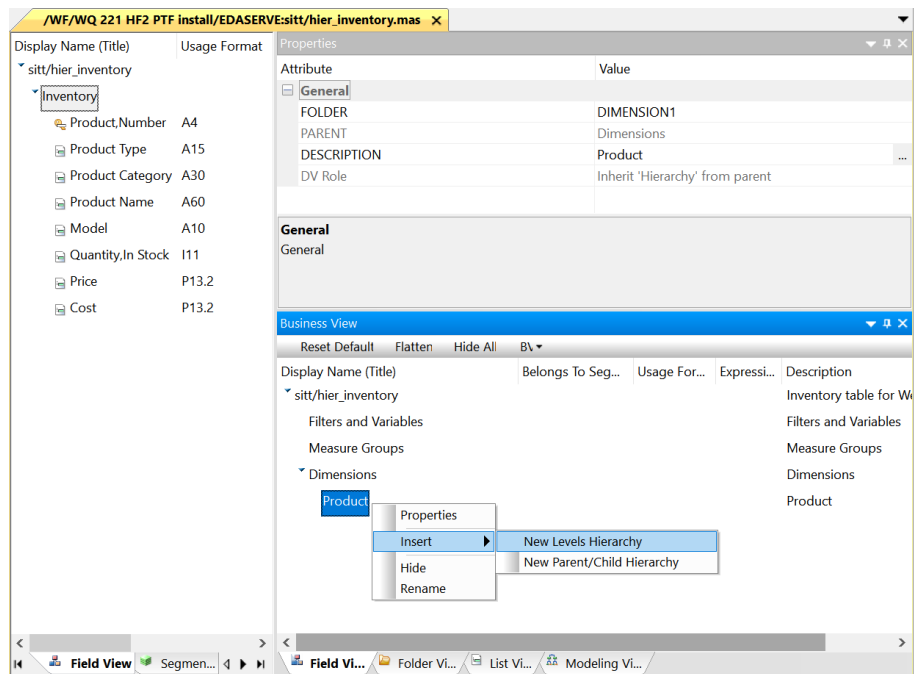
5. Drag fields from the data panel to the Levels Hierarchy to complete the hierarchy, as shown in the following image.
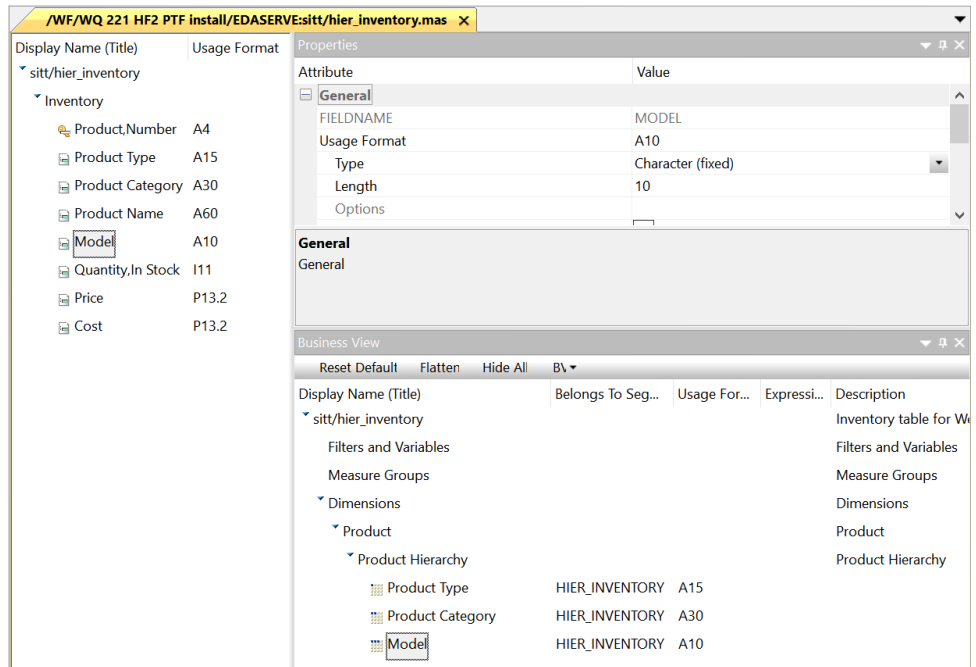
Procedure: **How to Create a Levels Hierarchy Using the Web Query Browser**

1. From a top-level folder, select *Metadata*, and then select the *Edit* option.

2. Open a synonym to launch the Data Assist Synonym Editor.

3. On the Business View panel, add a Dimension folder.

4. On the Business View panel, insert a Levels Hierarchy.

5. Optionally, to show the Table/Column panel, click *View* in the Options group, as shown in the following image. This allows you to add fields from the Table/Column panel to your hierarchy.
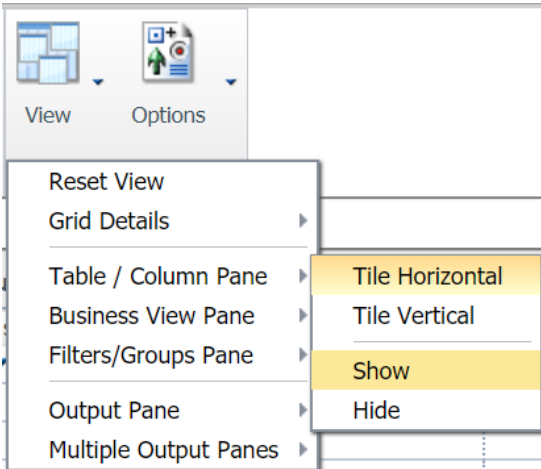
6. Drag fields from the Table/Column panel or Business View panel to the Levels Hierarchy to complete the hierarchy, as shown in the following image.
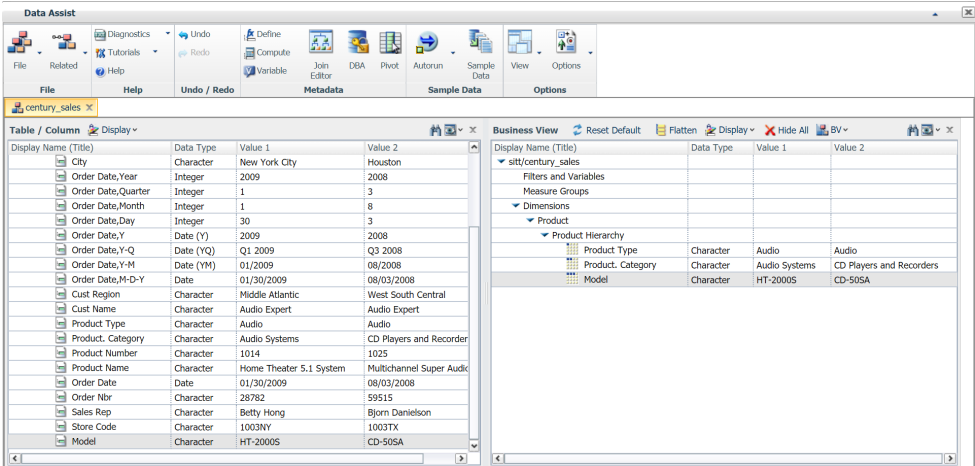
DB_EXPR: Inserting an SQL Expression Into a Request

The DB_EXPR function inserts a native SQL expression exactly as entered into the native SQL generated for a Web Query or SQL language request.

The DB_EXPR function can be used in a DEFINE command, a DEFINE in a Master File, a WHERE clause, a FILTER FILE command, a filter in a Master File, or in an SQL statement. It can be used in a COMPUTE command if the request is an aggregate request (uses the SUM, WRITE, or ADD command) and has a single display command. The expression must return a single value.

Syntax: **How to Insert an SQL Expression Into a Request With DB_EXPR**

```
DB_EXPR(native_SQL_expression)
```

where:

```
native_SQL_expression
```

Is a partial native SQL string that is valid to insert into the SQL generated by the request. The SQL string must have double quotation marks (") around each field reference, unless the function is used in a DEFINE with a WITH phrase.

Reference: **Usage Notes for the DB_EXPR Function**

❏ The expression must return a single value.

❏ Any request that includes one or more DB_EXPR functions must be for a synonym that has a relational SUFFIX.

❏ Field references in the native SQL expression must be within the current synonym context.

❏ The native SQL expression must be coded inline. SQL read from a file is not supported.

Example: **Inserting the DB2 BIGINT and CHAR Functions Into a TABLE Request**

The following TABLE request against the WF_RETAIL data source uses the DB_EXPR function in the COMPUTE command to call two DB2 functions. It calls the BIGINT function to convert the squared revenue to a BIGINT data type, and then uses the CHAR function to convert that value to alphanumeric.

```
TABLE FILE WF_RETAIL
SUM REVENUE NOPRINT
AND COMPUTE BIGREV/A31 = DB_EXPR(CHAR(BIGINT("REVENUE" * "REVENUE") ) ) ;
AS 'Alpha Square Revenue'
BY REGION
ON TABLE SET PAGE NOPAGE
END
```

The trace shows that the expression from the DB_EXPR function was inserted into the DB2 SELECT statement:

```
SELECT
T11."REGION",
 SUM(T1."Revenue"),
 ((CHAR(BIGINT( SUM(T1."Revenue") *  SUM(T1."Revenue")) ) ))
 FROM
wrd_fact_sales T1,
wrd_dim_customer T5,
wrd_dim_geography T11
 WHERE
(T5."ID_CUSTOMER" = T1."ID_CUSTOMER") AND
(T11."ID_GEOGRAPHY" = T5."ID_GEOGRAPHY")
 GROUP BY
T11."REGION  "
 ORDER BY
T11."REGION  "
 FOR FETCH ONLY;
END
```

Browser Information

The following topics describe information for the available web and mobile browsers for Web Query 2.2.1.

Web Browsers

The following browsers are certified for Web Query and Developer Workbench.

❑ Microsoft Edge™ 41

❑ Internet Explorer® 11

❑ Google Chrome™ 66

❑ Mozilla Firefox® Quantum 60

Release 2.2.1 Notes

❑ Simple HTML Web Query reports can be viewed on any browser.

❑ Chart/Graph request notes:

  ❑ *Browser-generated graphs* refer to graphs that are rendered inside the browser using HTML5 (and JavaScript). Browser-generated graphs are utilized in both standard HTML5 output ("FORMAT JSCHART"), and in Active Technologies ("FORMAT AHTML").

❑ *Server-generated graphs* refer to graph requests that are generated on the Reporting Server and then embedded as a bitmap or vector image in a document or webpage. This includes the following output formats:

❑ Bitmap: PNG, JPG

❑ Vector: PDF (but not active PDF), SVG

❑ Support for presenting images and graphs in HTML, DHTML, and DHTML compound reports is provided using an image embedding facility based on the client browser. Output generated by Internet Explorer browsers or in scenarios where the browser is unknown (such as when distributed by Report Broker) supports image inclusion through the creation of a web archive file (.mht). For all other browsers, images are base64 encoded within the generated .htm file.

❑ Drill-down links do not work when using an embedded PDF viewer available in some browser versions. Refer to the browser's configuration information on how to change the Application Options settings for the relevant content types so that the browser will automatically use Adobe Reader.

❑ Adobe Reader support:

❑ Acrobat Reader DC is certified

❑ Adobe XI is supported

❑ Adobe X is supported

❑ If you are using Internet Explorer® 11 on a Windows® 2012 R2 OS and you attempt to run an object (such as a report or chart in InfoAssist+), Internet Explorer 11 opens it in a new window instead of targeting the object to a specific frame. For example, in InfoAssist+, the New Window Runtime opens a new browser window that shows the running image, which then replaces that page with the output. Since Internet Explorer 11 does not allow the replacement of that window, it opens a new window instead.

This browser limitation can be remedied by an administrator. For more information, see *https://social.msdn.microsoft.com/Forums/ie/en-US/a5c294e2-e407-491d-ba6a-b7f7edbcabaf/ie11-cant-post-form-data-to-specific-frame-or-window-dialog-opened-via-windowopen?forum=iewebdevelopment*

Mobile Browser Information

If you are planning to use Web Query on mobile devices, note the following regarding mobile browser support. If you will be using Web Query on the Windows operating system, see the Web Browser support information.

Note: Browsers released after the production date of a Web Query version are subject to certification.

InfoAssist+ is not supported on mobile devices.

The following devices were used in testing Web Query 2.2.1:

❏ iOS 11.3, 11.2.6, 11.0, 10.21, 9.3 iPad and iPhone

❏ Android 8.0, 7.0, 6.0 tablet and phone

❏ Mobile Faves 3.2.2, 3.2.1.5

❏ AirWatch 5.9 with iOS 10

Usage Considerations:

❏ Report Broker interfaces are supported on tablets.

❏ HTML reporting Table of Contents (BYTOC) feature is not supported.

❏ Viewing PDF, Excel, and PowerPoint documents may require a third-party helper app.

❏ To open active report content, JavaScript needs to be enabled in your web browser. On mobile devices, please use the Mobile Faves app. If not installed, download it from the App Store for iOS devices or from the Google Play Store for Android devices.

10 Db2 Web Query Version 2.2.1 - October 2018 - HF4

This documentation describes new features, known issues, web browser support, and mobile support for the October 2018 - 2.2.1 Hotfix 4 release.

This document is intended for all levels of users, including application developers, administrators, and end users. It is also intended to serve as a quick reference for users upgrading from a prior version.

In this chapter:

❏ Db2 Web Query for i Enhancements

❏ Change in Behavior

❏ Known Issues

❏ Browser Information

Db2 Web Query for i Enhancements

The following new features apply to Db2 Web Query for i.

Auditing Enhancements

New and enhanced reports are provided in the IBM Db2 Web Query Information folder. Intended for Web Query administrators, this evolving suite of reports addresses administrative and audit-related questions about users, reports, schedules, email distributions, and more. This latest round of updates answers such questions as:

❏ How can you find which schedules send reports to a certain recipient? This may be helpful, for example, when an employee changes jobs or leaves the company and you are asked to redirect the reports to someone else.

❏ Where can you see a revision history for a schedule that shows who changed it and when it was changed?

❏ Before removing a user from Web Query, how can you find everything the user owns or runs, so you can ensure there is no *breakage* when removing the user?

❏ What are all the privately-owned objects? Private objects that reside in a folder are not generally visible to other users.

When Hotfix 4 is applied, these IBM-supplied reports are restored on your system as a Change Management package. On first startup, these reports are automatically imported to the IBM Db2 Web Query Information folder. Updated reports will replace prior versions of the reports. New reports are titled Email Distributions, Schedule Revision History, and Private Objects Owned by User.

The Email Distributions report lists all scheduled reports whose distribution type is email. For each schedule, it also lists the addresses of the recipients. The email addresses may be specified in the schedule using a Web Query distribution list or may be specified individually. The Email Distributions report does not include email addresses generated by a Dynamic Distribution List.

RUNWQFEX Enhancements

The Run Web Query Fex (RUNWQFEX) CL command allows you to specify the output format for a report when User Output Selection is enabled. The command now supports PowerPoint Open XML Presentation (.pptx) as an output format.

Change in Behavior

The following topic describes changes in behavior in Web Query 2.2.1 Hotfix 4.

❏ **CRTWQSYN command.** The Create DB2 Web Query Synonym (CRTWQSYN) CL command can optionally create a backup of an existing synonym (Master File) with a timestamp appended to the name before refreshing the synonym. Previously, this backup occurred automatically, but as of Hotfix 4 this backup will no longer occur. If you wish to enable the backups, enter this command:

```
CHGDTAARA DTAARA(QWQREPOS/QWQRFSSYN (2 1)) VALUE('1')
```

❏ **WRKWEBQRY processor cores.** The Work with DB2 Web Query (WRKWEBQRY) CL command for Processor Cores now displays the accurate information to match licensing and actual processor core usage. Previously, it displayed the minimum available core usage between the *BASE feature and the active Web Query edition.

❏ **QWQCENT and QWQRETAIL on iASP.** The QWQCENT library contains the sample Century Electronics database for the Web Query tutorials. The QWQRETAIL library contains the Retail database for reports in the Retail Samples folder. If these libraries were manually moved to an iASP, they will be automatically moved back to SYSBASE after Hotfix 4 is applied and Web Query is started. It is recommended now to leave these libraries in SYSBASE, since they are owned and maintained by the Web Query product.

Known Issues

The following topics describe known issues that will be addressed in a future version of Db2 Web Query.

Kerberos

The redirection URL has changed for users in an SSO-enabled environment that click *Sign Out* on the Web Query portal. The previous /logon/logoff.jsp URL will no longer sign out. To specify the new URL, follow these steps:

1. Sign in to Web Query with the administrative profile, QWQADMIN, or as a Web Query administrator.

2. From the Administration menu, select *Administration Console*.

3. On the Web Query Administration Console, click the *Configuration* tab, as shown in the following image.

4. Click *Security*, as shown in the following image.

5. Set the Sign-out URL to /signout, as shown in the following image.

6. Click *Save*.

REST-Based Application Extension (WQRAX)

This section addresses the known issues for the REST-Based Application Extension (WQRAX).

❑ Certain types of reports, including visualizations which utilize some maps, will not render properly when invoked through WQRAX. This will be resolved in an upcoming PTF.

❑ You must edit HTML Composer dashboards that were created prior to Web Query 2.1.0 group PTF level 13 or 2.1.1 group PTF level 2 for compatibility with current fix levels. Otherwise, they will not run in WQRAX after applying this Hotfix.

Workaround: Either edit and save the HTML file in the Developer Workbench HTML canvas, which will make the changes automatically, or edit and save the HTML dashboard using Web Query 2.2.0, using the following steps:

1. Sign in to Web Query using a Web Query Administrator user ID.

2. On the BI Portal resource tree, right-click the HTML dashboard file and select *Edit*.

   Note: if you do not see an Edit option, then the dashboard is already at a current version and these steps do not apply.

3. In the text editor, click *Search* and then *Find*.

4. Type */webquery/ibi_html* in the Find What: box.

5. Type *./ibi_html* in the Replace With: box.

6. Click the *Replace All* button.

7. Click the *Save* button on the toolbar.

8. Click *File* and then *Exit*.

Business Intelligence Portal

This section addresses the known issues for BI Portal.

Upload Data and Upload Wizard

❏ NLS characters are not supported in the following places when using the Upload Data and Upload Wizard:

❏ Excel Worksheet name.

❏ Folder name from where the Upload Wizard is being launched.

Workaround: Use invariant (A-Z and 0-9) characters. Support for NLS characters will be added in a future Hotfix.

❏ Run-Time Enablement (RTE) may cause the Upload Wizard to fail. This will happen if the user's current library (CURLIB) is not defined in the user's active RTE environment. The Upload Wizard writes out a temporary file during the upload process.

Workaround: It is recommended to add both QGPL and the user's CURLIB (if different from the default, QGPL) to the user's active RTE environment using the WRKWQRTE command.

Metadata Wizard

❏ The Statistics Report in the Utilities folder does not run. This will be resolved in a future PTF.

❏ The Adapters for Query/400, DB Heritage, and JD Edwards should not be used during the Import Metadata step as these are multi-step Create Synonym processes, which are not yet supported by the Metadata Wizard.

Workaround: Use the Metadata New option to create synonyms for these Adapter types.

InfoAssist+

This section addresses the known issue for InfoAssist+.

❏ The 2014 Demographic layers do not render on an ESRI map.

JD Edwards Adapters

This section addresses the known issues for the JD Edwards Adapters.

To use the Alternate Language option in the Adapter for JD Edwards EnterpriseOne and the Adapter for JD Edwards World:

1. Configure the adapter with *UDC Direct File Access* unchecked.

2. Run the *Refresh Metadata* with *Alternate Language File* unchecked.

   This step will create the udcdicdb table.

3. Run the *Refresh Metadata* with *Alternate Language File* checked and enter the default language code.

   This step will create the altdicdb table.

4. Create all the synonyms needed.

Note: Steps 2 and 3 need to be run, as needed, whenever UDC descriptions are updated.

Report Broker

This section addresses the known issue for Report Broker.

❑ Migration of Public Distribution Lists will generate the following error:

```
ERROR IBFSService                     - setShares - opShareBasic/
opShareAdvanced to this resource denied - user:qwqadmin res:/WFC/
Repository/untitled/ReportBroker/~ownerID/distribution_list.adr
[2014-03-11 00:00:00,605] ERROR IBFSAddrBookConverter        -
Failed to share '/WFC/Repository/untitled/ReportBroker/~ownerID/
distribution_list.adr' with IBFS:/SSYS/GROUPS/EVERYONE
```

The distribution list will be migrated as a private object. To make this published:

1. Move the distribution list to a published folder.

2. Right-click on the distribution list and select the *Publish* option.

Spreadsheet Client

This section addresses the known issue for Spreadsheet Client.

❑ Populating a spreadsheet using a large Excel Add-in request (25 columns, 200K rows) does not return output.

National Language Support

This section addresses the known issues for National Language Support (NLS).

❏ Running an active Flash or active PDF report with the following configuration will result in an *Error compiling Active Flex Report* message:

   ❏ Reporting Server configured for a DBCS language, for example, Japanese, Chinese, Korean.

   ❏ Portal UI configured for English.

   Workaround: Configure the Portal UI for the same language as the Reporting Server.

❏ In Turkish, running an active Flash or active PDF report in InfoAssist+ or from BI Portal generates a FOC3357 error message.

   Workaround: Edit the /QIBM/UserData/qwebqry/base80/client/wfc/etc/nlscfg.err file and add the following line to the end of the file:

```
ENCODING = Cp1026
```

   Also, edit the /QIBM/UserData/qwebqry/ibi/srv77/wfs/etc/odin.cfg file by modifying the JSCOM3 Listener block to include an additional argument on the JVM_OPTIONS parameter, as follows:

```
;JSCOM3 Listener
NODE = JSS
BEGIN
  PROTOCOL = TCP
  CLASS = JAVASERVER
  PORT = 12335
  AWT_HEADLESS = Y
  JVM_OPTIONS = -Djava.version=1.6|-Duser.language=en
  JVM_MAX_HEAP = 512
  IBI_CLASSPATH = /home/sqljdbc40/sqljdbc.jar:/home/sqljdbc20/sqljdbc.jar
END
```

❏ Some of the Retail Sample reports will not run in NLS or DBCS languages. This issue will be resolved in an upcoming PTF.

DataMigrator/Data Management Console

Important: The renaming of Application Directories in the Data Management Console is not recommended as it may result in execution failures with the contents of the Application Directory.

Metadata

This section addresses the known issues for metadata.

❏ Creating a synonym for a Query/400 file from the right-click folder Metadata Edit option does not generate the associated Web Query procedure in the repository. To create Query/400 synonyms, right-click a folder and select the *Metadata New* option.

❏ Creating a synonym for a Query/400 file fails when it is launched from a subfolder.

Documentation Update

This section addresses the known issue for documentation.

❏ The outbound_ssl_certificate_passphrase * value in the Adapter for Esri ArcGIS topic in the HF1 chapter has been updated from

`{AES}1D223C3B5391511503A9BA73617C6A3B`

to

`edaport0`

Online Help

This section addresses the known issue for Online Help.

❏ Online Help is not translated in Japanese. Translation will be available in a future release of Db2 Web Query.

Browser Information

The following topics describe information for the available web and mobile browsers for Web Query 2.2.1.

Web Browsers

The following browsers are certified for Web Query and Developer Workbench.

❏ Microsoft Edge™ 41

❏ Internet Explorer® 11

❏ Google Chrome™ 66

❏ Mozilla Firefox® Quantum 60

Release 2.2.1 Notes

❏ Simple HTML Web Query reports can be viewed on any browser.

❏ Chart/Graph request notes:

  ❏ *Browser-generated graphs* refer to graphs that are rendered inside the browser using HTML5 (and JavaScript). Browser-generated graphs are utilized in both standard HTML5 output ("FORMAT JSCHART"), and in Active Technologies ("FORMAT AHTML").

  ❏ *Server-generated graphs* refer to graph requests that are generated on the Reporting Server and then embedded as a bitmap or vector image in a document or webpage. This includes the following output formats:

    ❏ Bitmap: PNG, JPG

    ❏ Vector: PDF (but not active PDF), SVG

❏ Support for presenting images and graphs in HTML, DHTML, and DHTML compound reports is provided using an image embedding facility based on the client browser. Output generated by Internet Explorer browsers or in scenarios where the browser is unknown (such as when distributed by Report Broker) supports image inclusion through the creation of a web archive file (.mht). For all other browsers, images are base64 encoded within the generated .htm file.

❏ Drill-down links do not work when using an embedded PDF viewer available in some browser versions. Refer to the browser's configuration information on how to change the Application Options settings for the relevant content types so that the browser will automatically use Adobe Reader.

❏ Adobe Reader support:

  ❏ Acrobat Reader DC is certified

  ❏ Adobe XI is supported

  ❏ Adobe X is supported

❏ If you are using Internet Explorer® 11 on a Windows® 2012 R2 OS and you attempt to run an object (such as a report or chart in InfoAssist+), Internet Explorer 11 opens it in a new window instead of targeting the object to a specific frame. For example, in InfoAssist+, the New Window Runtime opens a new browser window that shows the running image, which then replaces that page with the output. Since Internet Explorer 11 does not allow the replacement of that window, it opens a new window instead.

This browser limitation can be remedied by an administrator. For more information, see *https://social.msdn.microsoft.com/Forums/ie/en-US/a5c294e2-e407-491d-ba6a-b7f7edbcabaf/ie11-cant-post-form-data-to-specific-frame-or-window-dialog-opened-via-windowopen?forum=iewebdevelopment*

Mobile Browser Information

If you are planning to use Web Query on mobile devices, note the following regarding mobile browser support. If you will be using Web Query on the Windows operating system, see the Web Browser support information.

Note: Browsers released after the production date of a Web Query version are subject to certification.

InfoAssist+ is not supported on mobile devices.

The following devices were used in testing Web Query 2.2.1:

❑ iOS 11.3, 11.2.6, 11.0, 10.21, 9.3 iPad and iPhone

❑ Android 8.0, 7.0, 6.0 tablet and phone

❑ Mobile Faves 3.2.2, 3.2.1.5

❑ AirWatch 5.9 with iOS 10

Usage Considerations:

❑ Report Broker interfaces are supported on tablets.

❑ HTML reporting Table of Contents (BYTOC) feature is not supported.

❑ Viewing PDF, Excel, and PowerPoint documents may require a third-party helper app.

❑ To open active report content, JavaScript needs to be enabled in your web browser. On mobile devices, please use the Mobile Faves app. If not installed, download it from the App Store for iOS devices or from the Google Play Store for Android devices.

This documentation describes known issues, web browser support, and mobile support for the June 2018 - 2.2.1 Hotfix 3 release.

Note: The June 2018 HF3 release is a maintenance release only. No new features were introduced in this Hotfix.

This document is intended for all levels of users, including application developers, administrators, and end users. It is also intended to serve as a quick reference for users upgrading from a prior version.

In this chapter:

❏   Report Styling Documentation

❏   Change in Behavior

❏   Known Issues

❏   Browser Information

Report Styling Documentation

There are many ways to style and format content using the various tools within Db2 Web Query. Content can be a report, chart, document, dashboard, or an HTML page. Using the report styling features within the development tools is always recommended. InfoAssist is the content development tool included in all Web Query editions. The Developer Workbench is an optional feature that provides an HTML canvas used to create HTML pages. There are many report formatting and styling features within each of these respective tools. However, if the GUI does not contain the feature for the exact styling you desire, you can use a style sheet.

Find out everything you need to know about report styling in the *Db2 Web Query for i Report Styling* documentation, located at:

http://ibm.biz/db2wqwiki-documentation

This document will cover all aspects of report styling and will answer some of the following commonly asked questions:

❏ What is a Web Query style sheet?

❏ What is the best practice for uploading style sheets and uploading images?

❏ Where do I store images that I may want to use in my content?

❏ What are the best practices for location of images (for example, grouping the images separately so as not to confuse them with reports and schedules in the tree)?

Change in Behavior

The following topic describes a change in behavior for Db2 Web Query.

Business Intelligence Portal

The Session Timeout message has been updated to the following:

```
Session invalidated or timed out - redirecting ...
```

Known Issues

The following topics describe known issues that will be addressed in a future version of Db2 Web Query.

Kerberos

The redirection URL has changed for users in an SSO-enabled environment that click *Sign Out* on the Web Query portal. The previous /logon/logoff.jsp URL will no longer sign out. To specify the new URL, follow these steps:

1. Sign in to Web Query with the administrative profile, QWQADMIN, or as a Web Query administrator.

2. From the Administration menu, select *Administration Console*.

3. On the Web Query Administration Console, click the *Configuration* tab, as shown in the following image.

4. Click *Security*, as shown in the following image.

5. Set the Sign-out URL to /signout, as shown in the following image.

6. Click *Save*.

REST-Based Application Extension (WQRAX)

This section addresses the known issues for the REST-Based Application Extension (WQRAX).

❑ Certain types of reports, including visualizations which utilize some maps, will not render properly when invoked through WQRAX. This will be resolved in an upcoming PTF.

❑ You must edit HTML Composer dashboards that were created prior to Web Query 2.1.0 group PTF level 13 or 2.1.1 group PTF level 2 for compatibility with current fix levels. Otherwise, they will not run in WQRAX after applying this Hotfix.

Workaround: Either edit and save the HTML file in the Developer Workbench HTML canvas, which will make the changes automatically, or edit and save the HTML dashboard using Web Query 2.2.0, using the following steps:

1. Sign in to Web Query using a Web Query Administrator user ID.

2. On the BI Portal resource tree, right-click the HTML dashboard file and select *Edit*.

   Note: if you do not see an Edit option, then the dashboard is already at a current version and these steps do not apply.

3. In the text editor, click *Search* and then *Find*.

4. Type */webquery/ibi_html* in the Find What: box.

5. Type *./ibi_html* in the Replace With: box.

6. Click the *Replace All* button.

7. Click the *Save* button on the toolbar.

8. Click *File* and then *Exit*.

Business Intelligence Portal

This section addresses the known issues for BI Portal.

Upload Data and Upload Wizard

❏ NLS characters are not supported in the following places when using the Upload Data and Upload Wizard:

  ❏ Excel Worksheet name.

  ❏ Folder name from where the Upload Wizard is being launched.

  Workaround: Use invariant (A-Z and 0-9) characters. Support for NLS characters will be added in a future Hotfix.

❏ Run-Time Enablement (RTE) may cause the Upload Wizard to fail. This will happen if the user's current library (CURLIB) is not defined in the user's active RTE environment. The Upload Wizard writes out a temporary file during the upload process.

  Workaround: It is recommended to add both QGPL and the user's CURLIB (if different from the default, QGPL) to the user's active RTE environment using the WRKWQRTE command.

Metadata Wizard

❏ The Statistics Report in the Utilities folder does not run. This will be resolved in a future PTF.

❏ The Adapters for Query/400, DB Heritage, and JD Edwards should not be used during the Import Metadata step as these are multi-step Create Synonym processes, which are not yet supported by the Metadata Wizard.

  Workaround: Use the Metadata New option to create synonyms for these Adapter types.

InfoAssist+

This section addresses the known issue for InfoAssist+.

❏ The 2014 Demographic layers do not render on an ESRI map.

JD Edwards Adapters

This section addresses the known issues for the JD Edwards Adapters.

To use the Alternate Language option in the Adapter for JD Edwards EnterpriseOne and the Adapter for JD Edwards World:

1. Configure the adapter with *UDC Direct File Access* unchecked.

2. Run the *Refresh Metadata* with *Alternate Language File* unchecked.

   This step will create the udcdicdb table.

3. Run the *Refresh Metadata* with *Alternate Language File* checked and enter the default language code.

   This step will create the altdicdb table.

4. Create all the synonyms needed.

Note: Steps 2 and 3 need to be run, as needed, whenever UDC descriptions are updated.

Report Broker

This section addresses the known issue for Report Broker.

❏ Migration of Public Distribution Lists will generate the following error:

```
ERROR IBFSService                    - setShares - opShareBasic/
opShareAdvanced to this resource denied - user:qwqadmin res:/WFC/
Repository/untitled/ReportBroker/~ownerID/distribution_list.adr
[2014-03-11 00:00:00,605] ERROR IBFSAddrBookConverter       -
Failed to share '/WFC/Repository/untitled/ReportBroker/~ownerID/
distribution_list.adr' with IBFS:/SSYS/GROUPS/EVERYONE
```

The distribution list will be migrated as a private object. To make this published:

1. Move the distribution list to a published folder.

2. Right-click on the distribution list and select the *Publish* option.

Spreadsheet Client

This section addresses the known issue for Spreadsheet Client.

❏ Populating a spreadsheet using a large Excel Add-in request (25 columns, 200K rows) does not return output.

National Language Support

This section addresses the known issues for National Language Support (NLS).

❑ Running an active Flash or active PDF report with the following configuration will result in an *Error compiling Active Flex Report* message:

❑ Reporting Server configured for a DBCS language, for example, Japanese, Chinese, Korean.

❑ Portal UI configured for English.

Workaround: Configure the Portal UI for the same language as the Reporting Server.

❑ In Turkish, running an active Flash or active PDF report in InfoAssist+ or from BI Portal generates a FOC3357 error message.

Workaround: Edit the /QIBM/UserData/qwebqry/base80/client/wfc/etc/nlscfg.err file and add the following line to the end of the file:

```
ENCODING = Cp1026
```

Also, edit the /QIBM/UserData/qwebqry/ibi/srv77/wfs/etc/odin.cfg file by modifying the JSCOM3 Listener block to include an additional argument on the JVM_OPTIONS parameter, as follows:

```
;JSCOM3 Listener
NODE = JSS
BEGIN
  PROTOCOL = TCP
  CLASS = JAVASERVER
  PORT = 12335
  AWT_HEADLESS = Y
  JVM_OPTIONS = -Djava.version=1.6|-Duser.language=en
  JVM_MAX_HEAP = 512
  IBI_CLASSPATH = /home/sqljdbc40/sqljdbc.jar:/home/sqljdbc20/sqljdbc.jar
END
```

❑ Some of the Retail Sample reports will not run in NLS or DBCS languages. This issue will be resolved in an upcoming PTF.

DataMigrator/Data Management Console

Important: The renaming of Application Directories in the Data Management Console is not recommended as it may result in execution failures with the contents of the Application Directory.

Metadata

This section addresses the known issues for metadata.

❏ Creating a synonym for a Query/400 file from the right-click folder Metadata Edit option does not generate the associated Web Query procedure in the repository. To create Query/400 synonyms, right-click a folder and select the *Metadata New* option.

❏ Creating a synonym for a Query/400 file fails when it is launched from a subfolder.

Documentation Update

This section addresses the known issue for documentation.

❏ The outbound_ssl_certificate_passphrase * value in the Adapter for Esri ArcGIS topic in the HF1 chapter has been updated from

```
{AES}1D223C3B5391511503A9BA73617C6A3B
```

to

```
edaport0
```

Online Help

This section addresses the known issue for Online Help.

❏ Online Help is not translated in Japanese. Translation will be available in a future release of Db2 Web Query.

Browser Information

The following topics describe information for the available web and mobile browsers for Web Query 2.2.1.

Web Browsers

The following browsers are certified for Web Query and Developer Workbench.

❏ Microsoft Edge™ 41

❏ Internet Explorer® 11

❏ Google Chrome™ 66

❏ Mozilla Firefox® Quantum 60

Release 2.2.1 Notes

❏ Simple HTML Web Query reports can be viewed on any browser.

❏ Chart/Graph request notes:

  ❏ *Browser-generated graphs* refer to graphs that are rendered inside the browser using HTML5 (and JavaScript). Browser-generated graphs are utilized in both standard HTML5 output ("FORMAT JSCHART"), and in Active Technologies ("FORMAT AHTML").

  ❏ *Server-generated graphs* refer to graph requests that are generated on the Reporting Server and then embedded as a bitmap or vector image in a document or webpage. This includes the following output formats:

    ❏ Bitmap: PNG, JPG

    ❏ Vector: PDF (but not active PDF), SVG

❏ Support for presenting images and graphs in HTML, DHTML, and DHTML compound reports is provided using an image embedding facility based on the client browser. Output generated by Internet Explorer browsers or in scenarios where the browser is unknown (such as when distributed by Report Broker) supports image inclusion through the creation of a web archive file (.mht). For all other browsers, images are base64 encoded within the generated .htm file.

❏ Drill-down links do not work when using an embedded PDF viewer available in some browser versions. Refer to the browser's configuration information on how to change the Application Options settings for the relevant content types so that the browser will automatically use Adobe Reader.

❏ Adobe Reader support:

  ❏ Acrobat Reader DC is certified

  ❏ Adobe XI is supported

  ❏ Adobe X is supported

❏ If you are using Internet Explorer® 11 on a Windows® 2012 R2 OS and you attempt to run an object (such as a report or chart in InfoAssist+), Internet Explorer 11 opens it in a new window instead of targeting the object to a specific frame. For example, in InfoAssist+, the New Window Runtime opens a new browser window that shows the running image, which then replaces that page with the output. Since Internet Explorer 11 does not allow the replacement of that window, it opens a new window instead.

This browser limitation can be remedied by an administrator. For more information, see *https://social.msdn.microsoft.com/Forums/ie/en-US/a5c294e2-e407-491d-ba6a-b7f7edbcabaf/ie11-cant-post-form-data-to-specific-frame-or-window-dialog-opened-via-windowopen?forum=iewebdevelopment*

Mobile Browser Information

If you are planning to use Web Query on mobile devices, note the following regarding mobile browser support. If you will be using Web Query on the Windows operating system, see the Web Browser support information.

Note: Browsers released after the production date of a Web Query version are subject to certification.

InfoAssist+ is not supported on mobile devices.

The following devices were used in testing Web Query 2.2.1:

❏ iOS 11.3, 11.2.6, 11.0, 10.21, 9.3 iPad and iPhone

❏ Android 8.0, 7.0, 6.0 tablet and phone

❏ Mobile Faves 3.2.2, 3.2.1.5

❏ AirWatch 5.9 with iOS 10

Usage Considerations:

❏ Report Broker interfaces are supported on tablets.

❏ HTML reporting Table of Contents (BYTOC) feature is not supported.

❏ Viewing PDF, Excel, and PowerPoint documents may require a third-party helper app.

❏ To open active report content, JavaScript needs to be enabled in your web browser. On mobile devices, please use the Mobile Faves app. If not installed, download it from the App Store for iOS devices or from the Google Play Store for Android devices.

This documentation describes known issues, web browser support, and mobile support for the March 2018 - 2.2.1 Hotfix 2 release.

Note: The March 2018 HF2 release is a maintenance release only. No new features were introduced in this Hotfix.

This document is intended for all levels of users, including application developers, administrators, and end users. It is also intended to serve as a quick reference for users upgrading from a prior version.

In this chapter:

❏ Known Issues

❏ Browser Information

Known Issues

The following topics describe known issues that will be addressed in a future version of Db2 Web Query.

Kerberos

The redirection URL has changed for users in an SSO-enabled environment that click *Sign Out* on the Web Query portal. The previous /logon/logoff.jsp URL will no longer sign out. To specify the new URL, follow these steps:

1. Sign in to Web Query with the administrative profile, QWQADMIN, or as a Web Query administrator.

2. From the Administration menu, select *Administration Console*.

3. On the Web Query Administration Console, click the *Configuration* tab, as shown in the following image.

4. Click *Security*, as shown in the following image.

5. Set the Sign-out URL to /signout, as shown in the following image.

6. Click *Save*.

REST-Based Application Extension (WQRAX)

This section addresses the known issues for the REST-Based Application Extension (WQRAX).

❑ Certain types of reports, including visualizations which utilize some maps, will not render properly when invoked through WQRAX. This will be resolved in an upcoming PTF.

❑ You must edit HTML Composer dashboards that were created prior to Web Query 2.1.0 group PTF level 13 or 2.1.1 group PTF level 2 for compatibility with current fix levels. Otherwise, they will not run in WQRAX after applying this Hotfix.

Workaround: Either edit and save the HTML file in the Developer Workbench HTML canvas, which will make the changes automatically, or edit and save the HTML dashboard using Web Query 2.2.0, using the following steps:

1. Sign in to Web Query using a Web Query Administrator user ID.

2. On the BI Portal resource tree, right-click the HTML dashboard file and select *Edit*.

   Note: if you do not see an Edit option, then the dashboard is already at a current version and these steps do not apply.

3. In the text editor, click *Search* and then *Find*.

4. Type */webquery/ibi_html* in the Find What: box.

5. Type *./ibi_html* in the Replace With: box.

6. Click the *Replace All* button.

7. Click the *Save* button on the toolbar.

8. Click *File* and then *Exit*.

Business Intelligence Portal

This section addresses the known issues for BI Portal.

Upload Data and Upload Wizard

❏ NLS characters are not supported in the following places when using the Upload Data and Upload Wizard:

❏ Excel Worksheet name.

❏ Folder name from where the Upload Wizard is being launched.

Workaround: Use invariant (A-Z and 0-9) characters. Support for NLS characters will be added in a future Hotfix.

❏ Run-Time Enablement (RTE) may cause the Upload Wizard to fail. This will happen if the user's current library (CURLIB) is not defined in the user's active RTE environment. The Upload Wizard writes out a temporary file during the upload process.

Workaround: It is recommended to add both QGPL and the user's CURLIB (if different from the default, QGPL) to the user's active RTE environment using the WRKWQRTE command.

Metadata Wizard

❏ The Statistics Report in the Utilities folder does not run. This will be resolved in a future PTF.

❏ The Adapters for Query/400, DB Heritage, and JD Edwards should not be used during the Import Metadata step as these are multi-step Create Synonym processes, which are not yet supported by the Metadata Wizard.

Workaround: Use the Metadata New option to create synonyms for these Adapter types.

InfoAssist+

This section addresses the known issue for InfoAssist+.

❏ The 2014 Demographic layers do not render on an ESRI map.

JD Edwards Adapters

This section addresses the known issues for the JD Edwards Adapters.

To use the Alternate Language option in the Adapter for JD Edwards EnterpriseOne and the Adapter for JD Edwards World:

1. Configure the adapter with *UDC Direct File Access* unchecked.

2. Run the *Refresh Metadata* with *Alternate Language File* unchecked.

   This step will create the udcdicdb table.

3. Run the *Refresh Metadata* with *Alternate Language File* checked and enter the default language code.

   This step will create the altdicdb table.

4. Create all the synonyms needed.

Note: Steps 2 and 3 need to be run, as needed, whenever UDC descriptions are updated.

Report Broker

This section addresses the known issue for Report Broker.

❏ Migration of Public Distribution Lists will generate the following error:

```
ERROR IBFSService                      - setShares - opShareBasic/
opShareAdvanced to this resource denied - user:qwqadmin res:/WFC/
Repository/untitled/ReportBroker/~ownerID/distribution_list.adr
[2014-03-11 00:00:00,605] ERROR IBFSAddrBookConverter       -
Failed to share '/WFC/Repository/untitled/ReportBroker/~ownerID/
distribution_list.adr' with IBFS:/SSYS/GROUPS/EVERYONE
```

The distribution list will be migrated as a private object. To make this published:

1. Move the distribution list to a published folder.

2. Right-click on the distribution list and select the *Publish* option.

Spreadsheet Client

This section addresses the known issue for Spreadsheet Client.

❏ Populating a spreadsheet using a large Excel Add-in request (25 columns, 200K rows) does not return output.

National Language Support

This section addresses the known issues for National Language Support (NLS).

❏ Some of the Retail Sample reports will not run in NLS or DBCS languages. This issue will be resolved in an upcoming PTF.

❏ In Turkish, running an active Flash or active PDF report in InfoAssist+ or from BI Portal generates a FOC3357 error.

Workaround: Edit the /QIBM/UserData/qwebqry/base80/client/wfc/etc/nlscfg.err file and add the following line to the end of the file:

```
ENCODING = Cp1026
```

Also, edit the /QIBM/UserData/qwebqry/ibi/srv77/wfs/etc/odin.cfg file by modifying the JSCOM3 Listener block to include an additional argument on the JVM_OPTIONS parameter, as follows:

```
;JSCOM3 Listener
NODE = JSS
BEGIN
  PROTOCOL = TCP
  CLASS = JAVASERVER
  PORT = 12335
  AWT_HEADLESS = Y
  JVM_OPTIONS = -Djava.version=1.6|-Duser.language=en
  JVM_MAX_HEAP = 512
  IBI_CLASSPATH = /home/sqljdbc40/sqljdbc.jar:/home/sqljdbc20/sqljdbc.jar
END
```

DataMigrator/Data Management Console

Important: The renaming of Application Directories in the Data Management Console is not recommended as it may result in execution failures with the contents of the Application Directory.

Metadata

This section addresses the known issues for metadata.

❏ Creating a synonym for a Query/400 file from the right-click folder Metadata Edit option does not generate the associated Web Query procedure in the repository. To create Query/400 synonyms, right-click a folder and select the *Metadata New* option.

❏ Creating a synonym for a Query/400 file fails when it is launched from a subfolder.

Documentation Update

This section addresses the known issue for documentation.

❏ The outbound_ssl_certificate_passphrase * value in the Adapter for Esri ArcGIS topic in the HF1 chapter has been updated from

```
{AES}1D223C3B5391511503A9BA73617C6A3B
```

to

```
edaport0
```

Online Help

This section addresses the known issue for Online Help.

❏ Online Help is not translated in Japanese. Translation will be available in a future release of Db2 Web Query.

Browser Information

The following topics describe information for the available web and mobile browsers for Web Query 2.2.1.

Web Browsers

The following browsers are certified for Web Query and Developer Workbench.

❏ Microsoft Edge™ 40

❏ Internet Explorer® 11

❏ Google Chrome™ 63

Note: Chrome™ 62 is not supported due to issues that impact Db2 functionality that are confirmed fixed by Chrome™ 63.

❏ Mozilla Firefox® 57

Release 2.2.1 Notes

❏ Simple HTML Web Query reports can be viewed on any browser.

❏ Chart/Graph request notes:

❏ *Browser-generated graphs* refer to graphs that are rendered inside the browser using HTML5 (and JavaScript). Browser-generated graphs are utilized in both standard HTML5 output ("FORMAT JSCHART"), and in Active Technologies ("FORMAT AHTML").

❏ *Server-generated graphs* refer to graph requests that are generated on the Reporting Server and then embedded as a bitmap or vector image in a document or webpage. This includes the following output formats:

❏ Bitmap: PNG, JPG

❏ Vector: PDF (but not active PDF), SVG

❏ Support for presenting images and graphs in HTML, DHTML, and DHTML compound reports is provided using an image embedding facility based on the client browser. Output generated by Internet Explorer browsers or in scenarios where the browser is unknown (such as when distributed by Report Broker) supports image inclusion through the creation of a web archive file (.mht). For all other browsers, images are base64 encoded within the generated .htm file.

❏ Drill-down links do not work when using an embedded PDF viewer available in some browser versions. Refer to the browser's configuration information on how to change the Application Options settings for the relevant content types so that the browser will automatically use Adobe Reader.

❏ Adobe Reader support:

❏ Acrobat Reader DC is certified

❏ Adobe XI is supported

❏ Adobe X is supported

❏ If you are using Internet Explorer® 11 on a Windows® 2012 R2 OS and you attempt to run an object (such as a report or chart in InfoAssist+), Internet Explorer 11 opens it in a new window instead of targeting the object to a specific frame. For example, in InfoAssist+, the New Window Runtime opens a new browser window that shows the running image, which then replaces that page with the output. Since Internet Explorer 11 does not allow the replacement of that window, it opens a new window instead.

This browser limitation can be remedied by an administrator. For more information, see *https://social.msdn.microsoft.com/Forums/ie/en-US/a5c294e2-e407-491d-ba6a-b7f7edbcabaf/ie11-cant-post-form-data-to-specific-frame-or-window-dialog-opened-via-windowopen?forum=iewebdevelopment*

Mobile Browser Information

If you are planning to use Web Query on mobile devices, note the following regarding mobile browser support. If you will be using Web Query on the Windows operating system, see the Web Browser support information.

Note: Browsers released after the production date of a Web Query version are subject to certification.

InfoAssist+ is not supported on mobile devices.

The following devices were used in testing Web Query 2.2.1:

❑ iOS 11.0 iPad and iPhone (Latest iOS 11 iPad and iPhone is supported)

❑ iOS 10.2.1 iPad and iPhone (Latest iOS 10 iPad and iPhone is supported)

❑ iOS 9.3 iPad and iPhone

❑ AirWatch 5.9 with iOS 10

❑ Android 7.0 tablet

❑ Android 6.0 tablet and phone

❑ Mobile Faves version 3.2.1.5

Usage Considerations:

❑ Report Broker interfaces are supported on tablets.

❑ HTML reporting Table of Contents (BYTOC) feature is not supported.

❑ Viewing PDF, Excel, and PowerPoint documents may require a third-party helper app.

❑ To open active report content, JavaScript needs to be enabled in your web browser. On mobile devices, please use the Mobile Faves app. If not installed, download it from the App Store for iOS devices or from the Google Play Store for Android devices.

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Db2 Web Query Version 2.2.1 - December 2017 - HF1

This documentation describes new features, web browser support, and mobile support for the December 2017 - 2.2.1 Hotfix 1 release.

This document is intended for all levels of users, including application developers, administrators, and end users. It is also intended to serve as a quick reference for users upgrading from a prior version.

In this chapter:

❏ Db2 Web Query for i Enhancements

❏ Adapter for Esri ArcGIS

❏ Known Issues

❏ Browser Information

Db2 Web Query for i Enhancements

The following new features apply to Db2 Web Query for i.
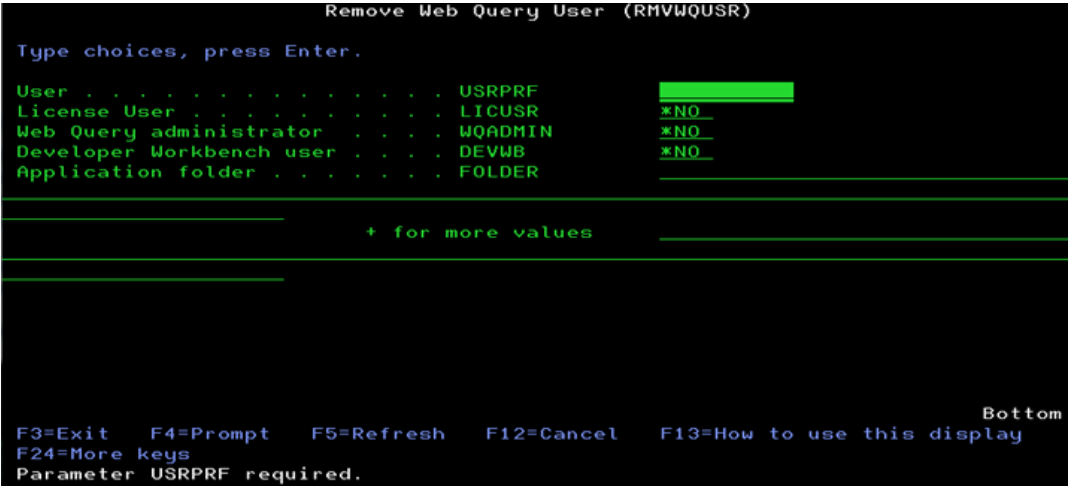
Remove Web Query User RMVWQUSR Command

The new RMVWQUSR command provides a command line (CL) interface for removing a Web Query licensed user or revoking one or more folder permissions. The command is complementary to the Web Query Security Center, providing an alternate way for IT managers to administer licensed Web Query users.

The RMVWQUSR command allows an administrator to:

❏ Deregister a profile as a Web Query user and release the Developer User license.

❏ Downgrade a profile from a Web Query administrator or Developer Workbench user.

❏ Remove a licensed user from one of more Web Query folder groups.

The command parameters are shown in the following image.

```
                    Remove Web Query User (RMVWQUSR)

 Type choices, press Enter.

 User . . . . . . . . . . . . . . USRPRF        _____
 License User . . . . . . . . . . LICUSR         *NO
 Web Query administrator  . . . . WQADMIN        *NO
 Developer Workbench user . . . . DEVWB          *NO
 Application folder . . . . . . . FOLDER         _____


 _____
                              + for more values  _____

 _____


                                                                  Bottom
 F3=Exit    F4=Prompt    F5=Refresh    F12=Cancel   F13=How to use this display
 F24=More keys
 Parameter USRPRF required.
```

Required Parameters

The following is a required parameter for the RMVWQUSR command:

USRPRF. Specifies the name of the user profile to be removed from Web Query or whose folder permissions are to be revoked. When removing a user completely from Web Query, the Developer User license (5733-WQX feature 5104) of the user will be released.

Optional Parameters

The following are optional parameters for the RMVWQUSR command:

LICUSR. Specifies if the user should be removed as a licensed Web Query user. Removing a user will release the user license to use the Web Query product (5733-WQX feature 5104). It will also release the user license to the Developer Workbench feature (5733-WQX feature 5105) if it is licensed. Any private content owned by the user will also be deleted.

Possible values are:

❏ *NO indicates that the user is not removed.

❏ *YES indicates that the user is removed from Web Query.

   Note: Only QWQADMIN or a user who has *SECADM special authority can specify this value, if the user being removed is a Web Query administrator.

WQADMIN. Specifies if the user should be removed from the WebQueryAdministrator group in Security Center. Users in this group can perform administrative tasks, such as adding or removing other users, assigning user permissions, and creating top level folders, metadata, and reports.

Possible values are:

❏ *NO indicates that the user is not removed from the group.

❏ *YES indicates that the user is removed from the group.

   Note: Only QWQADMIN or a user who has *SECADM special authority can specify this value.

DEVWB. Specifies if the user should be removed from the DevWorkBench group in Security Center. Users in this group are authorized to use the Developer Workbench Client, which provides advanced tools for editing metadata or developing HTML dashboards. Removing a user from this group will release the user license to the Developer Workbench feature of Web Query (5733-WQX feature 5105). Possible values are:

Possible values are:

❏ *NO indicates that the user is not removed from the group.

❏ *YES indicates that the user is removed from the group.

FOLDER. Specifies one or more folder groups from which the user will be revoked. Each top-level folder in the Web Query repository has a set of folder groups. The folder groups define the user roles and the underlying user permissions for the folder. The roles include administrator, analyst, DBA, developer, runner, and scheduler. Up to 50 folder groups can be specified on the command. The folder group names are case sensitive and must be entered exactly as they are shown in Security Center. Multiple folder groups can be specified, but must be separated by a blank.

RMVWQUSR Command Examples

```
RMVWQUSR USRPRF(John) LICUSR(*YES)
```

John will be deregistered as a Web Query user and his Developer User license (and Developer Workbench license, if the user holds one) will be released.

```
RVMWQUSR USRPRF(Jane) WQADMIN(*YES)
```

Registered user Jane will no longer have Web Query administrator privileges, but will remain a licensed Web Query developer.

```
RMVWQUSR USRPRF(Jane) DEVWB(*YES)
```

Jane's license as a Developer Workbench user will be released, but Jane will remain a licensed Web Query developer.

```
RMVWQUSR USRPRF(Bob) DEVWB(*YES) FOLDER('Century_Electronics-dev'
'Century_Electronics-admin')
```

Registered user Bob will remain a Web Query licensed user, but he will be removed from the Developer Workbench group and his Developer Workbench license will be released. Additionally, his permissions will be revoked as a developer and administrator for the Century Electronics folder.

Users who are authorized to run the RMVWQUSR command are QWQADMIN, members of the WebQueryAdministrator group, and users with *SECADM special authority. Only QWQADMIN or system administrators with *SECADM special authority can remove a user from the Web Query administrators group.

When removing a user from Web Query, any private content the user owns will be deleted. You will be prompted to confirm the deletion. Private content that should be retained must either be published or transferred to another owner.

You can use the partner Register Web Query User (REGWQUSR) command to add a Web Query user or assign a user to a folder group. Other Web Query administrative tasks, such as assigning a group profile to a run-only group or viewing a user group membership, must be performed from the Security Center. To access the Security Center, sign into the Web Query portal at *http://<your_system>:12331/webquery* and then click *Tools*.

Create Web Query Synonym CRTWQSYN Command

The CRTWQSYN command allows you to create synonyms (also referred to as metadata) from a command line interface. If the synonym already exists, the OPTION parameter determines what action to take. The *REFRESH option, which refreshes an existing synonym, is enhanced to create the synonym if it does not already exist.

Adapter for Esri ArcGIS

This section provides detailed descriptions of new features for GIS adapters.

The Adapter for Esri ArcGIS provides access to the Esri cloud for the purposes of drawing maps and demographic layers, and also providing the following geometry functions that retrieve geometry data and geocode addresses:

❑ **GIS_DISTANCE.** Calculates the distance between two geometry points.

❑ **GIS_DRIVE_ROUTE.** Returns the driving route between two geometry points.

❑ **GIS_GEOCODE_ADDR.** Returns the geometry point for a complete address.

❑ **GIS_GEOCODE_ADDR_CITY.** Returns the geometry point for address, city, and state.

❑ **GIS_GEOCODE_ADDR_POSTAL.** Returns the geometry point for address, postal_code.

❑ **GIS_GEOMETRY.** Builds/converts a JSON geometry object given a geotype, WKID (Well-Known ID) spatial reference, and a initial JSON geometry.

❑ **GIS_IN_POLYGON.** Given a geometry point and a polygon definition, returns the value 1 (TRUE), if the point is in the polygon or 0 (FALSE), if is not.

❑ **GIS_LINE.** Given two geometry points or lines, GIS_LINE builds a JSON line defining a geometry line.

❑ **GIS_POINT.** Given a WKID (Well-Known ID) spatial reference, longitude, and latitude, returns a JSON point defining a geometry object.

❑ **GIS_SERVICE_AREA.** Calculates the geometry area with access boundaries within the given time or distance from the provided geometry point.

❑ **GIS_SERV_AREA_XY.** Calculates the geometry area with access boundaries within the given time or distance from the provided coordinates and WKID spatial reference.

Configuring the Adapter for ESRI ArcGIS

The following procedure describes the steps for configuring the Adapter for ESRI ArcGIS.

Procedure: How to Configure the Adapter for ESRI ArcGIS

1. Sign in to Web Query using a Web Query Administrator user ID.

2. Expand the *Reporting Servers* node on the resource tree.

3. Right-click *EDASERVE* and select *Reporting Server Console*.

4. Select the *Workspace* tab.

5. Click the *Workspace SET* drop-down arrow on the ribbon and select *Miscellaneous Settings*, as shown in the following image.
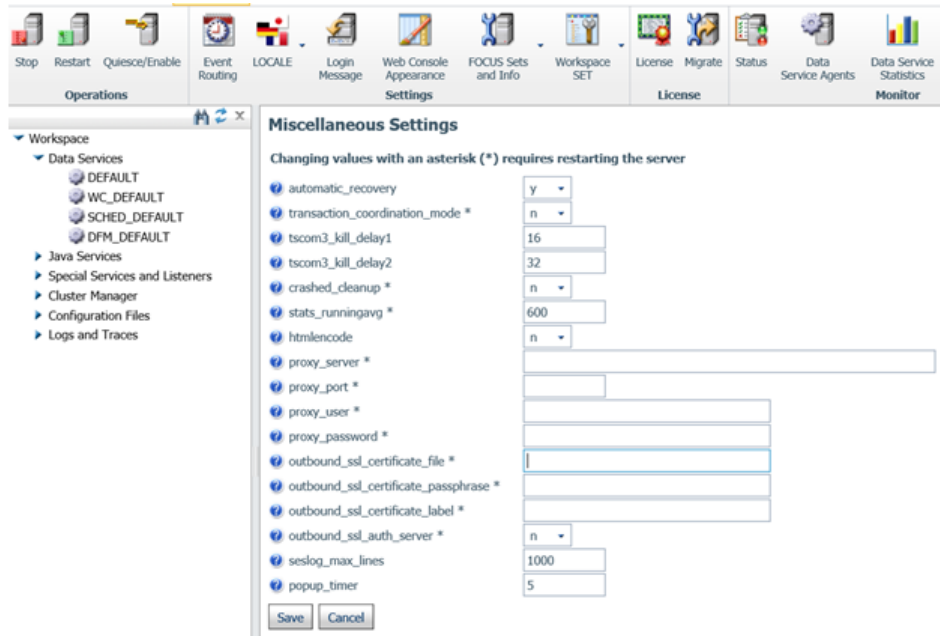

6. Enter the following values:

   ❏ outbound_ssl_certificate_file: * = /qibm/UserData/qwebqry/ibi/srv77/wfs/etc/iwaygsk.kdb

   ❏ outbound_ssl_certificate_passphrase * = edaport0

   ❏ outbound_ssl_certificate_label * = iwaysrv

7. Click *Save*. This will require a restart of the Reporting Server.

8. When the Console refreshes, select the *Adapters* tab.

9. Expand the *Available* adapters, expand *GIS*, and select the *ESRI ArcGIS* adapter.

10. To configure the adapter, double-click or right-click the adapter and select *Configure*, as shown in the following image.
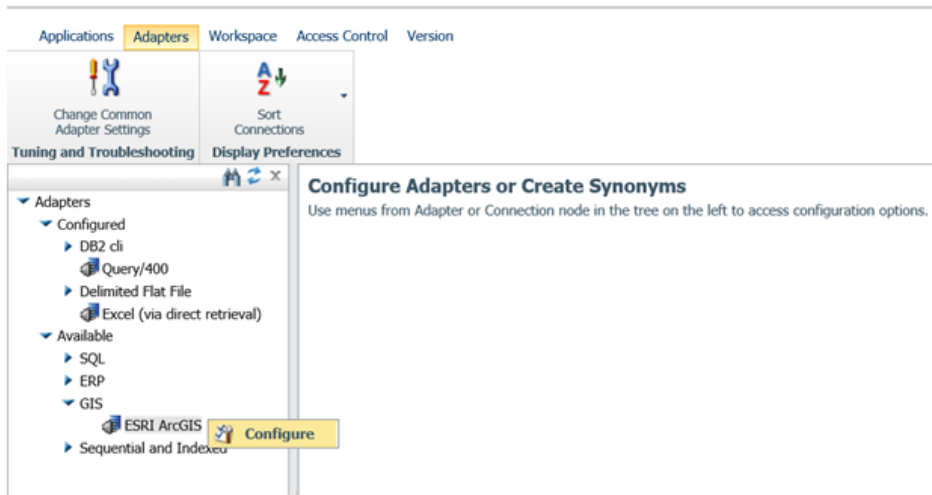
The following dialog box displays, with preconfigured values to access the IBI free content.
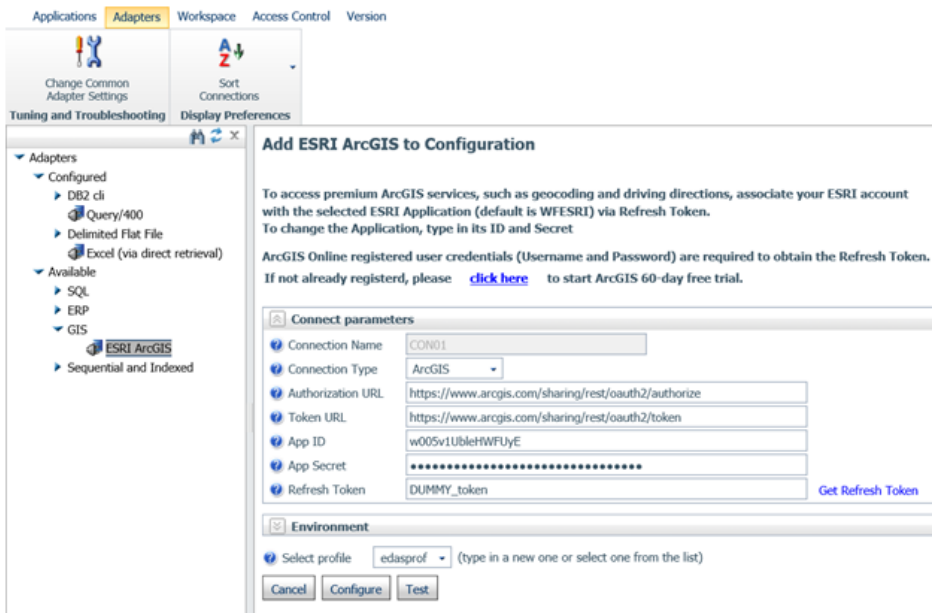
11. Click *Test*.

This should return a line of data.

12. Click *Configure* to complete the configuration of the adapter.

Unified Definition for ArcGIS Server URLs and Geographic Roles

The server comes with a file named geo_services.xml that configures all ArcGIS geographic services that are available out of the box when the server is installed.

In order to correctly retrieve and use location data in a request, the geographic roles for the fields that represent locations must be accurately defined in the request or the metadata. Geographic roles may be part of a hierarchy. For example, a city may be part of a state, and the state part of a country. The hierarchical relationships are needed in order to identify and retrieve the correct location data.

Hierarchy definitions also provide Web Query with the information needed to perform AutoDrilling from a geographic role at a higher level of the geographic hierarchy to a geographic role at a lower level of the geographic hierarchy.

When you use the Web Console Data Assist tool to assign a geographic role to a field, the hierarchies display their member roles within the appropriate contexts. For example, the following image shows the hierarchies available by default, with the World hierarchy open to its first level of member roles.
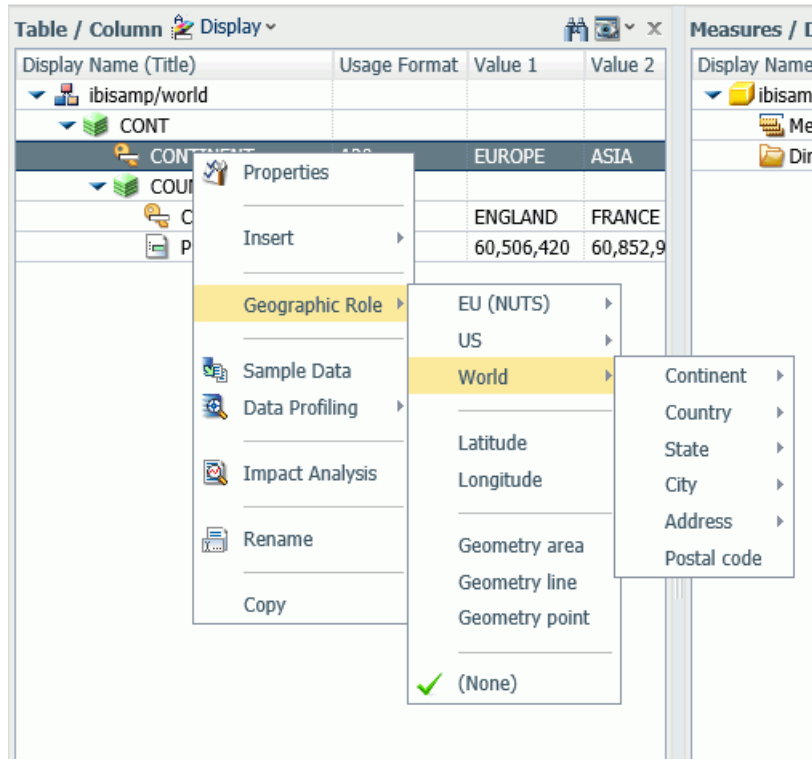
Note that, by default, the available hierarchies are the EU hierarchy, the US hierarchy, and the World hierarchy.

Customers with Enterprise Data often have map layers that represent their territories, events or logistical information. These are published as Map Services to either a subscription based in the Esri Cloud (ArcGIS.com) or on an internal portal. In order for these customized geographic roles to be available through the server, they must be added to the geo_services.xml file.

Configuring Geographic Roles

The geographic configuration file, geo_services.xml, is located in the catalog directory under the server home directory:

```
/qibm/ProdData/QWEBQRY/ibi/srv77/home/catalog
```

The server builds the calls needed to retrieve geographic roles dynamically using this configuration file. Each role definition in the configuration file, when used in a Web Query request, generates metadata and a request that is sent to Esri.

A geographic role can be part of a hierarchy. For example, the World geographic role is at the top of a hierarchy that contains continents, countries, states, and cities. These hierarchies are also described in the geo_services.xml file.

To add a custom geographic role, you must add the necessary parameters for the geography to this file.

Following standard xml syntax rules, each element is enclosed in element start and end tags (<elementname>, </elementname>), and attribute values are enclosed in double quotation marks (").

Reference: Geographic Role Definitions

A geographic role is stored as *geo_role* element in the geo_roles object of the geo_services.xml file. A geographic role must be defined with:

❏ An ID that will identify the role in the configuration file.

❏ A format and length for the data to be returned.

❏ A role name.

❏ A display title for the role name (to appear as a selection in the front-end tools).

❏ An optional role format (if the role can have multiple formats, such as a name and an abbreviation).

❏ A display title for the format.

❏ A role type (GEOGRAPHY for polygons or GEOMETRY for points).

❏ An optional vocabulary rule element containing vocabulary elements for associating the role with a field in the metadata.

The following attributes define a geographic role.

id

> Is an alphanumeric uppercase value, up to 50 characters, used to identify the geographic role.

type

> Is the data type for the ID. Can be one of the following.

> ❏ **"alpha"** for alphanumeric data, formats An or In.

> ❏ **"integer"** for integer numeric data, format In.

> ❏ **"numeric"** for fractional numeric data, formats Pn.m, Dn.m, or Fn.m.

> ❏ **"text"** for text data, format TXn.

value_size

> Is the optional number of characters in USAGE format length (any, if not set).

role_name

> Is the name of the geographic role.

role_name_title

> Is the title of the geographic role, to be displayed in the tools for selection.

role_format

> Is an optional format for the geographic role, useful when the role can be referenced using multiple formats, such as a name, an ISO code, and an abbreviation.

role_format_title

> Is an optional title for the format of the geographic role. It will be shown in parentheses along with the role title in the tools, for example, State (Abbreviation).

geo_type

> Is one of the following predefined role types.

> ❏ **"geography"**, for geographic objects such as country or state.

> ❏ **"geometry"**, for geometry objects such as geometry point and geometry area.

> ❏ **"coordinate"**, for coordinates such as latitude and longitude.

vocabulary_rules

Is an element that consists of a group of vocabulary elements that explicitly describe column names for the geographic role. These rules will be used to select the best geographic data for the role.

Elements in a rule are connected by the Boolean logic operation OR (only one needs to be satisfied). Each vocabulary element contains words enclosed with special characters. Words in the rule element are connected by the Boolean logic operation AND (all need to be satisfied).

A word may be prefixed and/or suffixed with the percent character (%), which is a place holder for any sequence of characters. If an element contains more than one word, each word has to be prefixed by the character plus (+) or minus (-). Plus indicates that the word must be found in the column name. Minus indicates that word *must not* be found in the column name.

Example: ## Sample Geographic Role Definitions

The following defines the State Abbreviation geographic role. The role ID is USSTATE_ABBR. The role name is USSTATE with a role format of ABBR. The titles that show in the tools are US state (Abbreviation). The format is A2, and the vocabulary rules specify that the characters *state* must be present, but the characters *iso*, *capital*, and *population* must not be present. The geo type is geography, indicating that the returned data will be a geographic area.

```
<geo_role
id="USSTATE_ABBR"
 value_size="2"
 type="alpha"
role_name="USSTATE"
role_name_title="US state"
role_format="ABBR"
role_format_title="Abbreviation"
 geo_type="geography">
<vocabulary_rules>
<vocabulary>+%state%-%iso%-%capital%-%population%</vocabulary>
</vocabulary_rules>
</geo_role>
```

The following is a role definition for latitude values. The role ID is LATITUDE. The role name is also LATITUDE. Its format is numeric. The title that displays in the tools is Latitude. The geo type is geometry, indicating that the returned data will be points or areas described using points. The vocabulary rules specify that the characters *latitude* must be present.

```
<geo_role
 id="LATITUDE"
 type="numeric"
 role_name="LATITUDE"
role_name_title="Latitude"
 geo_type="geometry">
 <vocabulary_rules>
  <vocabulary>%latitude%</vocabulary>
 </vocabulary_rules>
</geo_role>
```

The following is the definition for the city role. The ID is CITY. The role name is also CITY. Its format is NAME. The title that displays in the tools is City (Name). The definition has a set of vocabulary elements. Only one of the elements in the list must be true. Therefore, the characters *city*, or *town*, or *country* plus *capital*, or *state* plus *capital* must be present.

```
 <geo_role
 id="CITY"
type="alpha"
role_name="CITY"
role_name_title="City"
role_format="NAME"
role_format_title="Name"
 geo_type="geography">
  <vocabulary_rules>
   <vocabulary>+%city%-%population% </vocabulary>
   <vocabulary>+%town%-%population% </vocabulary>
   <vocabulary>+%country%+%capital%-%population% </vocabulary>
   <vocabulary>+%state%+%capital%-%population% </vocabulary>
  </vocabulary_rules>
 </geo_role>
```

Reference: **Geographic Hierarchy Definitions**

Some geographic roles exist as part of a hierarchy, and the data for the hierarchical roles are stored at the same map services endpoint (URL). Hierarchical role relationships are stored as *hier* elements in the geo_services.xml file.

Each hierarchy definition in geo_services.xml has the name of the hierarchy (attribute ID) and a group of LEV elements with the attributes level, geo_role, and, optionally, value. Not all defined roles can be used in hierarchies. The same role can be included in more than one hierarchy and may be on different hierarchical levels in each. However, the same role cannot be used more than once in the same hierarchy. Multiple geographic roles can be assigned to the same hierarchical level in a hierarchy.

Geographic hierarchies are defined with the following attributes:

id

Is a name of up to 50 alphanumeric characters used to identify the hierarchy.

level

Is a natural number (integer, starting with 1 for the top level) that specifies the level of the role within the hierarchy.

geo_role

Is the ID attribute of a geographic role (geo_role element).

value

Is an alphanumeric value, up to 50 characters, predefined for this geo role in this hierarchy.

Example: Sample Geographic Hierarchy Definition

The following element defines the world hierarchy. The top level is CONTINENT, both the Name role and the ISO code role. Level 2 has four COUNTRY geographic roles, corresponding to four different country formats. Level 3 contains three state formats, level 4 contains the city name, and level 5 contains two address formats and the postal code.

```
<hier id="World">
   <lev level="1" geo_role="CONTINENT"/>
   <lev level="1" geo_role="CONTINENT_ISO2"/>
   <lev level="2" geo_role="COUNTRY"/>
   <lev level="2" geo_role="COUNTRY_FIPS"/>
   <lev level="2" geo_role="COUNTRY_ISO2"/>
   <lev level="2" geo_role="COUNTRY_ISO3"/>
   <lev level="3" geo_role="STATE"/>
   <lev level="3" geo_role="STATE_ISO_SUB"/>
   <lev level="3" geo_role="STATE_FIPS"/>
   <lev level="4" geo_role="CITY"/>
   <lev level="5" geo_role="ADDRESS_FULL"/>
   <lev level="5" geo_role="ADDRESS_LINE"/>
   <lev level="5" geo_role="POSTAL-CODE"/>
</hier>
```

Reference: Adding the Federal Reserve Districts Geographic Role

These steps describe how to add the Federal Reserve Districts geographic role to the geo_services.xml file.

1. Open the geo_services.xml file.

   `/qibm/ProdData/QWEBQRY/ibi/srv77/home/catalog/geo_services.xml`

2. Add the role to the end of the GEO_ROLES object:.

```
<geo_role id="FED-DIST" value_size="50" type="alpha" role_name="FED-
DIST" role_name_title="FED District" role_format="FR_Distric"
role_format_title="FED District Name" geo_type="geography">
   <vocabulary_rules>
    <vocabulary>+%FR_Distric%</vocabulary>
   </vocabulary_rules>
</geo_role>
```

The ID is FED-DIST. The role name is also FED-DIST. Its format is FR_Distric. The title that displays in the tools is FED District. The definition has a vocabulary rule. The characters *FR_Distric* must be present.

3. Add this role to the US Hierarchy:

```
<hier id="US">
   <lev level="1" value="United States" geo_role="COUNTRY"/>
   <lev level="1" value="US" geo_role="COUNTRY_ISO2/>
   <lev level="1" value="USA" geo_role="COUNTRY_ISO3"/>
   <lev level="2" geo_role="USSTATE"/>
   <lev level="2" geo_role="USSTATE_ABBR"/>
   <lev level="2" geo_role="USSTATE_FIPS"/>
   <lev level="3" geo_role="USCOUNTY"/>
   <lev level="3" geo_role="USCOUNTY_FIPS"/>
   <lev level="4" geo_role="USCITY"/>
   <lev level="4" geo_role="USCITY_FIPS"/>
   <lev level="5" geo_role="ADDRESS_FULL"/>
   <lev level="5" geo_role="ADDRESS_LINE"/>
   <lev level="5" geo_role="ZIP3"/>
   <lev level="5" geo_role="ZIP5"/>
   <lev level="6" geo_role="FED-DIST"/>
   </hier>
```

4. Add the URI to the map server layer for this role at the end of the URIS object:.

```
<uri description="FedReserve Districts">
   <returned_geometry>GEOMETRY_AREA </returned_geometry>
   <returned_georole>FED-DIST</returned_georole>
   <url type="esri" authorization="none" synonym="">
http://services7.arcgis.com/L95Wwv9OjRQ0tjAs/arcgis/rest/services/
FRDISTRICTS/FeatureServer/0</url>
   <parameters>
    <parm order="1" parm_name="FR_Distric" parm_georole="FED-DIST"/>
   </parameters>
   </uri>
```

This role will now be available to use in a request and will display in the tools.

Known Issues

The following topics describe known issues that will be addressed in a future version of Db2 Web Query.

Browser Support

This section addresses the known issues for browser support.

Phased Out Support for the Adobe Flash Player in Google Chrome

Google has phased out support for the Adobe Flash Player in its Chrome web browser. Although the Adobe Flash Player will be phased out, it will continue to be packaged with Google Chrome web browsers. Users will need to manually enable the Adobe Flash Player on the Plugins page on a continuing basis.

In addition, the default settings in Google Chrome web browsers (for example, Version 49) do not allow you to open and view a PDF file directly in the browser window. Currently, all PDF files are automatically downloaded to your Downloads folder on your system.

This document describes how to manually enable the Adobe Flash Player plugin in Google Chrome. This document also describes how to enable the Chrome PDF Viewer plugin, which allows you to view PDF files directly in the Google Chrome browser window.

Enabling the Adobe Flash Player Plugin

Before continuing, ensure that your version of Adobe Flash Player currently installed is compatible with your version of Adobe Reader. For example:

Operating System	Adobe Flash Player Version	Adobe Reader Version
Windows 10	23.0.0.166	11.0.0

To enable the Adobe Flash Player plugin in Google Chrome:

1. Type *chrome://plugins* in the address bar, as shown in the following image.

The Plugins page opens, as shown in the following image.

Notice that the Adobe Flash Player plugin is disabled.

2. Click the *Details* link in the upper-right corner to expand all of the contents in the Plugins page.

   For example, the following image now shows the Adobe Flash Player plugin area expanded.

3. Click *Enable*.

The Adobe Flash Player plugin is now enabled, as shown in the following image.

4. Select *Always allowed to run* to always allow the Adobe Flash Player plugin to run and be active.

5. Close the Plugins page.

Enabling the Chrome PDF Viewer Plugin

To enable the Chrome PDF Viewer plugin in Google Chrome:

1. Type *chrome://plugins* in the address bar, as shown in the following image.

The Plugins page opens, as shown in the following image.

Notice that the Chrome PDF Viewer plugin is disabled.

2. Click the *Details* link in the upper-right corner to expand all of the contents in the Plugins page.

For example, the following image now shows the Chrome PDF Viewer plugin area expanded.

3. For the BROWSER PLUGIN type, click *Enable*.

The Chrome PDF Viewer plugin is now enabled, as shown in the following image.

The *Always allowed to run* option is automatically selected, which always allows the Chrome PDF Viewer plugin to run and be active.

4. Close the Plugins page.

REST-Based Application Extension (WQRAX)

This section addresses the known issues for the REST-Based Application Extension (WQRAX).

❏ Certain types of reports, including visualizations, autodrill, and some maps and dashboards, will not render properly when invoked through WQRAX. This will be resolved in an upcoming PTF.

❏ You must edit HTML Composer dashboards that were created prior to Web Query 2.1.0 group PTF level 13 or 2.1.1 group PTF level 2 for compatibility with current fix levels. Otherwise, they will not run in WQRAX after applying this Hotfix.

Workaround: Edit the HTML dashboard using Web Query using the following steps:

1. Sign in to Web Query using a Web Query Administrator user ID.

2. On the BI Portal resource tree, right-click the HTML dashboard file and select *Edit*.

   Note: if you do not see an Edit option, then the dashboard is already at a current version and these steps do not apply.

3. In the text editor, click *Search* and then *Find*.

4. Type */webquery/ibi_html* in the Find What: box.

5. Type *./ibi_html* in the Replace With: box.

6. Click the *Replace All* button.

7. Click the *Save* button on the toolbar.

8. Click *File* and then *Exit*.

Business Intelligence Portal

This section addresses the known issues for BI Portal.

Upload Data and Upload Wizard

❏ NLS characters are not supported in the following places when using the Upload Data and Upload Wizard:

   ❏ Excel Worksheet name.

   ❏ Folder name from where the Upload Wizard is being launched.

   Workaround: Use invariant (A-Z and 0-9) characters. Support for NLS characters will be added in a future Hotfix.

❏ Run-Time Enablement (RTE) may cause the Upload Wizard to fail. This will happen if the user's current library (CURLIB) is not defined in the user's active RTE environment. The Upload Wizard writes out a temporary file during the upload process.

   Workaround: It is recommended to add both QGPL and the user's CURLIB (if different from the default, QGPL) to the user's active RTE environment using the WRKWQRTE command.

Metadata Wizard

❏ The Statistics Report in the Utilities folder does not run. This will be resolved in a future PTF.

❏ The Adapters for Query/400, DB Heritage, and JD Edwards should not be used during the Import Metadata step as these are multi-step Create Synonym processes, which are not yet supported by the Metadata Wizard.

   Workaround: Use the Metadata New option to create synonyms for these Adapter types.

InfoAssist+

This section addresses the known issues for InfoAssist+.

❏ It is not possible to change a HOLD file name or Db2 table name for a report. An error indicating that at least one column must be on the report is generated. This will be resolved in a future PTF.

❏ The 2014 Demographic layers do not render on an ESRI map.

❏ Drill down options are missing in the tool tip on an ESRI map.

❏ The Cut, Copy, and Paste options are unavailable (grayed out) for an InfoAssist+ Dashboard text box and keyboard shortcuts.

Security

This section addresses the known issues for security.

❏ In Security Center, a RunOnly user cannot be imported as a licensed Developer User by clicking the *Add User* icon.

Workaround: Remove the user ID and Import.

❏ A user in the TLF(Top Level Folder)-RUN group cannot run an InfoMini report. This will be resolved in a future PTF.

Developer Workbench

This section addresses the known issues for Developer Workbench.

❏ Creating a new procedure in InfoAssist+ will result in a procedure tab name starting with Procedure10.

❏ The Upload Data option is not available through the Developer Workbench product.

Workaround: Access the Upload Data option using the Business Intelligence Portal.

❏ Developer Workbench online help is hosted on a remote server and requires access to the Internet.

Workaround: A PDF version of the help will be available on the Db2 Web Query Wiki.

JD Edwards Adapters

This section addresses the known issues for the JD Edwards Adapters.

To use the Alternate Language option in the Adapter for JD Edwards EnterpriseOne and the Adapter for JD Edwards World:

1. Configure the adapter with *UDC Direct File Access* unchecked.

2. Run the *Refresh Metadata* with *Alternate Language File* unchecked.

   This step will create the udcdicdb table.

3. Run the *Refresh Metadata* with *Alternate Language File* checked and enter the default language code.

   This step will create the altdicdb table.

4. Create all the synonyms needed.

Note: Steps 2 and 3 need to be run, as needed, whenever UDC descriptions are updated.

Report Broker

This section addresses the known issue for Report Broker.

❏ Migration of Public Distribution Lists will generate the following error:

```
ERROR IBFSService                      - setShares - opShareBasic/
opShareAdvanced to this resource denied - user:qwqadmin res:/WFC/
Repository/untitled/ReportBroker/~ownerID/distribution_list.adr
[2014-03-11 00:00:00,605] ERROR IBFSAddrBookConverter         -
Failed to share '/WFC/Repository/untitled/ReportBroker/~ownerID/
distribution_list.adr' with IBFS:/SSYS/GROUPS/EVERYONE
```

The distribution list will be migrated as a private object. To make this published:

1. Move the distribution list to a published folder.

2. Right-click on the distribution list and select the *Publish* option.

Spreadsheet Client

This section addresses the known issues for Spreadsheet Client.

❏ Populating a spreadsheet using a large Excel Add-in request (25 columns, 200K rows) does not return output.

❏ Db2 Web Query InfoAssist+, when opened from Spreadsheet Client, does not support:

   ❏ Excel Pivot output type

   ❏ Table of Contents format option

Both of these options will be disabled from Spreadsheet Client InfoAssist+ in a future release of Db2 Web Query.

National Language Support

This section addresses the known issues for National Language Support (NLS).

❏ Some of the Retail Sample reports will not run in NLS or DBCS languages. This issue will be resolved in an upcoming PTF.

❏ In Turkish, running an active Flash or active PDF report in InfoAssist+ or from BI Portal generates a FOC3357 error.

Workaround: Edit the /QIBM/UserData/qwebqry/base80/client/wfc/etc/nlscfg.err file and add the following line to the end of the file:

```
ENCODING = Cp1026
```

Also, edit the /QIBM/UserData/qwebqry/ibi/srv77/wfs/etc/odin.cfg file by modifying the JSCOM3 Listener block to include an additional argument on the JVM_OPTIONS parameter, as follows:

```
;JSCOM3 Listener
NODE = JSS
BEGIN
  PROTOCOL = TCP
  CLASS = JAVASERVER
  PORT = 12335
  AWT_HEADLESS = Y
  JVM_OPTIONS = -Djava.version=1.6|-Duser.language=en
  JVM_MAX_HEAP = 512
  IBI_CLASSPATH = /home/sqljdbc40/sqljdbc.jar:/home/sqljdbc20/sqljdbc.jar
END
```

DataMigrator/Data Management Console

Important: The renaming of Application Directories in the Data Management Console is not recommended as it may result in execution failures with the contents of the Application Directory.

Metadata

This section addresses the known issues for metadata.

❏ Creating a synonym for a Query/400 file from the right-click folder Metadata Edit option does not generate the associated Web Query procedure in the repository.

Workaround: Right-click a folder and select the *Metadata New* option to create synonyms for Query/400.

Reporting Language

This section addresses the known issues for the reporting language.

Alert! XLS Files Not Opening After Applying Microsoft Security Patch MS16-088

In July 2016, Microsoft® issued a security patch (MS16-088) that prevents Excel® 2007, 2010, 2013, and 2016 from opening XLS files generated by the Web Query EXL2K and EXL2K FORMULA formats. See *Microsoft Security Bulletin MS16-088 - Critical* for details pertaining to each Office release. As described in *Microsoft Fixes or workarounds for recent issues in Excel for Windows* dated July 2016, when you previously tried to open an HTML file with an .XLS file extension from an untrusted location, Excel would warn about the mismatch between the file extension and content, but would still open the workbook without Protected View security. After the security updates, Excel no longer opens the workbook because these files are not compatible with Protected View, and there is no warning or other indication it was not opened. Excel shows a blank screen instead of a more helpful error message with information about what to do next.

On August 9, 2016, Microsoft issued updates for Microsoft Office to correct the change in behavior introduced by Microsoft July 2016 security updates (MS16-088) for certain file types to increase security. See *Microsoft Excel workbooks may not open after MS16-088 is installed* for additional information, including how to obtain the patch for your Microsoft Office version. As per Microsoft, these updates will also be published to Windows Update and the Windows Server Update Service (WSUS). These services provide files that are updated automatically, based on the Windows Update settings for the computer.

Web Query has been successfully tested with the Microsoft Office update for Excel® 2007, 2010, 2013, and 2016 to confirm XLS files generated by the Web Query EXL2K and EXL2K FORMULA formats open in protected view.

For more information, see *Microsoft Update to Resolve WebFOCUS EXL2K and EXL2K FORMULA (HTML-based) XLS Files Not Opening After Applying Microsoft Security Patch MS16-088*.

Browser Information

The following topics describe information for the available web and mobile browsers for Web Query 2.2.1.

Web Browsers

The following browsers are certified for Web Query and Developer Workbench.

❏ Microsoft Edge™ 40

❏ Internet Explorer® 11

❏ Google Chrome™ 61

❏ Mozilla Firefox® 56

Release 2.2.1 Notes

❏ Simple HTML Web Query reports can be viewed on any browser.

❏ Chart/Graph request notes:

   ❏ *Browser-generated graphs* refer to graphs that are rendered inside the browser using HTML5 (and JavaScript). Browser-generated graphs are utilized in both standard HTML5 output ("FORMAT JSCHART"), and in Active Technologies ("FORMAT AHTML").

   ❏ *Server-generated graphs* refer to graph requests that are generated on the Reporting Server and then embedded as a bitmap or vector image in a document or webpage. This includes the following output formats:

      ❏ Bitmap: PNG, JPG

      ❏ Vector: PDF (but not active PDF), SVG

❏ Support for presenting images and graphs in HTML, DHTML, and DHTML compound reports is provided using an image embedding facility based on the client browser. Output generated by Internet Explorer browsers or in scenarios where the browser is unknown (such as when distributed by Report Broker) supports image inclusion through the creation of a web archive file (.mht). For all other browsers, images are base64 encoded within the generated .htm file.

❏ Drill-down links do not work when using an embedded PDF viewer available in some browser versions. Refer to the browser's configuration information on how to change the Application Options settings for the relevant content types so that the browser will automatically use Adobe Reader.

❏ Adobe Reader support:

  ❏ Acrobat Reader DC is certified

  ❏ Adobe XI is supported

  ❏ Adobe X is supported

❏ If you are using Internet Explorer® 11 on a Windows® 2012 R2 OS and you attempt to run an object (such as a report or chart in InfoAssist+), Internet Explorer 11 opens it in a new window instead of targeting the object to a specific frame. For example, in InfoAssist+, the New Window Runtime opens a new browser window that shows the running image, which then replaces that page with the output. Since Internet Explorer 11 does not allow the replacement of that window, it opens a new window instead.

  This browser limitation can be remedied by an administrator. For more information, see *https://social.msdn.microsoft.com/Forums/ie/en-US/a5c294e2-e407-491d-ba6a-b7f7edbcabaf/ie11-cant-post-form-data-to-specific-frame-or-window-dialog-opened-via-windowopen?forum=iewebdevelopment*

Mobile Browser Information

If you are planning to use Web Query on mobile devices, note the following regarding mobile browser support. If you will be using Web Query on the Windows operating system, see the Web Browser support information.

Note: Browsers released after the production date of a Web Query version are subject to certification.

InfoAssist+ is not supported on mobile devices.

The following devices were used in testing Web Query 2.2.1:

❏ iOS 11.0 iPad and iPhone (Latest iOS 11 iPad and iPhone is supported)

❏ iOS 10.2.1 iPad and iPhone (Latest iOS 10 iPad and iPhone is supported)

❏ iOS 9.3 iPad and iPhone

❏ AirWatch 5.9 with iOS 10

❏ Android 7.0 tablet

❏ Android 6.0 tablet and phone

❏ Mobile Faves version 3.2.1.5

Usage Considerations:

❏ Report Broker interfaces are supported on tablets.

❏ HTML reporting Table of Contents (BYTOC) feature is not supported.

❏ Viewing PDF, Excel, and PowerPoint documents may require a third-party helper app.

❏ To open active report content, JavaScript needs to be enabled in your web browser. On mobile devices, please use the Mobile Faves app. If not installed, download it from the App Store for iOS devices or from the Google Play Store for Android devices.

IBM

14 Db2 Web Query Version 2.2.1 - December 2017 - GA

This documentation describes new features, web browser support, and mobile support for the December 2017 - 2.2.1 GA release.

This document is intended for all levels of users, including application developers, administrators, and end users. It is also intended to serve as a quick reference for users upgrading from a prior version.

In this chapter:

Db2 Web Query for i Enhancements

The following new features apply to Db2 Web Query for i.

Retail Samples and Demo Videos

IBM provides sample reports to show you new features in Web Query 2.2.1. The samples are organized into a top-level folder called Retail Samples. There are sample reports for auto link, 'data discovery' visualizations, mapping, and much more.

The Retail Samples folder includes a URL for Demo Videos. The self-service videos demonstrate how to create the content shown in the sample reports. The following image shows the Retail Samples folder structure.
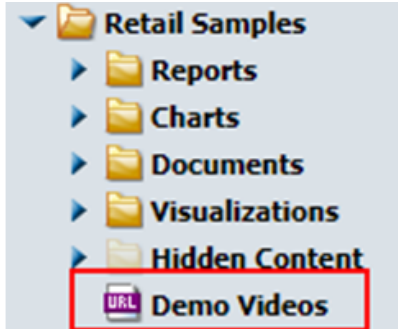
The Retail Samples folder is shipped as a Change Management package and is automatically imported into the Web Query repository. The sample reports access data in the sample retail database named QWQRETAIL. Both the database and the metadata are restored automatically by Web Query.

User Profiles

The Web Query 2.2.1 product creates two user profiles. The names and purposes are as follows:

❏ **QWQADMIN.** This is the administrative profile for Web Query. When signed into Security Center, QWQADMIN can administer all users, including adding and removing users from the WebQueryAdministrators group. QWQADMIN has access to the full administrator console and server console and can perform configuration and diagnostic tasks.

Additionally, QWQADMIN owns all Web Query objects. The Reporting Server and other jobs in the Web Query subsystem run under this ID

❏ **QWQADMGRP.** This is a group profile that is used to grant authorities to Web Query administrators, which are members of the WebQueryAdministrators group in Security Center. Like QWQADMIN, Web Query administrators can manage other users, except that Web Query administrators are restricted from adding or removing other administrators, which are users from the WebQueryAdministrator group. Members of this group profile also have full access to the administration console and the server console, but only when launched from the BI portal interface. In addition to managing users, Web Query administrators can add and remove folders, create and delete metadata, and develop and run reports.

By separating the ownership from the group membership in this way, IT managers have flexibility to achieve mandatory access control. Web Query automatically transfers the group membership from QWQADMIN to QWQADMGRP when upgrading Web Query to release 2.2.1 from a prior release.

InfoAssist+

InfoAssist+ is a powerful report generation tool that enables business users to leverage ad hoc functionality. With InfoAssist+, you can generate highly complex reports, charts, and documents from any enterprise information source without IT intervention. You can also analyze multiple reports and charts simultaneously and output report data in a variety of formats.

Visualizations

Business users are often challenged to make sense of intricate data values or large volumes of information. Data visualization depicts raw information from enterprise sources in a rich, engaging, and visually compelling way, allowing analysts to interactively explore the data and accelerate discovery of insights.

Visualizations centralize information by providing different views of data that are pertinent to a particular objective. For example, reviewing trends or fluctuations in data over a period of time or within a region. A visualization provides you with a quick glance of information on a single screen, as shown in the following image.
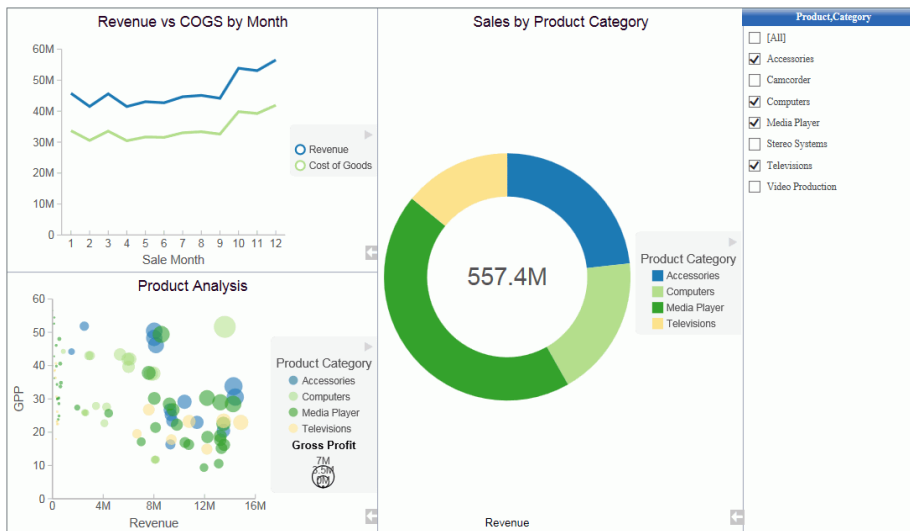
Visualizations support the use of different types of charts, maps, and grids. For example, you may want to use a bar, pie, and line chart to show different views of the same data. Alternatively, you may want to offset a particular visual by showing other types of related data that employ a different type of visual. You can also add a text cell to your visualization to provide explanatory text or information that other users can reference.

Visualizations allow you to monitor changes in data. They also serve to provide information in real-time, based on changes in underlying data or other components. A visualization can be updated, changed, or revised at any time to account for shifts in data needs.

Responsive Autoprompt

The Responsive Autoprompt facility provides a modern user interface design with responsive mobile support, chaining of dynamic lists for fields in a dimension hierarchy, and a calendar control for simple filters to select a date for a date field of YYMD format with modifiers. The date format must have all components (year, month, day) and not be a Date-Time field format.

Note:

❏ Responsive Autoprompt is the default for the Autoprompt facility. For information on how to configure the Autoprompt facility, using the Administration Console, see *Parameter Prompting*, under *Application Settings*.

Responsive Autoprompt Page Components

The Responsive Autoprompt page displays filters vertically on the left and report output on the right, as shown in the following image.
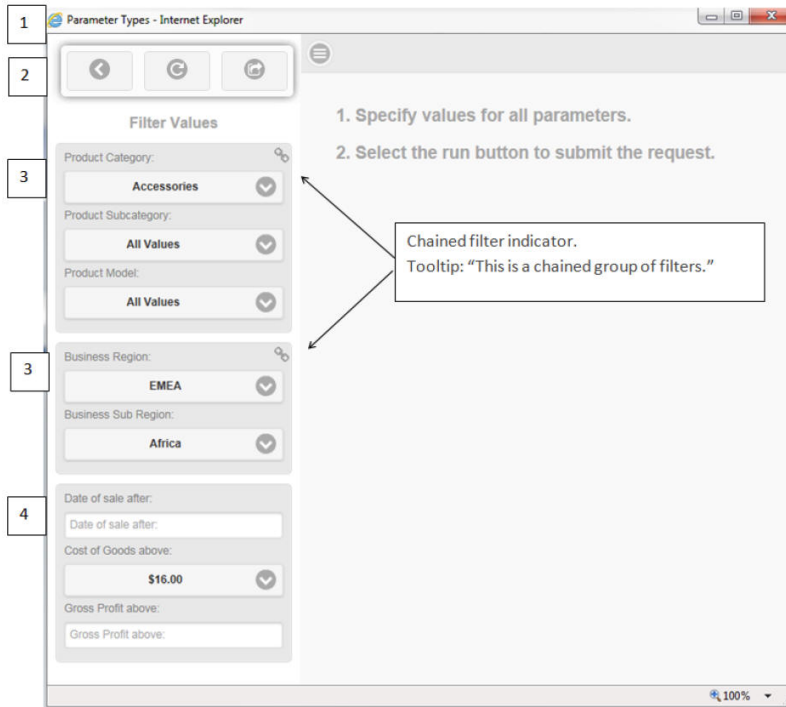
1. The window title is the title that displays in the tree when the report or chart is run from the tree or a request that obtains the procedure code from the repository. When the request is run from within InfoAssist a number is appended to the end of the report output tab within InfoAssist. When the request has not been previously saved and is run from a tool, the title is AdHocFex.

2. Options bar enables the user to:

   ❏ [icon] Close (hide) the filter panel.

   ❏ [icon] Reset the filter values to the values shown on initial display of the page.

   ❏ [icon] Run with filter values runs the request with the values selected or entered. The filter pane closes so that the report output is fully visible which is important when using small devices.

3. The Filter Values section displays the parameter controls in a chained group for each set of parameters for fields in a single path dimension hierarchy. Parameters for fields that are not in a dimension hierarchy are in an unchained group. Chained groups display before the unchained group.

Chaining will populate controls based on the selected value from the prior control in the chain. Chaining requires using a dynamic filter for all fields in the chain.

A chained grouping is identified by an image displayed in the upper-right corner of the group, as shown in the Responsive Autoprompt page example.

4. Unchained groups do not display an image in the upper-right corner.

The Filter Panel can be closed (hidden) or displayed by selecting the Show filter panel image

 located in the upper-left corner of the report output panel.

Selection Lists

A selection list will display when the parameter field is selected. The selection list display varies depending on the number of values in the selection list and the device type. A selection list is dismissed (closed) by selecting the option in the upper-left corner or selecting any area outside of the selection list.

When there are approximately seven (7) or fewer values, depending on the device size, the selection list overlays the Filter Panel display.

A single select list will default to the first value in the list when no default value has been specified for the parameter.
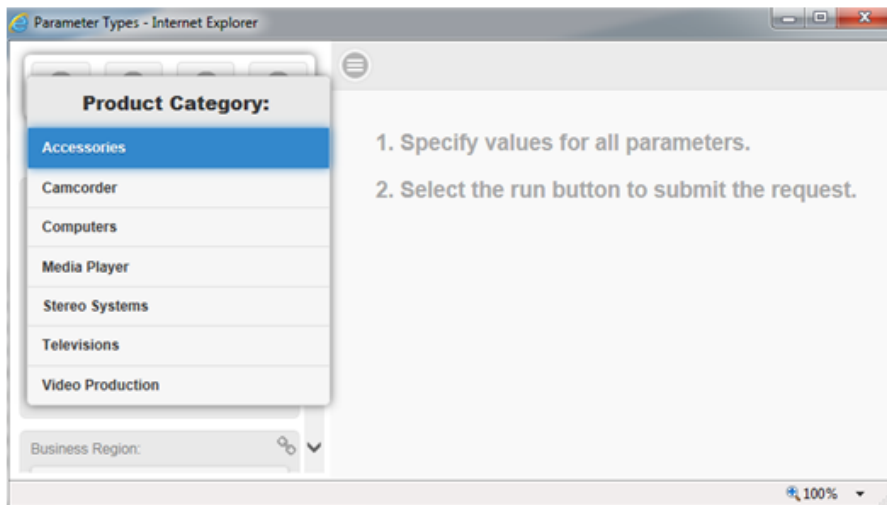
A static multiselect list of values does not include the Select All Values option when the selection list overlays the Filter Panel display, as shown in the following image.
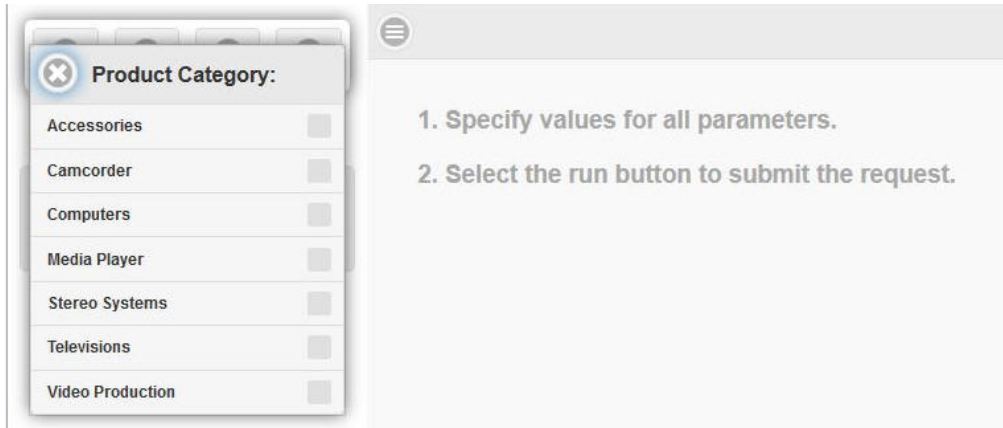
For larger value lists, approximately eight (8) or more values depending the on device, a values selection dialog box displays overlaying the right panel. The values selection dialog box options available are dependent on the filter type in which the parameter is referenced. The All Values and Select Values options are available when the filter is a dynamic multiselect list. The All and None options are available when the filter is a dynamic or static multiselect list. The following image shows the values selection dialog box options when the parameter filter type is a dynamic multiselect list and the parameter is not assigned a default value. When a default value is not assigned to a parameter in a dynamic multiselect filter, the default value is *All Values.* When *All Values* is selected, the filter is not applied resulting in all values of the field being included in the report or chart.

Dynamic list values that display in Responsive Autoprompt are organized in a case-insensitive sort order. Dynamic list values that display in HTML Autoprompt are organized in the sort order returned by the Reporting Server, which is determined by the operating system of the machine.
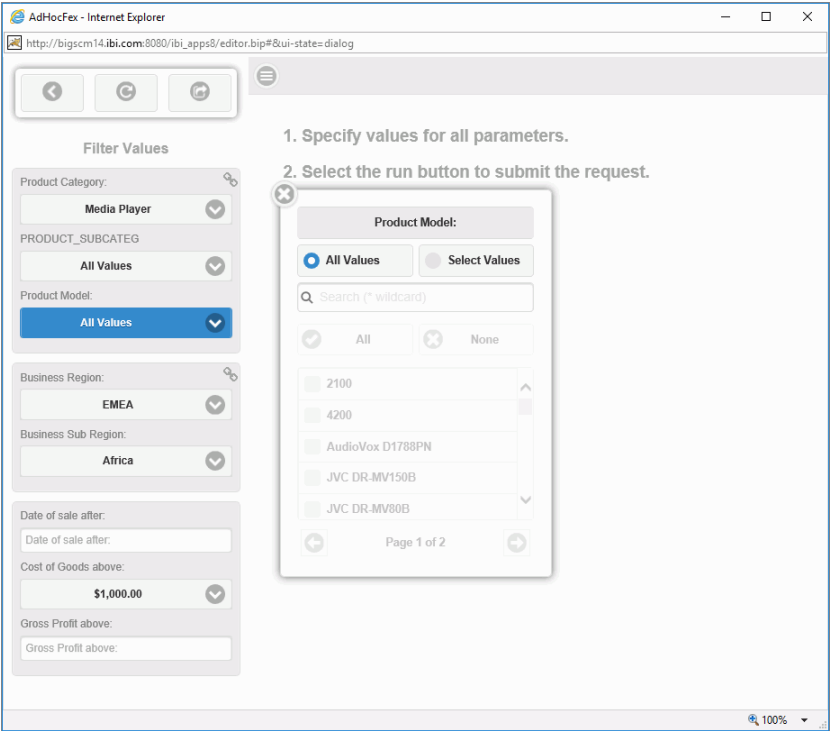
Selecting the *Select Values* option enables the Search, All, None, individual values, and paging controls. The paging control is available when there are 25 or more values.
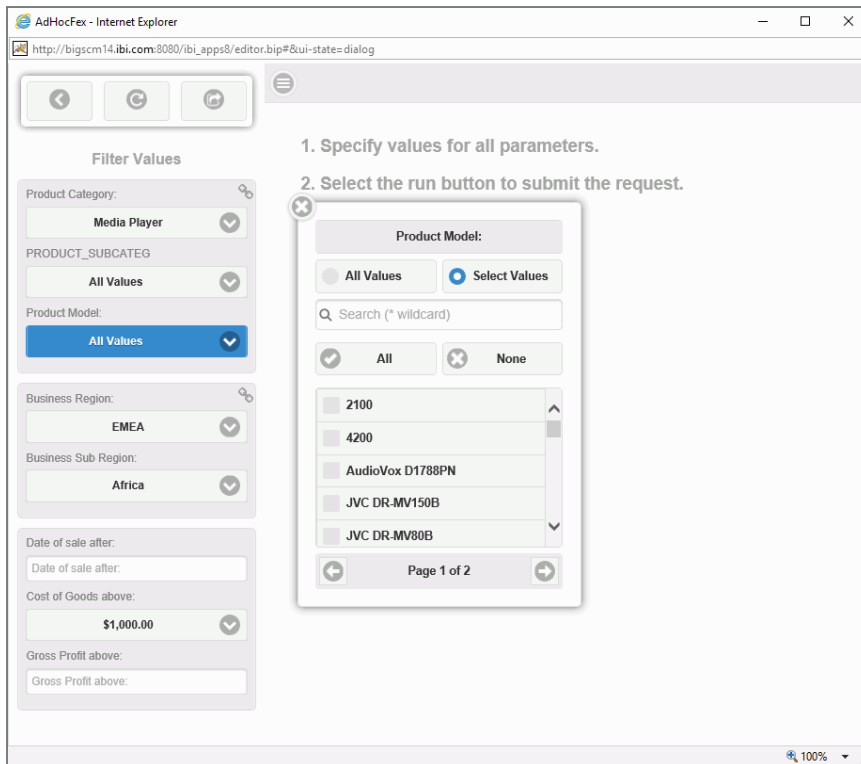
The *Search* option filters the values in the list as characters are entered. The search is applied to the value that displays in the selection list.
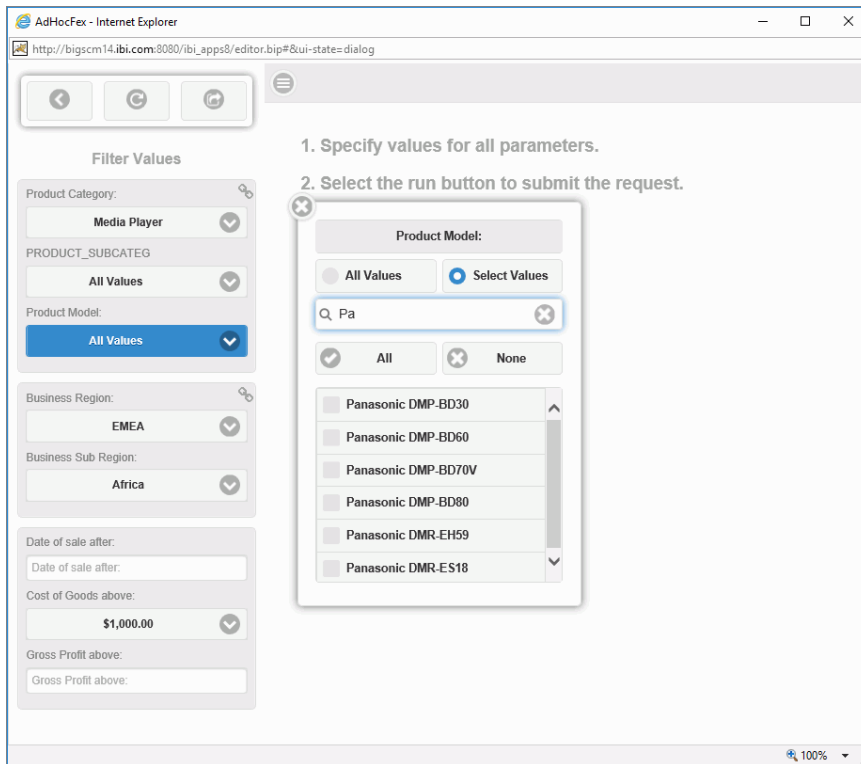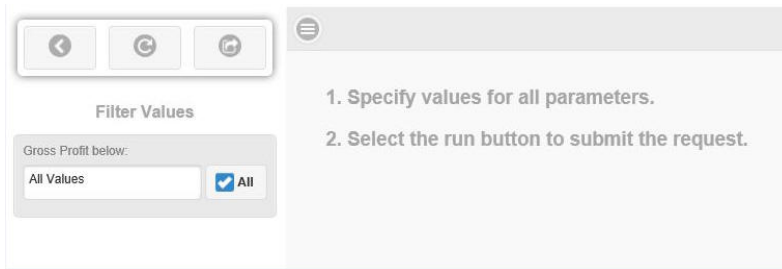
Selecting *All* checks the check box for all values in the selection list. When a search has been applied, only the values listed for the search result are checked. After selecting *All*, individual values can be unchecked.

Selecting *None* unchecks all values that are checked.

Note: When a single select filter is assigned a value and the filter is selected to display the Values Selection dialog box, the list of values will display with the assigned value visible and not selected (highlighted). You can view the values assigned to a parameter by placing the cursor over the parameter field in the Filter panel located on the left side of the Autoprompt page.

Simple Filter

You can add a simple filter to prompt the user for the value of a variable. When a variable is assigned the default value _FOC_NULL and used in a simple filter, the Autoprompt simple filter control will default to *All Values* and have the *All* option checked, by default. When a value is entered, the *All* check box is unchecked. If you want to specify to include all values of the field the variable is filtering on, select the *All* option. Entering *All Values* in the parameter field, as shown in the following image, will filter on the value All Values, not return all values for the field.
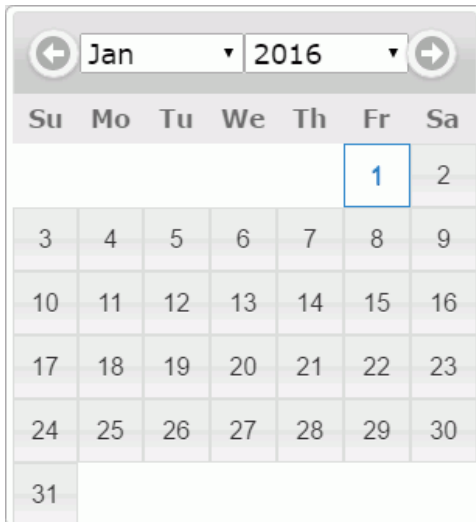
Calendar Control

The calendar control will display for parameters that are simple filters for a field that is a combination of YYMD date format with any of the supported modifiers. The date format must have all components (year, month, day). Date-Time field formats are not supported.

Note:

❏ The default value is the current date.

❏ The default value can be specified with an English month, two-digit day, and four-digit year. For example:

```
-DEFAULT &STARTDATE='January 01 2016';
```

The following image shows the calendar control with the default date of January 01, 2016.
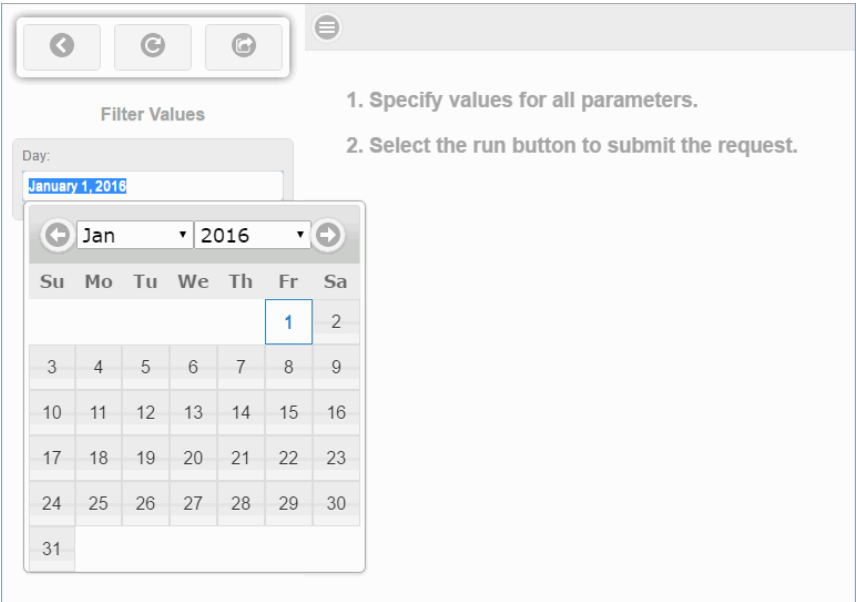
The default date will display in the calendar control in the language that the user used at sign in. The following image shows the filter pane with the default value in French and the calendar control with the month expanded to show the month values are French.
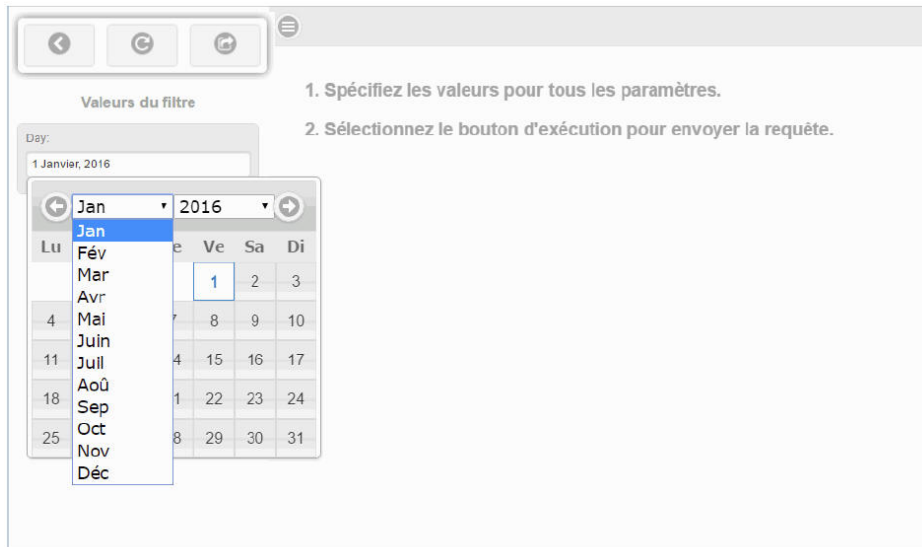
Using Paper-Clipping to Group Dimension Values

Paper-clipping gives you the advantage of lassoing values in a visualization to create logical groups within your selected dimension. Paper-clipping uses the core functionality of dynamic grouping, giving you access to grouping capabilities that meet your business needs. You can also add additional groupings or fields to an existing group by merging the fields together, as shown in the following image.
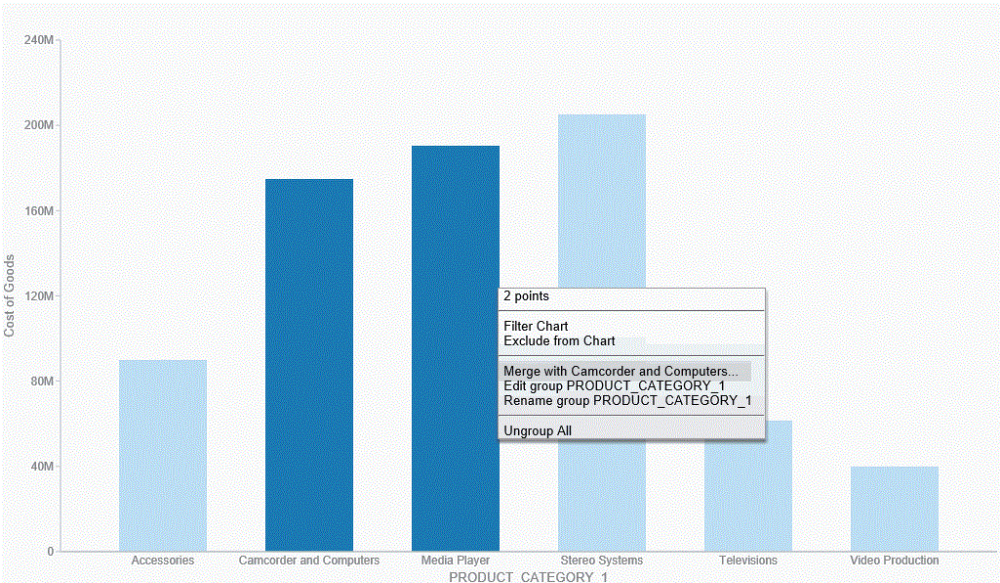
You can also rename the groups and values, giving you control over how the information displays.

Learn More

For more information, see *Using Paper-Clipping to Group Values in a Visual* in the *InfoAssist+* technical content.

Binning

Binning enables you to determine the frequency of values across a bin or grouping, as defined by a subset of values. With binning, you can create discrete buckets of continuous data that control how groups of your data display. In addition, binning gives you the ability to review trends and spot outliers.

For example, you can review the range of expenses incurred by households. In the following example, these ranges are represented by bins that are grouped by $1000. In this case, you can see that the largest number of households had the smallest expense (16) while the trend declines as the bin size gets larger. With binning, you can see the frequency of values across the different groupings, as shown in the following image.
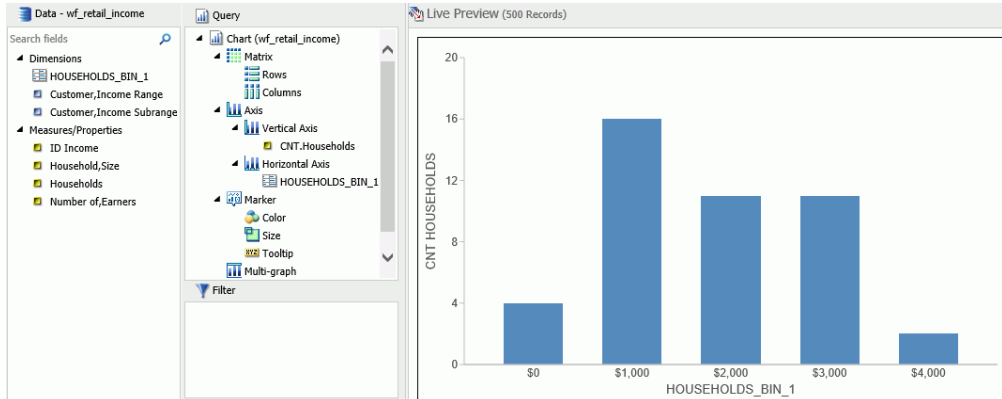
Binning Values in a Histogram

You can now create Histograms in Visualization mode. Histograms graphically represent the distribution of numeric data. They facilitate the identification and discovery of the underlying frequency distribution within a set of continuous data. You can use histograms to identify trends and illustrate categorizations, or groupings, also known as bins.

Binning is available in Chart and Visualization mode. Adding a measure to a histogram automatically creates bins with a default width of 10. This bin value is designated as a dimension field, since it is a limited field with a discrete set of possible values that was created from a field with an unlimited, continuous range of values. The measure displays as a count (.CNT) field and the related bin is created in the Query pane. You can right-click this bin field and click *Edit Bins* to change the value that dictates the width or format of the contents of the bin.

The bin automatically displays in the Query pane, as well as the under the Dimension group in the Data pane, as shown in the following image.
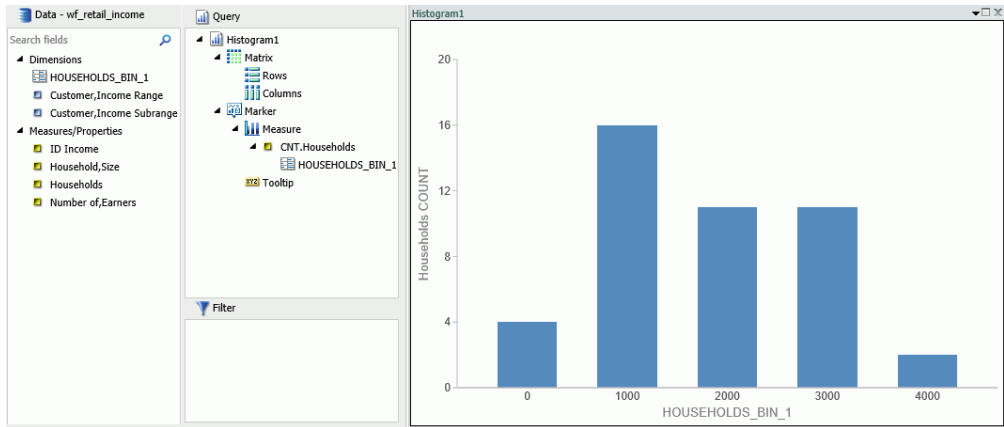
Grid Added as a New Chart Type

The ability to create a Grid chart type has been added. Accessible from the Other button on the Format tab in Chart mode, the Grid feature is part of the HTML5 group of charts.

Grids allow you to display data in tabular format. As a new chart type, you can now display your data in a format that is similar to that of a typical report, as shown in the following image.
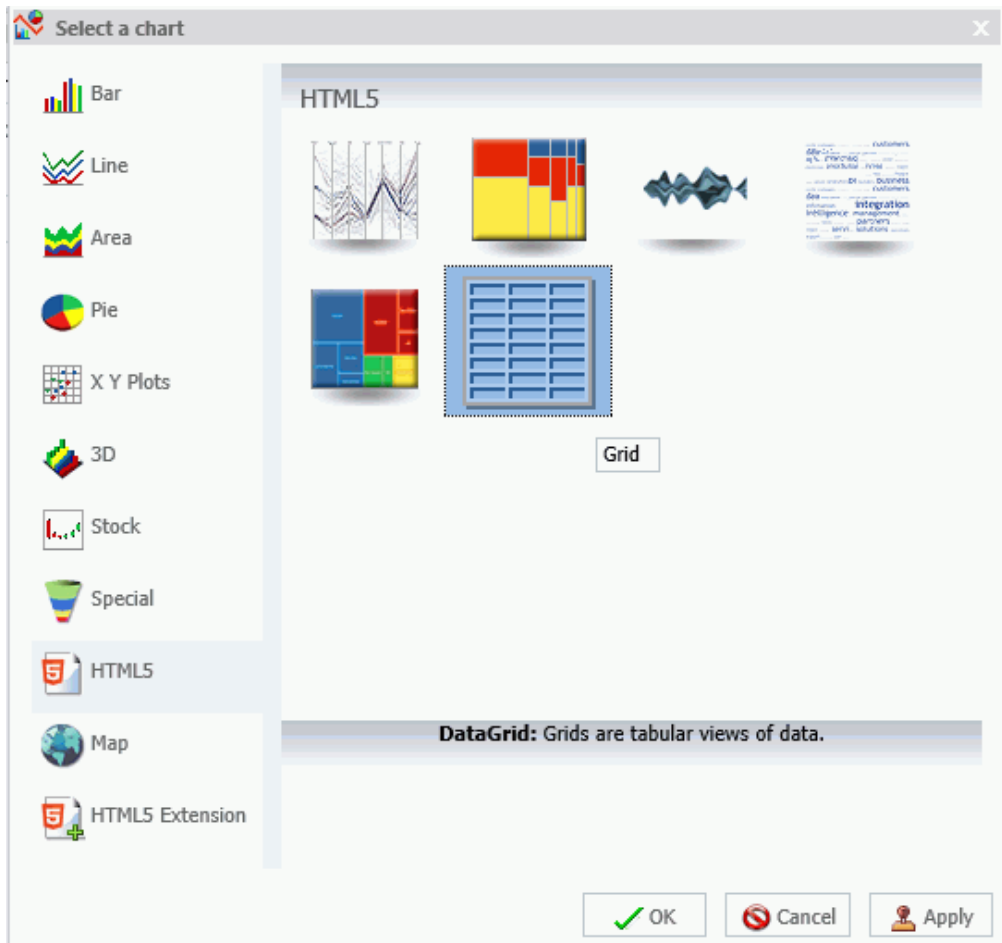
Note: Grids are also available in Visualization mode.

Sorting a Chart by Total Value

In Chart and Visualization mode, you can now sort your bar, line, and area charts by the total value. While this feature was implemented specifically for Stacked Bar charts, it also applies to other chart types. This feature enables you to view your data in numerical order, allowing you to identify trends and determine what data points are priorities. For example, the chart in the following image is set to *Ascending*, which sorts the chart from the lowest value to the highest value.
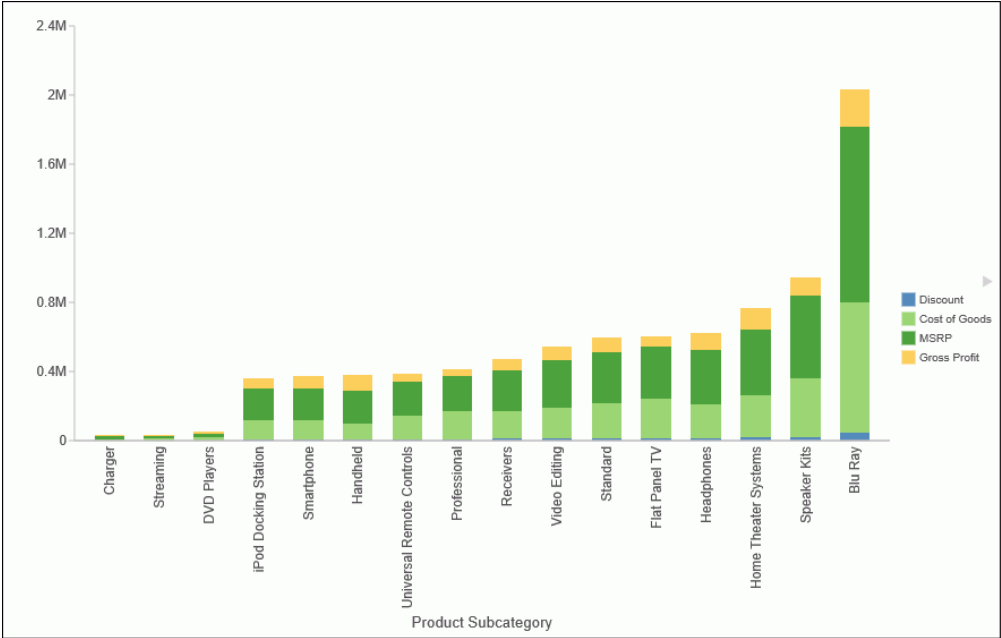
You can sort your charts in ascending or descending order using the Sort by Total Value option on the right-click menu of the Horizontal Axis, as shown in the following image.
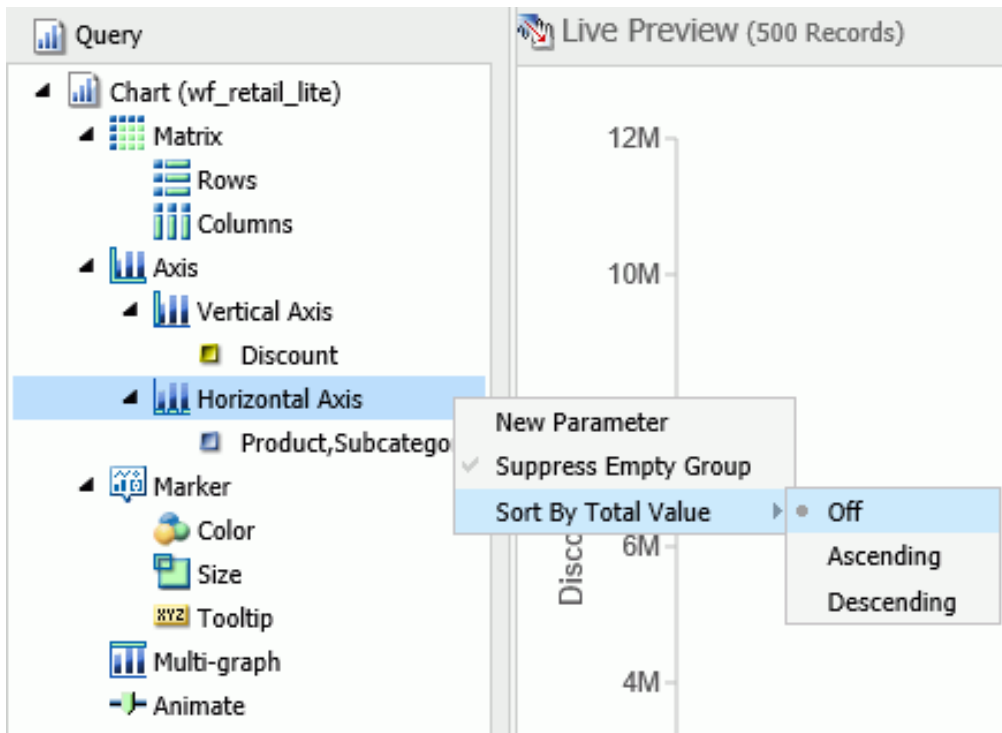
This option is turned off, by default.

Note: If you rotate your chart horizontally, the Sort By Total Value menu option displays on the Vertical Axis.

Using Multi Drill in Visualization Mode

You can now create multiple drill down links on a measure field in a visualization. This enables you to define custom links to other reports or websites, making it easy to link content from internal and external sources. Once defined, these links display on the shortcut menu that displays when you hover over a riser, as shown in the following image.
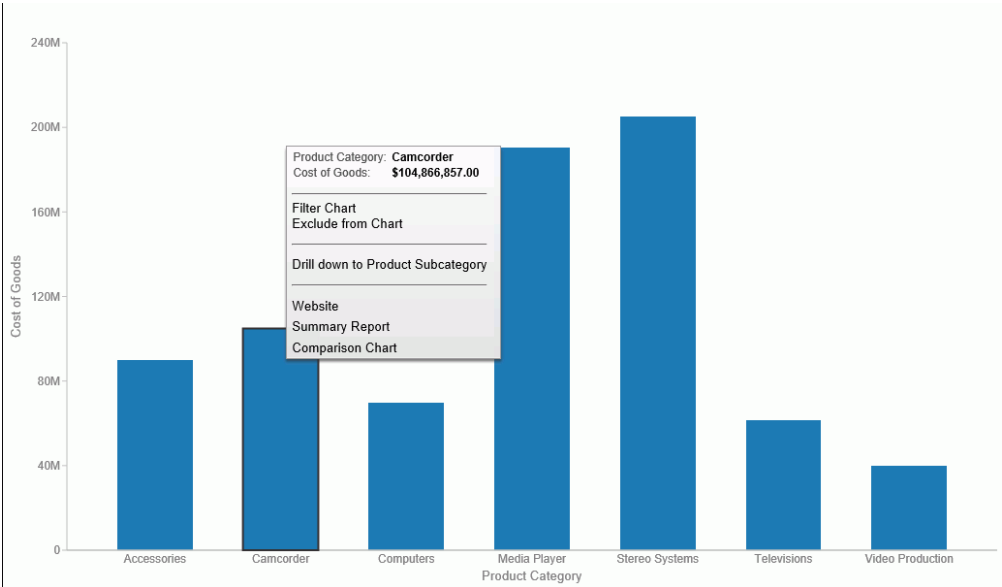
You create multiple drill downs using the Drill Down dialog box, which you can access from the Links group on the Field tab. In the Query pane, click a measure to enable the Field tab. In the Links group, click *Drill Down*. The Drill Down dialog box displays, as shown in the following image.

Note: When creating a drill down in Visualization mode, the Auto Link Target option is not available.

Updates to Various Chart Types

The new chart attribute syntax has been applied to the following chart types: Dual Bar and Line, Tag Cloud, Streamgraph, Mekko, Funnel, and Pyramid. This process adds additional relevant field containers for these chart types, which can be used to specify fields in a specific area of the chart. For example, Horizontal Axis, Color, and Tooltip are field containers that are part of the new chart attribute syntax.

In InfoAssist+, specific field containers display for each chart type. For information on the field containers for charts, see the *Field Containers for Charts and Visualizations* topic in the *Navigating the InfoAssist+ Interface* chapter.

Percent Count Added as an Aggregation Option for Dimension (Non-Numeric) Fields

You can now use the Percent of Count aggregation on dimension (non-numeric) fields in a chart. This aggregation computes a field percentage, based on the number of instances found. In addition, you can use the Count or Count Distinct aggregation when working with dimension (non-numeric) fields. The Count aggregation counts the number of occurrences of a field. Count Distinct counts the number of distinct values within a field. When a dimension (non-numeric) field is placed in the Vertical Axis field container, it is converted to a Count field. You can subsequently change the aggregation to Count Distinct or Percent of Count, as shown in the following image.
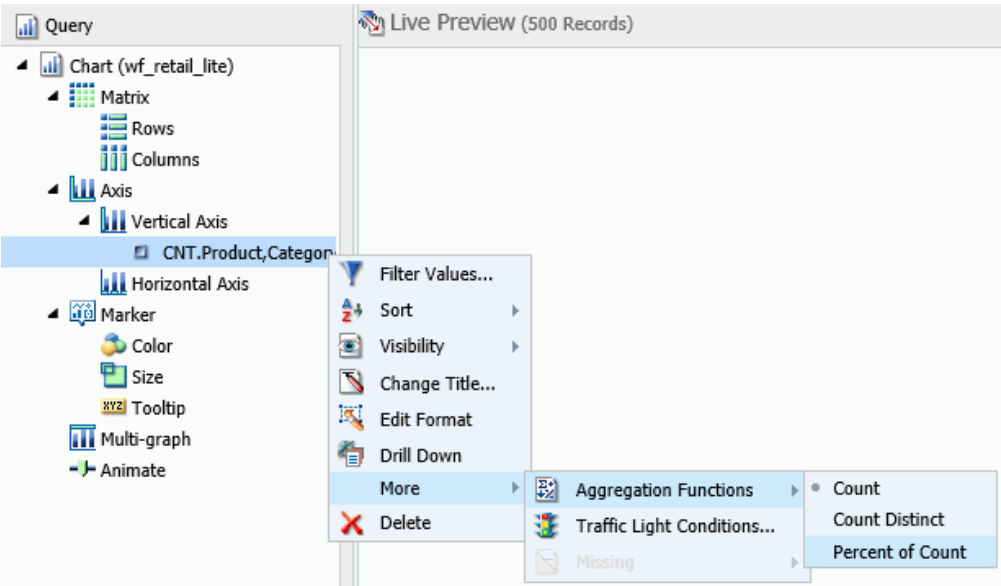
New Default Theme (BIPNeutral) for InfoAssist+

A new, modern theme that colors the interface has been introduced. Using light blue to show the default values, the theme uses different shades of this color, as shown in the following image.
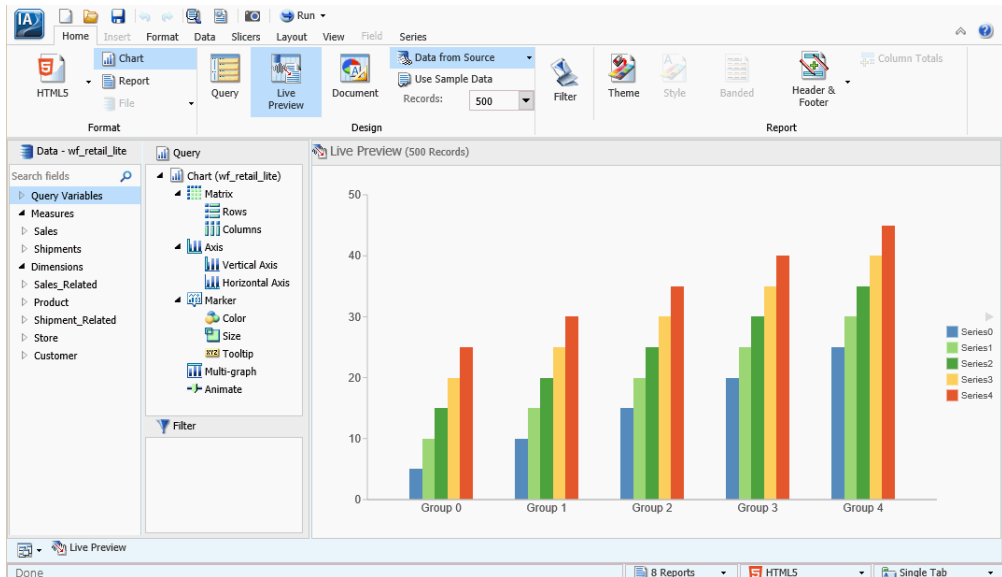
This theme is a contrast, based on previous gray-centric themes.

Some of the features of the theme include:

❏ On mouse over, the buttons in the ribbon and Quick Access Toolbar show with a light blue-gray background.

❏ Buttons with drop-down arrows display as blue on mouse over, but when you click a menu, the background opens with a white background, black text, and light blue hover color.

❏ All context menus show with white background, black text, and light blue hover color.

Extended Currency Options Added to Field Format Options Dialog Box

Additional currency options have been added to the Field Format Options dialog box. When editing the format of a field, you can select from a number of new currency symbols to enhance the format and display of your data. These new currency symbols are shown in the following image.
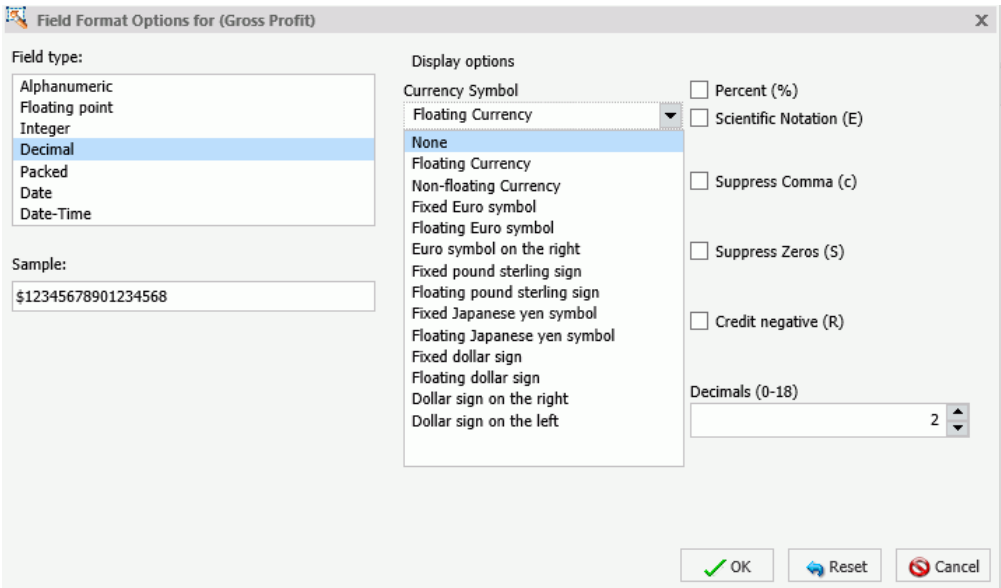
You can access the Field Format Options dialog box from the following locations:

❏ Define and Compute dialog boxes.

❏ Edit Format option when you right-click a measure in the Query pane (all modes), right-click a column in a chart, or a measure column in a report.

❏ Format group on the Field tab.

Editing the Format of a Field in Chart and Visualization Mode

Similar to Report mode, you can now edit the format of a measure field in Chart and Visualization mode. This feature allows you to access the Field Format Options dialog box, where you can modify the Field type (for example, Decimal or Alphanumeric) and change Display options (for example, Currency symbol or Percent). You can also set options for Field Length and specify the number of decimals to apply to the values in the selected measure, as shown in the following image.

You can access the Edit Format option from the menu that displays when you right-click a measure field in the Query pane. In addition, you can access the Field Format Options dialog box by selecting *More options…* from the Decimal drop-down menu in the Format group on the Field tab.

Using Field Titles in a Define or Compute

When working with Defines and Computes, field titles now automatically display as you build your criteria in the Define (or Compute) text area.

Field titles are an attribute of a field. They are defined in the metadata and display only when specified for the field that you select. If a field title has not been defined in the metadata, the title that displays will be the physical field name.

Note: If you specify a field with a duplicate field title, the fully qualified field name is used for the second (and any subsequent) instance.

The Use field titles feature enables you to see the field title (for example, Cost of Goods) rather than the fully qualified name of the field (for example, WF_RETAIL_LITE.WF_RETAIL_SALES.COGS_US). This facilitates easy identification of field names while building your Define or Compute. You can switch between the display of field titles and fully qualified field names by unchecking the Use field titles option, which you can access by clicking *Additional Options*, as shown in the following image.
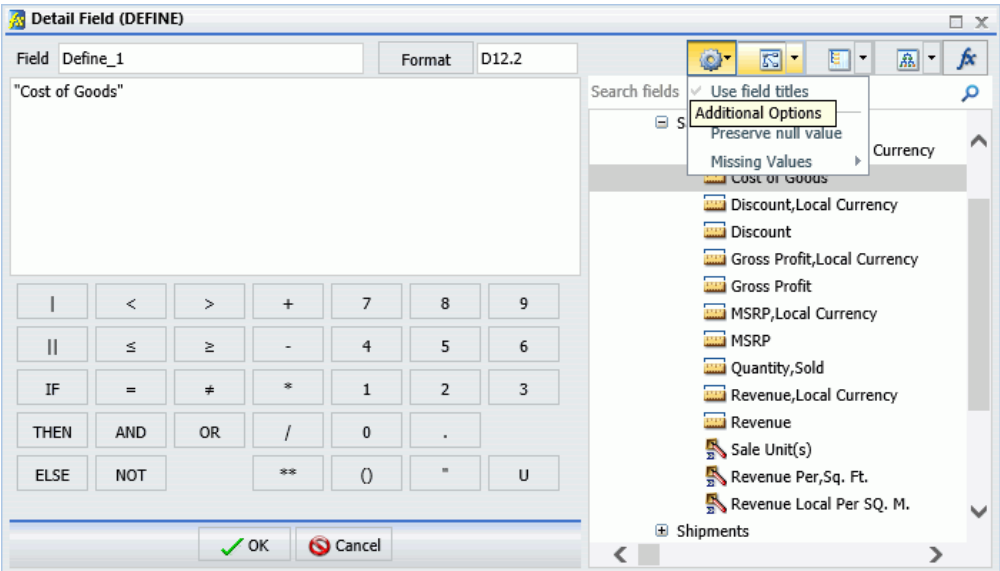
New JSON Output Format Added for HOLD Files

A new output format, JSON (*.json), has been added for HOLD files. This enables you to create a HOLD file and output it to a JSON object.

This option has been added to the list of available output formats, as shown in the following image.
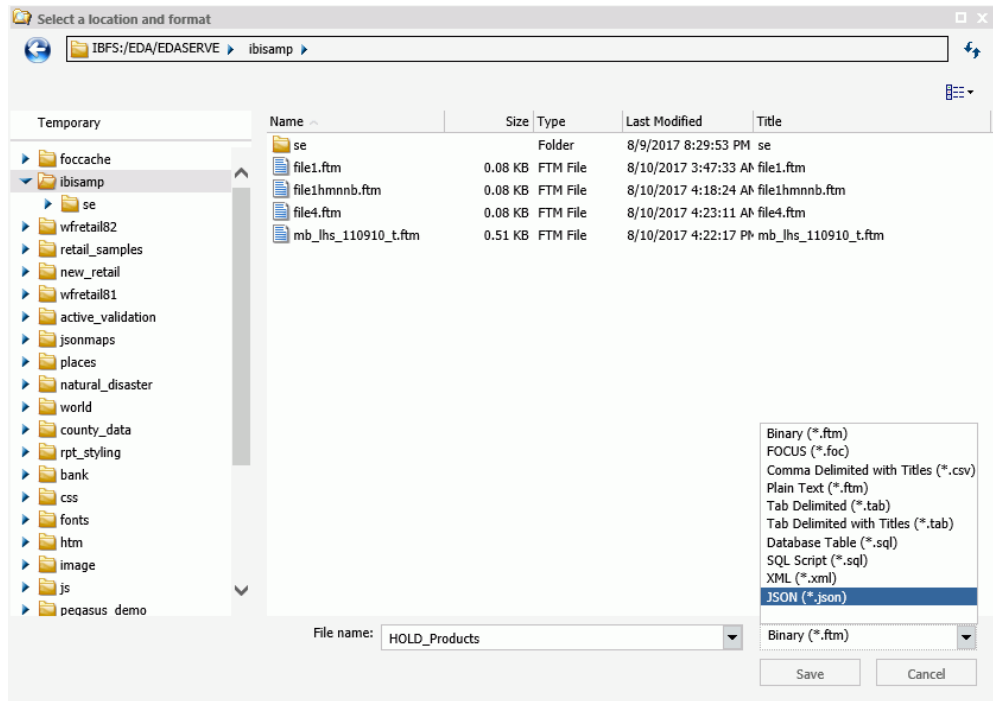
Resizing the Text Area of a Define or Compute

When working with Defines and Computes, you can now adjust the width of the text area to accommodate the size of the fields in your query. This is particularly useful when using fully qualified names or long formulas. Using your mouse, hover over the right border of the text area. When the double arrows display, click and drag the text area to the right to expand it.

In its original state, the text area is aligned with the calculator, as shown in the following image.
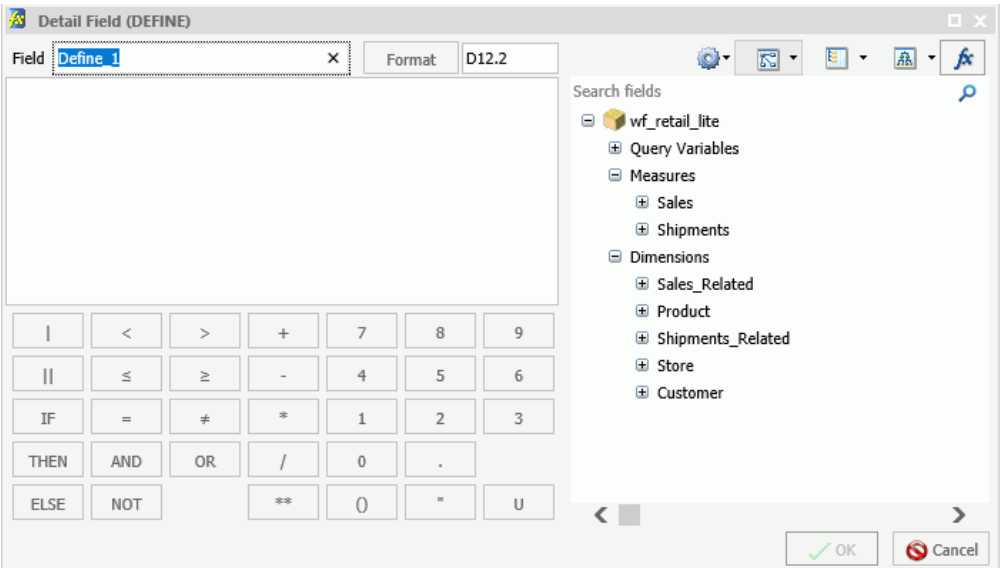
When fully expanded, the span of the text area replaces the entire metadata tree, as well as the toolbar icons that display, as shown in the following image.
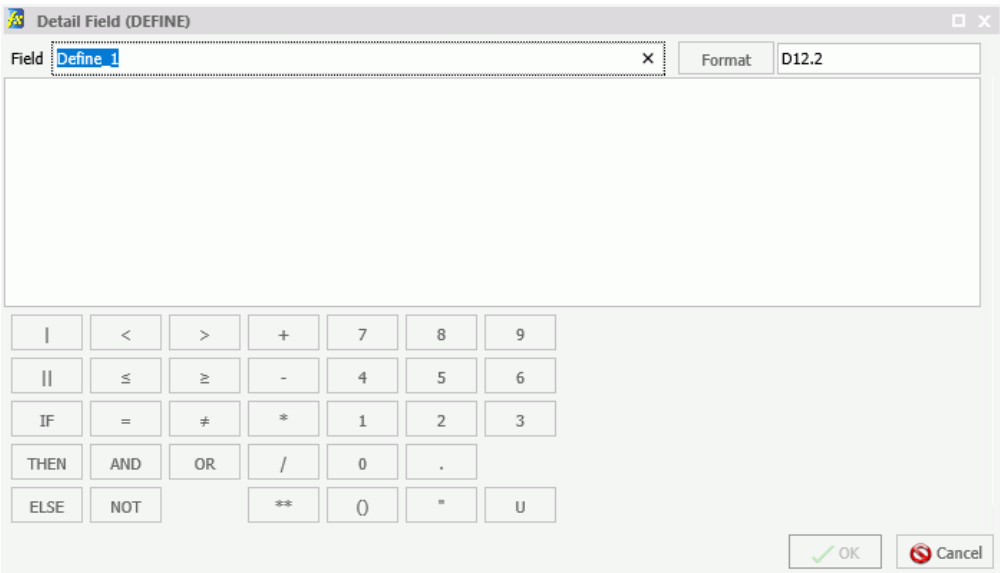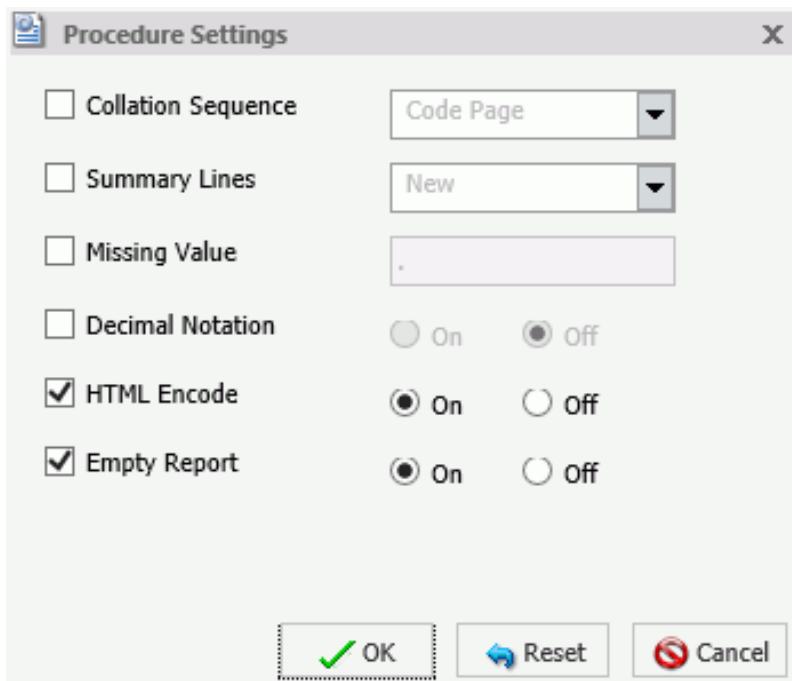
Addition of Procedure Settings to the Quick Access Toolbar

You can use Procedure Settings to specify and control items for inclusion in a procedure. Accessible from the Quick Access Toolbar, these options can be used to tailor your report, chart, or document presentation or content to meet your individual needs.

The procedure settings include:

❏ Collation Sequence (COLLATION)

❏ Summary Lines (SUMMARY LINES)

❏ Missing Value (NODATA)

❏ Decimal Notation (CDN)

❏ HTML Encode (HTMLENCODE)

❏ Empty Report (EMPTY REPORT)

The Procedure Settings dialog box is shown in the following image.

Downloading Chart Plugins From the HTML5 Chart Extensions Page

The HTML5 Chart Extensions page contains all HTLM5 chart extensions currently available for use in your local installation of Web Query, as shown in the following image.
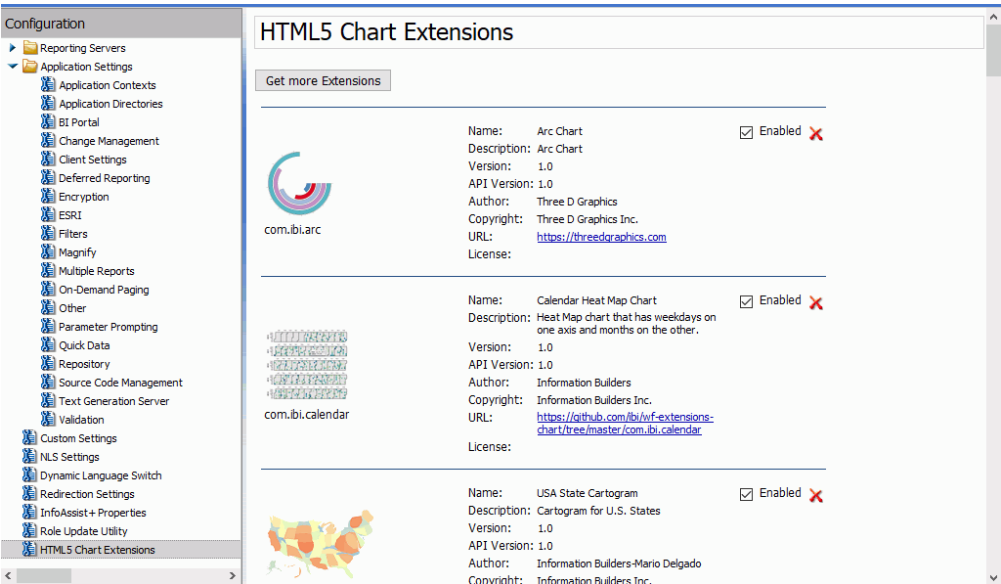
Features on this page enable administrators to make chart extensions available to InfoAssist+ developers for use in their chart customization and development, to remove them from InfoAssist+, and to uninstall them from Web Query when no longer needed. The *Get more extensions* link connects to the Upload and Install Extensions page where Administrators can install locally-created HTML5 chart extensions or to upload publically available and supported chart extensions from the Information Builders Github web site that are not currently installed, as shown in the following image.
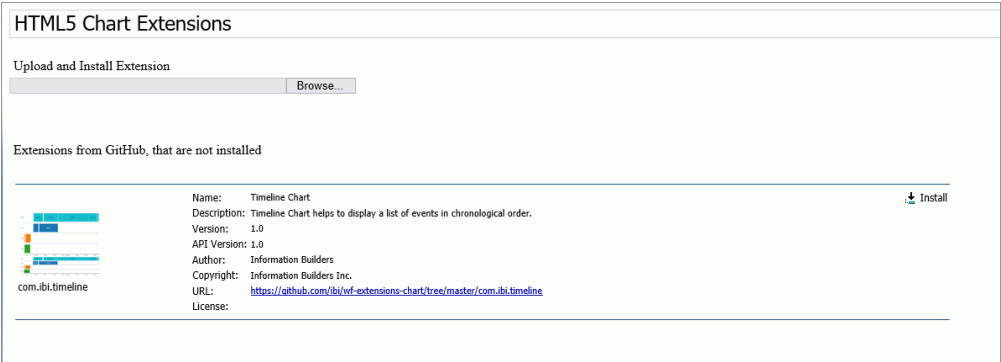
These two pages free administrators from the tasks of manually searching through the IBI Github webpage and downloading the zip file of the correct version of the chart extension plug-in they want to use, or manually transferring locally-developed files from their source location to the /qibm/prodData/qwebqry/base80/config/web_resource/extensions/ directory, editing the html5chart_extensions.json configuration file to include the new chart extension, and then running the *Clear Cache* command from the Web Query Administration Console to complete the activation of the chart extension.

Scheduling and Distribution

Report Broker is a scheduling and distribution application that centralizes the execution and distribution of Web Query reports, the contents of URLs, and files. Report Broker supports multiple administrators and provides a single point of control for managing information distribution within an organization.

Using Parameter Values to Burst Active Dashboards and Compound Reports

In addition to the ability to distribute sections of a single report to individual users using standard bursting, you can now use a parameterized filter to distribute sections of reports. This new feature allows you to burst reports that originally could not be burst, including active dashboards and Compound Reports in Excel format.

When scheduling a report that contains a filter with a static or dynamic multiselect parameter, access the Parameter options and select values from the multiselect parameter that you want to include in the distributed report or reports, using the Parameter Value for Amper Variable dialog box. In this dialog box, the Repeat Task for Each Selected Value check box displays, as shown in the following image.
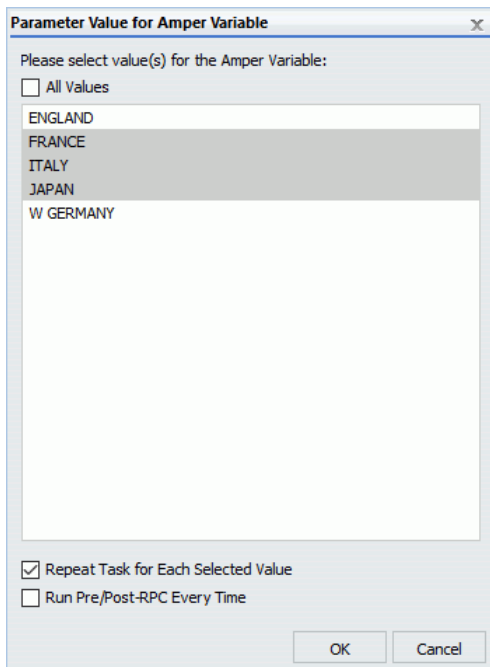
Selecting the Repeat Task for Each Selected Value check box allows you to repeat a schedule task process for each selected parameter value. When the schedule is run, the recipient receives separate reports for each selected parameter value, as shown in the following image.
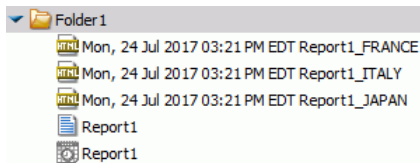
Learn More
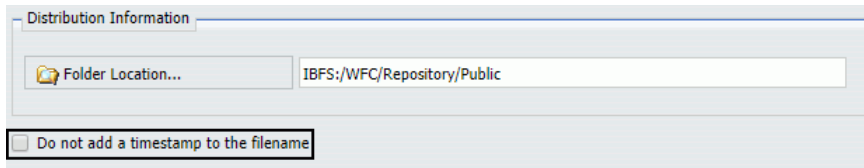
For more information, see the *Using Parameter Values to Burst Active Dashboards and Compound Reports* topic in the *ReportCaster* technical content.

Overwriting Reports Distributed to the Repository

You can now overwrite a single report after each scheduled distribution. Instead of generating multiple timestamped files after each scheduled distribution, this feature provides the option to remove timestamps from the filename of reports distributed to the Repository or your file system.

To use this feature, create a schedule that uses Repository distribution. When setting distribution information in the Distribution tab, select the *Do not add a timestamp to the filename check box*, as shown in the following image.

Email Distribution Using the Cc and Bcc Email Options

You can now use the carbon copy and blind carbon copy email options for schedules that are configured to use email distribution. These options allow you to send copies of an email distribution to separate recipients, simplifying the creation of scheduled email distributions. If you use the Blind Carbon Copy field to send email distributions to individual recipients, each recipient will not see the other recipients of the email distribution.

To use this feature in the Basic Scheduling tool, right-click a report, chart, document, visualization, or portal, point to *Schedule*, and then select the *Email* distribution option. The Distribution tab displays, as shown in the following image.

In the Distribution Information section, click the *To* button to open the Enter Email Addresses dialog box, as shown in the following image.

Tracking Report Broker Configuration Events

You can now track when Report Broker Configuration settings are changed. This feature enables you to keep continuous records of how and when Report Broker Configuration settings are changed, and to comply with any regulatory auditing requirements of your organization.

To access the audit log file, launch the Administration Console, click the Diagnostics tab, and then click *Log Files*. The following image shows the link that you can click to view the audit log.

When you change Report Broker Configuration settings, a record of the event is created in the audit.log file in the following format:

[*YYYY–MM–DD hh:mm:ss,sss*] INFO caster_config *monitor_ID user_ID* old CasterConfig file: dserver_*file_ID*.xml

The following image shows a Report Broker Configuration log that is generated after a change to the Report Broker Configuration settings.

```
[2017-08-17 13:02:17,756] INFO  caster_config    92fd885c494e367  admin old CasterConfig file: dserver_1502989337756.xml
```

Before changes to the Report Broker Configuration settings are saved, the previous settings of the Report Broker Configuration tool are recorded in a timestamped dserver.xml file. This file is saved in /qibm/UserData/qwebqry/base80.

Enabling and Disabling Schedules Using the Shortcut Menu Option

You can now enable or disable schedules using the shortcut menu options for a schedule in the Resources tree or Report Broker Explorer. This method provides an option for changing the activation of a schedule without requiring you to open the schedule.

To use this option, right-click an enabled schedule in the Resources tree or Report Broker Explorer and click *Disable*. If the schedule is already disabled, the menu option is *Enable*.

Ability to Enable or Disable Multiple Schedules

You can now enable or disable a group of schedules at the same time using a single multi-select action in the Report Broker Explorer. This feature provides an additional option to enabling or disabling schedules individually.

To use this option, from the Report Broker Explorer, select the schedules you want to enable or disable, right-click the schedules, and then click *Enable* or *Disable*.

The following image highlights the *Enable* and *Disable* options in the shortcut menu.
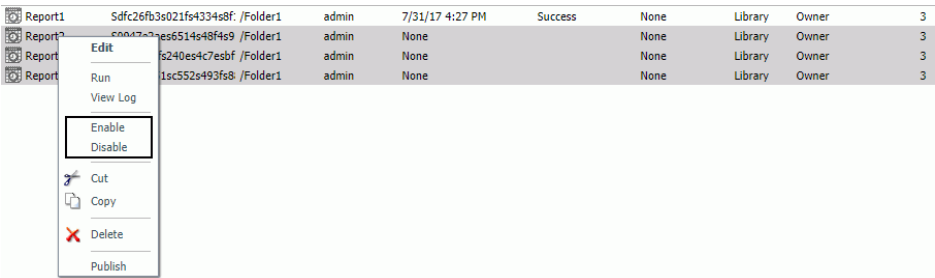
## Using the Email of the Schedule Owner as the Default Reply Address

If a default Mail Reply Address is not provided in the Report Broker Configuration tool, the email address of the user signed in to Web Query becomes the default Reply Address used in the Basic and Advanced Scheduling tools. This feature provides another default option for the Mail Reply Address field. Report Broker obtains the email address of the user from the Web Query security system.

Downloading Report Broker Job Trace Files

In addition to opening and viewing trace files in your browser, you can now download trace files created by Report Broker jobs. This feature allows you to download trace files of any size, as a zip file.

To access this feature, navigate to the Report Broker Console, and click the *Job Log* tab. Choose a folder in the left panel and click an existing job log generated from a job that has been configured to contain traces.

Navigate to the Manage Job Logs group on the Report Broker Console ribbon and click the *View Trace* arrow button. The *Download Trace Files* option appears, as shown in the following image.
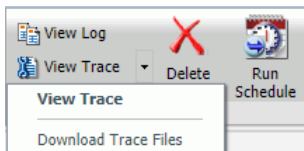
Click *Download Trace Files* to download the trace files as a zip file.

Viewing and Downloading Configuration Files

You can now use the Configuration Files button to view and download configuration files from the Report Broker Console. The Configuration Files button is shown in the following image.
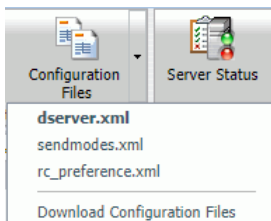
This feature allows you to view the following files:

❏ **dserver.xml**. Contains a record of current Report Broker configuration settings.

❏ **sendmodes.xml**. Contains information about mime output file formats.

❏ **rc_preference.xml**. Contains information about the display of options in the UI.

Clicking one of the file options displays the file information in a browser window. You can also click *Download Configuration Files* to download all files as a single zip file.

To access this feature, navigate to the Report Broker Console and, in the Show group on the ribbon, click *Configuration*. The Configuration Files button appears on the ribbon, in the Manage Configuration group.

Restricting Distribution Server Console Access to an IP Address List

You can now restrict Distribution Server access to one or more IP addresses to prevent denial of service (DoS) attacks against the server. A DoS attack is a malicious cyber-attack that overloads a server with requests from multiple IP addresses, which blocks legitimate addresses from accessing the server. This new feature enhances network security by configuring your Distribution Server to only accept TCP/IP requests from the IP addresses you provide.

To use this feature, access the Report Broker Console Configuration tab and open the Distribution Servers folder from the Configuration pane. Click the *Restrict to IP Addresses* open folder button and add your selected IP addresses to the Allowed IP Addresses list, as shown in the following image.
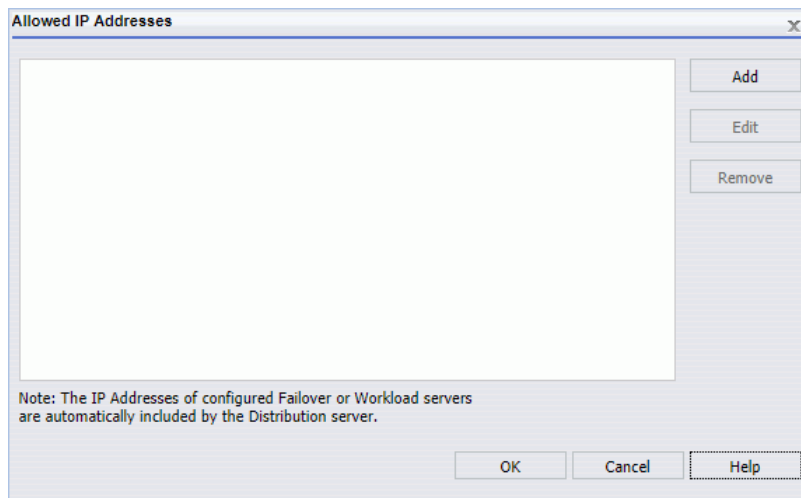
Restricting User Input of Email Addresses and Domains

You can restrict user input of email addresses and domains to those listed in the Allowed Email Domains and Addresses dialog box. Enabling this feature allows users to easily select email addresses and domains only from a pre-approved list, removing the need to add addresses manually.

To access the Allowed Email Domains and Address dialog box, navigate to the Report Broker Console, click the *Configuration Tab*, click the *Email Distribution* folder, and then click the *Allowed Email Domains and Addresses* folder.

To activate this feature, select the *Enabled* check box, and then select the *Restrict user input with this list* check box, which is highlighted in the following image.
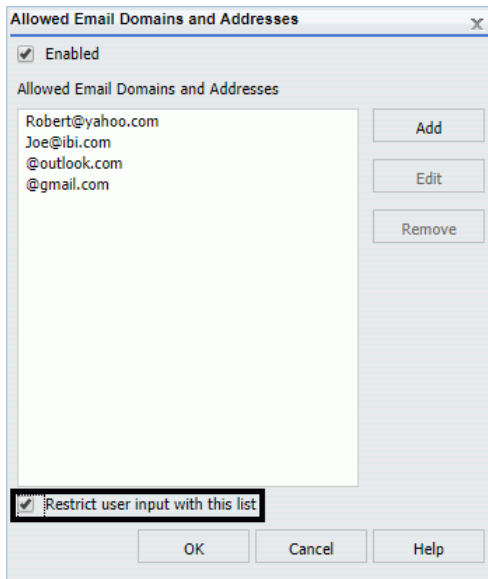
Once this feature is activated, users working with Email Distribution options, Notification Email options, Distribution Lists, Distribution Files, and Dynamic Distribution Lists can only use the email addresses and domains in this list.

Developer Workbench

Developer Workbench is a Windows-based GUI development environment for creating Web Query applications. Developer Workbench provides innovative features and functions that simplify development, thereby allowing you to concentrate on interface design, business logic, and data manipulation. Features include data visualization, color exception reporting, intelligent drilldowns, and the ability to generate HTML pages without writing code.

Environments and Data

The following are new features and enhancements for environments and data in Developer Workbench v221.

New Options for Environment Properties

The Environment Properties dialog box now includes the following options:

❏ **Login Timeout.** Specifies how long Developer Workbench should wait for the login credentials to be validated. The default time is 15 seconds. You can set this to a higher value, if necessary. You can configure this setting for each environment.

The following image shows the Login Timeout option within the Web Component properties.
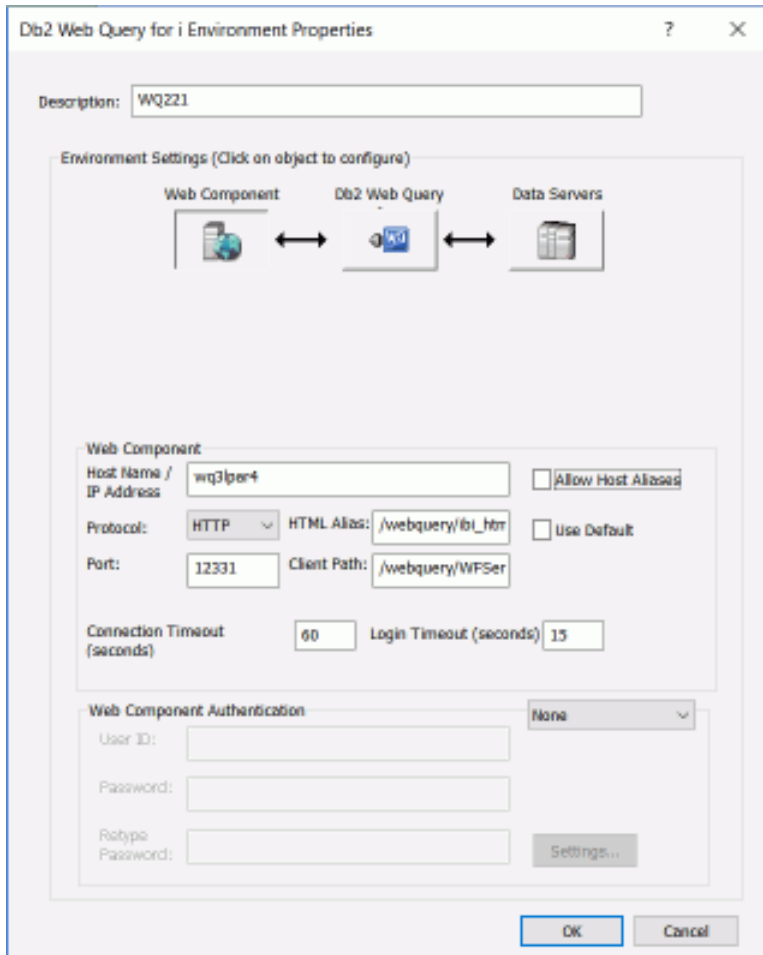
PostgreSQL Database Option

The PostgreSQL database option is available on the SQL Report Wizard and SQL Chart Wizard Data access information dialog boxes and in the Engine dialog box drop-down list in the Engine canvas. The SQL Report Wizard Data access information dialog box is shown in the following image. If the Adapter for PostgreSQL is not configured, you will receive a message with options to choose a different adapter or configure this adapter.
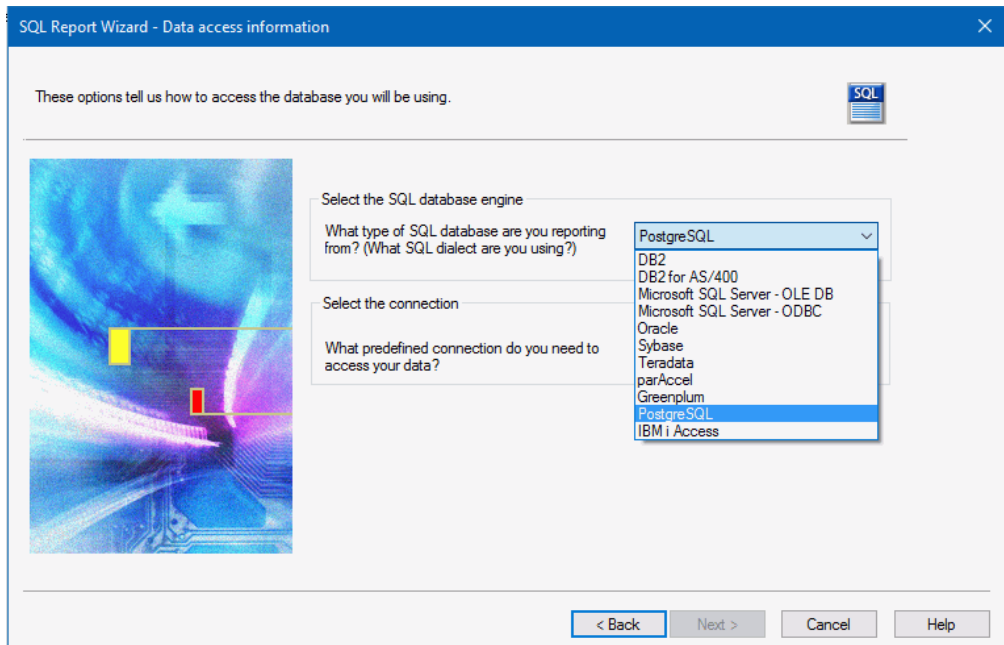
The Engine dialog box drop-down list in the Engine canvas is shown in the following image. The Connection drop-down list displays the list of connections available, or is disabled if there are no connections.
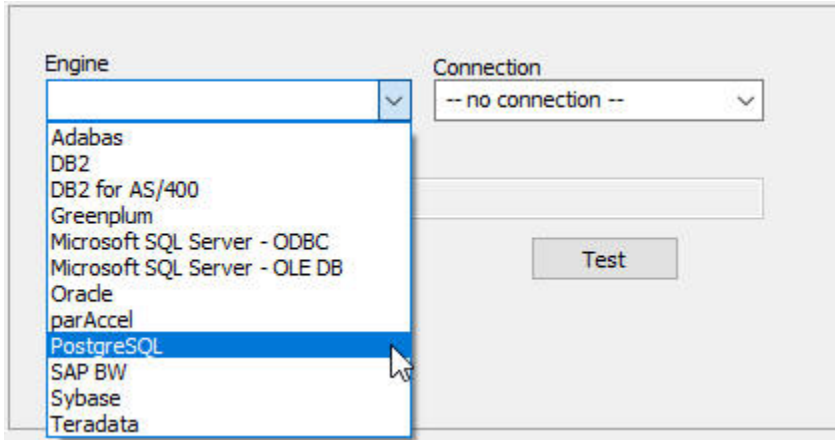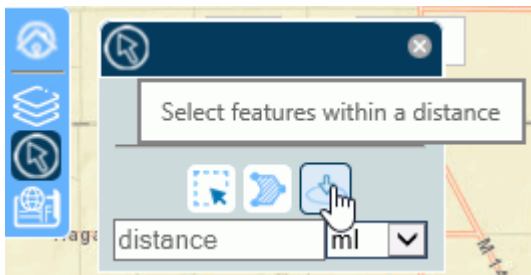

Esri Mapping

The following are new features and enhancements for Esri mapping in Developer Workbench v221.

Changing Default Distance Settings From Miles to Kilometers

In the Esri Viewer Selection widget, you can select features within a distance of a point you select on the map, as shown in the following image.

Although you can select either the miles or kilometers distance unit from the drop-down list in the widget, the default unit in which the distance is shown is determined by your browser locale settings. For example, if your browser language is United States English, the distance will be shown as miles, but if your language is Australian English or United Kingdom English, the distance will be shown as kilometers.

For information about configuring locale settings in your browser, see the help content for your browser.

This is a change in behavior from prior releases and will be implemented automatically when you run a map request.

Adding a Demographic Layer to a Map

Esri demographic data enables you to add info-layers to a map that provide global demographic, spending, lifestyle, and business data on your map application.

*Procedure:* **How to Configure a Demographic Layer on an Esri Map**

Once you have added an Esri map component to your HTML page, you can add one or more preconfigured demographic layers.

1. In the Settings panel for the Esri map component, click the arrow next to the New Layer icon and select *Demographic Layer*, as shown in the following image.
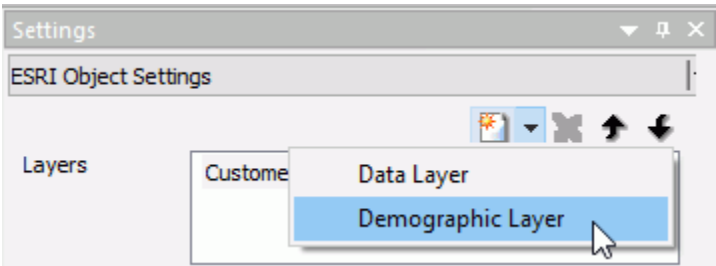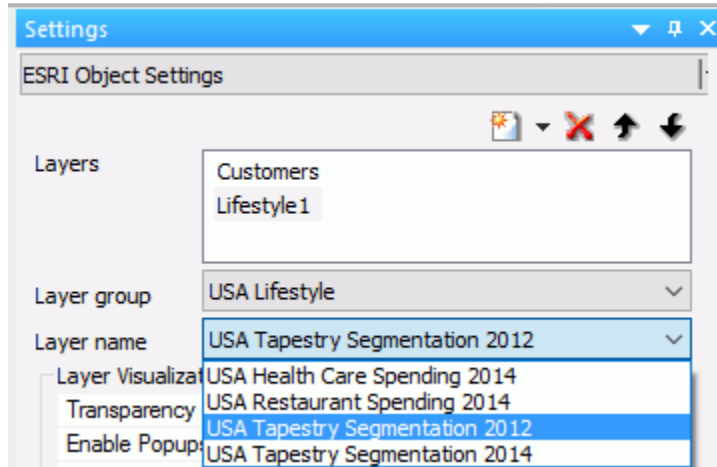

The layer is created with a default name. You can rename the layer by clicking in the default name and typing a new name.

2. Select a type of demographic layer from the Layer group drop-down list, as shown in the following image.
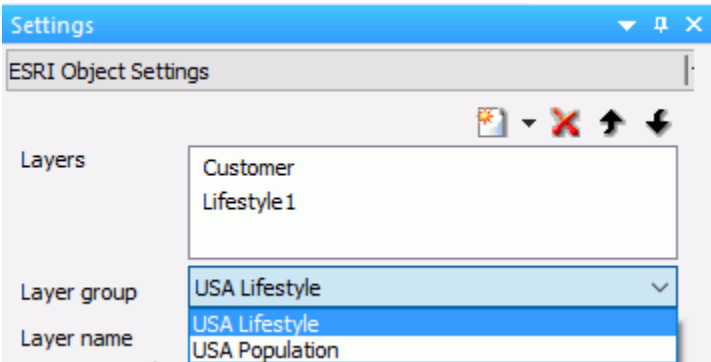
3. Select a layer name from the Layer name drop-down list, as shown in the following image.

Note: If the layer is not freely available from Esri, you will be asked to provide your Esri credentials before the layer can be added to the map.

4. Configure the layer visualizations you require, such as the transparency of the layer and the default visibility.

5. Save the HTML page.

When you run the HTML page, the demographic layer is added to the map output, as shown in the following image.
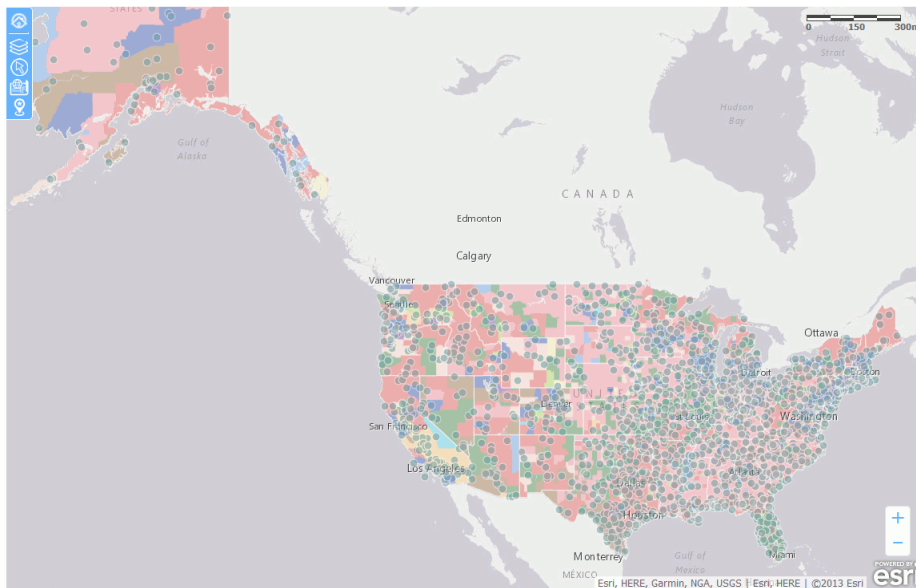
Note: You may need to adjust the transparency values for each layer to make them all visible.

6. To open the demographic layer table of contents, open the *Change Base Maps* widget and select the *Info Maps* tab, as shown in the following image
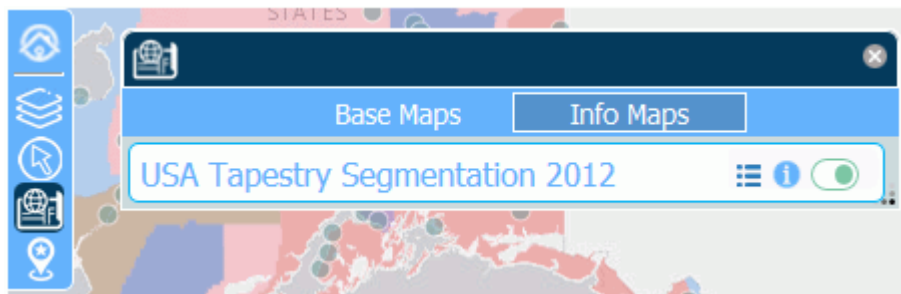
The following options are available on the info Map table of contents.

Description	Icon	Example
Toggle Layer Legend This icon toggles the legend on and off.	☰	
Show Description This icon toggles a layer description on and off.	ⓘ	
Visibility This icon toggles the layer visibility on and off.	◯	

Retrieving the Esri Map Viewer Current Extent Coordinates as Variables

The current extent of an Esri map can be retrieved as map parameters and used for subsequent filtering of map layers and reports. The extent can be in any coordinate system and must be a simple polygon.

The names of the map extent variables are:

❏ &MINX, which defines the minimum longitude of the extent.

❏ &MINY, which defines the minimum latitude of the extent.

❏ &MAXX, which defines the maximum longitude of the extent.

❏ &MAXY, which defines the maximum latitude of the extent.

Refreshing Markers on an ESRI Map Without Refreshing the Entire Map

Markers on a Point of Interest layer may be used to represent the positions of objects (such as vehicles or incidents) whose location changes over time. You can update these markers without updating the entire map using the IbComposer_refreshEsriMapLayer JavaScript function in a control.

The refresh will do the following:

❏ Update the locations of the markers without refreshing the map layer or other map layers.

❏ Maintain the extent (zoom level) of the map layer.

❏ Maintain the symbols with which the map layer was configured.

❏ Maintain the visibility of the map layer.

❏ Allow infoWindows to be opened on click.

Syntax: How to Refresh Map Markers Without Refreshing the Map

Add the following JavaScript function call to the onclick event of the control created to refresh the markers.

```
IbComposer_refreshMapLayer("mapid", "layerid") ;
```

where:

`"mapid"`
Is a map ID (for example, "emfobject1").

`"layerid"`
Is a layer ID (for example, "Layer1").

Example: **Refreshing Markers on an ESRI Map Without Refreshing the Entire Map**

The following image shows a map layer that contains a map object and three buttons. The map ID is emfobject1, and the layer ID is Layer1, which are the default IDs.


The Web Query request associated with the map is fed the coordinates of the cars and prints each car ID and its latitude and longitude as the car positions change.

The button labeled *Start*, whose name is button1, has the IbComposer_refreshMapLayer function call in its onclick event, as shown on the Embedded JavaScript tab.

```
//Begin function button1_onclick
function button1_onclick(event) {
var eventObject = event ? event : window.event;
var ctrl = eventObject.target ? eventObject.target : eventObject.srcElement;
// TODO: Add your event handler code here
//IbComposer_refreshMapLayer("emfobject1", "Layer1") ;
//IbComposer_triggerExecution("task2",1);
if (glbInterval) return;
glbInterval = setInterval(doMapRefresh,1000);
}
//End function button1_onclick
```

The following image shows the map output before the Start button is clicked. The circles that represent the map markers are in their starting positions within the large X's on the map.
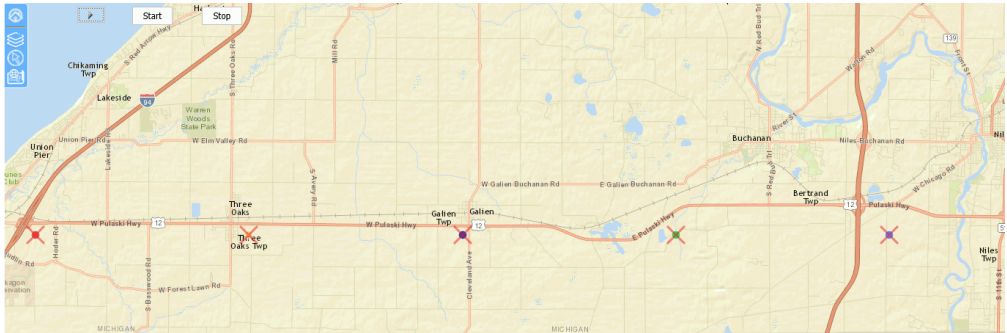
After the Start button is clicked, the markers move on the map, but the map is not refreshed and its zoom and position remain unchanged, as shown in the following image.
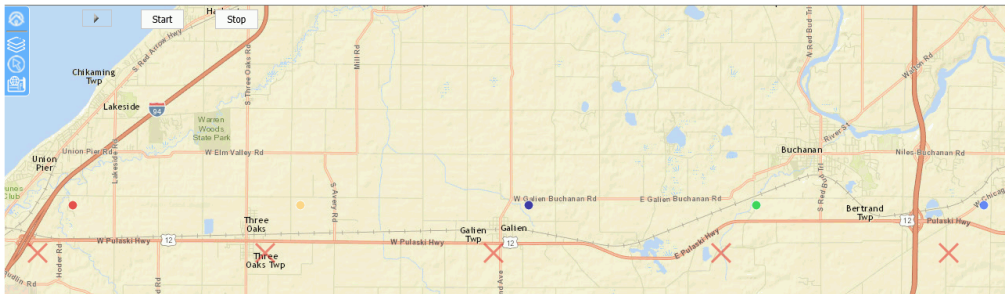
Clicking a marker opens its InfoWindow. The values displayed in the InfoWindow update as the marker moves. The following images show an open InfoWindow for the same marker in two different locations.
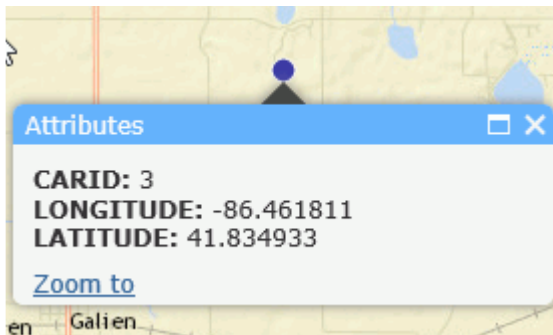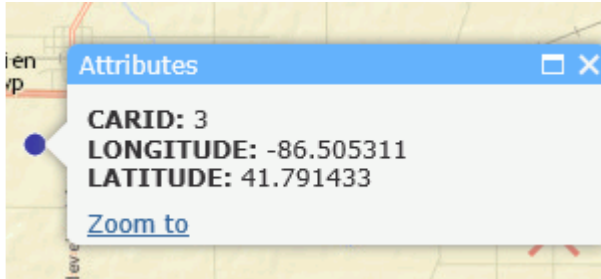
Configuring the Map Menu

You can change background and hover colors of icons in the map menu by editing the .css classes that represent the menu components. To edit the .css class definitions, you can use the Embedded CSS tab on the HTML page that contains the map component or reference an external .css file.

Editing .css Class Definitions for the Map Menu

To embed .css classes in the HTML page, click the Embedded CSS tab at the bottom of the HTML page. The default embedded CSS tab is shown in the following image.
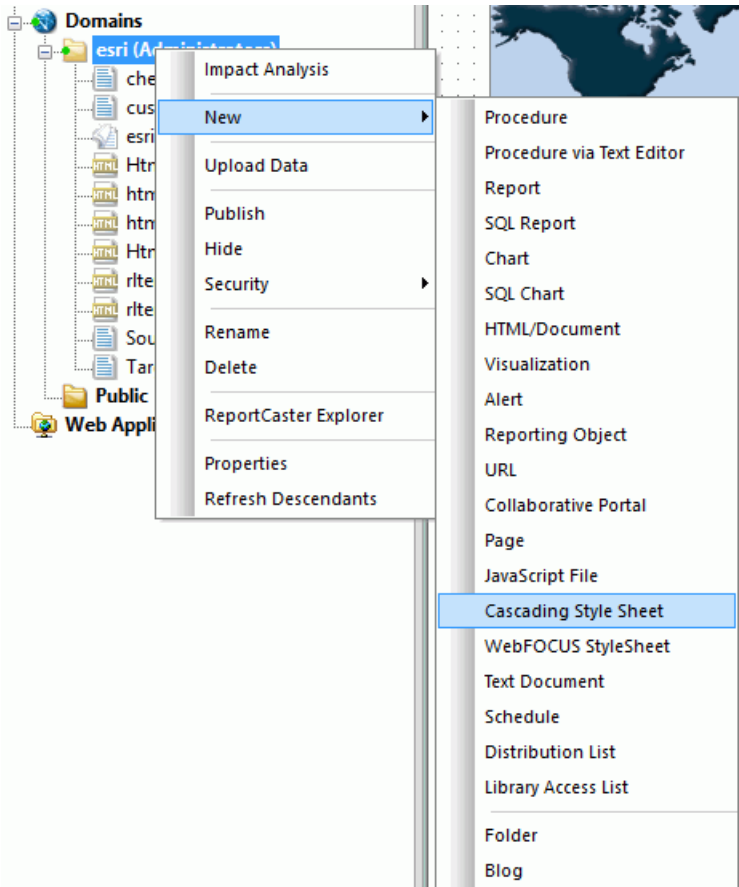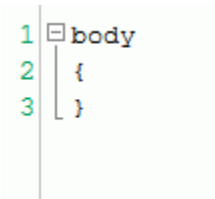
```
1  .internal_default {
2  }
3
```

Add your customized classes outside of the .internal_default class (for example, starting on line 3).

To create a new .css file, right-click an application in a domain, point to *New*, and select *Cascading Style Sheet* from the context menu, as shown in the following image.
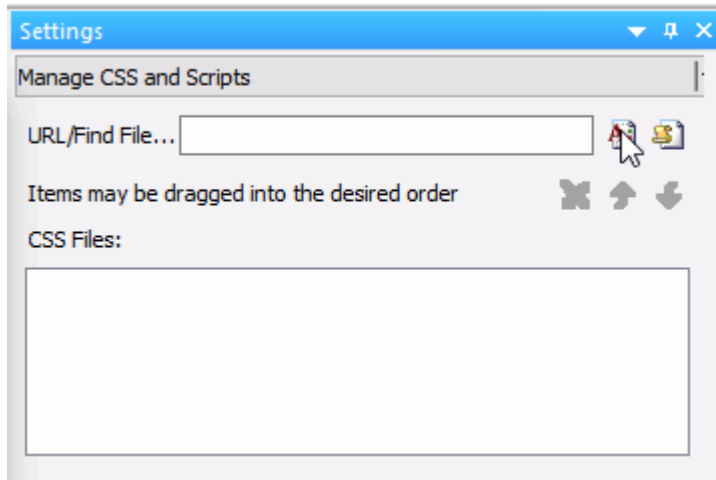

The new .css file opens, as shown in the following image.

Add your customized classes outside of the body tag (for example, starting on line 4).

After you save the .css file, you can reference it in the HTML page:

1. Click on the HTML page outside of any of its components.

2. Open the Settings panel and click the .css icon, as shown in the following image.

The Open File dialog box opens.

3. Navigate to the application that contains the .css file, select the .css file, and click *OK*.

The .css file is added to the CSS Files list in the Settings panel.
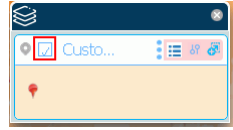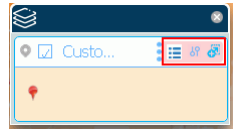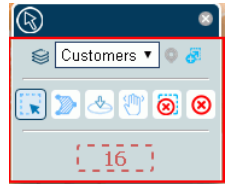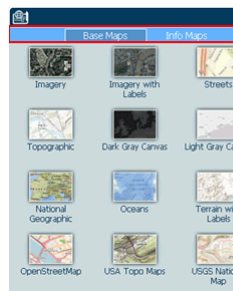
Map Menu Classes

This section describes the classes that color the map widgets. You can type them into the Embedded CSS tab of the HTML page that contains the map, or you can access an external .css file.

If you add them to an external .css file, place them outside of the body tag.
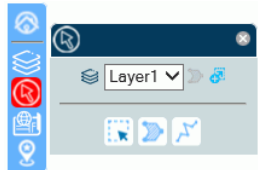
The following table lists the map menu classes with an image of the map menu component affected by that class. The affected areas are outlined in or colored red.

Class Name	Class Description	Class Image (Outlined in or Colored Red)
.mainMenuColor	Main menu container colors	
.HomeButton	Home button hover color	
.layersWidget	Layers (Table of Contents) button hover color	
.selectionWidget	Selection button hover color	
.basemapBtn	Basemap button hover color	
.LocateButton .zoomLocateButton	Locate button hover color	

Class Name	Class Description	Class Image (Outlined in or Colored Red)
.lyrCheckBoxColors	Check boxes to turn layers on and off in Table of Contents	
.lyrContainerColors	Color of each layer container in the Table of Contents widget	
.optionsListColors	Layer options box container background color	
.stContentColor	Selection tools content background color	
.selectionInfoColors	Number of selected features box	
.tabsHeaderColors	Background color of Basemaps and Info Maps tabs	

Class Name	Class Description	Class Image (Outlined in or Colored Red)
.imTabsTitlesColors	Button color of Basemaps and Info Maps tabs	
.imContentColor	Background color of the Basemaps and Info Maps content area.	
.imActive	Color of the active button, either the Basemaps and Info Maps tab	

Class Name	Class Description	Class Image (Outlined in or Colored Red)
.dojoxFloatingPaneTitle	Background and border colors of the title pane of all widgets	
.esriPopup .titlePane	Background color of the title pane in the Esri pop-up window	
.tocContentColor	Background color of the content area in the Table of Contents widget	
.WidgetOn	Color of any button in the main menu when its corresponding widget is active	

Reference: Default Map Widget Class Definitions

The following syntax shows the .css definitions for the colors of the components in the map menu. You can replace any color definition using a hexadecimal color value, an RGBA color value, or a color name. Some classes contain multiple background color properties in order to support browsers that may require color definitions in different formats (hexadecimal or RGBA). The default color definitions are the same in both formats.

```
/*MAIN MENU STYLES*/

/*main menu container colors*/
.mainMenuColor{
    border-color: #FFFFFF;
    border-left-color: #66b2ff;
    background: #66b2ff;
}

/*Color of the home button in the main menu when mouse hovers*/
.HomeButton .home:hover {
    background-color: #5390cf;
    background-color: rgba(83, 144, 207,1);
}

/*Color of the button in the main menu that invokes the table of contents
widget when mouse hovers*/
.layersWidget:hover {
    background-color: #5390cf;
    background-color: rgba(83, 144, 207,1);
}

/*Color of the button in the main menu that invokes the selection widget
when mouse hovers*/
.selectionWidget:hover {
    background-color: #5390cf;
    background-color: rgba(83, 144, 207,1);
}
```

```
/*Color of the button in the main menu that invokes the basemaps widget
when mouse hovers*/
.basemapBtn:hover {
    background-color: #5390cf;
    background-color: rgba(83, 144, 207,1);
}

/*Color of the locate button in the main menu when mouse hovers*/
.LocateButton .zoomLocateButton:hover {
    background-color: #5390cf;
    background-color: rgba(83, 144, 207,1);
}

/*Color any button in the main menu when its corresponding widget is
active*/
.WidgetOn {
    background-color: #023858;
    background-color: rgba(2, 56, 88,1);
}

/*Color any button in the main menu when its corresponding widget is active
and mouse hovers*/
.WidgetOn:hover {
    background-color: #023858;
    background-color: rgba(2, 56, 88,1);
}

/*background color of the content area in the Table-Of-Contents widget*/
.tocContentColor{
    background-color: #c9dbdf;
}

/*style of each layer container in the Table-Of-Contents widget*/
.lyrContainerColors{
    background-color: white;
    border-color: #00b2f3;
    color: #66b2ff; /*text color. All child nodes will inherit this color*/
}

/*check boxes to turn On and Off layers in Table-Of-Contents widget*/
.lyrCheckBoxColors{
    border-color: #66b2ff;
    color: #66b2ff;
}

/* layer options box container background color*/
.optionsListColors{
    background-color: rgba(243, 10, 21, 0.19);
}
```

```
/*selection tools content background color*/
.stContentColor{
    background-color: #c9dbdf;
}

/*number of selected features box*/
.selectionInfoColors{
    color: #cd5c5c;
    border-color: #cd5c5c;
}

/*BASE MAPS WIDGET*/

/*basemaps and info-maps tabs background color */
.tabsHeaderColors{
    background-color: #66b2ff;
}

/*base-maps and info-maps tabs buttons colors*/
.imTabsTitlesColors{
    color: #ffffff;
    background-color: transparent;
}

/*base-maps and info-maps tabs buttons active colors*/
.imActive{
    background-color: #5390cf;
    border: 1px solid white;
}

/*base-maps and info-maps tabs buttons hover colors*/
.imTabsTitles:hover{
    background-color: #5390cf;
    background-color: rgba(83, 144, 207,1);
}

/*base-maps and info-maps content area background color*/
.imContentColor{
    background-color:  #00ff00;
}

/*Title pane of all widgets*/
.dojoxFloatingPaneTitle {
    background-color: #023858;
    border-color: #ffffff;
}

/*title pane in the esri pop-up window*/
.esriPopup .titlePane{
    background-color: #66b2ff; !important;
}
```

Example: **Changing the Map Menu Background Color**

Place the following CSS commands above the .internal_default CSS command on the Embedded CSS tab of the map object to make the background color of the map menu cyan.

```
.mainMenuColor{
border-color: #FFFFFF;
border-left-color: #66b2ff;
background: cyan;
}
```

The menu generated when you run the HTML page is shown in the following image.

Example: **Changing the Hover Color of the Home (Default Extent) and Layers Buttons**

The following .HomeButton .home:hover class changes the background hover color of the Home (Default Extent) button to orange and the .layersWidget:hover class changes the background hover color of the Layers (Table of Contents) widget to yellow.

```
.HomeButton .home:hover {
background-color: orange;
}
.layersWidget:hover {
background-color: yellow;
}
```

The following image shows the background hover color of the Home button:

The following image shows the background hover color of the Table of Contents button:

Example: **Coloring a Button When its Widget is Active**

The following .WidgetOn class makes any button green when its widget is active.

```
.WidgetOn {
  background-color: green;
  }
```

The following image shows that the Table of Contents widget is green when the Table of Contents is open.
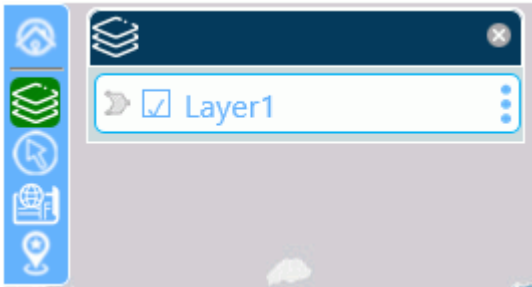
Example: **Changing the Background Color of the Table of Contents Content Area**

The following .tocContentColor class makes the area directly around the layer container purple.

```
.tocContentColor{
 background-color: purple;
```

The following image shows the Table of Contents widget with the background color purple.
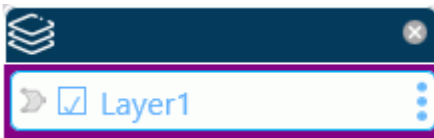
Example: **Styling the Layer Containers**

The following class definition makes the layer container background color yellow, the border orange, and the text red.

```
.lyrContainerColors{
 background-color: yellow;
 border-color: orange;
 color: red;
```

The following image shows a layer container whose background color is yellow, border color is orange, and text color is red

Example: **Styling the Widget Title Panes**

The following class definition makes the background color of the title pane burlywood and the border color navy.

```
.dojoxFloatingPaneTitle {
background-color: burlywood;
border-color: navy;
```

The following image shows the selection widget. Its title pane has a navy border and burlywood background color.
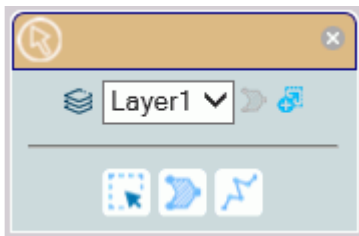
Example: **Changing the Background Color of the Pop-up Window Title Panes**

The following class definition makes the background color of the pop-up window title panes magenta.

```
.esriPopup .titlePane{
background-color: magenta;
!important;
}
```

The following image shows a pop-up window with a magenta title pane.

General Functionality

The following are new features and enhancements for general functionality in Developer Workbench v221.

Preview Option

The Preview option displays content for images, Master Files, Access Files, and procedure files in a re-sizable preview pane. The Preview option is available for the Open File, Save As, and Select Data Source dialog boxes.

The Open File dialog box, with a thumbnail preview of an image in the preview pane, is shown in the following image.
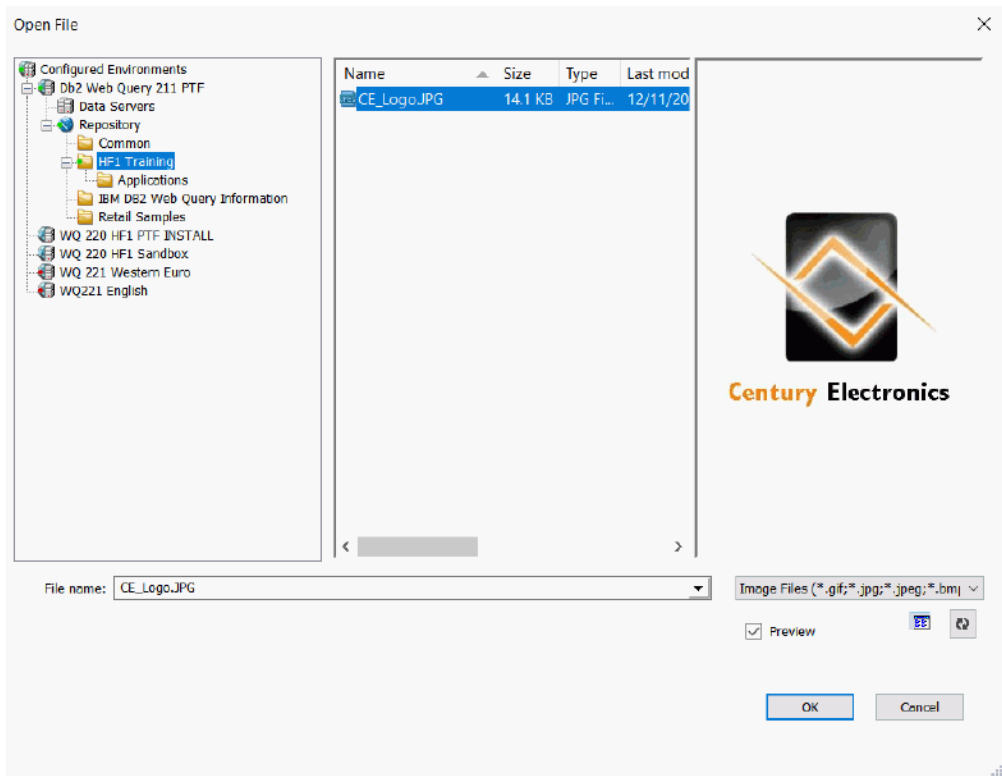
Note: If you select the *Preview* check box on the Open File, Save As, or Select Data Source dialog box, the preview pane displays. The check box is selected, by default, and remains enabled for subsequent invocations.

Close All Option

The Close All option has been added to the Developer Workbench Application menu of file-related commands, as shown in the following image.
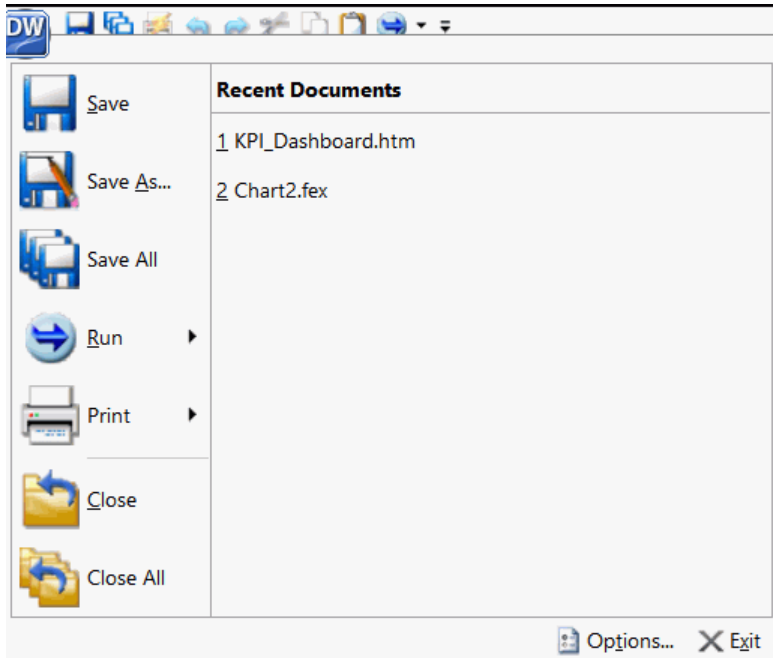
The Close All option closes all open documents. If changes were made to a file, you will be prompted to save the changes.

Title and Status Columns

When displaying files in the Environment Details view and File dialog boxes, the Title and Status columns are now available.

❑ The Title column displays the descriptive name of the item.

❑ The Status column contains information about whether the file is Public or Private. If Private, the column indicates the user name of the owner.

The Open File dialog box, with the Title and Status columns, is shown in the following image.
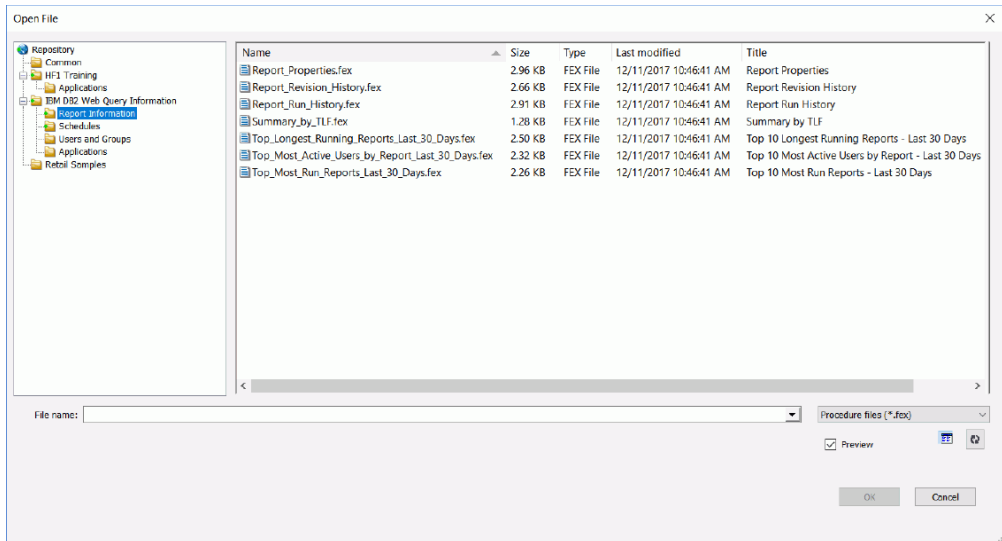
HTML Canvas

The following are new features and enhancements for the HTML canvas in Developer Workbench v221..

Creating a Widget to Autoplay Control Values

You can insert a widget on an HTML page to automatically submit values in a control at specific intervals. The control can be linked to a report, chart, or map.

You can enable the autoplay setting for the widget in the Tasks & Animations panel. The widget selected may require the following configurations:

❏ Setting the timing for the autoplay action to indicate the amount/length of time it should take for a value to change.

❏ Setting the play interval for a date slider to specify the interval in terms of days, weeks, months, or years.

When the autoplay widget displays, select a control on your page from the drop-down menu in the widget. You can hide the drop-down menu by making a selection or pressing the Esc key. When you press the play button in the autoplay widget, the value in the selected control changes based on the specified time interval.

You can also create an autoplay control that is the sole input control for a parameter, unassociated with any control on the page. This is called a virtual control. You can do this in one of two ways:

❏ When creating a control using the New Parameters dialog box, in the Create control column drop-down menu, click *Virtual*.

❏ In the Parameters view tab, right-click a control object, point to *Set Control Type*, and click *Virtual Control*.

You must create a task to display a virtual control autoplay widget using the Tasks & Animations panel.

Parameterizing Properties in the Properties Panel

You can parameterize properties in the Properties panel for all objects in an HTML page. This enables you to add values to amper variables and pass these variables to the corresponding property settings in Developer Workbench so the HTML page behaves a specific way.

You can pass values using the !IBI.AMP.*VarName* variable or a URL call.

Procedure: **How to Parameterize Properties in the Properties Panel**

The following procedure shows how to parameterize properties in the Properties panel, using the !IBI.AMP.*VarName* variable and a procedure call to the HTML page.

1. From the Environments tree, right-click a folder, point to *New*, and click *HTML/Document* to create a new HTML page.

2. On the *Components* tab, in the *Generic Elements* group, click *Button* and draw a button on the canvas.

3. On the *Controls* tab, click the *Tree* drop-down arrow and select the *Multi source Tree control* option to draw the control on the canvas.

4. On the Requests & Data Sources panel, click the *New* drop-down arrow, and then click *Add Data Source*.

5. Navigate to the *ibisamp* folder and select a Master File. For example, *movies.mas*.

6. Select the button component on the HTML canvas.

7. On the Properties panel:

   ❏ Next to the Color property, type *!IBI.AMP.MYCOLOR;*.

   ❏ Next to the Background-color property, type *!IBI.AMP.BCOLOR;*.

The Properties panel with Color and Background-color values are shown in the following image.

Style attributes	
Basic	
Location: Left; Top; Width; Height	70; 150; 360; 80
Color	☐ !IBI.AMP.MYCOLOR;
Font	
Font-size	
Background-color	☐ !IBI.AMP.BCOLOR;
Display	
Visibility	
Position	absolute
Left	70px
Top	150px

8. Select the Multi source Tree control on the HTML canvas. On the Properties panel, next to the Direction of text property, type *!IBI.AMP.DIRECTION;*.

The Properties panel with the Direction of text value is shown in the following image.

Miscellaneous	
Autosize settings	
Enable	No
Set focus	
Tab index	2
Language information	
Direction of text	!IBI.AMP.DIRECTION;
Number of levels	1
Preload next level	No
Send selected only	No
Select all children	No
Multiple	
Expanded	
Selection & Validation	Not required/no validate
Default selection	Yes
Global name	
Disabled	
Control panel	No

9. On the Settings panel, click the ellipsis for *Value from* and double-click *Movie*, as shown in the following image.
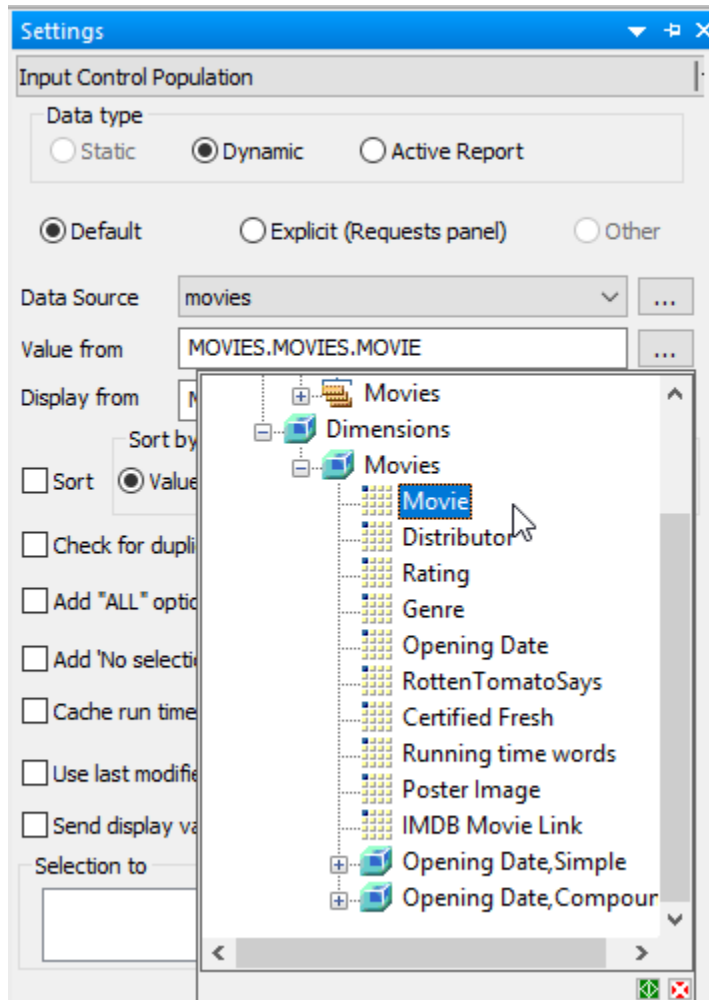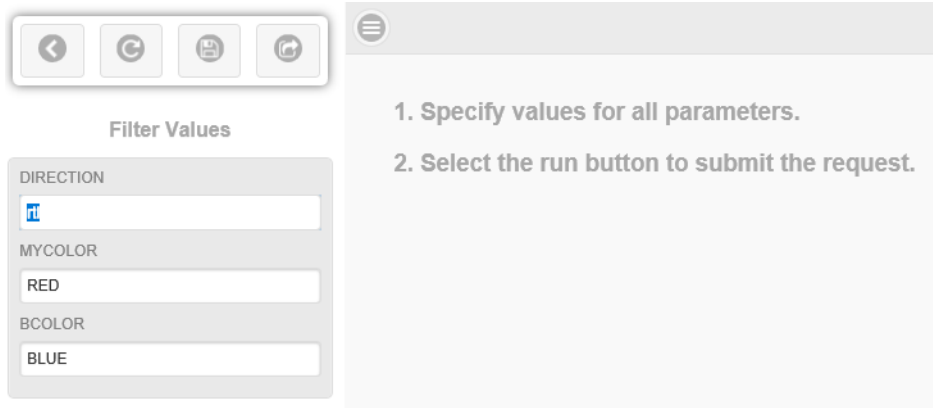
10. Save and close the HTML page.

11. From the Environments tree, right-click an application folder (for example, *baseapp*), point to *New*, and then click *Procedure*.

12. Type the following code:

```
-DEFAULT &DIRECTION='rtl';
-DEFAULT &MYCOLOR='RED';
-DEFAULT &BCOLOR='BLUE';
```

13. From the Procedure View panel, right-click *Comment*, point to *New*, point to *HtmlForm*, and then click *Referenced*.

14. Double-click the HTML page to reference.

15. Close the procedure and save the file.

16. From the Environments tree, right-click the procedure, and click *Run*.

   The following screen displays with the specified default values.

17. Click the Run icon.

   Notice that the background color is blue, the button text is red, and the movie titles are right-justified.

18. Click the Show filter panel icon, as shown in the following image.
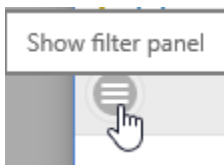
19. Change the direction to ltr (left to right) and the background color to yellow, as shown in the following image.

Filter Values

DIRECTION

ltr

MYCOLOR

RED

BCOLOR

YELLOW

1. Specify values for all parameters.

2. Select the run button to submit the request.

20. Click the Run icon. Notice that the background color for the button is yellow and the movie titles are left-justified, as shown in the following image.
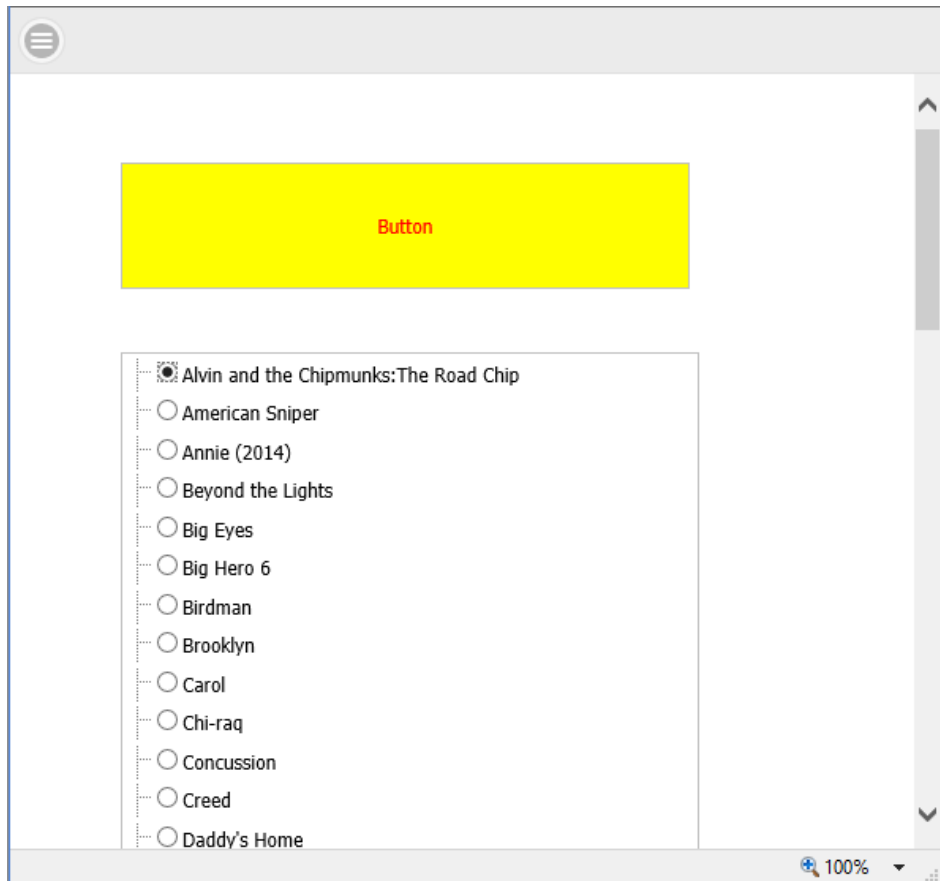
Note: You can also parameterize properties in the Properties panel using a URL in a browser. For example:

```
http://host:port/app_directory/htmfilename.htm?bcolor=red
```

In this example:

❏ *&Varname* (for example, &bcolor) must be added to the Properties panel for the parameter value.

❏ bcolor refers to the background color.

Font Size and Style for Text in the JavaScript and CSS Editor

You can change the default font size and style of the text in the Embedded JavaScript and Embedded CSS tabs of the HTML canvas, using the Font dialog box. This is available for new and existing files.

Procedure: How to Change the Font Size and Style for the Text in the JavaScript and CSS Editor

1. Select the *Embedded JavaScript* or *Embedded CSS* tab in the HTML canvas.

2. On the ribbon, in the *Options* group, click *Font Style*, as shown in the following image.
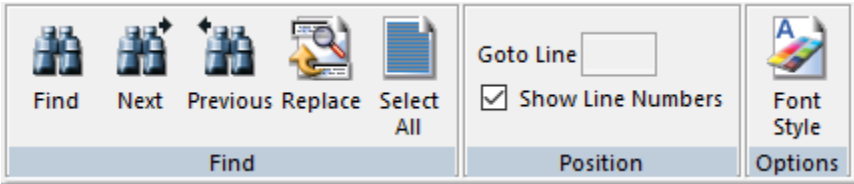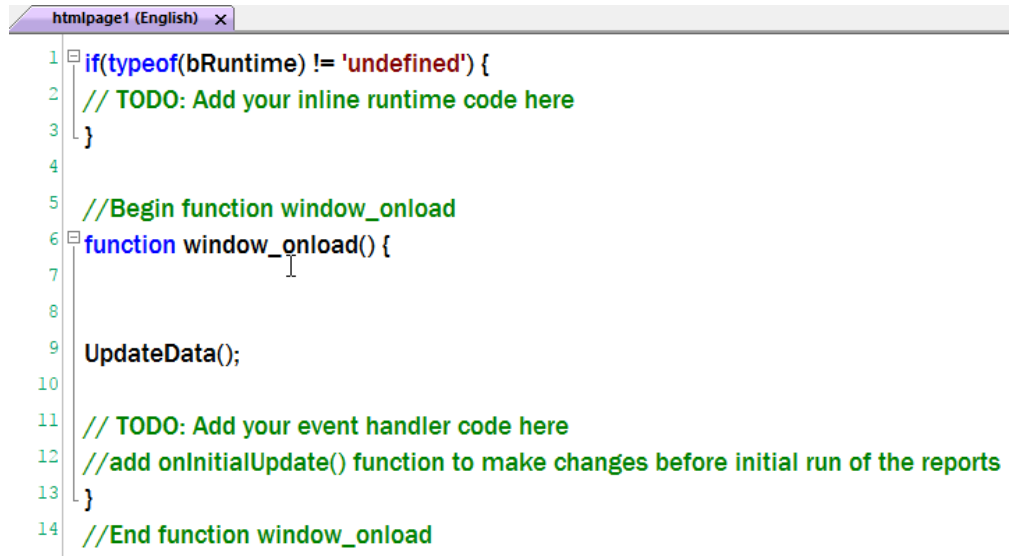
   The Font dialog box opens.

3. Select a font, font style, and size (for example, *Franklin Gothic*, *Medium*, and *14*), as shown in the following image.
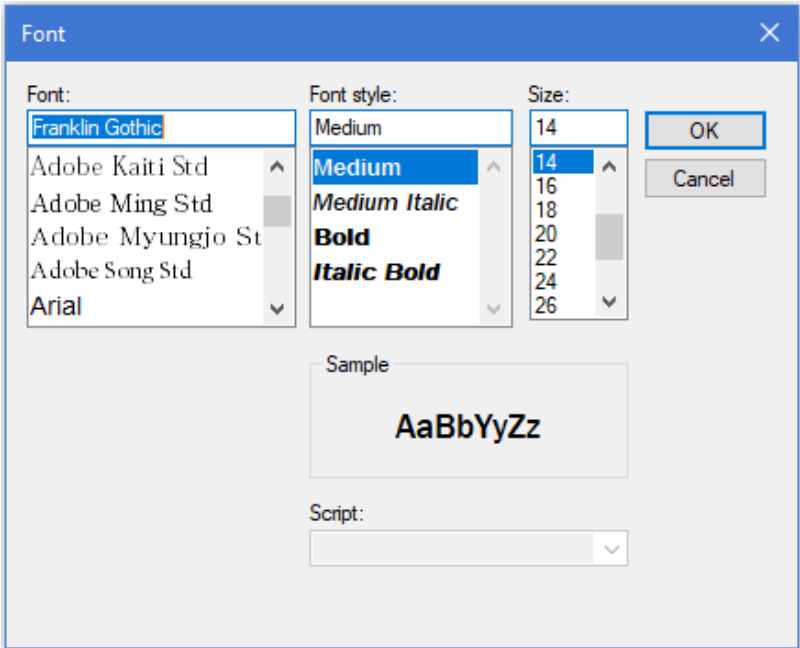
4. Click *OK*.

The updated font size and style of the text is shown in the following image.

Displaying Applications in Different Languages

You can translate HTML pages within Developer Workbench to display applications in different languages in the portal. A translation XML file can be an embedded file or a referenced file.

When creating an HTML page in the HTML canvas, you can use the Dynamic Language Sets group on the Properties panel for the DOCUMENT object to:

❏ Select a language, to allow for development.

❏ Select a default language for run time, if the selected language is not yet defined.

❏ Use an embedded or external file for translation.

❏ See a visual representation of the selected language. The open tab for the HTML file displays the language in parentheses next to the file name. This is for display purposes only. The file will not be saved with the additional language information.

The Dynamic Language Sets group on the Properties panel for the DOCUMENT object is shown in the following image.
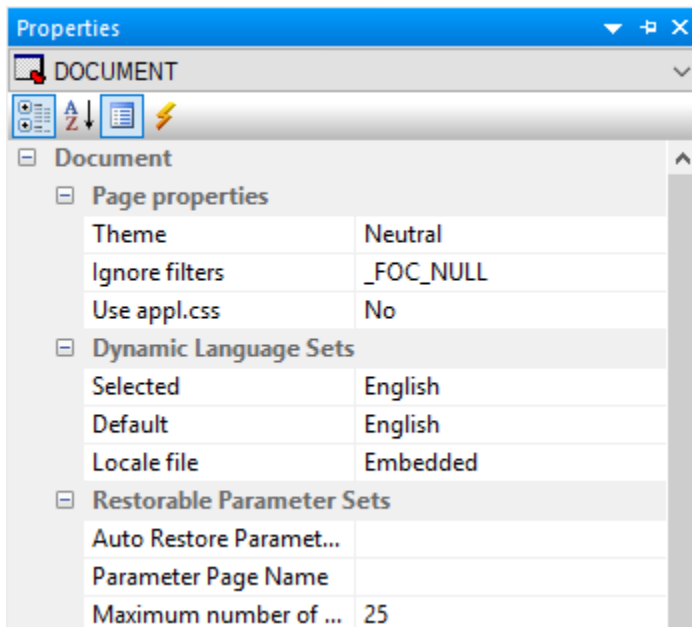
The Dynamic Language Sets properties are as follows:

❏ **Selected.** Is a drop-down list, which contains a list of Web Query languages, as selected in the Web Query Administration Console. This is based on the selected code page. The default value is the language that is set in the General section of the Developer Workbench Options dialog box.

❏ **Default.** Is a drop-down list of the languages that will be available in the embedded or referenced file (XML). When you select a language in the Selected drop-down list, the language is added to the Default drop-down list and a section in the XML file is added for the language. If you run the page from the Web Console (BIP tree), and if the selected Web Query language is not available for the HTML file, then the page runs in the language selected in the Default drop-down list. When a new value is selected in the Selected drop-down list, the Default will automatically be set for the Language drop-down list in the General section of the Developer Workbench Options dialog box.

❑ **Locale file.** Indicates whether the translation XML file is an embedded file or a referenced file, as shown in the following image.
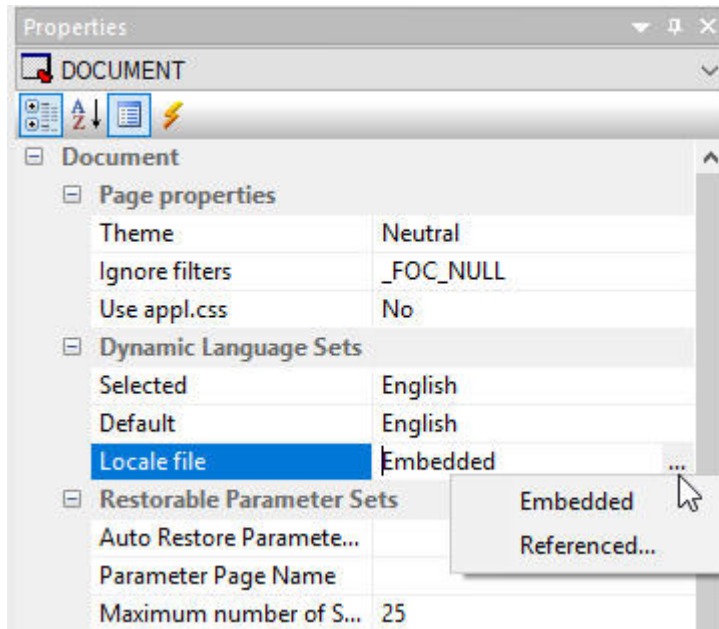
Possible values are:

❑ **Embedded.** Indicates that all the XML language strings are written in the HTML file. This is the default value.

❑ **Referenced.** Prompts you to select an existing XML file from the Open File dialog box. You can type a name in the Filename field in order to create a new XML file. Selecting *Yes* in the Developer Workbench dialog box creates a new file.

Note: When creating a locale file for the first time, the referenced file must be created as a new file.
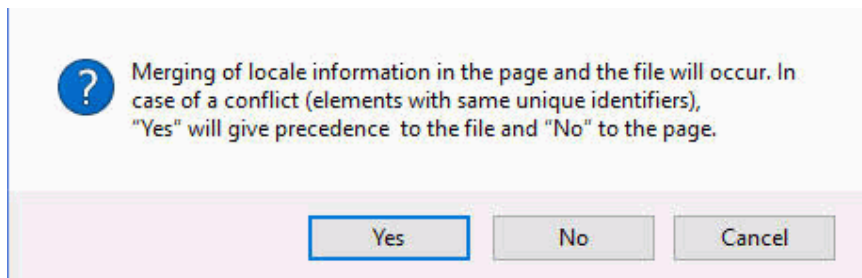
Yes populates the page with the localized strings in the file. *No* writes the information in the page to the file at the time when the HTML file is saved.

You can also set Locale options by right-clicking the document and selecting *Locale Sections* from the right-click menu, as shown in the following image.
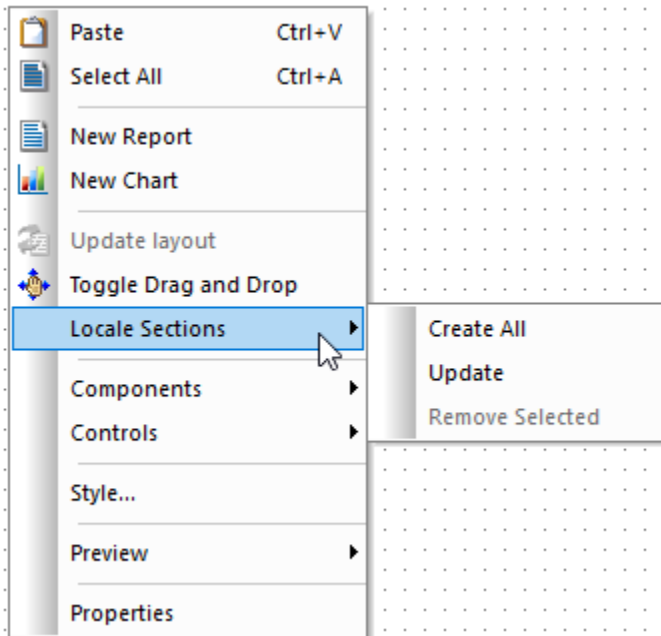
The following options are available:

❏ **Create All.** Creates sections in the XML file for all languages listed in the Selected drop-down list in the Properties panel. All the languages will also be populated in the Default drop-down list. Once the Create All option is selected, it will be grayed out until a section is removed from the XML file.

❏ **Update.** Updates sections in the XML file when you develop the HTML page and when saving the page.

   Note: If the XML file is not written for any sections in the HTML page, selecting *Update* will update the XML file sections for those missing sections.

❏ **Remove Selected.** Removes the section in the XML file for the language in the Selected drop-down list. The value in the Selected drop-down list will be the default language. The language will also be removed from the Default drop-down list.

Procedure: **How to Display Applications in Different Languages**

1. Right-click a folder, point to *New*, and then click *HTML/Document* to create a new HTML page.

   Notice that the open tab for the HTML file displays the default language in parentheses, as shown in the following image.
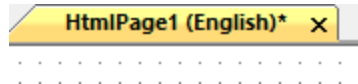
2. Add a report and a heading control to the HTML page, as shown in the following image. Type the text for the heading in English.

3. Save the HTML page.

4. In the Properties panel, click the Selected drop-down list and select a different language, for example, French, as shown in the following image.

   Notice that the open tab for the HTML file changes to the selected language, as shown in the following image.
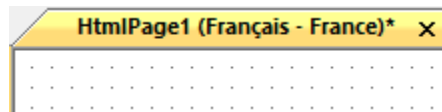
5. Type the text for the heading in French, as shown in the following image.

6. Save the HTML page.

7. Select *English* for the Selected property in the Properties panel for the Document.

8. Run the HTML page. The report heading is in English, as shown in the following image.

9. Select *French* for the Selected property in the Properties panel for the Document.

10. Run the HTML page. The report heading is in French, as shown in the following image.

Displaying Objects in the Order of the Document Object Model

You can add elements/objects independently of screen reading order and then change the order later on during the development process.

Using the Accessible property, available on the Properties panel for a document, you can indicate that the Document Object Model (DOM) should be rewritten in the order of objects on the page, left to right, top to bottom. In addition, all tab index values should be set to the value -1.

Procedure: **How to Display Objects in the Order of the DOM**

1. Create a new HTML page with multiple controls on the page.

2. On the Properties panel for the document, select *Yes* from the Accessible drop-down menu, as shown in the following image.
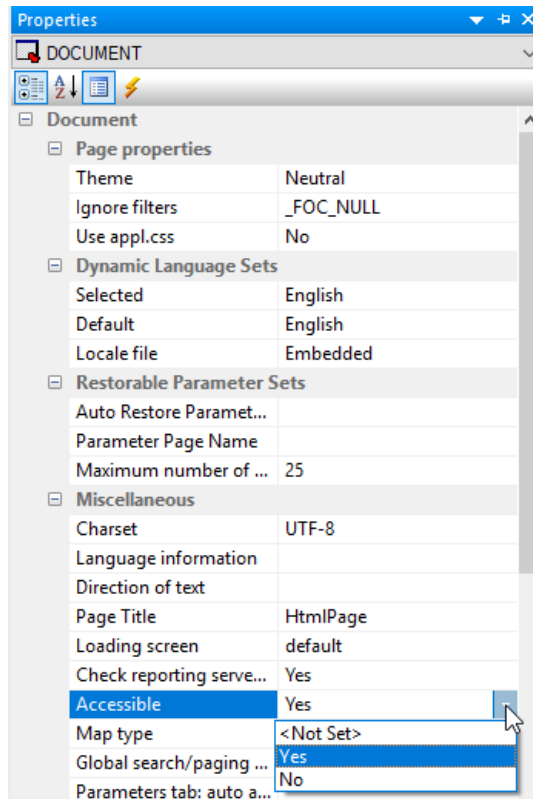
A tab order warning message appears.

Note: The Warning message displays only once, when the Accessibility property is set to *Yes*.

Selecting *Yes* will write the tab order of objects on the page, left to right, top to bottom. Selecting *No* will keep the tab order in the page.

Learn More

For more information, see *Displaying Objects in the Order of the Document Object Model* in the *App Studio* technical content.

Setting a Date Range for a Target Calendar

The IbComposer_setCalendarDatesRange function sets the range for the target calendar, given the date on the source calendar and a range in days.

Syntax: ## How to Set a Date Range for a Target Calendar

`IbComposer_setCalendarDatesRange(`*elementId*`, `*fromDate*`, `*toDate*`)`

where:

elementID

Alphanumeric

Is the unique identifier of the target calendar control for which you want to set the date range.

fromDate

Date object

Is the value of the date from the source calendar.

Note: This can be obtained by using the IbComposer_getCurrentSelection function. This function should have the third parameter set to True to return a Date object.

toDate

Date object

This value must be calculated using fromDate and the number of days needed to show the range.

Example: **Setting the Date Range for a Target Calendar**

```
function button1_onclick(event) {
var eventObject = event ? event : window.event;
var ctrl = eventObject.target ? eventObject.target : eventObject.srcElement;
// TODO: Add your event handler code here
    var curDate = IbComposer_getCurrentSelection('calendar1', 0, true);
      var fromDate= new Date(curDate);
      var toDate = new Date();
      var nOfDays= IbComposer_getCurrentSelection('slider1');
      if (isNaN (nOfDays-0)&& nOfDays != null) {
          alert("Please enter a numeric value!!");
      }
      else {
          var time = fromDate.getTime()+(nOfDays*3600000 * 24);
          toDate.setTime(time);
          IbComposer_setCalendarDatesRange("calendar2", fromDate,
          toDate);
      }
}
```

Learn More

For more information, see the *Function:IbComposer_setCalendarDatesRange* topic in the *App Studio* technical content.

Arranging Controls in the New Parameters Dialog Box

You can choose the arrangement of controls in the New Parameters dialog box, without any additional steps, after the parameter controls are generated. This gives you the flexibility to design your HTML page, without the need for moving the controls after creation.

The Controls arrangement option, as shown in the following image, indicates the placement of controls.
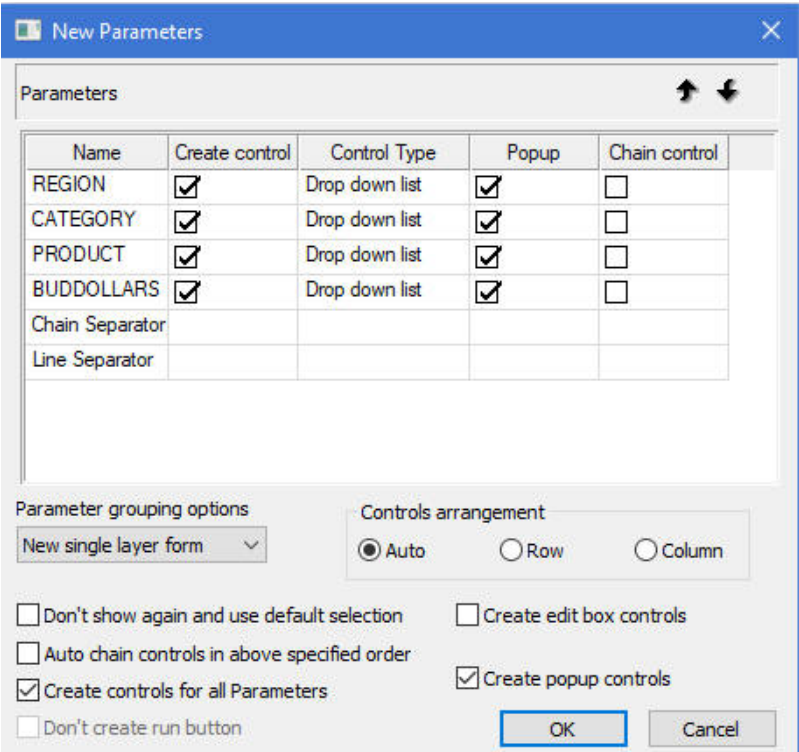
The following are possible values for the Controls arrangement option:

❏ **Auto.** This value depends on the value in the Number of columns property in the Form settings dialog box. This dialog box is in the HTML Page section in the Developer Workbench Options dialog box. Based on this value, the controls will fold to the next line. The valid values for Number of columns are 1 to 99. Auto is the default value.

❏ **Row.** Places the controls horizontally within the form.

❏ **Column.** Places the controls vertically within the form.

Sort Order for a Control for Active Formats

You can select the sort order of display for a control for Active formats in the HTML and Document canvas. You can select Ascending or Descending from the Sort order option in the Settings panel. Ascending is the default value selected. At run time, the values will be sorted based on the sort order selected.

Procedure: **How to Select the Sort Order for a Control for Active Formats**

1. Create an active report that includes a filter control (for example, a date filter).

   When you run the report, as shown in the following image, notice that date values are sorted in ascending order. Ascending is the default value.

2. Open the report and select the control, as shown in the following image.

Select a Date:

Date Of Order: ▼	Order Number: ▼	YR_MO ▼	Store Name: ▼	Product Number#: ▼	Product Number: ▼	Quantity: ▼
		100 of 100 records, Page 1 of 5 ▶|▶▶				
2001/01/12	48010	JAN, 2001	Consumer Merchandise	1034	1034	850
	48070	JAN, 2001	Audio Expert	1032	1032	947
2001/01/22	48048	JAN, 2001	eMart	1032	1032	1,165
	48088	JAN, 2001	Consumer Merchandise	1034	1034	850
	48108	JAN, 2001	Audio Expert	1034	1034	850
	48134	JAN, 2001	Web Sales	1034	1034	5
	48146	JAN, 2001	Audio Expert	1034	1034	850
2001/01/26	48050	JAN, 2001	eMart	1030	1030	1,194
2001/10/12	48005	OCT, 2001	eMart	1034	1034	544
	48011	OCT, 2001	eMart	1034	1034	544
2001/10/13	48053	OCT, 2001	Web Sales	1034	1034	5
	48061	OCT, 2001	Web Sales	1034	1034	5
	48064	OCT, 2001	Web Sales	1034	1034	5
2001/10/16	48038	OCT, 2001	AV VideoTown	1030	1030	675
	48073	OCT, 2001	Audio Expert	1036	1036	1,292
	48093	OCT, 2001	eMart	1030	1030	495
	48099	OCT, 2001	Web Sales	1034	1034	5
	48105	OCT, 2001	Audio Expert	1034	1034	544
	48109	OCT, 2001	eMart	1034	1034	544
2001/10/17	48145	OCT, 2001	Web Sales	1034	1034	5

3. From the Settings panel, select *Descending* for the sort order, as shown in the following image.

When you run the report, as shown in the following image, notice that the date values for the control are now sorted in the descending order.

Select a Date:

[All]
2002/12/30
2002/12/28
2002/12/27
2002/12/26
2002/12/25
2002/12/24
2002/12/23
2002/12/22
2002/12/20
2002/12/19
2002/12/16
2002/12/13
2002/12/11
2002/12/10
2002/12/09
2002/12/05
2002/12/01
2002/11/29
2002/11/28
2002/11/27
2002/11/24
2002/11/23
2002/11/22
2002/11/21
2002/11/17
2002/11/15
2002/11/13
2002/11/10
2002/11/09

Date Of Order: ▼	Order Number: ▼	re ne: ▼	Product Number#: ▼	Product Number: ▼	Quantity: ▼
2000/12/31	68461	b Sales	1030	1030	5
	93820	dio Expert	1036	1036	2,019
	93900	art	1034	1034	1,122
	94200	City	1036	1036	1,984
	94490	art	1036	1036	1,918
2001/01/01	48724	b Sales	1034	1034	5
	68651	VideoTown	1034	1034	582
	74310	City	1034	1034	1,123
2001/01/02	68606	City	1030	1030	905
	93940	b Sales	1036	1036	14
	94000	nsumer Merchandise	1034	1034	1,869
	94030	City	1034	1034	417
	94270	b Sales	1034	1034	10
	94300	art	1036	1036	1,104
	94340	City	1034	1034	1,297
	94380	dio Expert	1034	1034	1,165
	94410	JAN, 2001 Web Sales	1034	1034	8
	94430	JAN, 2001 Web Sales	1036	1036	10
	94460	JAN, 2001 Web Sales	1034	1034	11
	94520	JAN, 2001 TV City	1034	1034	945

5595 of 5595 records

Creating Pop-Up Controls

For a DOCUMENT object, you can use pop-up controls to:

❏ Create modern looking controls that will run seamlessly on any device.

❏ Create controls that look the same, but offer different functionality based on single or multiple value selection.

To create pop-up controls, you can:

❏ Set the Create popup controls property on the Properties panel for the DOCUMENT object.

❏ Use the Popup style right-click shortcut option, which allows a control to be an original or a pop-up style control. (Disabled for Edit Box, Text Area, Calendar, and Slider).

❏ Use the New Parameters dialog box. This is available as:

❏ An item in the Parameters grid as a check box (Popup).

❏ A check box to select all parameters in the grid to be a Popup Control (Create popup controls).

The Create popup controls property on the Properties panel is shown in the following image. Possible values are Yes and No. No is the default value.

Properties	▼ ⊣ ✕
🗋 DOCUMENT	⌄

⊟ **Document**
  ⊟ **Page properties**

Theme	Neutral
Ignore filters	_FOC_NULL
Use appl.css	No

  ⊟ **Restorable Parameter Sets**

Auto Restore Parameter Values	
Parameter Page Name	
Maximum number of Saved sets	25

  ⊟ **Miscellaneous**

Charset	UTF-8
Page Title	HtmlPage
Loading screen	
Check reporting servers access	Yes
Html alias	Custom
Accessible	
Map type	Google map
Global search/paging control	
Autoplay control	
Parameters tab: auto arrange	
Dynamic Styling	
Mobile	No
Responsive design	No
Global responsive margin	
New container margin	4
Create popup controls	No
	Yes
	No

⊟ **Body**
  ⊟ **Core attributes**

Unique Identifier	
Class identifier (CSS)	IBI_PageBg
Title	HtmlPage

The Popup style right-click shortcut option for a drop-down control is shown in the following image. (Disabled for Edit Box, Text Area, Calendar, and Slider).
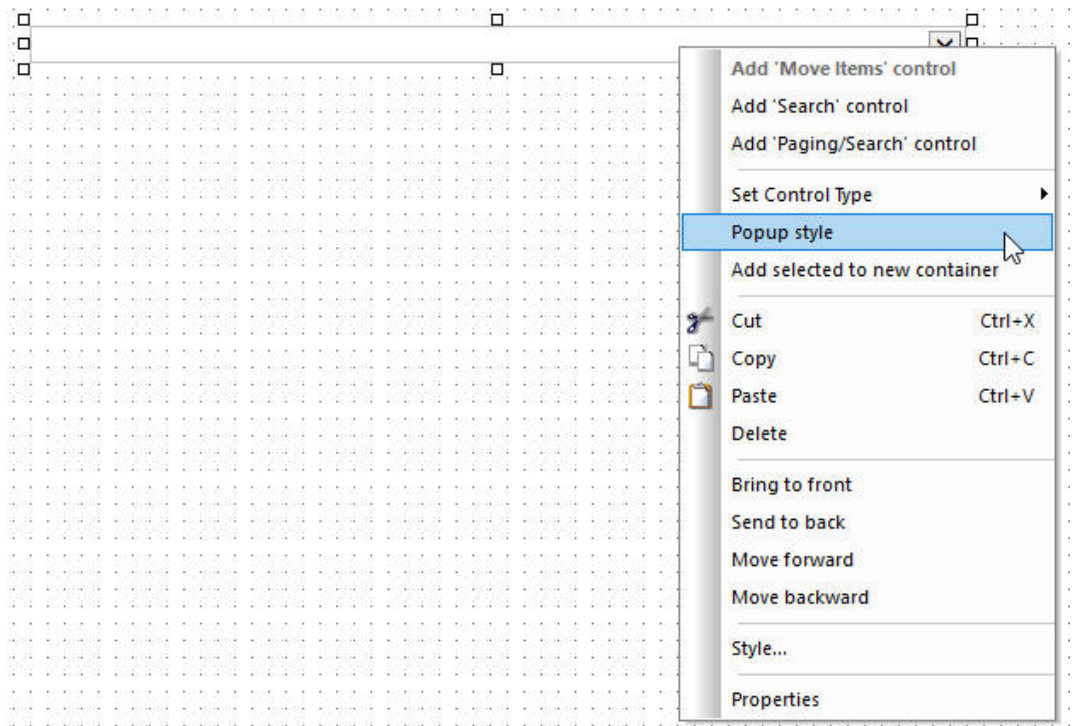
The New Parameters dialog box is shown in the following image. This option is available in the Parameters grid as a check box (Popup) and also as a check box to select all parameters in the grid to be a Popup Control (Create popup controls).

The following image shows an example of a pop-up control.
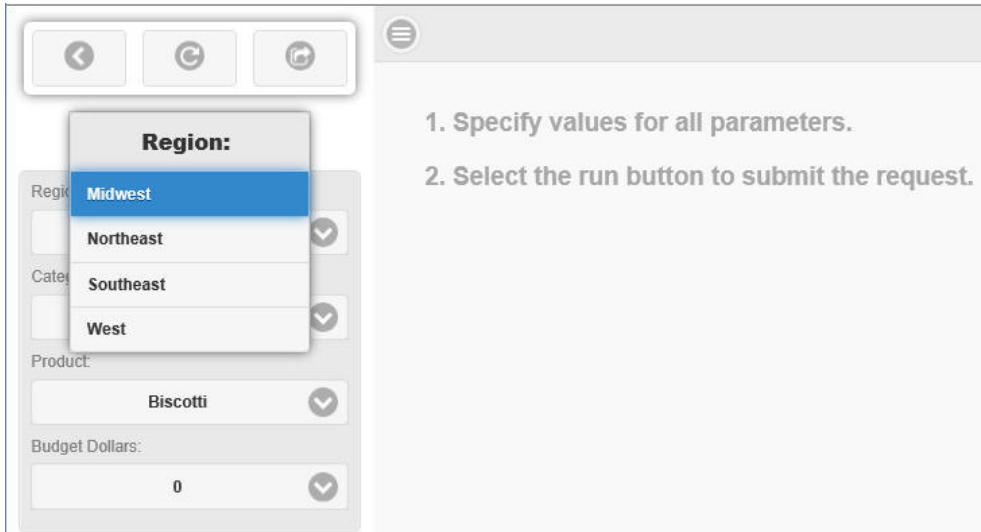
Loading a Saved Set of Parameters

You can add the ability to save parameters to any application. The parameters are saved in sets. For example, you have a page that contains three parameter prompts, and you want to let your users resolve their favorite choices in one action, and/or have a default.

The Saved Set of Parameters facility lets you:

❏ Load a default saved set of parameters on load of the HTML page.

❏ Create new saved sets of parameters without creating physical HTML files.

❏ Load different saved sets of parameters at run time.

❏ Manage the saved sets of parameters at run time.

At design time, when creating an HTML page in the Content area, the following properties are available:

❏ **Auto Restore Parameter Values.** Contains values of Not Set (that is, removes the attribute, as opposed to giving it a value), Yes, and No. Yes loads the latest saved set of parameters on load of the HTML page.

❏ **Parameter Page Name.** Creates a folder name under the My Content folder of the running user. It defaults to the HTML page name, and cannot be blank. You can type a name, or use the default name.

Note: If the page name changes, the default will change. It is recommended that you use this setting.

❏ **Maximum number of Saved sets.** Specifies the maximum number of saved sets of parameters to save per user. The default is 25. You can change this value. The maximum value that can be entered is 999, and it cannot be a value of 0 or less.

The Restorable Parameter Sets category on the Properties panel is shown in the following image.
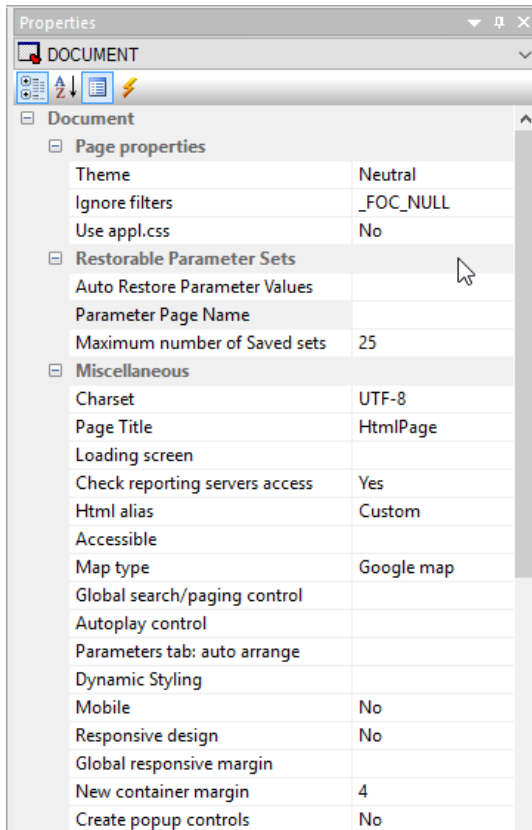
Note: If you want to associate a trigger to invoke a JavaScript control that manages the saved sets of parameters, you can use the Saved sets of Parameters Action type in the Tasks and Animations panel.

Procedure: **How to Create a Saved Set of Parameters**

1. Create a new HTML page.

2. Open the Properties panel and pin it.

3. Add a report to the HTML page, right-click the report, and select *Import Existing Report* from the shortcut menu.

4. Select an existing report.

5. Click *OK* on the New Parameters dialog box.

6. Add a button to the HTML page.

7. On the Properties panel, set the restorable parameters, as follows:

   a. Auto Restore Parameters Values to *Yes*.

   b. Parameter Page Name to *Test*.

   c. Maximum number of Saved sets to *10*.

   The properties panel is shown in the following image.
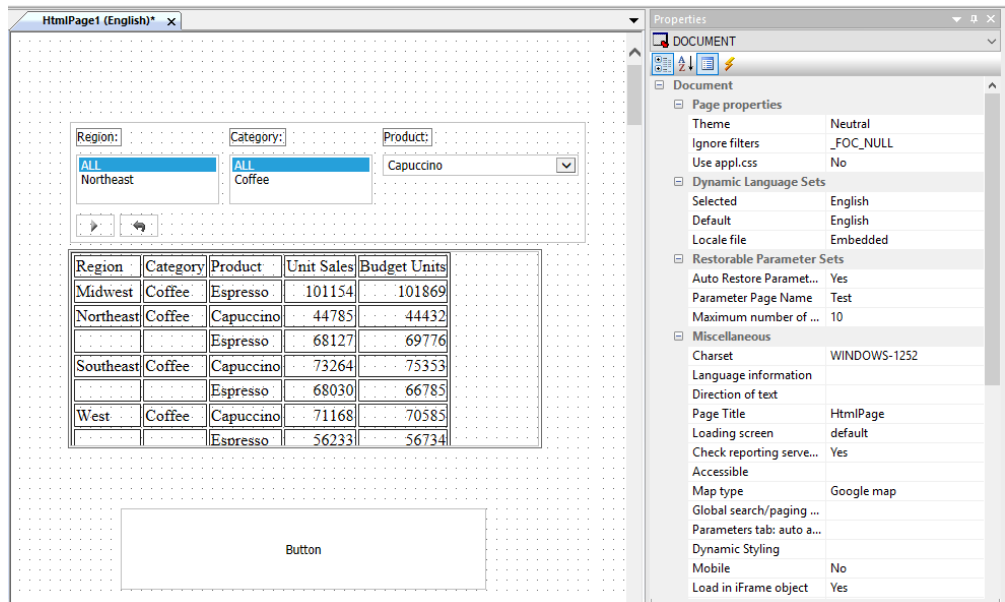
8. Open the Tasks & Animations panel and add a new task.

   a. Set Trigger Type to *Click*.

   b. Set Trigger Identifier to *button1*.

   c. From the Requests/Actions drop-down menu, select *Saved sets of Parameters*.

The Tasks & Animations panel is shown in the following image.
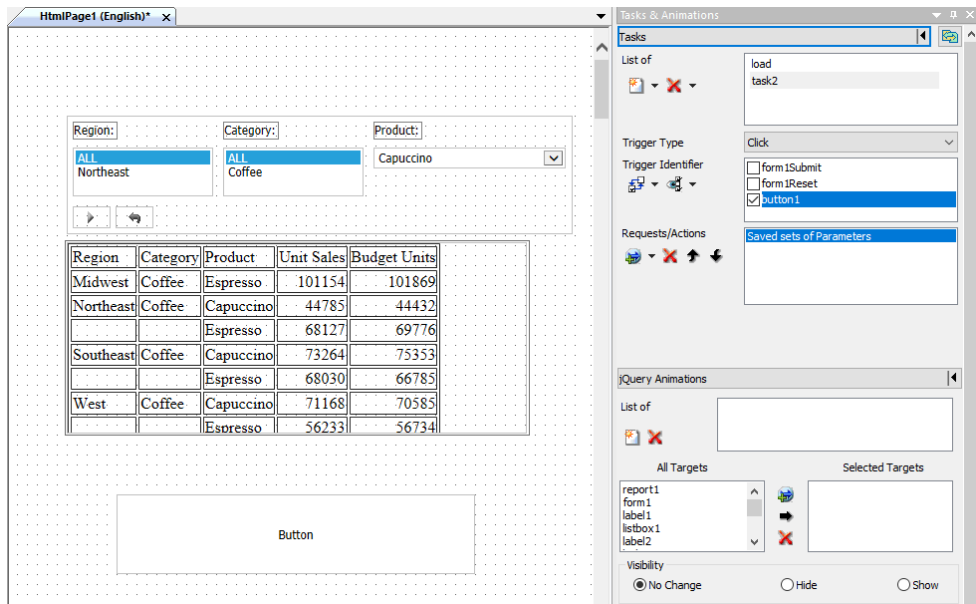
9. Save and run the report.

10. Click the button.

11. Add eight new Save Parameter settings, as shown in the following image.
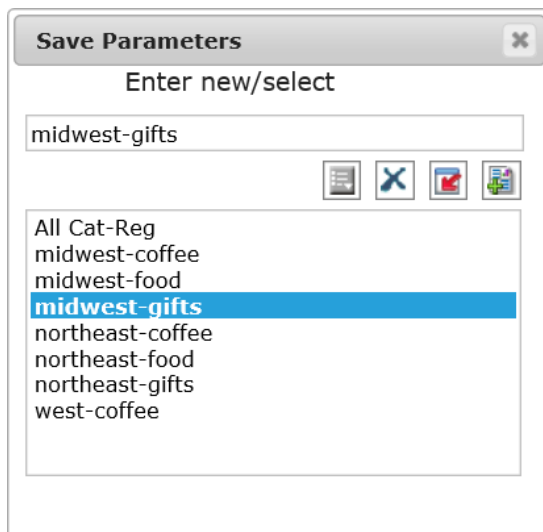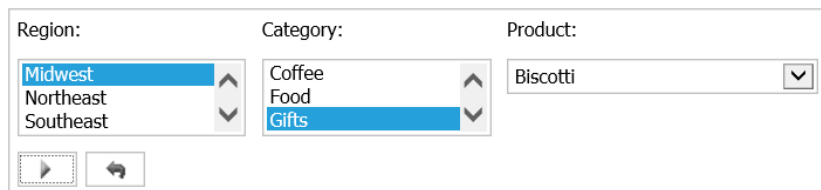
User Experience With the Save Parameters Dialog Box

❏ Any saved sets of parameters display in the list box section of the Save Parameters dialog box. The user can select one and click the *Load* button on the toolbar to load those values into the controls.

❏ Above the list box is an edit box where the user can type the name for the new saved sets of parameters to save, or existing saved sets of parameters to retrieve. Between the edit box and the list box is a toolbar with Save, Delete, Load, and Set buttons. The Set button is the default.

❏ If the user saves a new saved set of parameters, and the name already exists, a message displays informing the user that the named set already exists. The user can click *Yes* to overwrite the file with the new values.

❏ The user can select a saved parameter file in the list and click the *Set as default* button. This sets the default file to load when the page is invoked for the first time.

12. Select *midwest-gifts* and click *Set as default*.

13. Close the report and rerun it. Notice the default settings are Midwest and Gifts, as shown in the following image.

14. Change the default to northeast-gifts.

15. Close the report and rerun it. Notice the default settings are Northeast and Gifts.

16. Close the report.

Associating a Label With a Control

You can associate a label with a control in an HTML page, using one of the following methods:

❏ The HtmlFor property in the Properties panel. The HtmlFor property is a drop-down list, which contains a list of the controls in the HTML canvas.

❏ A *Bind label to* option on the shortcut menu, when you select the label and the associated control together.

Procedure: **How to Associate a Label With a Control Using the Bind label to Option**

1. Create an HTML page with a Label component and three controls (for example, drop down, calendar, and slider).

2. Select both the label and the control to which you want to associate the label.

3. Right-click the canvas and select *Bind label to*, as shown in the following image.
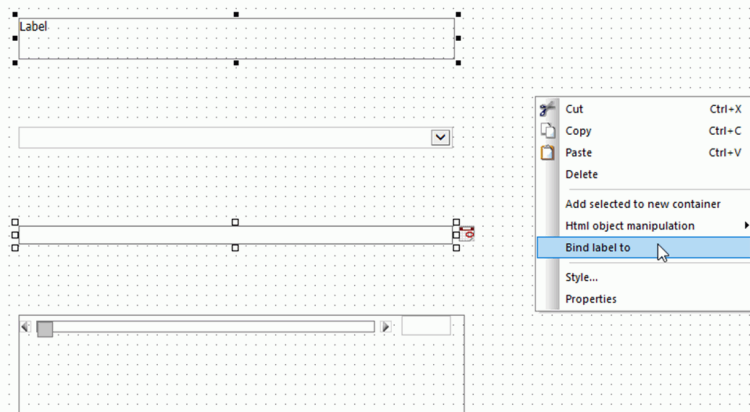
The label, label1, is now associated with the calendar1 control.

Procedure: How to Associate a Label With a Control Using the Properties Panel

1. Create an HTML page with a Label component and three controls (for example, drop down, calendar, and slider), as shown in the following image.
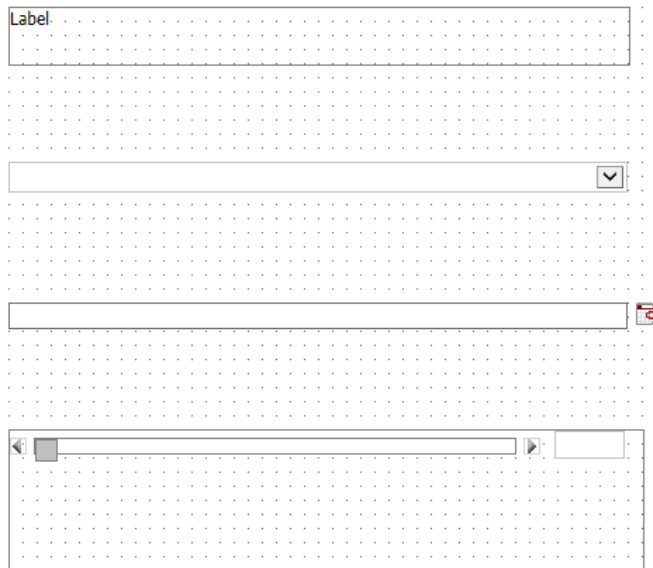
2. In the Properties panel for the label, from the HtmlFor property drop-down list, select the control to which you want to associate the label, as shown in the following image.
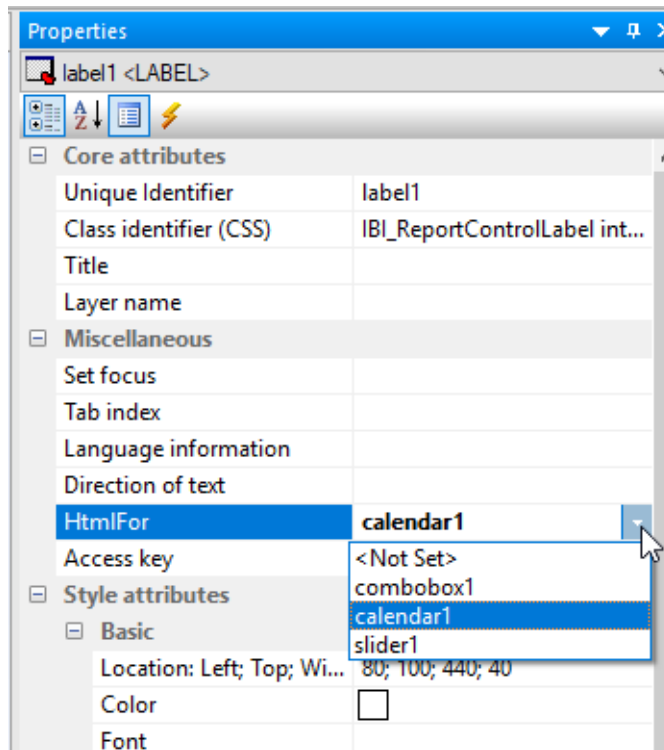
The label, label1, is now associated with the calendar1 control.

Server Enhancements

This section describes new server features on the Web Console.

The server provides a wide range of capabilities and tools for adapter configuration, metadata creation, application and path management, security control, communications configuration, and for monitoring, tuning, and troubleshooting server performance. Authorized users can perform most server administration tasks from a graphical Web Console.

The server supports Web Query reporting functions, extraction, load and transformation functions, and analysis and data access control functions.

Applications

This section provides detailed descriptions of new features for server applications.

Downloading Files From the Server

The right-click shortcut menu for a file in an application on the Web Console and Data
Management Console now has a Download option, as shown in the following image.
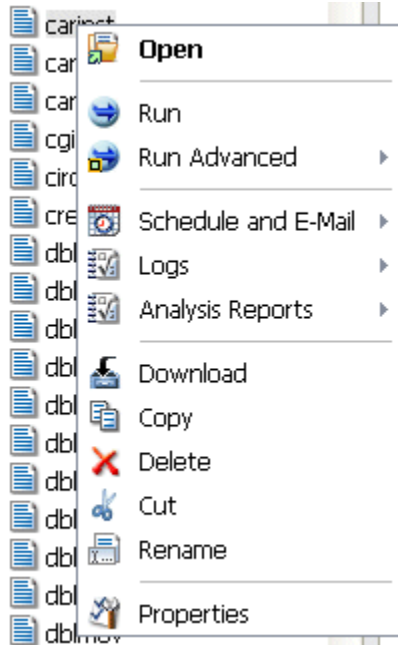
When this option is selected, the file is transferred to the Downloads folder of the user. On
Windows, this folder is, by default, the following directory:

`C:\users\`*`username`*`\Downloads`

If you right-click a synonym, the shortcut menu gives you a choice of Master File or Access File.

Renaming Applications and Application Files

Rename has been added as a right-click option for files and folders in the Web Console and
Data Management Console.

Selecting *Rename* from the shortcut menu opens a dialog box in which you can enter a new name and click *OK*, as shown in the following image.
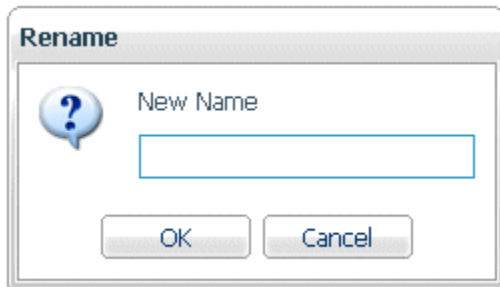
You cannot rename mapped applications (including SQL Repository apps), foccache, myhome, homeapps, or baseapp.

Note: If you rename an application that is directly under approot, it will no longer be on the application path. You can manually add the renamed application to APP PATH, if you want it to be on the search path of the server.

Configuration and Monitoring

This section provides detailed descriptions of new configuration and monitoring features.

Forcing a Scheduler Scan

A scheduler scan is initiated on server startup, if sched_autostart=y. In addition, the scheduler is updated for a procedure if you edit schedule information for a procedure or DataMigrator job using *Manage Schedule and Email* from the Web Console or DMC. At other times, you can force scanning of scheduler and deferred jobs in the following ways.

❏ On the Applications page, click the *Schedule/E-Mail* button on the ribbon and select *Force Scheduler Scan*.

❏ On the Workspace page, open the Special Services and Listeners folder, right-click Scheduler, and select *Force Scheduler Scan*.

❏ Issue the following command in the server command window.

```
edastart –forcescan
```

Adding Cc and Bcc to Email Actions

On the Schedule and E-Mail, the Customizing Event Routing, and Customizing New Event Routing pages of the Web Console and Data Management Console, you can add carbon copy (Cc) and blind carbon copy (Bcc) email recipients, as shown in the following image.

You can enter lists of email addresses by separating the addresses with semicolons (;).

Metadata

This section provides detailed descriptions of new server metadata features.

Business View Plus (BV+) Candidate for Release

Business View Plus (BV+) combines the power and capabilities of Business View (BV) and Dimension View (DV) into one feature that allows a customized view of the data source and enables the use of joins, measures, hierarchies, attributes, expressions, and filters. This allows for robust report, chart, document, and visualization development using a customized logical view of a data source.

A traditional Business View offered users a customized logical view of a data source by grouping related items into folders that reflect business logic for an application, rather than the physical position of items in the data source. However, the fields in these folders did not have any indication of their roles in a request.

A traditional Dimension View, on the other hand, categorized fields on the basis of their roles in a request. Measures were placed in measure groups, hierarchies were organized within dimensions, levels were organized within hierarchies, and attributes were organized within levels. Then, when a field was double-clicked in InfoAssist+ or dragged onto the report or chart canvas in Developer Workbench, it was added as a sort field or aggregation field depending on its placement in the Dimension View structure. Dimension Views, however, offered no ability to create a custom logical view of the data source.

BV+ combines Business Views and Dimension Views by enabling you to group fields into folders and, for each field, assign a role that indicates its role in a request. The syntax is clear and simple, and it provides all of the functions of both traditional Business Views and Dimension Views. In addition, BV+ gives you total flexibility in creating folders anywhere in the structure, and in reusing fields in multiple folders.

For example, if you assign the role DIMENSION to a field, it will automatically be added to the By field container for reports and the horizontal axis for charts if you double-click or drag the field onto the report or chart canvas. If you assign the role Drill Level to successive fields in a folder and turn AUTODRILL on, automatic drilldowns will be generated from the top level to the bottom level on the generated output.

You can create or edit a synonym to use BV+ in the Reporting Server Web Console, the Data Management Console, or the Developer Workbench Metadata Canvas.

Introduction to BV Namespace Modes

When you upload a file or create or open a synonym in the Reporting Server Web Console or Data Management Console, the synonym opens in one of two modes for creating a BV+ structure, BV_NAMESPACE=OFF mode or BV_NAMESPACE=ON mode. The mode in which the synonym opens determines the types of BV+ structures you can add to your synonym. It also controls the type of field name qualifiers that will be used, after the synonym is saved, when you create a request using the Web Query tools.

You can set your Web Console preferences to open Data Assist, the wizards, the DMC, and the Developer Workbench Metadata Canvas in your preferred BV Namespace mode by going to the *Workspace* tab, clicking *FOCUS Sets and Info*, clicking *Settings for Web Console Preferences*, and setting the parameter AUTO_BV_NAMESPACE to OFF (the default if you install a new server) or ON. If the synonym already contains a DV or BV structure, the presence of this existing structure will override your setting with BV_NAMESPACE=OFF or BV_NAMESPACE=ON, respectively.

If you create a new synonym, or open an existing synonym that has no DV or BV, it will respect the setting you set in the Web Console. When you upload a file, the synonym has no existing DV or BV structure, so it respects the mode you set in the Web Console.

Reference: **BV_NAMESPACE=OFF Mode**

BV_NAMESPACE=OFF mode uses physical segment names to qualify field references in reports. If you open an existing synonym that has a DV, it will open in this mode, regardless of the setting you configured. In this mode, you can only add nodes that conform to the DV structure. That is, you can add new measure groups and dimensions under the existing measure group and dimension structure.

The following describes the structures and actions available in new or existing synonyms in BV_NAMESPACE=OFF mode:

❑ **Creating a new cluster synonym or opening an existing synonym that has no BV or DV.** If the synonym has no logical view defined, It opens with three default nodes in the Business View pane, Filters and Variables, Measure Groups, and Dimensions, as shown in the following image.
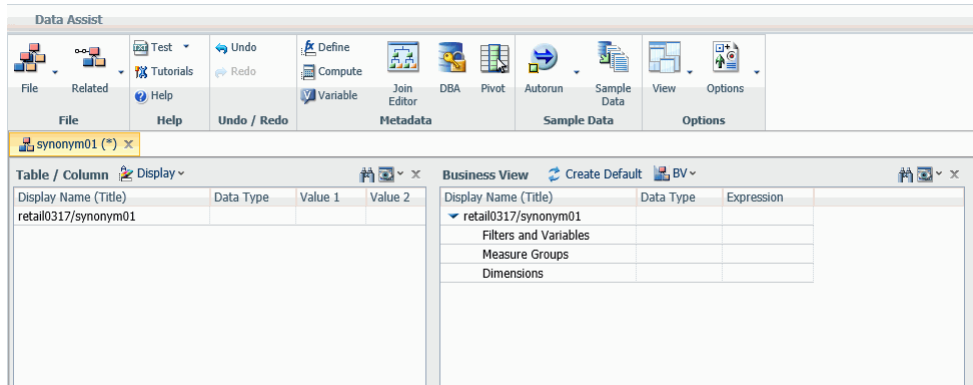
These nodes are based on a DV structure, and any edits you make to the synonym in this pane using BV_NAMESPACE=OFF mode must adhere to this structure. The right-click menu options provide only the structures available for a DV. You can insert a new measure group under the Measure Group node or a new dimension folder under the Dimensions node, but you cannot create a new node in the synonym. In a measure group folder, you can only place measures. In a dimensions folder, you can only place dimensions. Under a dimension, you can only add hierarchies, and under a hierarchy field, you can only add attributes.

❑ **Opening an existing synonym with a DV defined.** It opens showing the DV organization and icons in the Business View pane. The synonym syntax is converted to use BV+ folders with the DV structure. You cannot create new folders, you are limited to the structure already defined in the Business View pane. The right-click menu options provide only the structures available for a DV, as shown in the following image that shows the right-click options for the Measure Group folder.
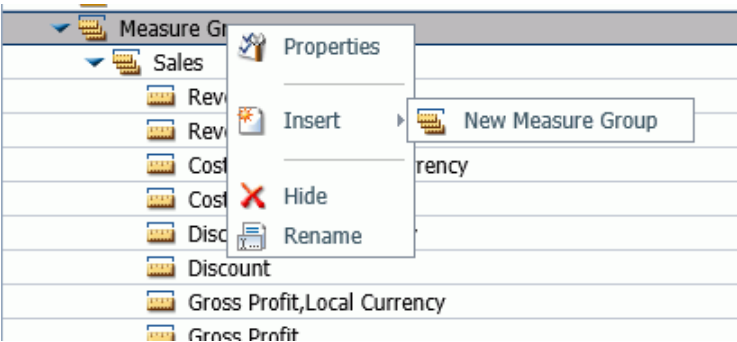
Reference: BV_NAMESPACE=ON Mode

BV_NAMESPACE=ON mode uses logical folder names to qualify field references in reports. If you open an existing synonym that has a BV, it will open in this mode, regardless of the setting you configured. In this mode, you can create your own logical view of the synonym. You are free to add new folders and assign DV roles to fields and folders.

The following describes the structures and actions available in new or existing synonyms in BV_NAMESPACE=ON mode:

❏ **Creating a new cluster synonym or opening an existing synonym with no DV or BV.** No nodes are pre-configured, as shown in the following image.

The right-click menu options provide all BV+ options.

❑ **Opening an existing synonym with a BV defined.** It opens in BV_NAMESPACE=ON mode. It will open showing the Business View structure defined within it. The right-click menu options provide BV+ options, as shown in the following image.
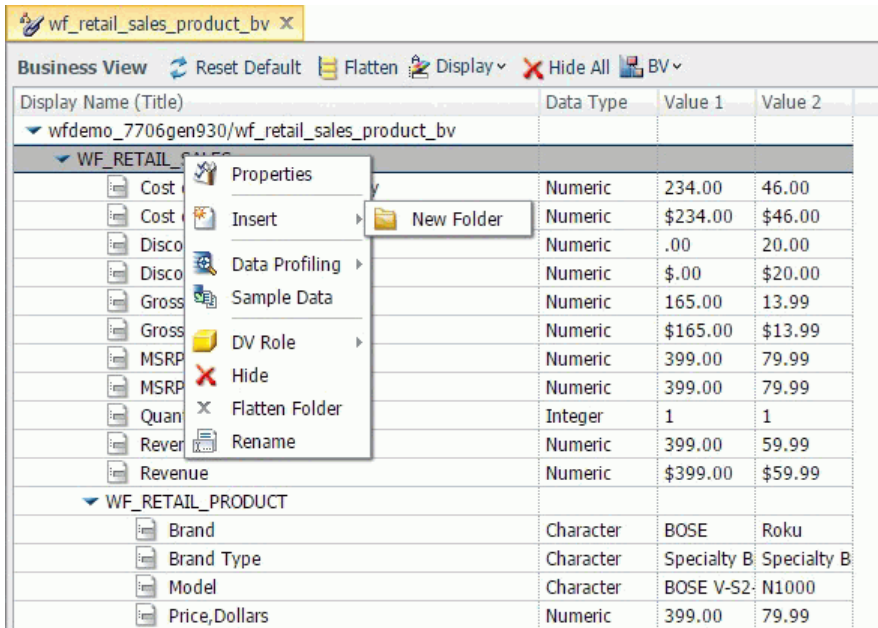
Reference: ## Usage Notes for BV_NAMESPACE Modes

❑ In BV_NAMESPACE=ON or OFF mode, the folder structure must include all of the fields referenced in the request, as fields not included in folders will not be accessible.

❑ In BV_NAMESPACE=ON mode, moving a field from one folder to another may also make the field inaccessible, as the request will not have the correct folder qualifier for the field.

❑ Synonyms in BV_NAMESPACE=OFF mode have the attribute BV_NAMESPACE=OFF on the file declaration.

❑ You can change BV Namespace modes in the Reporting Server Web Console by clicking the *BV* menu at the top of the Business View pane and selecting *BV_NAMESPACE=ON* or *BV_NAMESPACE=OFF*.

❑ If you generate a request using the Web Query tools in one BV_NAMESPACE mode, it may not run if the synonym is converted to the other BV_NAMESPACE mode, as the field qualifiers will be incorrect for the new mode.

❏ If you change the BV_NAMESPACE mode, a popup window opens to warn you of the potential effects on existing requests.

❏ When you begin the cycle of developing reports and metadata in parallel, use BV_NAMESPACE=OFF mode to make sure that procedures developed earlier in the cycle will continue to run as changes are made to the metadata.

❏ Any changes to metadata should be thoroughly tested before use in production environments.

Assigning DV Roles

In BV+, you define folders, which function as segments to provide a view of the synonym and to define the accessible fields and their relationships. Folder relationships are the same as segment relationships, with parent folders, child folders, and sibling folders.

While you have total flexibility defining a structure using any fields from your data source, when you issue a report request against the synonym, the retrieval path for the data must conform to any constraints imposed by your DBMS entity diagrams and by the rules of Web Query retrieval.

Only the folders will be displayed in the Web Query tools, not the real segments, and only the fields within the folder structure will be accessible for reporting.

You can assign a DV role to a folder or field by right-clicking the folder or field and selecting a DV role. The following image shows the right-click options for a folder.
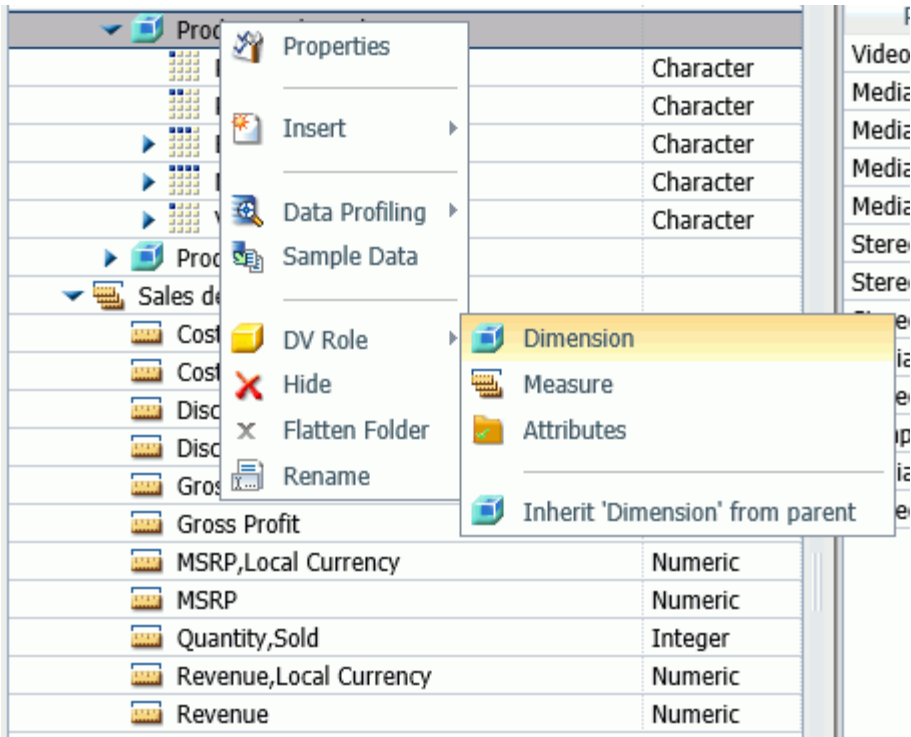
You can explicitly assign a DV role to a folder or field, or have it automatically inherit its role from its parent. If you explicitly assign a DV role, that role moves with the object if you drag it to another location within the BV+ structure. If you do not explicitly assign a DV role, the role changes as you move the object under a new parent, except if you drop it onto a field with the Drill Level role. If dropped onto a Drill Level field, the moved field inherits the Drill Level role.

The following DV roles can be assigned.

❏ **Dimension.** A dimension field, when double-clicked or dragged onto the report or chart canvas in the Web Query tools, will automatically be added to the request as a vertical (BY) sort field.

A folder can be assigned the role Dimension.

A field can be assigned the role Dimension (Standalone) or Dimension (Drill Level). When it is assigned the role Dimension (Drill Level), it will become part of a hierarchy where the levels depend on the order of the fields in the folder. Then, when AUTODRILL is turned on, automatic drill-downs will be created on the report or chart output. The following image shows the choices for DV role when you right-click a dimension field.
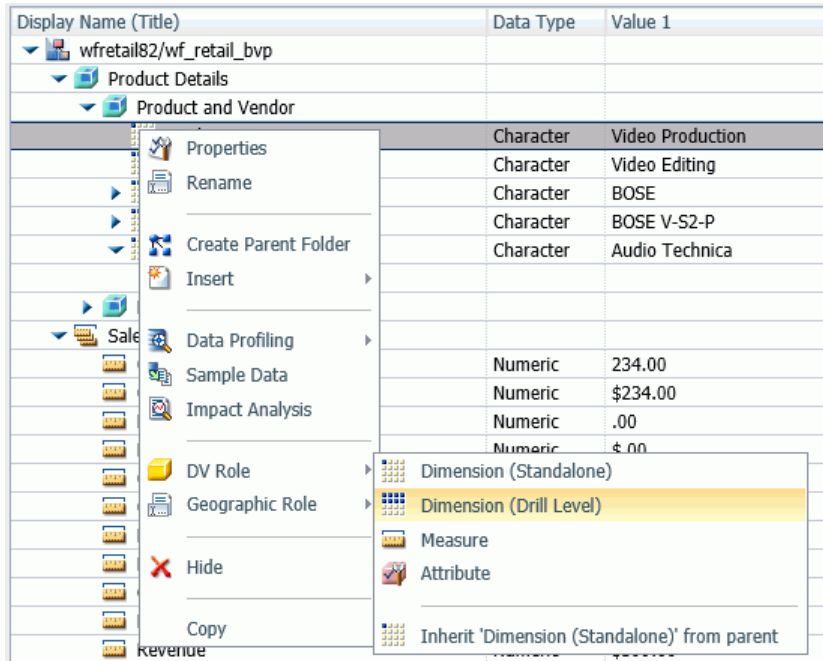
For a folder assigned the DV role Dimension or a field assigned the DV role Dimension (Standalone), the following attribute is added to the folder or field declaration in the synonym.

`DV_ROLE=DIMENSION`

For a field assigned the DV role Dimension (Drill Level), the following attribute is added to the field declaration in the synonym.

`DV_ROLE=LEVEL`

A folder can contain only one drill level hierarchy. However, you can use the same fields in multiple hierarchies by placing each hierarchy in a separate folder. A folder with a drill level hierarchy is not limited to just the hierarchy. It can contain other fields with different DV_ROLEs.

❏ **Measure.** A measure field, when double-clicked or dragged onto the report or chart canvas in the Web Query tools, will automatically be added to the request as an aggregated value (SUM), if it is numeric. If it is alphanumeric, it will be added as a vertical (BY) sort field. A folder or field can be assigned the role Measure.

For a folder or field assigned the DV role Measure, the following attribute is added to the folder or field declaration in the synonym.

```
DV_ROLE=MEASURE
```

❏ **Attribute.** An attribute field, when double-clicked or dragged onto the report or chart canvas in the Web Query tools, will automatically be added to the request as an aggregated value (SUM), if it is numeric, or as a vertical sort field (BY), if it is alphanumeric.

For a folder or field assigned the DV role Attribute, the following attribute is added to the folder or field declaration in the synonym.

```
DV_ROLE=ATTRIBUTE
```

❏ **Folder.** A folder is a virtual segment in a BV+. It can be assigned the roles Dimension, Measure, or Attribute.

Note: When a folder is inserted as a child of a field, the attribute PARENT_FIELD describes this relationship. By default, such a folder and its fields will be assumed to have the Attribute role.

❏ **None.** If no role is assigned, the field or folder will inherit its role from its parent. If a role has been assigned, you can remove it by selecting the option to inherit its role from its parent, as shown in the following image.
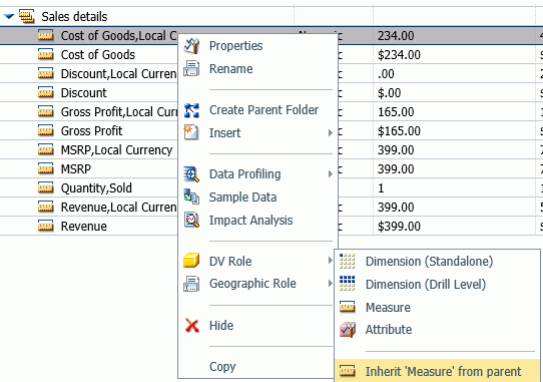
Example: Sample BV+ Declarations

The following declarations show sample BV+ folder and field definitions. Note that the declaration for each field in a BV+ folder specifies the real segment it actually belongs to.

Sample Dimension Folder Declaration

The DV_ROLE for the PRODUCT_CATEGORY folder is DIMENSION.

```
 FOLDER=PRODUCT_CATEGORY, PARENT=FOLDER1,
    DV_ROLE=DIMENSION,
    DESCRIPTION='Product and Vendor', $
```

Sample Attributes Folder Declared as a Child of a Field

The ATTRIBUTES1 folder has the DV_ROLE ATTRIBUTE. Its parent folder is PRODUCT_CATEGORY, and its parent field is MODEL.

```
FOLDER=ATTRIBUTES1, PARENT=PRODUCT_CATEGORY, PARENT_FIELD=MODEL,
    DV_ROLE=ATTRIBUTE,
    DESCRIPTION='Model Details', $
```

Sample BV+ Level Hierarchy and Standalone Dimension

The PRODUCT_CATEGORY folder has a hierarchy defined consisting of the PRODUCT_CATEGORY, PRODUCT_SUBCATEG, BRAND, and MODEL fields. The field VENDOR_NAME is a standalone dimension field.

```
 FOLDER=PRODUCT_CATEGORY, PARENT=FOLDER1,
    DV_ROLE=DIMENSION,
    DESCRIPTION='Product and Vendor', $
    FIELDNAME=PRODUCT_CATEGORY, ALIAS=PRODUCT_CATEGORY,
      BELONGS_TO_SEGMENT=WF_RETAIL_PRODUCT,
      DESCRIPTION='Product Category',
      DV_ROLE=LEVEL,  $
    FIELDNAME=PRODUCT_SUBCATEG, ALIAS=PRODUCT_SUBCATEG,
      BELONGS_TO_SEGMENT=WF_RETAIL_PRODUCT,
      DESCRIPTION='Product Subcategory',
      DV_ROLE=LEVEL,  $
    FIELDNAME=BRAND, ALIAS=BRAND,
      BELONGS_TO_SEGMENT=WF_RETAIL_PRODUCT,
      DESCRIPTION='Product Brand',
      DV_ROLE=LEVEL,  $
    FIELDNAME=MODEL, ALIAS=MODEL,
      BELONGS_TO_SEGMENT=WF_RETAIL_PRODUCT,
      DESCRIPTION='Product Model',
      DV_ROLE=LEVEL,  $
    FIELDNAME=VENDOR_NAME, ALIAS=VENDOR_NAME,
      BELONGS_TO_SEGMENT=WF_RETAIL_VENDOR,
      DESCRIPTION='Vendor Name',
      DV_ROLE=DIMENSION,  $
```

Sample Measure Field

The PRODUCT_COST field has been assigned the DV_ROLE MEASURE.

```
FIELDNAME=PRODUCT_COST, ALIAS=PRODUCT_COST,
BELONGS_TO_SEGMENT=WF_RETAIL_PRODUCT,
      DESCRIPTION='Product Cost',
      DV_ROLE=MEASURE,   $
```

Data Assist

Data Assist is a unified environment for managing and enhancing synonyms. It is available on the Web Query Reporting Server Web Console and is incorporated in the Upload Wizard.

Data Assist provides an extensive user interface using a ribbon and right-click sensitive paradigm for enhancing synonyms. You see the results of all changes in the tabbed output pane.

The following are some of the features you might want to add to the synonym to enhance your data access and reporting capabilities.

❑ Add virtual columns (DEFINE fields) and columns for aggregated values (COMPUTE fields).

❑ Apply functions to fields.

❑ Grouping, phonetic grouping, and binning field values.

❑ Add filters to specify data selection criteria.

❑ Change the format of fields (for example, the size of an alphanumeric field or the format of a date field).

❑ Create a cluster join view by linking available synonyms to create a multi-segment (multi-table) file for reporting.

❑ Create Business Views of the metadata in order to limit the fields available to any retrieval request that references the Business View and to group fields together based on their roles in an application.

❑ Pivot data, for example, pivot repeating columns or groups of repeating columns into rows.

❑ Define hierarchies for automatic drilldowns.

❑ Apply security rules for fields and values.

Web Console

This section describes new Web Console features.

Setting a Web Session Timeout Warning

The server can post a warning about web session expiration before the session actually expires.

To set the number of minutes prior to session expiration that the warning displays:

1. On the Workspace tab, expand the *Special Services and Listeners* folder.

2. Right-click TCP/HTTP and select *Properties of HTTP* from the shortcut menu.

   The Listener Configuration page opens.

3. Expand the *Sessions Control* group, as shown in the following image.
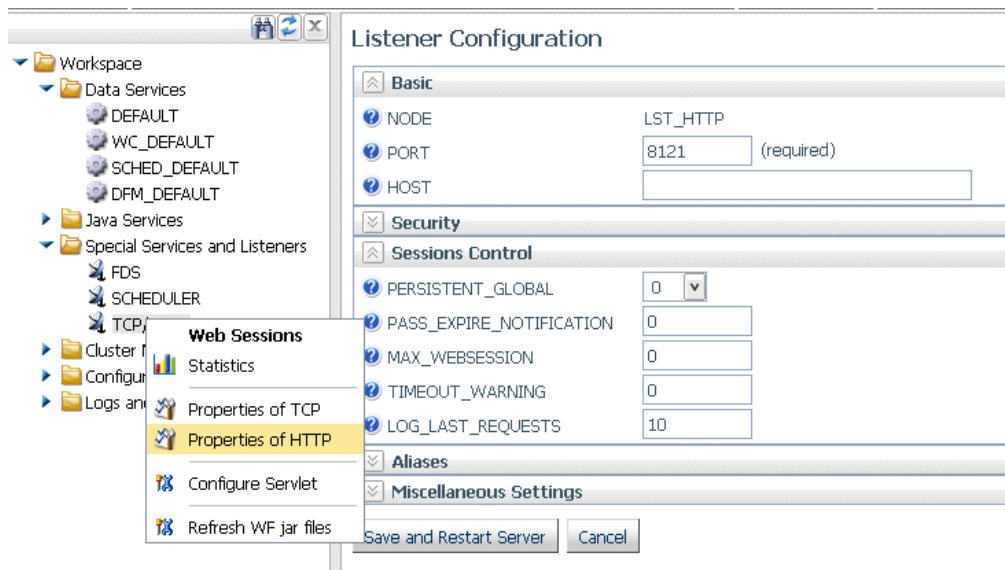
4. Enter a number of minutes, *n*, in the TIMEOUT_WARNING text box.

   By default, the value is zero (0), meaning that no warning will be displayed.

5. Click *Save and Restart Server*.

   The TIMEOUT_WARNING=*n* attribute is added to the odin.cfg file.

Responding to the warning message resets the session expiration timer.

Using the Web Console Binocular Search

The binocular search is available on all web Console pages that display a list of files. For example, the binocular search is available on the Synonym Candidates pages, the Manage Files page, and the Application Path Configuration page.

Clicking the binoculars icon opens a Find box where you can enter characters, as shown in the following image.
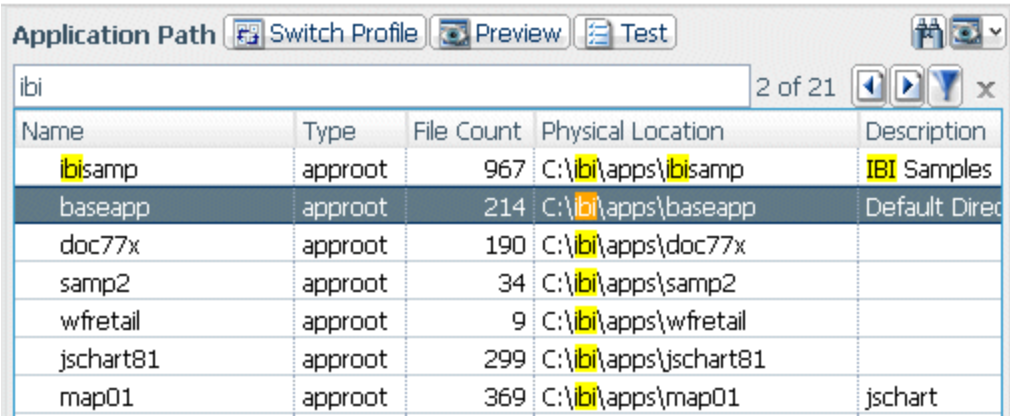
As you click on each row with a match, its number within the total number of matches is displayed in the form *n* of *m*.

All matching characters on the list will be highlighted. You can move from one matching row to the next or prior match using the arrow keys.

You can filter the list to display only the rows with matching characters by clicking the Filter icon. Clicking the Filter icon again restores the list.

Web Console Text Editor Enhancements

The Web Console Text Editor that is used to edit procedures, files, and server configuration files was enhanced with line numbers and an improved search facility. A search for characters in the *Find text* box opens a window with the list of lines matching the pattern, as shown in the following image.
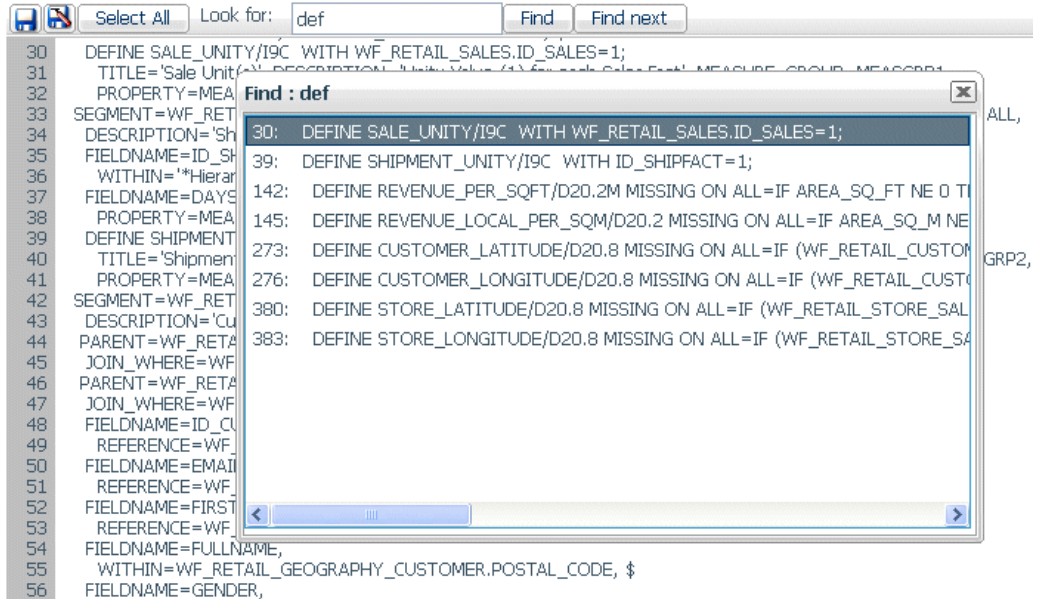
As you click each line in the Find window, the Web Console text editor scrolls to display that line.

When you edit configuration files from the Workspace tab, the editor toolbar has new actions to:

❏ Refresh from disk.

❏ Reset to the server default settings.

Displaying the Connected User ID on the Web Console

When a server is running with security enabled, the upper right corner of the Web Console browser window displays the security provider (for two-part names) and the user ID of the connected user.

Adapter Enhancements

This section describes new adapter features. All adapters can be used for Web Query Reporting and SQL requests, and as sources for DataMigrator flows.

The server supports adapters designed to access a wide variety of data sources. Using the graphical Web Console, you can configure these adapters and create the metadata you need to seamlessly access the corresponding type of data.

All Adapters

This section provides descriptions of new features for all adapters.

Changing Common Adapter Settings

The Web Console Adapters page has a new button in the Troubleshooting group labeled *Change common adapter settings* that allows you to customize data type mappings and other miscellaneous settings that are common to all adapters.

Adapter-specific settings are customizable as well, and can be accessed by right-clicking a configured adapter folder and selecting *Change Settings* from the shortcut menu.

SQL Adapters

This section provides detailed descriptions of new features for SQL adapters.

All SQL Adapters

This section provides detailed descriptions of new features for all SQL adapters.

Optimization of Simplified Numeric Functions

The following new simplified numeric functions are optimized by the SQL adapters:

❏ **CEILING.** Returns the smallest integer value greater than or equal to a value.

❏ **EXPONENT.** Raises the constant e to a power.

❏ **FLOOR.** Returns the largest integer less than or equal to a value.

❏ **MOD.** Calculates the remainder from a division.

❏ **POWER.** Raises a value to a power.

Optimization of Simplified Functions REPLACE, TOKEN, and POSITION

The following simplified character functions are optimized by the SQL adapters.

❏ **REPLACE.** Replaces all instances of a string.

❏ **TOKEN.** Extracts a token (substring) from a string.

❏ **POSITION.** Returns the first position of a substring.

Enhancement to the Optimization of LIKE for Fixed Length Fields

In prior releases, the LIKE operator was not optimized for those RDBMS engines (such as Db2) that count trailing blanks when comparing columns because the Web Query LIKE operator is not sensitive to trailing blanks. Now, LIKE is optimized by removing trailing blanks in the SQL passed to those RDBMS engines using the RTRIM function. (RTRIM(*column*) LIKE *mask*).

LIKE optimization works as long as the mask does not end with an underscore character (_). Optimization does work when the mask starts or ends with a percent sign (%).

Example: **Optimizing the LIKE Operator for Fixed Length Fields**

The following request creates a fixed-length field named CATEGORY and uses it in a WHERE test with the LIKE operator.

```
SET TRACEUSER=ON
SET TRACEON=STMTRACE//CLIENT
SET TRACESTAMP=OFF
DEFINE FILE WF_RETAIL_LITE
CATEGORY/A10 = PRODUCT_SUBCATEG;
END
TABLE FILE WF_RETAIL_LITE
SUM COGS_US
BY CATEGORY
WHERE CATEGORY LIKE '%phone'
ON TABLE SET PAGE NOLEAD
END
```

The following SQL is generated, which trims trailing blanks from the CATEGORY column.

```
AGGREGATION DONE ...
SELECT
T7."PRODUCT_SUBCATEG",
SUM(T1."COGS_US")
FROM
D999OL29_wf_retail_sales T1,
D999OL29_wf_retail_product T7
WHERE
(T7."ID_PRODUCT" = T1."ID_PRODUCT") AND
(TRIM(TRAILING ' ' FROM T7."PRODUCT_SUBCATEG") LIKE '%phone')
GROUP BY
T7."PRODUCT_SUBCATEG"
ORDER BY
T7."PRODUCT_SUBCATEG"
FOR FETCH ONLY;
```

The output is shown in the following image.

CATEGORY	Cost of Goods
Smartphone	$1,341.00

PERSISTENCE Option for HOLD FORMAT sqlengine

The PERSISTENCE option has been added to the HOLD command when it is used to create an SQL table.

This new command option allows you to generate intermediate tables of different types that will be used only during UPLOAD and EBL requests to accelerate performance by keeping all processing on the DBMS server instead of downloading data into a HOLD file. The actual type of the intermediate table will be determined at run time, based on specific DBMS-supported features and the data-populating mechanisms being used.

The syntax is:

```
HOLD FORMAT sqlengine PERSISTENCE {STAGE|PERMANENT}
```

where:

sqlengine
Identifies the relational DBMS in which to create the table.

STAGE

Will create either a Volatile or GLOBAL TEMPORARY table, for a DBMS that supports that functionality, currently HP Vertica, Db2, Oracle, Teradata, MS SQL, and MySQL. For a DBMS that does not support that functionality, a message will display and the table will not be created.

PERMANENT

Will create a regular SQL table with a uniquely-generated name that will be used in the request and will be available for further use after the request ends, but will be dropped at the end of the session. This is the default value for PERSISTENCE for HOLD FORMAT *sqlengine*.

Enhanced BY Clause Optimization

The relational adapters now optimize reports that contain a BY field more efficiently, by no longer passing MAX(field) in the SELECT list to the RDBMS.

Mapping Spatial Data Stored in RDBMS Columns

The Adapters for MS SQL Server and MySQL now support direct read from DBMS spatial columns that store Esri data.

The Access File contains the expression needed to retrieve the spatial data, which is different for each DBMS. The geographic data is returned as a Geometry object that can be used to render maps in Web Query GRAPH requests.

For example, in the Following SQL Server Master File, the field GEO contains spatial data representing geographic areas. In SQL Server, the data type for this field is GEOMETRY or GEOGRAPHY. In the Master File, it is mapped as text, with a GEOGRAPHIC_ROLE attribute.

```
FIELDNAME=GEO, ALIAS=GEO, USAGE=TX50, ACTUAL=TX,MISSING=ON,
GEOGRAPHIC_ROLE=GEOMETRY_AREA, $
```

The following are the Access File attributes for this field.

```
IELD=GEO,
SQL_FLD_OBJ_TYPE=OPAQUE,
SQL_FLD_OBJ_PROP=GEOMETRY_SHAPE,
SQL_FLD_OBJ_EXPR='DB_EXPR("GEO".STGeometryType()
+ '','' 
+ CAST( "GEO".STSrid AS VARCHAR(10) )
+ '','' 
+ "GEO".STAsText())', $
```

The following request retrieves the GEO field.

```
TABLE FILE EUROPE_SWASIA
PRINT NAME GEO
WHERE NAME IN ('FRANCE','GERMANY','UNITED KINGDOM')
END
```

The SQL passed to SQL Server as a result of this request follows.

```
SELECT
T1."NAME",
(T1."GEO".STGeometryType() + ',' + CAST(
T1."GEO".STSrid AS VARCHAR(10) ) + ',' +
T1."GEO".STAsText())
FROM
EUROPE_SWASIA T1
WHERE
(T1."NAME" IN ('FRANCE','GERMANY','UNITED KINGDOM');
```

Enhanced Messages About SQL Optimization

More descriptive messages have been developed when SQL Optimization is not done for a request. In some cases, a message will contain information about ways to possibly change the syntax so that optimization can be used.

Optimization of Function DTRUNC for First Day of Week

Calls to the DTRUNC function can be optimized when using the new WEEK parameter that returns the first day of the week in which the date occurs.

Optimization of Function DTRUNC for YEAR_END, QUARTER_END, MONTH_END and WEEK_END

Calls to the DTRUNC function can be optimized when using the new YEAR_END, QUARTER_END, MONTH_END and WEEK_END parameters that return the last day of the period in which the date occurs.

CONCAT Function Optimization

Simplified character function CONCAT is passed to the Relational Adapters in the generated SQL.

Optimization of the DT_CURRENT_DATE, DT_CURRENT_DATETIME, and DT_CURRENT_TIME Functions

The simplified functions DT_CURRENT_DATE, DT_CURRENT_DATETIME, and DT_CURRENT_TIME are passed to the Relational Adapters in the generated SQL request.

Example: **Optimizing the DT_CURRENT_DATETIME Function**

The following request calls the DT_CURRENT_DATETIME function.

```
SET TRACEUSER=ON
SET TRACEON=STMTRACE//CLIENT
SET TRACESTAMP=OFF
DEFINE FILE WF_RETAIL_LITE
CURRDT/HYYMDS = DT_CURRENT_DATETIME(SECOND);
END
TABLE FILE WF_RETAIL_LITE
SUM QUANTITY_SOLD CURRDT
BY PRODUCT_CATEGORY
ON TABLE SET PAGE NOLEAD
END
```

The following SQL is generated for Microsoft SQL Server.

```
SELECT
T7."PRODUCT_CATEGORY",
SUM(T1."QUANTITY_SOLD"),
MAX(SYSDATETIME())
FROM
( wrd_wf_retail_sales T1
LEFT OUTER JOIN
wrd_wf_retail_product T7
ON T7."ID_PRODUCT" = T1."ID_PRODUCT" )
GROUP BY
T7."PRODUCT_CATEGORY"
ORDER BY
T7."PRODUCT_CATEGORY";
```

The output is shown in the following image.

Product Category	Quantity Sold	CURRDT
Accessories	2,034	2016/03/25 14:03:54
Camcorder	1,956	2016/03/25 14:03:54
Computers	865	2016/03/25 14:03:54
Media Player	3,140	2016/03/25 14:03:54
Stereo Systems	4,679	2016/03/25 14:03:54
Televisions	362	2016/03/25 14:03:54
Video Production	887	2016/03/25 14:03:54

Application Access Control for HyperStage Tables

Enhanced Optimization of Selection Tests

In prior releases, all optimized selection tests were passed to the RDBMS and also re-evaluated when the answer set was returned to FOCUS. Starting in this release, individual tests passed to the SQL engines may be excluded from execution. This enhances performance and also allows tests to be optimized that are not totally compatible with how FOCUS evaluates them.

Optimization of the PARTITION_REF Function

Calls to the PARTITION_REF function in an aggregation request with a WHERE TOTAL phrase can be passed to SQL engines that have a LAG function, such as Db2 and Microsoft SQL Server.

New SQL Functions

The SQL Functions MOD, CEIL, FLOOR, LEAST, and GREATEST are now supported.

MOD: Returning the Remainder of a Division

The SQL function MOD returns the remainder of the first argument divided by the second argument.

Syntax: How to Return the Remainder of a Division

```
MOD(n,m)
```

where:

n

Numeric

Is the dividend (number to be divided).

m

Numeric

Is the divisor (number to divide by). If the divisor is zero (0), MOD returns NULL.

Example: Returning the Remainder of a Division

MOD returns the remainder of *n* divided by *m*.

```
MOD(N,M)
```

For N=16 and M=5, the result is 1.

For N=34.5 and M=3, the result is 1.5.

CEIL: Returning the Smallest Integer Greater Than or Equal to a Value

CEIL returns the smallest integer value not less than the argument. CEILING is a synonym for CEIL.

Syntax: **How to Return the Smallest Integer Greater Than or Equal to a Value**

CEIL(*n*)

where:

n

Numeric or Alphanumeric

Is the value less than or equal to the returned integer. For exact-value numeric arguments, the return value has an exact-value numeric type. For alphanumeric or floating-point arguments, the return value has a floating-point type.

Example: **Returning an Integer Greater Than or Equal to a Value**

CEIL returns an integer greater than or equal to the argument.

CEIL(N)

For N=1.23, the result is 2.

For N=-1.23, the result is -1.

FLOOR: Returning the Largest Integer Less Than or Equal to a Value

FLOOR returns the largest integer value not greater than a value.

Syntax: **How to Return the Largest Integer Less Than or Equal to a Value**

FLOOR(*n*)

where:

n

Numeric or Alphanumeric

Is the value greater than or equal to the returned integer. For exact-value numeric arguments, the return value has an exact-value numeric type. For alphanumeric or floating-point arguments, the return value has a floating-point type.

Example: **Returning an Integer Less Than or Equal to a Value**

FLOOR returns an integer less than or equal to the argument.

`FLOOR(N)`

For N=1.23, the result is 1.

For N=-1.23, the result is -2.

LEAST: Returning the Smallest Value

With two or more arguments, LEAST returns the smallest (minimum-valued) argument. The arguments are compared using the following rules:

❏ If any argument is NULL, the result is NULL. No comparison is needed.

❏ If the return value is used in an INTEGER context, or all arguments are integer-valued, they are compared as integers.

❏ If the return value is used in a floating-point context, or all arguments are floating-point-valued, they are compared as floating-point values.

❏ If the arguments comprise a mix of numbers and strings, they are compared as numbers.

❏ If any argument is a character string, the arguments are compared as character strings. In all other cases, the arguments are compared as binary strings.

Syntax: **How to Return the Smallest Value**

`LEAST(value1, value2, ... , valuen)`

where:

`value1, value2,... , valuen`
Numeric or alphanumeric

Are the values to be compared.

Example: **Returning the Smallest Value**

LEAST returns the smallest argument.

`LEAST(X,Y,Z)`

For X=2, Y=0, and Z=-1, the result is -1.

For X='B', Y='A', and Z='C', the result is 'A'.

GREATEST: Returning the Largest Value

With two or more arguments, GREATEST returns the largest (maximum-valued) argument. The arguments are compared using the following rules:

❏ If any argument is NULL, the result is NULL. No comparison is needed.

❏ If the return value is used in an INTEGER context, or all arguments are integer-valued, they are compared as integers.

❏ If the return value is used in a floating-point context, or all arguments are floating-point-valued, they are compared as floating-point values.

❏ If the arguments comprise a mix of numbers and strings, they are compared as numbers.

❏ If any argument is a character string, the arguments are compared as character strings. In all other cases, the arguments are compared as binary strings.

Syntax: **How to Return the Largest Value**

GREATEST(*value1, value2, ... , valuen*)

where:

value1, value2,... , valuen
     Numeric or alphanumeric

     Are the values to be compared.

Example: **Returning the Largest Value**

GREATEST returns the smallest argument.

GREATEST(X,Y,Z)

For X=2, Y=0, and Z=-1, the result is 2.

For X='B', Y='A', and Z='C', the result is 'C'.

SQL Adapters Create Unique Keys for HOLD FORMAT SQL_SCRIPT

KEY information for SQL_SCRIPT files created using HOLD FORMAT SQL_SCRIPT is propagated to the Access File, which improves JOIN optimization.

Example: Propagating Key Information to the Access File Generated by HOLD FORMAT SQL_SCRIPT

The following request generates an SQL_SCRIPT file with two keys.

```
TABLE FILE WF_RETAIL_LITE
SUM MIN.COGS_US MAX.GROSS_PROFIT_US
BY BUSINESS_SUB_REGION
BY STATE_PROV_CODE_ISO_3166_2
WHERE BUSINESS_SUB_REGION EQ 'Midwest' OR 'East'
WHERE COUNTRY_NAME EQ 'United States'
ON TABLE HOLD AS RETAILS FORMAT SQL_SCRIPT
END
```

This request produces the following script file, retails.sql.

```
 SELECT
T3."BUSINESS_SUB_REGION" AS "SK001_BUSINESS_SUB_REGION",
T3."STATE_PROV_CODE_ISO_3166_2" AS "SK002_STATE_PROV_CODE_ISO_3166",
 MIN(T1."COGS_US") AS "VB001_MIN_COGS_US",
 MAX(T1."GROSS_PROFIT_US") AS "VB002_MAX_GROSS_PROFIT_US
" FROM
wrd_wf_retail_sales T1,
wrd_wf_retail_customer T2,
wrd_wf_retail_geography T3
 WHERE
(T2."ID_CUSTOMER" = T1."ID_CUSTOMER") AND
(T3."ID_GEOGRAPHY" = T2."ID_GEOGRAPHY") AND
(T3."COUNTRY_NAME" = 'United States') AND
(T3."BUSINESS_SUB_REGION" IN('Midwest', 'East'))
 GROUP BY
T3."BUSINESS_SUB_REGION",
T3."STATE_PROV_CODE_ISO_3166_2"
```

The RETAILS Master File follows.

```
FILENAME=RETAILS, SUFFIX=SQLMSS  , $
  SEGMENT=RETAILS, SEGTYPE=S0, $
    FIELDNAME=BUSINESS_SUB_REGION, ALIAS=SK001_BUSINESS_SUB_REGION,
USAGE=A25V, ACTUAL=A25V,
      MISSING=ON,
      TITLE='Customer,Business,Sub Region', $
    FIELDNAME=STATE_PROV_CODE_ISO_3166_2,
ALIAS=SK002_STATE_PROV_CODE_ISO_3166, USAGE=A5V, ACTUAL=A5V,
      MISSING=ON,
      TITLE='Customer,State,Province,ISO-3166-2,Code', $
    FIELDNAME=COGS_US, ALIAS=VB001_MIN_COGS_US, USAGE=D20.2M, ACTUAL=D8,
      MISSING=ON,
      TITLE='Cost of Goods', $
    FIELDNAME=GROSS_PROFIT_US, ALIAS=VB002_MAX_GROSS_PROFIT_US,
USAGE=D20.2M, ACTUAL=D8,
      MISSING=ON,
      TITLE='Gross Profit', $
```

The RETAILS Access File contains the key information.

```
 SEGNAME=RETAILS,
   CONNECTION=wfretail,
   DATASET=RETAILS.SQL,
   KEY=BUSINESS_SUB_REGION/STATE_PROV_CODE_ISO_3166_2,
   SUBQUERY=Y, $
```

Adapter for Db2

This section provides detailed descriptions of new features for the Adapter for Db2.

Conversion to ANSI Date, Time, and Timestamp Literals

When the Adapter for Db2 converts a request that contains a date, time, or timestamp literal to SQL, it converts the literal to ANSI standard format in the generated SQL.

For example, consider the following WHERE phrase:

```
WHERE DATECONST1 EQ '19010228'
```

The adapter will convert the WHERE phrase to the following predicate in the generated SQL:

```
WHERE
(T1."DATECONST1" = DATE '1901-02-28')
```

Support DECFLOAT Data Type as MATH and XMATH

The new Db2 data types MATH and XMATH support the necessary precision for compatible decimal computation. The Db2 data type DECFLOAT(16) can be mapped as ACTUAL format MATH or FLOAT, and the Db2 DECFLOAT(34) data type can be mapped as ACTUAL format XMATH or FLOAT using the following settings.

```
SQL DB2 SET CONV_DECFLOAT16 MATH
SQL DB2 SET CONV_DECFLOAT16 FLOAT
SQL DB2 SET CONV_DECFLOAT34 XMATH
SQL DB2 SET CONV_DECFLOAT34 FLOAT
```

The default precision is 18 and the default scale is 2 for the MATH data type. You can change these defaults using the following commands, where *p* is the precision and *s* is the scale.

```
SQL DB2 SET CONV_DECFM_PREC p
SQL DB2 SET CONV_DECFM_SCALE s
```

The default precision is 34 and the default scale is 2 for the XMATH data type. You can change these defaults using the following commands, where *p* is the precision and *s* is the scale.

```
SQL DB2 SET CONV_DECFX_PREC p
SQL DB2 SET CONV_DECFX_SCALE s
```

Adapter for Microsoft SQL Server

The following features are supported for Microsoft SQL Server in this release.

Adapter for Microsoft SQL Server: Support for Computed Columns as R/Only

Adapters for MS SQL (SQLMSS and MSODBC) now map SQL Server computed columns as read-only, with the FIELDTYPE=R attribute.

JDBC and ODBC Adapters for Microsoft SQL Server Support Version 2016

ODBC and JDBC Adapters for Microsoft SQL Server support the recently released Microsoft SQL Server version 2016, ODBC driver version 13, and JDBC driver version 6.

Adapter for MySQL

This section provides detailed descriptions of new features for the Adapter for MySQL.

Change Data Capture (CDC) Support

The Adapter for MySQL now supports Change Data Capture (CDC).

Sequential and Indexed Adapters

This section provides detailed descriptions of new features for the Sequential and Indexed adapters.

Special Characters Supported With Upload Wizard

Upload Wizard now allows the special characters dot (.) and slash (/) when you explicitly redefine the target DBMS table name, in order to support multi-part schema/owner based names. The library specification (for example, mylib/mytable or mylib.mytable) separator is changed to an underscore (for example, mylib_mytable).

Adapter for Excel (via Direct Retrieval)

This section provides detailed descriptions of new features for the Adapter for Excel (via direct retrieval).

File Listener for Excel Worksheet

The File Listener component of DataMigrator can process Microsoft Excel workbooks that are delivered to a specified directory.

In addition to the synonym for the workbook as Excel (via direct read), this requires a synonym for a flat file with the normal file listener parameters specified. An additional segment contains a copy of the synonym for the Excel workbook.

Adapters for DFIX and Excel (via Direct Retrieval)

This section provides descriptions of features for the Adapters for DFIX and Excel (via direct retrieval).

Date and Date-Time Recognition With Patterns

Previously, when creating a synonym for a Delimited Flat File or Excel workbook using the direct read adapter, columns with timestamp or date-time values were created as alphanumeric fields.

Now such columns are recognized, and the synonym is created with appropriate USAGE and ACTUAL formats.

Adapters for Flat and Delimited Flat Files

The following features have been added for the Adapters for flat files and delimited flat files.

Adapter for DFIX: Respecting Server CDN option

The CDN parameter can be set in the server profile, in the Access File for a delimited data source, or in a request. When you upload a delimited file to the server, you can select the CDN option for that file from a drop-down list, and it is placed in the Access File. The supported CDN values are the following.

OFF

The thousands separator is a comma (,), and the decimal separator is a period (.). This is the default value.

ON

The thousands separator is a period (.), and the decimal separator is a comma (,).

SPACE

The thousands separator is a space, and the decimal separator is a comma (,).

QUOTE

The thousands separator is a single quotation mark ('), and the decimal separator is a comma (,).

QUOTEP

The thousands separator is a space, and the decimal separator is a period (.).

DataMigrator Enhancements

This section describes the new features for DataMigrator.

DataMigrator represents a broad category of tools designed to facilitate and automate the extraction and integration of data. From source extraction through target load, data is transformed through the application of business rules. Once the transformation is complete, the data is loaded into table structures that have been optimized for a particular application.

Adapters

The following section provides descriptions of new features for adapters.

Change Data Capture for MySQL

The DataMigrator support for Change Data Capture now includes the MySQL database.

In order to use CDC with MySQL, you must install Java and MySQL client utilities on the system where the DataMigrator server is installed. Additionally, on that system, you must have the Environment Variable CLASSPATH pointing to the location where the Connector/J is installed.

Connection for [Delimited] Flat File Targets

In prior releases when using DataMigrator to write a Flat File or Delimited Flat file the first configured connection was always used.

There is now an option to select *<local>* for the local file system where the DataMigrator server is running. You can also select a connection that refers to an FTP or SFTP server that has been configured for the server.

Extended Bulk Load Availability

Extended Bulk Load is now available on MS SQL Server and PostgreSQL.

Change Data Capture for MySQL

The DMC now supports Change Data Capture (CDC) for MySQL with a load type of IUD.

Calculators

The following section provides descriptions of new features for calculators.

Allow a Variable in WHERE Filter for IN

In the Data Management Console, you can now use a variable in a Data Flow with a WHERE filter that contains an IN clause. For example, you could create a WHERE filter such as:

```
PLANT IN (&PLIST)
```

When you run the flow, you could use the following values:

`'BOS','ATL'`

These values would be used to return rows with either value.

Notifications for Format Auto Correct

Under certain conditions, when working in the DMC Synonym Editor or a Data Flow calculator, the format of a new field is recalculated based on the expression. A new balloon tip has been added, which informs users that the format has been recalculated.

Enhanced DMTRUNC Function

The simplified function DTRUNC, which returns the first day of a time period (YEAR, MONTH, QUARTER), has been extended to return the first day of a WEEK and the last day of any time period.

Optimization of REPLACE Function

A new, simplified REPLACE function has been introduced. This function has the following syntax:

`REPLACE ( string , pattern , replacement )`

The function will replace or remove a substring within a string. The input parameters can have CHAR, VARCHAR, or TEXT as data types. The result is always VARCHAR, with a length that is determined from the input parameters.

Using a Regular Expression in a SQL WHERE Condition

A Regular Expression can now be used in WHERE conditions in a SQL SELECT statement. A Regular Expression, or regexp, is a special sequence of characters that describe a search string. The syntax is:

`string [NOT] RLIKE regexp`

Data and Process Flows

The following section provides descriptions of new features for data and process flows.

CMRUN on All Platforms

The CMRUN program, which DataMigrator uses to initiate flows or stored procedures, takes an optional parameter of x=filename. This parameter allows you to store the password in a protected file.

Disallowing Multiple Instances of a Flow

When working with a Process Flow that initiates another data flow, you can now prevent the called flow from starting if another instance of the flow is running, by selecting the *Do not allow multiple instances* check box. This option is available in the Properties pane of a flow object.
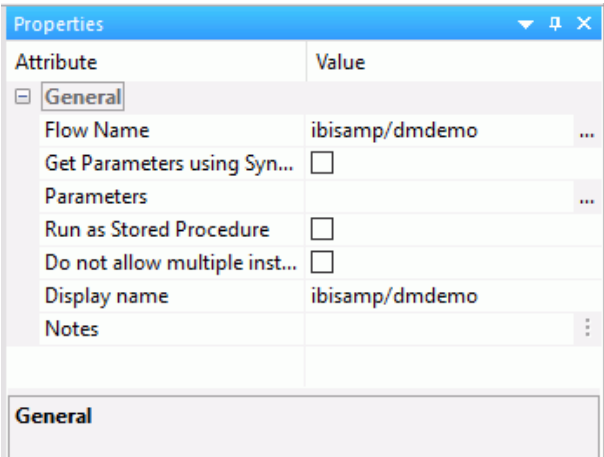
Expand and Collapse Functionality for Objects

In the DMC, when viewing a flow with expanded objects, multiple objects can be selected by pressing the Ctrl key while clicking them.

If there are no objects selected in either a data or process flow, the new Expand All or Collapse All options are available.

Long Names in Flows

In the Data Management Console, if the name of an object is too long to fully display, it is truncated and shown with ellipses. You can see the full name by hovering over the object.

Optimize Load Option to Support MERGE

DataMigrator has a new option that allows for faster loading when a source and target are in the same relational database, resulting in an increase in performance. When working with:

❏ Databases that support the MERGE command, the merge is generated and passed through to the database so that both the extract and load is done in a single SQL statement. This option allows specifying different calculations for insert and update operations. Updates can use values from both the source and target tables. Databases that support a SQL MERGE command include MS SQL Server 2008 and Db2 9.1 (and later).

❏ Insert only operations, an INSERT INTO ... SELECT command is generated and passed through to the relational database.

In either case, because all operations are done in the database, a much faster throughput is possible.

You can enable this option by opening the flow properties of a data flow and selecting the *Optimize Load* checkbox under the Execution section.

Note: Since the operation is done as a single SQL command rather than row-at-a-time processing, some capabilities are not available when this option is selected. These include Record Logging and use of VALIDATE to reject individual rows. Also, a count of the number of rows inserted, updated, or deleted is not available.

The user should consider both modes of operation to determine which is best suited for their application.

Specifying Display Name in Target Properties

Target Properties has a new attribute, Display Name, that allows user specification of the name that appears on the flow. The default is the application name, if enabled in flow properties, and the synonym name.

Updates to Email Functionality

The following new features are available for emails:

❏ **Email File Types for a Process Flow**

Any file type can be attached to a DataMigrator process flow email.

❏ **Email Recipients**

In previous releases, when sending email messages, all recipients appeared in the To line. Now, recipients can also appear on the Cc line, or hidden as Bcc.

❏ **Sending HTML Output on Message Failure**

The Send HTML output as inline message located in the Properties panel of a Process Flow Start object now allows you to send HTML output from a report in an email message on failure, as well as on successful completion.

Updating Values in Target Transformations

You can now update, instead of replace, values in a target table using the On Match Expressions tab that can be found in the Transformations dialog box. For example, you can add the value from an incoming row to the value in the target table instead if replacing it completely.

Data Management Console

The following section provides descriptions of new features for the Data Management Console (DMC).

Downloading Files

A new Download option is available for all files on Application tree in the Data Management Console and Web Console. When a user downloads files, they are saved in the Downloads folder of their computer. In Windows, this location is C:\users*username*\Downloads, by default.

Improvements in Column Name Display Strategy

When the strategy is something other than *Name*, the header label now shows, for example *Display Name (Title)*. This ensures that the column name is clearly displayed. In addition, the field Name can now be displayed even when the display strategy is not *Name*.

Improvements to Text Editor

When using the Text Editor in the DataMigrator Console with a stored procedure (focexec) that has one more lines selected, new shortcut menu options allow for commenting or uncommenting multiples lines at once. The options are *Comment Selection* or *Uncomment Selection*.

Kerberos and Single Sign-On From DMC

A new Single Sign-On capability is now available when connecting from the Data Management Console to a DataMigrator or Reporting Server on Linux with Kerberos enabled.

The IWA (Integrated Windows Authentication) that is available on the Server Node Configuration dialog box has been replaced with two new options: NTLM (NT Lan Manager) for Windows and Kerberos for use with Linux. When you select either of these options, you do not need to enter a user ID and password. The user ID and password you used to log in to Windows is used.

Once you connect to the DMC, a message appears in the console log indicating the authentication method and user ID that was used.

Using Find in Properties Panes

In the Data Management Console, you can right-click the Properties pane for a synonym or a flow and use the new Find option in the shortcut menu to search for text in the Attributes column.

Data Profiling

The following section provides descriptions of new features for data profiling.

Quick Copy

The following section describes the new feature for the Quick Copy tool.

Quick Copy Allows Delimited Flat File Targets

From the Data Management Console or Web Console, the Quick Copy facility can now be used to create delimited flat files, in addition to loading database tables.

Reporting

The following section provides descriptions of new features for reporting.

Synonym Editor

The following section provides descriptions of new features for the Synonym Editor.

Assigning SCD Columns on a Synonym

Previously, using the DataMigrator capability of loading a Slowly Changing Dimension (SCD) table required identifying the SCD type of each column in the target table. This was done in the Synonym Editor one column at a time.

A new dialog box provides a quicker, simpler way for assigning the SCD types. A new panel shows all the column names and folders for each SCD type. Columns can be assigned to the appropriate type by drag-and-drop.

Identifying Internal Fields

There are new icons in the Synonym Editor Field View that help to identify fields with types Internal and Needs Value. These field types do not allow sample data. The icons help to provide a visual indication that these fields are different.

In addition, the new Access Property column shows these values for fields with these properties. You can access this column by right-clicking the *Name* header in the Synonym Editor, pointing to *Customize*, and clicking *Access Property*.

New Parameterize Value Attribute

The new Parameterize Value dialog box allows you to overwrite the values for the CDC attributes with the existing, corresponding, CDC variables or with new variables.

Pivoting Columns and Rows

It is now simpler to edit a synonym to indicate that data should be pivoted, columns turned into rows or single column turned into multiple columns, for retrieval.

This can be done by either selecting a group of columns or a single character column that contains a delimited list of values or a JSON or XML document. A new dialog box allows specification for how the columns should be pivoted.

Also, data sources that support array structures in a field, such as Hive (for data managed by Hadoop) or MongoDB a synonym can now be created to represent an array so that the individual elements can be accessed.

Archiving Files on a Local Server

When the File Listener processes remotely located files, users can now archive these files on either a local or remote system by using the new ARCHIVE_LOCAL option that is available in the File Listener Attributes.

Enhanced DB Loaders Option to Support MERGE

DataMigrator has a new option that allows for faster loading when a source and target are in the same relational database, resulting in an increase in performance. When working with:

❑ Databases that support the MERGE command, the merge is generated and passed through to the database so that both the extract and load is done in a single SQL statement. This option allows specifying different calculations for insert and update operations; updates can use values from both the source and target tables. Databases that support a SQL MERGE command include MS SQL Server 2008 and Db2 9.1 (and later).

❏ Insert only operations, an INSERT INTO ... SELECT command is generated and passed through to the relational database.

In either case, because all operations are done in the database, a much faster throughput is possible.

You can enable this option by opening the flow properties of a data flow and selecting the *Use Enhanced in-database loader*s checkbox under the Execution section.

Note: Since the operation is done as a single SQL command rather than row-at-a-time processing, some capabilities are not available when this option is selected. These include Record Logging and use of VALIDATE to reject individual rows. Also, a count of the number of rows inserted, updated, or deleted is not available.

The user should consider both modes of operation to determine which is best suited for their application.

Changes in Behavior

The following are changes in behavior for Web Query 2.2.1.

Release Levels and Prerequisites

❏ Web Query 2.2.1 runs on IBM i OS 7.3, 7.2, and 7.1. It requires Java version 1.8. For more information on supported release levels, prerequisite products, required fix levels, and Web Query group PTF numbers, refer to the Release Levels and Prerequisites document at:

https://ibm.biz/Bds6cS

❏ Developer Workbench is a 64-bit application and includes a 64-bit Reporting Server that requires 64-bit Java. Verify that your Windows machine meets the Developer Workbench hardware requirements.

Note: Developer Workbench does not support a 32-bit operating system.

Developer Workbench Installation Wizard

Developer Workbench is an optional feature of Web Query that provides advanced functions for editing metadata, creating HTML dashboards, and more. The Developer Workbench Client is available in English and Japanese. To install the Client, download the three files from the IBM i /qibm/proddata/qwebqry/DeveloperWorkbench directory to the workstation, and then run the .exe file. The wizard will automatically determine which language to install.

Register Web Query User (REGWQUSR) Command

The REGWQUSR command provides a CL interface for adding Web Query users and granting folder permissions. The command provides an alternative to Security Center for QWQADMIN, members of the WebQueryAdministrators group, and IT managers to administer Web Query users. The WQADMIN(*YES) parameter can be specified to add members to the WebQueryAdministrators group, but only QWQADMIN or a user with *SECADM authority may use this parameter.

InfoAssist+

To control how measures are aggregated, you must right-click the Report in the Query pane to display the list of verb options.

OLAP

The OLAP feature is turned off by default, as the emphasis is now on the new InfoAssist Visualization, Autodrill, and Autolink features. Existing OLAP reports will continue to run. If the InfoAssist OLAP development option is required, use the Administration Console to turn OLAP on.

Known Issues

The following topics describe known issues that will be addressed in a future version of Db2 Web Query.

Browser Support

This section addresses the known issues for browser support.

Phased Out Support for the Adobe Flash Player in Google Chrome

Google has phased out support for the Adobe Flash Player in its Chrome web browser. Although the Adobe Flash Player will be phased out, it will continue to be packaged with Google Chrome web browsers. Users will need to manually enable the Adobe Flash Player on the Plugins page on a continuing basis.

In addition, the default settings in Google Chrome web browsers (for example, Version 49) do not allow you to open and view a PDF file directly in the browser window. Currently, all PDF files are automatically downloaded to your Downloads folder on your system.

This document describes how to manually enable the Adobe Flash Player plugin in Google Chrome. This document also describes how to enable the Chrome PDF Viewer plugin, which allows you to view PDF files directly in the Google Chrome browser window.

Enabling the Adobe Flash Player Plugin

Before continuing, ensure that your version of Adobe Flash Player currently installed is compatible with your version of Adobe Reader. For example:
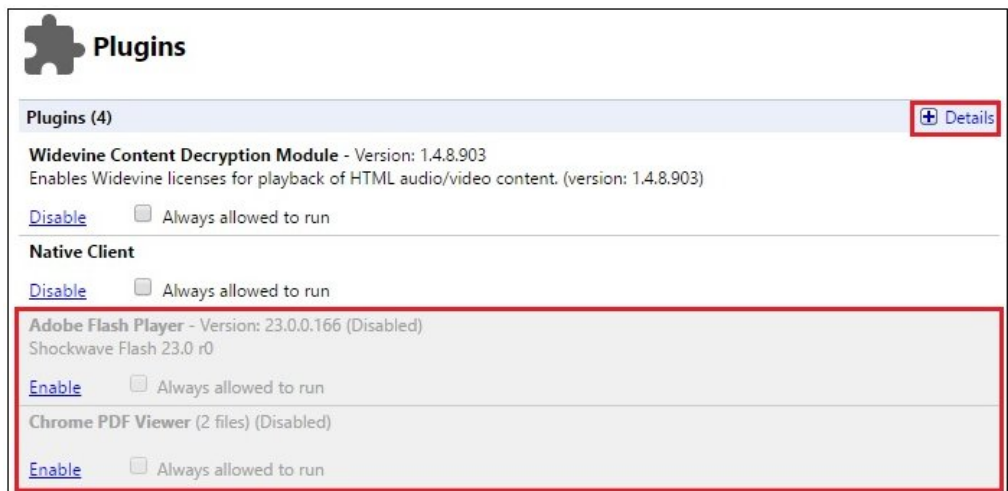
Operating System	Adobe Flash Player Version	Adobe Reader Version
Windows 10	23.0.0.166	11.0.0

To enable the Adobe Flash Player plugin in Google Chrome:

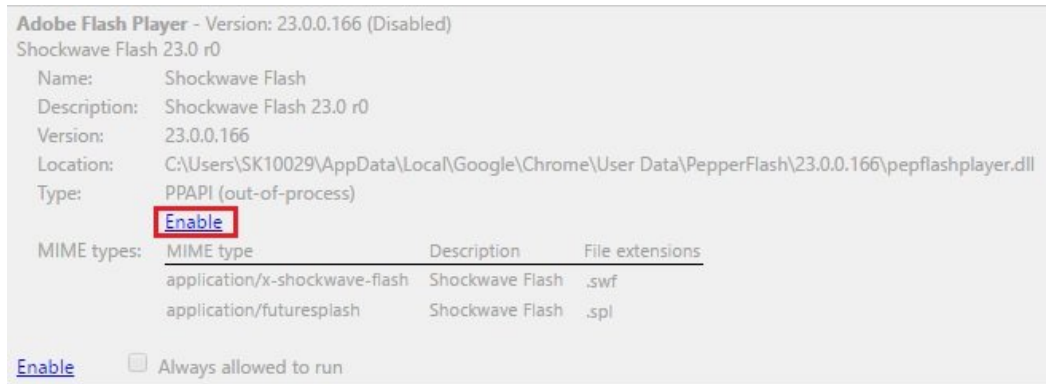1. Type *chrome://plugins* in the address bar, as shown in the following image.

The Plugins page opens, as shown in the following image.

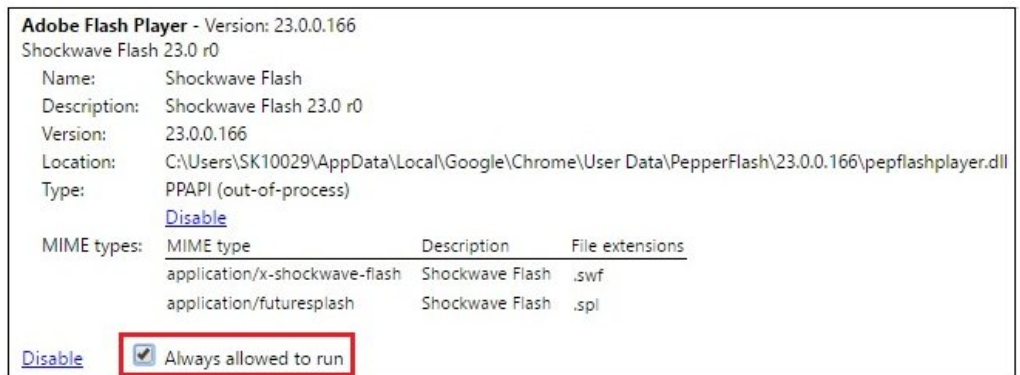Notice that the Adobe Flash Player plugin is disabled.

2. Click the *Details* link in the upper-right corner to expand all of the contents in the Plugins page.

For example, the following image now shows the Adobe Flash Player plugin area expanded.

3. Click *Enable*.

The Adobe Flash Player plugin is now enabled, as shown in the following image.

4. Select *Always allowed to run* to always allow the Adobe Flash Player plugin to run and be active.
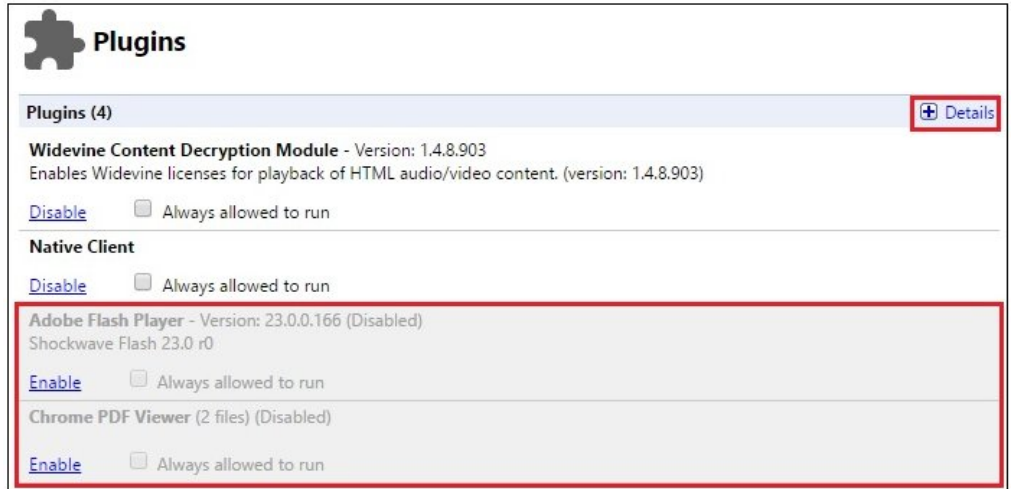
5. Close the Plugins page.

Enabling the Chrome PDF Viewer Plugin

To enable the Chrome PDF Viewer plugin in Google Chrome:

1. Type *chrome://plugins* in the address bar, as shown in the following image.
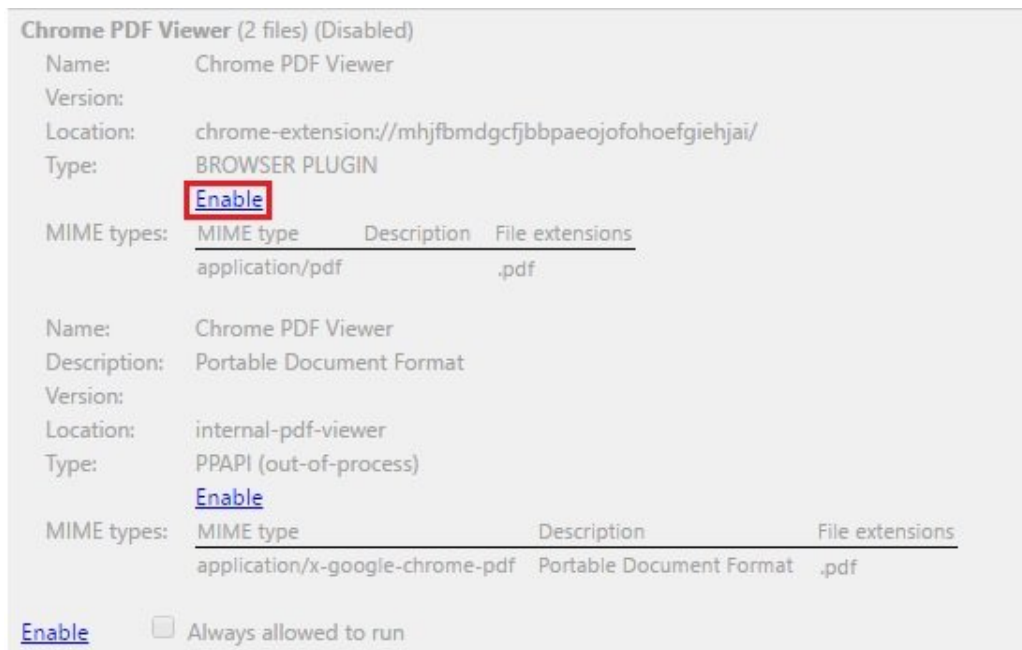
The Plugins page opens, as shown in the following image.

Notice that the Chrome PDF Viewer plugin is disabled.

2. Click the *Details* link in the upper-right corner to expand all of the contents in the Plugins page.
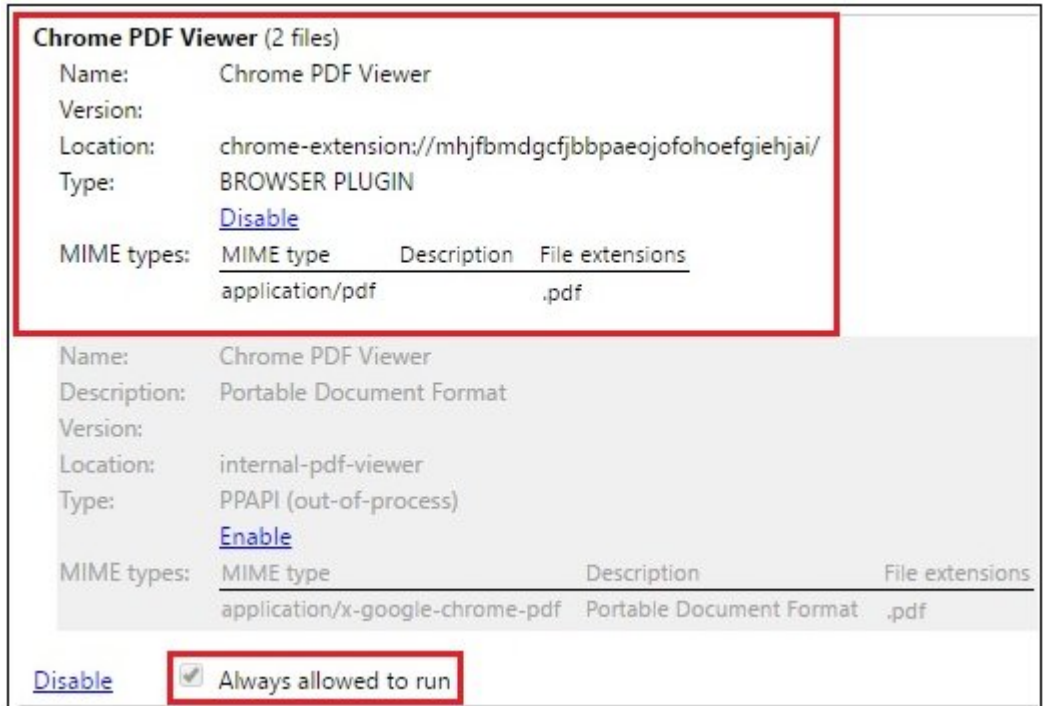
For example, the following image now shows the Chrome PDF Viewer plugin area expanded.

3. For the BROWSER PLUGIN type, click *Enable*.

The Chrome PDF Viewer plugin is now enabled, as shown in the following image.

The *Always allowed to run* option is automatically selected, which always allows the Chrome PDF Viewer plugin to run and be active.

4. Close the Plugins page.

Db2 Web Query for IBM i

This section addresses the known issues for Db2 Web Query for IBM i.

❏ On IBM i 7.3, start and end messages are written into the QHST log for QSQSRVR jobs in the QWEBQRY21 subsystem. Two messages are logged every minute. To stop the messages, apply SS1 PTF SI64153.

❏ A Web Query startup failure may occur in program QWQFEXTRG with error message 'Library QSYSINC not found'. Details of the problem, including the PTF numbers for 7.1, 7.2, and 7.3, can be found at *https://ibm.biz/BdjQnJ*.

REST-Based Application Extension (WQRAX)

This section addresses the known issues for the REST-Based Application Extension (WQRAX).

❏ Certain types of reports, including visualizations, autodrill, and some maps and dashboards, will not render properly when invoked through WQRAX. This will be resolved in an upcoming PTF.

❏ You must edit HTML Composer dashboards that were created prior to Web Query 2.1.0 group PTF level 13 or 2.1.1 group PTF level 2 for compatibility with current fix levels. Otherwise, they will not run in WQRAX after applying this Hotfix.

Workaround: Edit the HTML dashboard using Web Query using the following steps:

1. Sign in to Web Query using a Web Query Administrator user ID.

2. On the BI Portal resource tree, right-click the HTML dashboard file and select *Edit*.

   Note: if you do not see an Edit option, then the dashboard is already at a current version and these steps do not apply.

3. In the text editor, click *Search* and then *Find*.

4. Type */webquery/ibi_html* in the Find What: box.

5. Type *./ibi_html* in the Replace With: box.

6. Click the *Replace All* button.

7. Click the *Save* button on the toolbar.

8. Click *File* and then *Exit*.

Business Intelligence Portal

This section addresses the known issues for BI Portal.

❏ Running a procedure using the Run with SQL Trace option does not generate the SQL Trace. Instead it generates the message *Run-time messages will appear here...* This issue is resolved in HF1.

❏ The Resource Tree, when launched from the menu bar, displays a Global Resources folder. This folder is not used by Web Query and should be hidden. This is resolved in HF1.

❏ A second resource tree may appear when logging into Web Query after an idle session timeout sign off. This is resolved in HF1.

Metadata

This section addresses the known issues for metadata.

❏ Creating a new Query/400 synonym generates an error. This issue is resolved in HF1.

❏ Create Synonym overwrites an existing synonym even though the Overwrite option is off. This issue is resolved in HF1.

Upload Data, Upload and Metadata Wizards

This section addresses the known issues for Upload Data and the Upload and Metadata Wizards.

❏ After the Sample Content is generated, the Initial Dashboard in the Analytics folder is not automatically run. This is resolved in HF1.

❏ NLS characters are not supported in the following places when using the Upload Data and Upload Wizard:

❏ Excel Worksheet name.

❏ Folder name from where the Upload Wizard is being launched.

Workaround: Use invariant (A-Z and 0-9) characters. Support for NLS characters will be added in a future Hotfix.

❏ Run-Time Enablement (RTE) may cause the Upload Wizard to fail. This will happen if the user's current library (CURLIB) is not defined in the user's active RTE environment. The Upload Wizard writes out a temporary file during the upload process.

Workaround: It is recommended to add both QGPL and the user's CURLIB (if different from the default, QGPL) to the user's active RTE environment using the WRKWQRTE command.

❏ The Statistics Report in the Utilities folder does not run. This will be resolved in a future PTF.

❏ The Adapters for Query/400, DB Heritage, and JD Edwards should not be used during the Import Metadata step as these are multi-step Create Synonym processes, which are not yet supported by the Metadata Wizard.

Workaround: Use the Metadata New option to create synonyms for these Adapter types.

InfoAssist+

This section addresses the known issues for InfoAssist+.

❏ It is not possible to change a HOLD file name or Db2 table name for a report. An error indicating that at least one column must be on the report is generated. This will be resolved in a future PTF.

❏ The 2014 Demographic layers do not render on an ESRI map.

❏ Drill down options are missing in the tool tip on an ESRI map.

❏ A Document with an image referenced in the Reporting Server application directory fails. This is resolved in HF1.

   Workaround: Source the image in a Web Query repository folder.

❏ Running a report containing an image causes a Reporting Server agent crash. This is resolved in HF1.

❏ Running a report in a Firefox browser displays two *Running* messages. This will be resolved in an upcoming PTF.

❏ A visualization containing an Esri map does not rendcer. This is resolved in HF1.

❏ Reports using ranking syntax (BY HIGHEST *n*) fails with an SQL error. This is resolved in HF1.

❏ Changing an active report chart measure field from SUM to PRINT terminates the request during run time. This is resolved in HF1.

❏ The Cut, Copy, and Paste options are unavailable (grayed out) for an InfoAssist+ Dashboard text box and keyboard shortcuts.

Security

This section addresses the known issues for security.

❏ In Security Center, a RunOnly user cannot be changed to a licensed user by editing their status to Active.

   Workaround: Remove the user ID and Import.

❏ A user in the TLF(Top Level Folder)-RUN group cannot run an InfoMini report. This will be resolved in a future PTF.

❏ A user in the TLF(Top Level Folder)-DBA group does not see the Metadata options from the resource tree. This issue is resolved by HF1.

Developer Workbench

This section addresses the known issues for Developer Workbench.

❏ Creating a new procedure in InfoAssist+ will result in a procedure tab name starting with Procedure10.

❏ Developer Workbench online help is hosted on a remote server and requires access to the Internet.

Workaround: A PDF version of the help will be available on the Db2 Web Query Wiki.

JD Edwards Adapters

This section addresses the known issues for the JD Edwards Adapters.

To use the Alternate Language option in the Adapter for JD Edwards EnterpriseOne and the Adapter for JD Edwards World:

1. Configure the adapter with *UDC Direct File Access* unchecked.

2. Run the *Refresh Metadata* with *Alternate Language File* unchecked.

   This step will create the udcdicdb table.

3. Run the *Refresh Metadata* with *Alternate Language File* checked and enter the default language code.

   This step will create the altdicdb table.

4. Create all the synonyms needed.

Note: Steps 2 and 3 need to be run, as needed, whenever UDC descriptions are updated.

Report Broker

This section addresses the known issues for Report Broker.

❏ The Report Broker Status Configuration tab displays the following parameters which are not applicable to Web Query. This issue is resolved in HF1.

   ❏ Group Blackout periods

   ❏ Distributed configuration

   ❏ Failover Server

❏ Pre- and Post-process procedures

❏ Migration of Public Distribution Lists will generate the following error:

```
ERROR IBFSService                    - setShares - opShareBasic/
opShareAdvanced to this resource denied - user:qwqadmin res:/WFC/
Repository/untitled/ReportBroker/~ownerID/distribution_list.adr
[2014-03-11 00:00:00,605] ERROR IBFSAddrBookConverter        -
Failed to share '/WFC/Repository/untitled/ReportBroker/~ownerID/
distribution_list.adr' with IBFS:/SSYS/GROUPS/EVERYONE
```

The distribution list will be migrated as a private object. To make this published:

1. Move the distribution list to a published folder.

2. Right-click on the distribution list and select the *Publish* option.

Spreadsheet Client

This section addresses the known issues for Spreadsheet Client.

❏ Populating a spreadsheet using a large Excel Add-in request (25 columns, 200K rows) does not return output.

❏ Db2 Web Query InfoAssist+, when opened from Spreadsheet Client, does not support:

❏ Excel Pivot output type

❏ Table of Contents format option

Both of these options will be disabled from Spreadsheet Client InfoAssist+ in a future release of Db2 Web Query.

National Language Support

This section addresses the known issues for National Language Support (NLS).

❏ Web Query will not start and WRKWEBQRY will show Partial status when the Reporting Server is configured for codepage 273, 278, 280, 297, 420, or 939. This is resolved in HF1.

❏ A Reporting Server configured with a Unicode code page has the following issues.

❏ InfoAssist+ reports with output to a Hold file will fail.

❏ InfoAssist+ Visualizations will not render.

❏ InfoAssist+ Esri maps will not render.

These issues are resolved in HF1.

❏ Some of the Retail Sample reports will not run in NLS or DBCS languages. This issue will be resolved in an upcoming PTF.

❏ In Turkish, running an active Flash or active PDF report in InfoAssist+ or from BI Portal generates a FOC3357 error.

Workaround: Edit the /QIBM/UserData/qwebqry/base80/client/wfc/etc/nlscfg.err file and add the following line to the end of the file:

```
ENCODING = Cp1026
```

Also, edit the /QIBM/UserData/qwebqry/ibi/srv77/wfs/etc/odin.cfg file by modifying the JSCOM3 Listener block to include an additional argument on the JVM_OPTIONS parameter, as follows:

```
;JSCOM3 Listener
NODE = JSS
BEGIN
  PROTOCOL = TCP
  CLASS = JAVASERVER
  PORT = 12335
  AWT_HEADLESS = Y
  JVM_OPTIONS = -Djava.version=1.6|-Duser.language=en
  JVM_MAX_HEAP = 512
  IBI_CLASSPATH = /home/sqljdbc40/sqljdbc.jar:/home/sqljdbc20/sqljdbc.jar
END
```

DataMigrator/Data Management Console

Important: The renaming of Application Directories in the Data Management Console is not recommended as it may result in execution failures with the contents of the Application Directory.

Metadata

This section addresses the known issues for metadata.

❏ Creating a synonym for a Query/400 file from the right-click folder Metadata Edit option does not generate the associated Web Query procedure in the repository.

Workaround: Right-click a folder and select the *Metadata New* option to create synonyms for Query/400.

Reporting Language

This section addresses the known issues for the reporting language.

Alert! XLS Files Not Opening After Applying Microsoft Security Patch MS16-088

In July 2016, Microsoft® issued a security patch (MS16-088) that prevents Excel® 2007, 2010, 2013, and 2016 from opening XLS files generated by the Web Query EXL2K and EXL2K FORMULA formats. See *Microsoft Security Bulletin MS16-088 - Critical* for details pertaining to each Office release. As described in *Microsoft Fixes or workarounds for recent issues in Excel for Windows* dated July 2016, when you previously tried to open an HTML file with an .XLS file extension from an untrusted location, Excel would warn about the mismatch between the file extension and content, but would still open the workbook without Protected View security. After the security updates, Excel no longer opens the workbook because these files are not compatible with Protected View, and there is no warning or other indication it was not opened. Excel shows a blank screen instead of a more helpful error message with information about what to do next.

On August 9, 2016, Microsoft issued updates for Microsoft Office to correct the change in behavior introduced by Microsoft July 2016 security updates (MS16-088) for certain file types to increase security. See *Microsoft Excel workbooks may not open after MS16-088 is installed* for additional information, including how to obtain the patch for your Microsoft Office version. As per Microsoft, these updates will also be published to Windows Update and the Windows Server Update Service (WSUS). These services provide files that are updated automatically, based on the Windows Update settings for the computer.

Web Query has been successfully tested with the Microsoft Office update for Excel® 2007, 2010, 2013, and 2016 to confirm XLS files generated by the Web Query EXL2K and EXL2K FORMULA formats open in protected view.

For more information, see *Microsoft Update to Resolve WebFOCUS EXL2K and EXL2K FORMULA (HTML-based) XLS Files Not Opening After Applying Microsoft Security Patch MS16-088*.

Documentation

This section addresses updates to the documentation.

❑ Online Help displays Topic Not Found. This is resolved in HF1.

Workaround: Click on the Table of Contents and navigate to the desired topic.

Browser Information

The following topics describe information for the available web and mobile browsers for Web Query 2.2.1.

Web Browsers

The following browsers are certified for Web Query and Developer Workbench.

❏ Microsoft Edge™ 40

❏ Internet Explorer® 11

❏ Google Chrome™ 61

❏ Mozilla Firefox® 56

Release 2.2.1 Notes

❏ Simple HTML Web Query reports can be viewed on any browser.

❏ Chart/Graph request notes:

  ❏ *Browser-generated graphs* refer to graphs that are rendered inside the browser using HTML5 (and JavaScript). Browser-generated graphs are utilized in both standard HTML5 output ("FORMAT JSCHART"), and in Active Technologies ("FORMAT AHTML").

  ❏ *Server-generated graphs* refer to graph requests that are generated on the Reporting Server and then embedded as a bitmap or vector image in a document or webpage. This includes the following output formats:

    ❏ Bitmap: PNG, JPG

    ❏ Vector: PDF (but not active PDF), SVG

❏ Support for presenting images and graphs in HTML, DHTML, and DHTML compound reports is provided using an image embedding facility based on the client browser. Output generated by Internet Explorer browsers or in scenarios where the browser is unknown (such as when distributed by Report Broker) supports image inclusion through the creation of a web archive file (.mht). For all other browsers, images are base64 encoded within the generated .htm file.

❏ Drill-down links do not work when using an embedded PDF viewer available in some browser versions. Refer to the browser's configuration information on how to change the Application Options settings for the relevant content types so that the browser will automatically use Adobe Reader.

❏ Adobe Reader support:

    ❏ Acrobat Reader DC is certified

    ❏ Adobe XI is supported

    ❏ Adobe X is supported

❏ If you are using Internet Explorer® 11 on a Windows® 2012 R2 OS and you attempt to run an object (such as a report or chart in InfoAssist+), Internet Explorer 11 opens it in a new window instead of targeting the object to a specific frame. For example, in InfoAssist+, the New Window Runtime opens a new browser window that shows the running image, which then replaces that page with the output. Since Internet Explorer 11 does not allow the replacement of that window, it opens a new window instead.

This browser limitation can be remedied by an administrator. For more information, see *https://social.msdn.microsoft.com/Forums/ie/en-US/a5c294e2-e407-491d-ba6a-b7f7edbcabaf/ie11-cant-post-form-data-to-specific-frame-or-window-dialog-opened-via-windowopen?forum=iewebdevelopment*

Mobile Browser Information

If you are planning to use Web Query on mobile devices, note the following regarding mobile browser support. If you will be using Web Query on the Windows operating system, see the Web Browser support information.

Note: Browsers released after the production date of a Web Query version are subject to certification.

InfoAssist+ is not supported on mobile devices.

The following devices were used in testing Web Query 2.2.1:

❏ iOS 11.0 iPad and iPhone (Latest iOS 11 iPad and iPhone is supported)

❏ iOS 10.2.1 iPad and iPhone (Latest iOS 10 iPad and iPhone is supported)

❏ iOS 9.3 iPad and iPhone

❏ AirWatch 5.9 with iOS 10

❏ Android 7.0 tablet

❏ Android 6.0 tablet and phone

❏ Mobile Faves version 3.2.1.5

Usage Considerations:

❏ Report Broker interfaces are supported on tablets.

❏ HTML reporting Table of Contents (BYTOC) feature is not supported.

❏ Viewing PDF, Excel, and PowerPoint documents may require a third-party helper app.

❏ To open active report content, JavaScript needs to be enabled in your web browser. On mobile devices, please use the Mobile Faves app. If not installed, download it from the App Store for iOS devices or from the Google Play Store for Android devices.

Legal and Third-Party Notices