

IBM Case Manager
Version 5.3.3

*Planning, Installation, and Upgrade
Guide*



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Note

Before using this information and the product it supports, read the information in "Notices" on page 211.

This edition applies to Version 5 Release 3 Modification 3 of IBM Case Manager (product number 5725-A15) and to all subsequent releases and modifications until otherwise indicated in new editions.

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Case management overview

IBM® Case Manager simplifies the job of designing and building a case management system and provides a graphical user interface for case workers to easily manage cases. With IBM Case Manager, you design a case management solution that is based on closely related cases and then deploy that solution into a production environment. Case workers can then complete work items associated with cases.

For example, if you want to design a solution for resolving credit card disputes, IBM Case Manager provides tools to quickly design and create a solution that case workers can then use to process cases in that solution.

IBM Case Manager unifies information, processes, and people by providing you with the following key functionality:

- An active-content infrastructure that manages the persisted case object model and enables content-based events for case activities. For example, the addition of a document or a field change triggers a case task.
- Enterprise content management integration that includes complete document lifecycle capabilities including versioning, security, and records management.
- True content management functionality that enables you to store document metadata that you can later modify and search on.
- A process map that manages the logic for the execution of a task.
- An out of the box user interface that is built in a flexible and easily customizable widgets-based environment that you can also extend to create a role-based client experience that provides case workers with the information they need to work on cases.
- Template-based solutions that you can easily modify and reuse.
- Rich analytics provided by IBM Watson™ Explorer Analytical Components, Case Analyzer, and IBM Case Monitor Dashboard that provide you with several ways to track and measure performance that is associated with cases and workloads so that you can optimize your cases.

The following users install, maintain, design, and use the case management system: a business analyst, a case worker, and an information technology (IT) administrator.

IT administrator

The IT administrator is responsible for installing, configuring, and maintaining the case management environment. The IT administrator also deploys solutions into a production environment.

Business analyst

The business analyst designs the case management solution, including the user interface layout.

Case worker

The case worker uses the solution to achieve the business objectives by processing work items that are associated with their role.

“System requirements” on page 10

Related concepts:

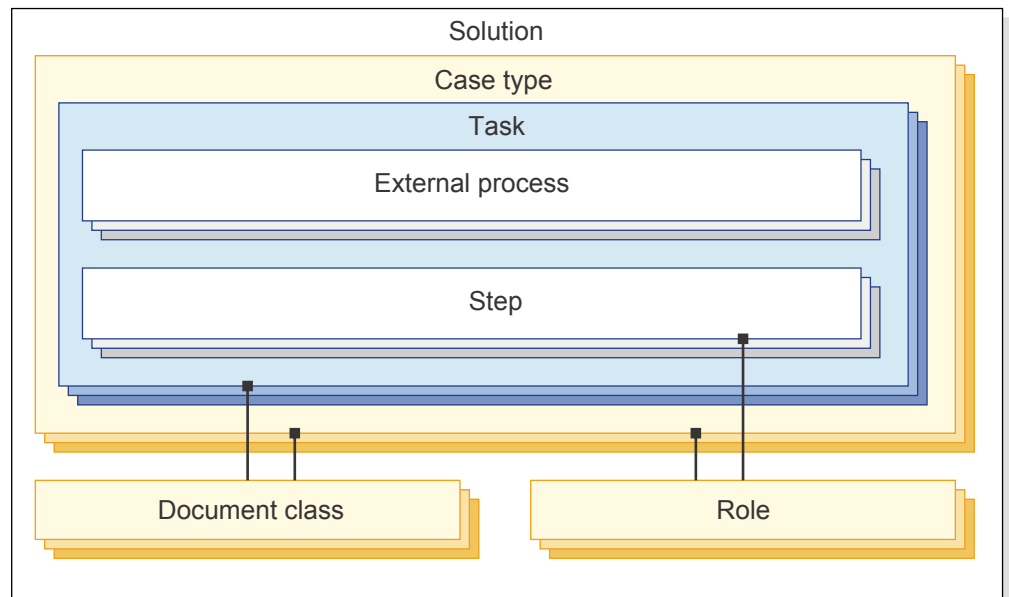
“IBM Case Manager architecture overview” on page 13

Related information:

- [Advanced case management and BPM: Better together](#)
- [Take a tour](#)

Case management solution concepts

Solutions consist of case types, tasks, steps, and other components. A solution is an application that case workers use to process cases.



Solutions

A *solution* consists of one or more related case types that provide the documents, data, business processing, and routing to the case workers. For example, a solution for a human resources department might include a case type for new hires, a case type for retirement, and a case type for employee termination.

Case types

Case types define the tasks, the necessary document types to support the task, the task steps, and the roles that must complete those steps to solve a business problem. The case type also includes properties that are displayed to case workers in views in the Case Manager Client. Case types make up a solution. A *case* is an instance of a case type.

Document classes

Document classes help you to organize and classify the documents that belong to a case. You can provide additional information about the documents by assigning properties to the document class. For example, a document class might be a job application form.

The document class maps to a document class in the Content Platform Engine, or to an item type in IBM Content Manager.

Rules A case type can contain rules. A *rule* determines the actions to take if particular conditions are met in a case. After you create business rules for your case type, you can use the business rules in a task to determine process routing or to update case properties.

Views A case type can contain views. A *view* specifies the properties that are displayed to a case worker for a case type. For each case type, you can specify the properties that are displayed for the case summary and the properties that are searchable. In addition, you can specify the one or more views for the properties that are displayed in the Properties widgets that case workers use to complete cases and work items.

Tasks A case contains tasks. A *task* has one or more steps that must be completed to complete the task. For example, a task might be to review new hire applications. A case is not complete until all tasks that are marked as required during solution design, as well as all tasks that have been started, are completed or manually disabled. Each task has roles that are associated with it.

Steps *Steps* are the actions in a process that must be completed for a task. For example, a step might be to review a job application form. Use the Case Manager Builder Step Designer to create and edit steps, assign the steps to roles or workgroups, and connect steps. You can also use Process Designer to add primary queues, add more in-baskets, and define custom roles. Or, you can use the Integration Designer from IBM Business Process Manager instead of the Step Designer, if you are integrating with IBM Business Process Manager. Case workers see steps as work items in the Case Manager Client.

Roles A *role* represents a specific business function. For example, a role might be an Applicant or Supervisor. You assign users to roles. You use roles to access a particular task.

You define roles for the entire solution. You then associate roles with tasks. You assign users and groups to roles in the Case Manager Client to specify which users can access a particular task or step. Because you define roles for the solution, you can reuse those roles across all case types when you design the solution. When you create tasks or steps, you can assign roles to the task or step from roles that are already defined for the solution, or you can create a new role for the solution.

Pages A page contains the widgets that users of the solution application use to complete an activity. A page consists of a layout, widget configurations, and the flow of events between widgets.

Case Manager Builder includes a set of pages that you can use in your solution. You can customize these pages to meet the requirements of your solution. You can use these pages as templates to create additional pages to provide customized views for different roles, case types, and tasks.

In-baskets

Each solution has a personal *in-basket* that contains steps (work items in the Case Manager Client) for tasks that are assigned to a specific user. The personal in-basket differs from the role in-basket. The role in-basket contains work items that are assigned to a role, but not to a specific person. Work items in a role in-basket can be accepted by any user to work on. For example, you might have a personal in-basket named My Tasks that displays only the tasks assigned to you in the Case Manager Client. But, you can switch to the Supervisor Tasks in-basket to see any task assigned to that role. Anyone that is assigned to that role can work on those tasks.

Scenario: Financial services credit card dispute resolution

IBM Case Manager can provide card-issuing banks with a case management solution for credit card dispute resolution. IBM Case Manager provides a comprehensive view of the case for the case workers, improves case worker efficiency, and reduces the chance for errors as the case is being processed.

Problem

Banks that issue credit cards are seeing a significant increase in dispute cases. In addition, regulatory reform and an increased focus on customer satisfaction put more pressure on banks to handle each case as efficiently as possible. The banks require a solution that enables them to process each incoming dispute and decide whether to forward it to the credit card company for chargeback.

Credit card companies have strict requirements for how cases can be submitted. The bank solution must provide accurate and appropriate information to the credit card company to ensure efficient processing.

Solution

A business analyst at the bank, Anna, studies the requirements of the credit card company's dispute process. She determines the types of information that the credit card company requires to process a dispute. Anna uses the IBM Case Manager tools to quickly design and create a solution that helps the bank representatives capture all of the required information in a case and attach additional records and documents to the case. Anna determines what roles must be involved in processing dispute and fraud cases, and she assigns permissions to different groups based on those roles.

Scenario

Jane, a credit card customer of the bank, buys a table from an online merchant for \$400. The table is not delivered within three weeks as the merchant promised. Jane sends email and calls the merchant. However, no one responds. Because she used her credit card for the transaction, Jane calls the bank for help.

Jane enters her account information by using the automated phone system. As a result, her call is routed to Nicole, a senior customer service representative. When Jane explains the situation, Nicole opens a case to track the dispute. She finds the purchase transaction for the table from Jane's account and adds the record to the new case. Nicole forwards the call and the case to a dispute agent, Frank.

During his conversation with Jane, Frank enters data into the case by using a form that captures details about the transaction, the merchant, and the customer. When Jane says that she can provide a copy of the receipt and delivery agreement, Frank creates a task in the case to follow up on requesting the document. Frank tells Jane that he will investigate further, and adds Jane's preferred contact method to the case. When the call ends, a recording of the call is automatically added to the case as a document.

Frank uses Case Manager Client as an interface. This interface is customized to Frank's job as a case worker. The interface provides a comprehensive view of the case, the tools to review details of the case, and the ability to take actions based on his findings. After some research, Frank discovers that the merchant has gone out of business. He adds a comment to the case about this discovery. Frank is notified

that the online receipt and delivery agreement have arrived from Jane. These documents automatically get added to the case and are available for Frank to review.

Frank decides to process a chargeback against the merchant. He starts a task that gathers the relevant details of the case, formulates the chargeback request, validates that the information is correct and complete, and forwards it to the credit card company. Frank also creates a task in the case for his supervisor Richard to review the case and determine whether any action must be taken based on the fact that the merchant is no longer in business.

Frank's supervisor Richard reviews the case. He notices Frank's comment that the merchant has gone out of business. He uses the IBM Case Manager case analytics tool to search for cases against the merchant to determine whether other customers are affected. He also analyzes recent transactions involving the merchant to determine the bank's level of exposure.

Based on this analysis, Richard decides to set up a subteam to handle any disputes involving this merchant. He sends a change request to Anna, the business analyst, to modify the solution to incorporate this new team. From his Case Manager Client environment, Richard requests that a letter be sent to affected customers to inform them of their dispute rights. Richard also sends an alert to his team of advisors to inform them of the situation. He then completes his review of the case.

Anna receives Richard's change request. To satisfy the new requirement, Anna designs a new role for the subteam in the solution and adds a new rule. When customers call with disputes that involve this merchant, the new rule routes the disputes to the new team. By using the IBM Case Manager tools, Anna can implement the changes in a few minutes. She can then easily test the solution changes before deploying them to the production system.

Because the credit card company implemented an efficient case management process, Jane's and other customer's requests can be more quickly resolved.

Scenario: Automobile insurance claims

IBM Case Manager provides a sample solution for creating and managing automobile insurance claims. With the case management system, you can associate the data about the claim and the submitter with the supporting documentation as it is submitted. The business analyst can quickly process any required changes to the automobile claim solution. By configuring a solution in IBM Case Manager, you can ensure that claims are processed completely and accurately.

Problem

Automobile insurance claims can involve input and supporting documentation from many sources, including the claim submitter, the repair shop, the police, and other official sources of information about vehicle value or road conditions. In addition, different analysts are often required to evaluate and add information to an insurance claim during processing. All documentation and claim information must be available and easily accessible to enable adjusters to properly evaluate and resolve the claim.

Individual claims can vary greatly. This variability can require case workers to start discretionary processes, to involve new roles, and to change how and when tasks are completed as the claim is routed through the organization.

Solution

Javier, a business analyst at the automobile insurance company, is working on making the automobile claims process more consistent. Javier uses Case Manager Builder to design a solution with tasks that involve multiple steps. He creates roles for each step in the claims process, and assigns permission to the roles for the groups of employees who perform the tasks at each stage in the process.

The solution that Javier designs combines the following elements:

- Claim properties, such as policy number and accident details
- Roles, such as claims adjustor or fraud investigator
- Case types, such as general claims, claims with injury, or major loss claims.

In addition, Case Manager Builder enables Javier to create a flexible solution. He can quickly change roles, processing, or add tasks when they are needed. He can also use business rules to automatically update claim properties, such as to calculate a new premium after a claim is filed.

Scenario

Carly is driving on a roadway when her car strikes a large object. Although she is not hurt, her car is too damaged to drive. The police arrive, and a tow truck is dispatched. When Carly calls her insurance company, customer service representative Chris opens a case for her claim. He uses a First Notice of Loss (FNOL) form to record the information. When he enters her home phone number, many of the form fields are automatically populated with her data that is retrieved from the system.

Chris asks about her location, and tells her to have the tow truck driver take her damaged car to a specific nearby repair shop. The case information is forwarded to the car repair shop. Chris tells Carly how to use a PDF form that is available on the insurance company's website to provide details about the accident. He gives her the case number that was generated when he opened her case. She will include the case number on the form.

Chris recalls a memorandum about recent fraudulent claims involving collisions with roadway debris. He creates a discretionary task to involve a fraud investigator in the claim.

Later, Carly downloads the PDF form from the insurance company's website and enters the accident details and the case number. She mails the form back to the insurance company. Javier is using IBM Datacap to automatically scan and index the form into the case. Because this action is set as a precondition on Chris's task to review the claim, he is notified when the form is added to the case. Also, on the company website, Carly uses her case number to access a tool for uploading photographs of her damaged car.

John, the agent at the car repair shop, receives notification about the case. He creates a task to provide an estimate for repairs. John makes sure that the \$4500 estimate for repair does not exceed the value of the car and submits the estimate to the insurance company. He uses Carly's contact information to let her know that the estimate was submitted.

The case is routed to Lisa, an adjustor. She reviews the case and the supporting documents, including the police report and the photographs of the damage. The

estimate is below the threshold for investigation, and the fraud investigator has set the flag for possible fraud to false. Lisa approves the claim.

After the claim is approved, a task is triggered to automatically calculate the new premium for Carly. The new premium is calculated according to a business rule that evaluates whether the accident was caused by negligence, the number and severity of any other claims that Carly filed during the last few years, and the type of policy.

After the case is closed, the insurance company receives a report from the police that a freight company was charged with dropping the object that caused Carly's accident. Lisa reopens Carly's case. She contacts Javier, who adds a new role to the system called recovery expert. The recovery expert creates new tasks to attempt to reclaim the cost of the repairs from the freight company.

Because of the flexibility of this case management system, case workers can resolve problems more quickly and efficiently, and customers can close their claims more easily.

Case Manager Builder

The Case Manager Builder is a web-based tool for business analysts to design and develop a solution and the artifacts that make up cases in that solution. Optionally, business analysts can use a wizard in Case Manager Builder to guide them through creating a solution, or they can create the solution components manually and in any order. After the solution is initially defined, multiple business analysts can collaborate and contribute to the solution creation and refinement. For example, while one business analyst designs case types, case properties, and tasks with corresponding workflows for case workers to process, another can define business rules for automated decision making.

Case Manager Client

The Case Manager Client is a web-based application for case workers to complete their work for each case. Before the Case Manager Client is deployed into production so that case workers can access it, business analysts can modify the application to customize it.

The Case Manager Client is a widgets application with a set of pages that are configured to work together, enabling case workers to manage cases and process work items. A business analyst designs the views and in-baskets for the Case Manager Client in the Case Manager Builder. Business analysts can use the provided pages and widgets, or they can further customize the Case Manager Client by adding additional pages or widgets.

IBM Case Manager configuration tool

The IBM Case Manager configuration tool is used to configure Case Manager Builder, Case Manager Client, and integration points with other optional components. Based on the values that you specify, the configuration tool configures the environment and deploys the applications.

Related concepts:

“Planning your development and production environments” on page 22

“Planning for IBM Case Manager installation” on page 28

IBM Case Manager administration client

The IBM Case Manager administration client is a web-based application that is used to administer your case management system. Administrators can access wizards to work with solutions, manage project areas, configure security and auditing, and migrate case management components from one environment to another.

Related tasks:

Setting up project areas

➞ Setting up target environments

➞ Preparing a database for the case history store

Related information:

➞ Configuring security by using the IBM Case Manager administration client wizard

➞ Importing IBM Case Manager assets

Case health analysis

IBM Case Manager monitors case health by analyzing the due dates for quick tasks, deadlines for work items, and duration of case stages. IBM Case Manager then displays health indicators so that a case worker can quickly see if a case is in good health. If the case is not in good health, the case worker can view details as to why.

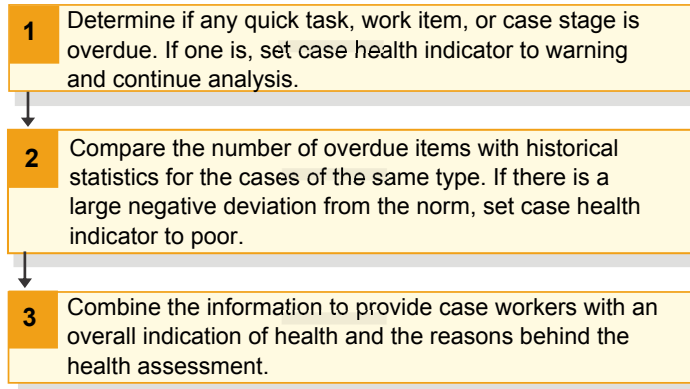
Enabling case health analysis

In the IBM Case Manager configuration tool, run the Configure the Case Management Object Stores task for the target object stores in your V5.3.3 environment to enable case health analysis. To view the case health indicators for existing solutions in Case Manager Client, you must configure the Case Toolbar widget and the Case List widget.

How is case health determined?



For a case that has stages, Case Manager Client first calculates the expected time frame for case completion based on the aggregate duration of the stages. Case Manager Client then compares the time that is already spent on the case to the expected duration. If the case cannot be completed within the expected time frame, the case health is always set to poor.

If the case can be completed within the expected time frame, Case Manager Client continues the health analysis as shown in the following diagram:



For historical case health analysis, IBM Case Manager requires that the aggregate data for a case type includes statistical data from a large number of completed cases. IBM Case Manager does not perform the historical analysis until enough historical data is available.

Related information:

-  [Case List widget](#)
-  [Case Toolbar widget](#)

What's new in IBM Case Manager, V5.3.3

IBM Case Manager, V5.3.3 provides new features and other enhancements.

IBM Case Manager is now available as part of IBM Business Automation Workflow

IBM Case Manager is now available as part of IBM Business Automation Workflow. This offering combines case management and process management to unite information, process, and users, thus giving you a 360-degree view of your organization's work. In addition to process management and case management, IBM Business Automation Workflow uses advanced analytics, business rules, and collaboration to drive more successful, optimized business outcomes.

If you do not want to move up to IBM Business Automation Workflow, IBM Case Manager is still available as a stand-alone product for upgrades.

Viewing an IBM Business Process Manager (BPM) process from Case Manager Builder

When you create a case task based on an existing process, you can now get to that process in IBM Process Designer. After you create a task from an existing process, you can click the **Open Web Process Designer** icon to edit the process in Process Designer.

To change an existing process or add a new process, you must open the process from IBM Process Center, update or create the process, create a snapshot, and make that snapshot the default. To view any new processes in Add Task dialog box, click **Refresh** on the Select Process page.

Access to the IBM Business Process Manager Work Dashboard from Case Manager Client

You can now easily access the IBM Process Portal Work dashboard from Case Manager Client by adding the IBM Business Automation Workflow plug-in to your IBM Content Navigator desktop. You can then view your Work dashboard tasks in a desktop, claim the tasks, and work on them just as you do in Process Portal.

When the IBM Business Automation Workflow plug-in and IBM BPM V8.6.0 CF2018.03 are installed, the **Workflow > Launch Process** action is added to the **Action** menu and pop-up menu in the Browse view, which you can configure to display in your IBM Case Manager desktop. You can use this action to launch an IBM BPM process from a document. You can also add the **Launch Process** action to the menu in the Documents view for the Case Information widget.

Business object properties now included in a case package PDF file

The values for a property that is defined as type Business Object are now listed in the case package PDF file along with the other case properties.

Enhanced font formatting options in Properties View Designer

Properties View Designer provides enhanced formatting options that you can use for labels and property values in a view. In addition to selecting the font size, you can now specify the font color.

Fixes that are included in this version

For a list of the fixes that are included in this version, see [Fixes that are included in IBM Case Manager, Version 5.3.3](#).

System requirements

Use the Software Product Compatibility Reports page to generate a report for supported operating systems, related software, hypervisors, hardware requirements, and detailed system requirements, including component-level details. You can also get support information related to product translations and product end of service.

Go to the page at Software Product Compatibility Reports to create a high-level report for operating systems, related software, hypervisors, and supported translations for IBM Case Manager. You can also create an in-depth report to get detailed IBM Case Manager system requirements, hardware requirements, and end of service information. You can search for IBM Case Manager in all of the report types and reports are generated based on your query values.

The following report types are the most commonly generated reports from software product compatibility reports:

Detailed system requirements

When you select your product version for the detailed system requirements report, you can set a report filter for **Operating system platforms**, **Product components**, and **Capabilities**, including prerequisites and support software. After you view the report, you can save it as a URL to generate anytime or download it as a PDF.

Hardware requirements

When you select your product version for the hardware requirements report, you can set a report filter by the **Operating system families** option. Set the operating system filter by selecting some or all of the operating systems that are supported by your product. After you view the report, you can save it as a URL to generate anytime or download it as a PDF.

Translations

You can search for the list of available translations by a specific product or for a list of products that are translated into a specific language. For example, when you select **Translations available for a specific product** and enter the product and version, you can see a list of the available translations for that product version. After you view the report, you can save it as a URL to generate anytime or download it as a PDF.

End of service

The end of service report shows the service window of the products that you specify over an eight-year span. For example, you can find out when your product is scheduled to go out of service.

Planning your case management system

You must plan your environment and business needs before you install IBM Case Manager. For example, you must prepare your environment by installing prerequisite software and configuring users and groups. Your business analyst must identify the items and processes that apply to your business cases that you want to automate and manage.

About this task

Thorough planning of your IBM Case Manager requirements and usage parameters can make the installation, configuration, and use of your application more efficient and effective.

IBM Case Manager architecture overview

You can install IBM Case Manager on either a single system that FileNet® P8 is also installed on or in a distributed environment where IBM Case Manager is on a separate system than FileNet P8.

IBM Case Manager is deployed in an application server, and uses FileNet P8 to access and store content and solution assets. The IBM Case Manager administration client and Case Manager Client work in the IBM Content Navigator user interface (UI) framework. The lightweight directory access protocol (LDAP) is used for user access and authorization.

Typically, the business analyst designs, builds, and tests a solution in the development environment. When the solution is ready to be deployed to production, the solution is migrated to the production environment, which should be in a separate FileNet P8 domain.

You use the IBM Case Manager administration client to migrate your solutions from domain to domain. If your solutions contain non-case management assets, you must use FileNet Deployment Manager and other tools to move the additional assets.

The Case Manager Client serves as the user interface that case workers use to complete cases for the solution.

Users access Case Manager Builder, the IBM Case Manager administration client, and Case Manager Client from a web browser.

IBM Case Manager can also integrate with IBM Business Process Manager to complete case tasks and IBM Cognos® Real-time Monitoring or IBM Watson Explorer Analytical Components to create active and historical analytic dashboards for your case management.

Single-system architecture

You can install all of the components, including product prerequisites such as FileNet P8, Db2®, and WebSphere® Application Server, on the same system.

The single-system architecture for IBM Case Manager is ideal for development environments, demonstration environments, or production environments for small businesses that do not require high availability and disaster recovery. When you use a single-system architecture for a production environment, Content Platform Engine should be in a separate application server profile from the application server profile that contains IBM Case Manager and the IBM Content Navigator UI framework.

The following graphic shows the typical architecture of IBM Case Manager on a single server.

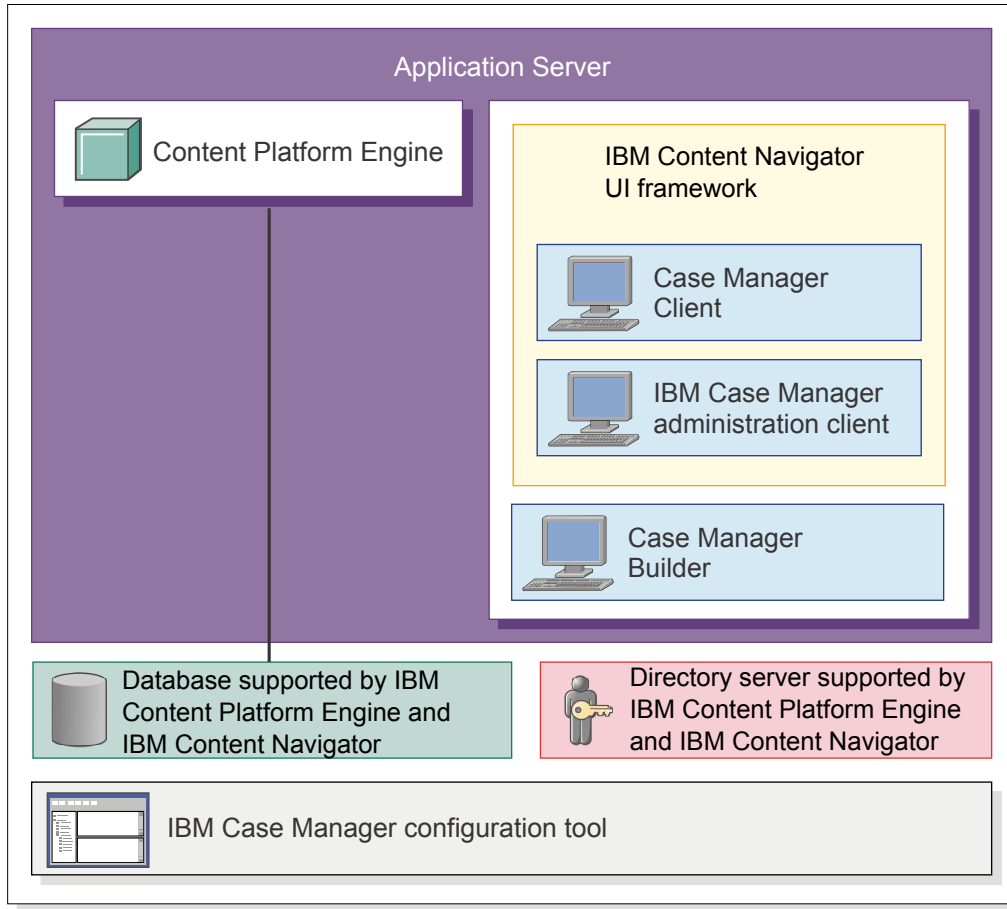


Figure 1. Single-system architecture

Distributed system architecture

You can also install IBM Case Manager in a distributed architecture where IBM Case Manager is installed on a separate system from FileNet P8. The IBM Case Manager installation program installs Case Manager Builder, Case Manager Client, the IBM Case Manager configuration tool, the IBM Case Manager administration client, and the IBM Case Manager API.

For a distributed system architecture, IBM Case Manager can use either Db2, Oracle, or SQL Server as the database and any LDAP server that FileNet P8 supports.

The following graphic shows the typical architecture of IBM Case Manager in a distributed development environment and the features that IBM Case Manager can integrate with.

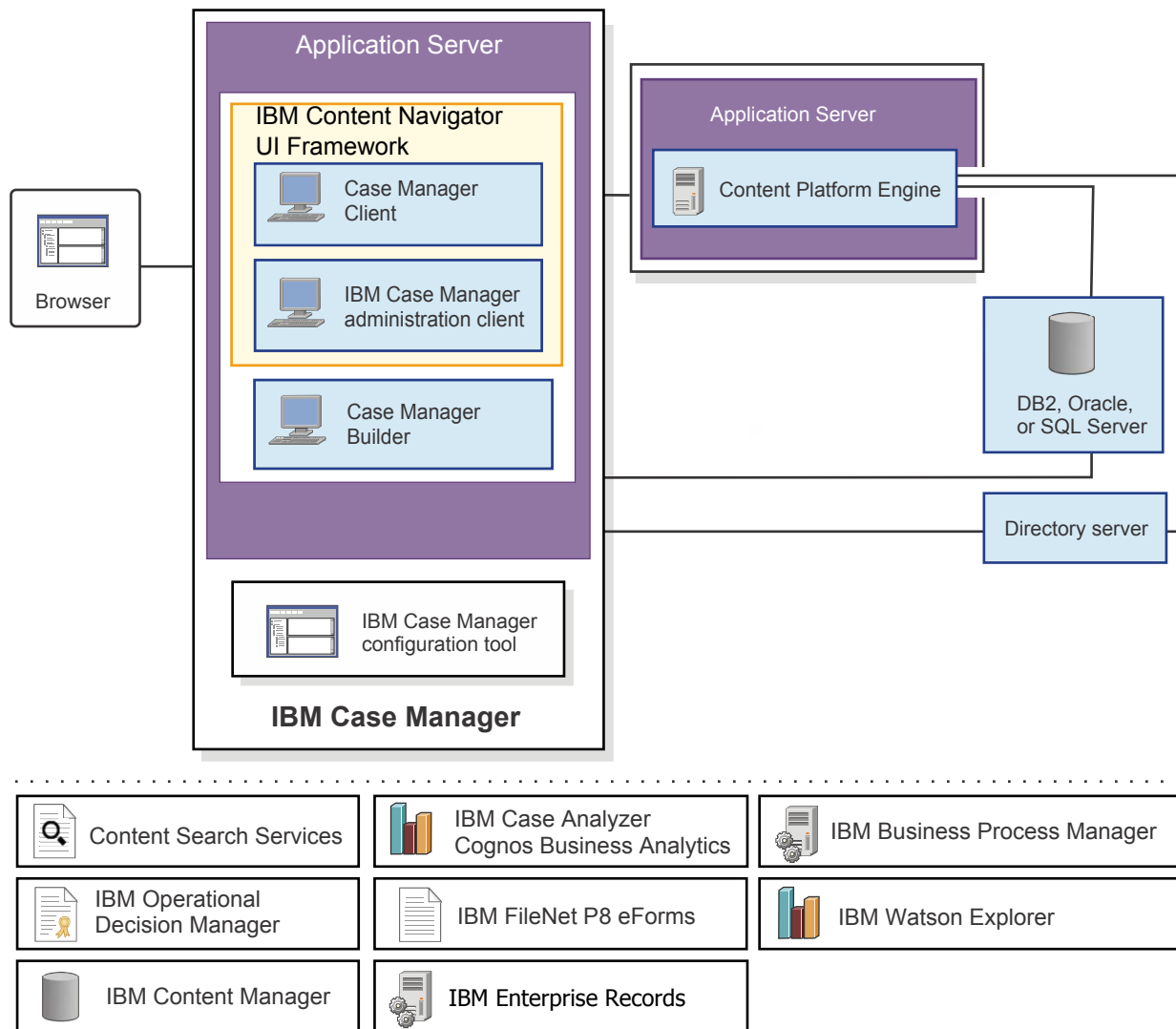


Figure 2. Distributed system architecture

When you configure FileNet P8 to work with IBM Case Manager, you must configure each target object store to work with a single workflow region, and the workflow region must point to a single target object store.

Related concepts:

“Planning your development and production environments” on page 22

“Planning for IBM Case Manager installation” on page 28

“Case management overview” on page 1

Prerequisites

When you plan for your IBM Case Manager installation, you must consider hardware and software compatibility for the IBM Case Manager server. Because IBM Case Manager works with many other software applications, you must also consider which applications to include in your system, and the compatibility requirements for all applications.

For details about the hardware and software requirements, see “System requirements” on page 10.

Planning for IBM Case Manager security

You manage the security for IBM Case Manager with users and groups that you configure in your Lightweight Directory Access Protocol (LDAP) repository and apply throughout the system. You must plan for different groups of users and different permission levels for your design environment and your production environment.

If possible, decide which users and groups to configure before you install your prerequisite software. If you are installing IBM Case Manager with an existing IBM FileNet P8 environment, plan and add your users and groups before you configure the IBM FileNet P8 system to work with IBM Case Manager.

Important: It is a best practice to create a case management *master group* to use for assigning access to object stores at the time that you create the object store. Give this group Use object store permission. With this method, you can grant new users access to the object store by adding them to the master group. This approach can prevent issues with changing security on an established object store.

You can use users and groups that exist in your directory server for IBM Case Manager permissions. You can also create new users and groups.

For the development environment, you configure users and groups to create, test, and administer solutions. For the production environment, you configure users and groups that correspond with different case worker roles.

Restriction: To prevent problems when Active Directory users log in, use the same full name, samAccountName, and display name when you create users.

“Planning for single sign-on (SSO)”

“Planning for security in the development environment” on page 17

“Planning for security in the production environment” on page 21

Related tasks:

“Configuring Active Directory user accounts in WebSphere Application Server” on page 55

Related information:

 Configuring security by using the IBM Case Manager administration client wizard

Planning for single sign-on (SSO)

You can configure single sign-on for IBM Case Manager with IBM Security Access Manager, CA eTrust SiteMinder, Kerberos SPNEGO, or SAML.

Review the single sign-on documentation before you install IBM Case Manager. In most cases, you install and configure FileNet P8 Platform and IBM Case Manager before you set up the SSO configuration. However, some steps in the configuration can vary if you are configuring SSO later.

For details, see [Configuring single sign-on security](#).

Planning for security in the development environment

In the development environment, you assign permissions to users and groups for designing, testing, and administering solutions. Business analysts design and test solutions. Solution administrators manage the solution environment, including copying solutions and resetting test environments.

Important: It is a best practice to create a case management *master group* to use for assigning access to object stores at the time that you create the object store. Give this group Use object store permission. With this method, you can grant new users access to the object store by adding them to the master group. This approach can prevent issues with changing security on an established object store.

The permissions for the users who design, administer, and manage the case management solutions must cover two basic roles: solution designers, or business analysts, and solution administrators. The following table shows sample groups for users who are designing and administering solutions.

Table 1. Sample groups for business analysts and solution administrators

Group	Description
Business analysts	<p>Responsible for designing solutions in Case Manager Builder and user interface applications in Case Manager Client. Business analysts work in a development environment to develop and test solutions. Business analysts need access to objects in the design object store in order to create solutions, edit solutions, and create the pages for the client application.</p> <p>Business analysts must have access to objects in the case management design object store to create and edit solutions, and create client application pages. Business analysts must have access to a case process configuration and workflow definitions of a solution.</p> <p>Business analysts must also have access to IBM Content Navigator so that they can start Process Designer and extend a case activity with advanced Content Platform Engine workflow functions.</p> <p>Business analysts require permission to log in to the default IBM Content Navigator desktop. When IBM Content Navigator is installed, the IBM Content Navigator administration desktop with the ID <i>admin</i> is set as the default. When IBM Case Manager is configured, the default desktop is changed to the default IBM Case Manager desktop with the ID <i>icm</i>. If you do not change this configuration, business analysts have the appropriate access to use the Page Designer application. If you add security restrictions to the desktop, you must ensure that business analysts can log in to the <i>icm</i> desktop under those security restrictions. If you change the default desktop, ensure that the business analysts can log in to the updated default desktop. For example, if you change the default desktop back to the IBM Content Navigator <i>admin</i> desktop, then the business analysts must be granted IBM Content Navigator administrator access.</p>

Table 1. Sample groups for business analysts and solution administrators (continued)

Group	Description
Solution administrators	<p>Responsible for managing project areas, copying and deploying solutions, and promoting solutions to templates. The user that you specify in the IBM Case Manager configuration tool as the Content Platform Engine domain user must have the permissions that are specified for this group.</p> <p>Solution administrators control any management or destructive aspects of solutions. For example, solution administrators can delete a solution along with all its artifacts. You can also grant this role permission to reinitialize the case management development environment, which results in the removal of all solutions that are deployed within the development environment. To delete cases and reset the development environment, solution administrators must have GCD domain administrator rights, administrator rights on the target object store, and workflow system Configuration group rights.</p>

If the object store is created without the #AUTHENTICATED-USERS internal group, a case management master group, or other required user or administrative groups being added to the Object Store Create Wizard, access issues can occur. Business analysts or solution administrators that are members of other groups that were not added when the object store was created will not be able to perform their duties without extensive, supplemental security configuration. This approach applies to both the design object store and any target object stores that are created to support the default and additional project areas. Whether you plan to create new groups or designate existing groups, you must ensure that you grant these groups or roles the following permissions:

Table 2. Business analyst group permissions

For this component	Configure these permissions
Design object store	<p>In the New Object Store wizard, configure users and groups who have basic non-administrative access. The IBM Case Manager administration client automatically grants the following rights when a user or group is added to a project area:</p> <ul style="list-style-type: none"> • AccessLevel.MAJOR_VERSION_DOCUMENT_AS_INT • AccessLevel.WRITE_FOLDER_AS_INT • AccessRight.WRITE_ACL_AS_IN • Major Versioning level plus Publish, Modify Permissions, and Create subfolder (Inherit Only) rights for this object and all children • Delete for all children, but not this object • For the Solutions folder, View Properties plus the right Create subfolder for all authenticated users
Target object store	<p>For the target object store that is referenced by the Project Area where this business analyst is assigned, give the business analyst's security group Administrators rights in the New Object Store wizard or in the Security Script wizard.</p>

Table 2. Business analyst group permissions (continued)

For this component	Configure these permissions
IBM FileNet P8 Domain GCD	The business analyst's security group also requires Global Configuration Domain (GCD) administrator rights. This role is referred to as the IBM FileNet P8 Administrator in IBM FileNet P8 documentation.
Content Platform Engine	Add the business analyst's security group to the workflow system Configuration group to enable deployment, which requires creation of rosters, queues, applications spaces, and roles. If a business analyst must run Process Administrator in order to update work items, then also add the business analyst group to the workflow system Administrator group. Tip: If you do not assign users or groups to your queues and rosters, then all users automatically have all rights to the rosters and queues. This level might be appropriate in your development environment.
Process Designer	Business analysts require permissions to open the Process Designer application from Case Manager Builder. Configure permissions by using IBM FileNet Workplace XT: <ol style="list-style-type: none"> 1. On the Tools menu, click Administration > Site Preferences. 2. Under Workplace Preferences in the left pane, click Access Roles. 3. Under the PWDesigner access role, click Add new members. 4. On the Select Users/Groups pane, select Groups, enter #AUTH in the Starts with box, and click Search. 5. Click Accept.

Table 3. Solution administrator group permissions

For this component	Configure these permissions
Design object store	In the New Object Store wizard or in the Security Script Wizard, configure the solution administrator's security group as an Administrator.
Target object store	For the target object stores, give the solution administrator's security group Administrator rights in the New Object Store wizard or in the Security Script wizard.
IBM FileNet P8 Domain GCD	The solution administrator's security group also requires Global Configuration Domain (GCD) administrator rights. This role is referred to as the IBM FileNet P8 Administrator in IBM FileNet P8 documentation.
Content Platform Engine	Add the group to the workflow system Configuration groups rights to enable deployment, which requires creation of rosters, queues, applications spaces, and roles. Tip: If you do not assign users or groups to your queues and rosters, then all users automatically have Process Administrator rights. This level might be appropriate in your development environment.

To thoroughly test the solution design before you move the solution to a production environment, you must create test users who are similar to the production environment users. The business analysts can log in by using the test

case user accounts to verify the solution design. Each application and each customer environment has its own set of groups that are appropriate for assigning case access. For the sake of illustration, the following examples define four groups for case workers for testing a solution design:

Table 4. Sample groups of case workers for testing a solution in the development environment

Group	Description
Test case viewers	Have only read-only access to cases.
Test case initiators	Create new cases. They might also be able to view case properties. For some applications, this group might be a superset of case workers, or might be combined with case workers.
Test case workers	View and update cases and case-related objects. They cannot create cases, delete cases, or change the permission or the owner of case-related objects.
Test case administrators	Control all case-related objects, including case folders, subfolders, comments, and tasks. Can view the list of roles for a solution for reassigning work only if the group has access to the application space in Content Platform Engine. This group does not necessarily have full control of documents that are associated with a case.

Tip: Case viewers, case initiators, case workers, and case administrators can all create or remove relationships between cases even if they do not have write permission on the case folders. The request to create or remove the relationship between cases can succeed even if the user has only read permission on the folders.

Planning for security in the production environment

In the production environment, you assign permissions to users and groups for working with your completed IBM Case Manager solution. These users and groups perform the different roles that you specify in your solution, such as case workers and case administrators.

If you must set security on an individual case solution, you can use the security tools that are included with FileNet P8 components to adjust the security settings of a solution.

Solution administrators are responsible for importing and deploying solutions. Solution administrators also manage post-deployment tasks such as assigning security to the deployed solution. The users that act as solution administrators and the groups that are used to manage them must have GCD domain administrator rights, administrator rights on the target object store, and Content Platform Engine process services group rights.

Solution administrators are also involved with defining and applying security and audit definition configurations. In some organizations this process might be in collaboration with the business analyst or solution developer who designed the solution. In that situation, consider adding those users to the solution administrators group or create another group to represent those users.

It is a best practice to create a case management master group to use for assigning access to object stores at the time that you create the object store. Give this group Use object store permission. With this method, you can grant new users access to the object store by adding them to the master group. This approach can prevent issues with changing security on an established object store.

In a production environment, you configure security to permit or limit access to cases and case objects. You configure security in the Content Platform Engine.

Content Platform Engine

When you configure case management security in Content Platform Engine, you set permissions for users who can create cases, users who can add or change tasks, and users who have full control and ownership over cases.

Content Platform Engine process services

Security in the process services component of Content Platform Engine controls access to queues, rosters, and the application space. Queues and rosters control workflows and work items. The application space provides a list of all the roles in the application space and the members for any role.

Each application and each customer environment has its own set of groups that are appropriate for assigning case access. For example, the following configuration defines four groups of case workers:

Table 5. Sample groups of case workers

Group	Description
Case viewers	Has only read-only access to a case.
Case initiators	Creates new cases. They might also be able to view case properties. For some applications, this group might be a superset of case workers, or might be combined with case workers.
Case workers	Views and updates cases and case-related objects. They cannot create cases, delete cases, or change the permission or the owner of case-related objects.
Case administrators	Control all case-related objects, including case folders, subfolders, comments, and tasks. Can view the list of roles for a solution for reassigning work only if the group has access to the application space in Content Platform Engine. This group does not necessarily have full control of documents that are associated with a case.

Tip: Case viewers, case initiators, case workers, and case administrators can all create and remove relationships between cases even if they do not have write permission on the case folders. The request to create or remove the relationship between cases can succeed even if the user has only read permission on the folders.

Planning your development and production environments

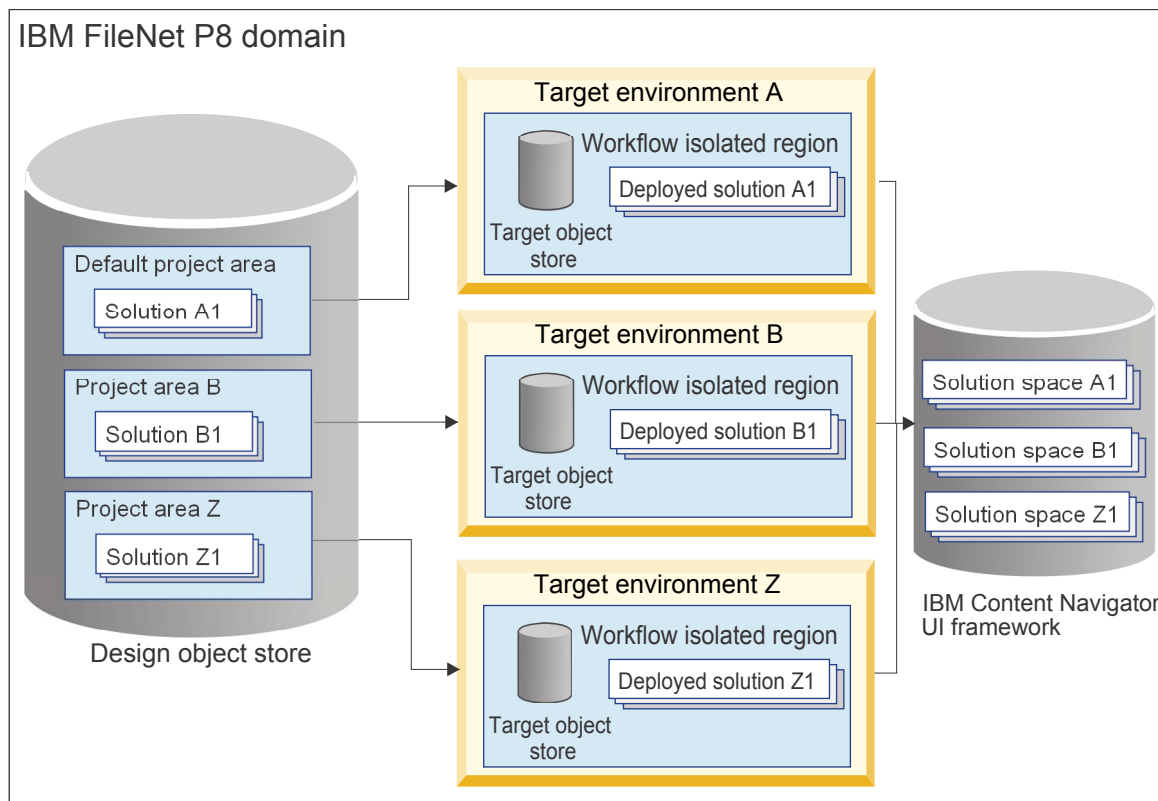
The case management environment consists of a development environment for creating and initially testing solutions, a test environment for fully testing the solutions, and a production environment where users work on active and archived cases. All of the environments include FileNet P8 object stores and databases for

storing solution data. In addition, environments include a file system at the IBM Case Manager tier for storing pages, views, and resources, and a file system at the FileNet P8 tier for storing rulesets, if applicable.

Development environment

The development environment is typically in a dedicated FileNet P8 domain and includes a design object store where solutions are stored. You use Case Manager Builder to define solutions, which are then saved and versioned in the design object store. After you design a solution, you deploy the solutions into a target environment, and then you can use Case Manager Client to do basic functional testing of your solution and to customize the user interface.

In addition, the development environment uses project areas in the design object store to isolate the effects of resetting the test environment. Each project areas has its own target object store and Process Engine region.

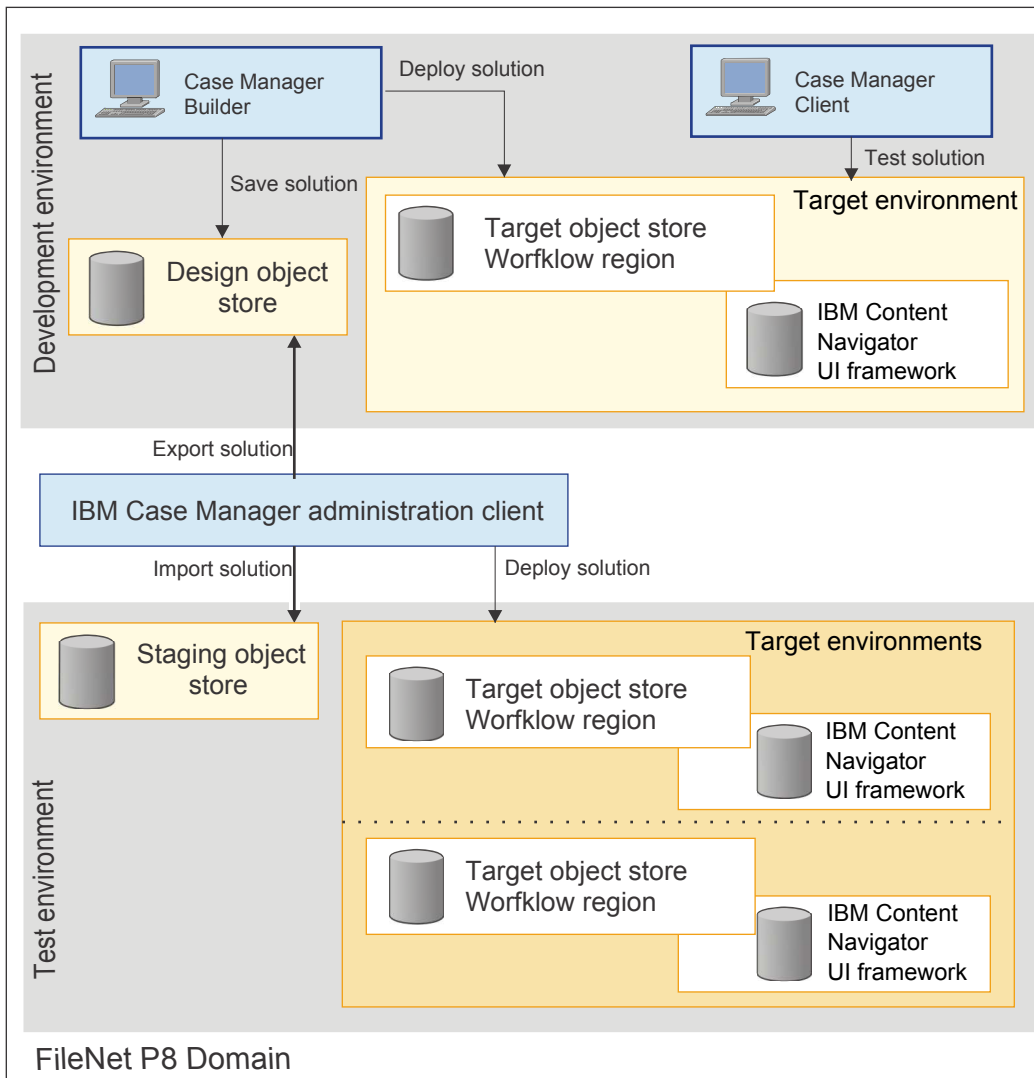


Test environment

The test environment is for testing the solutions that were created in the development environment. You might have multiple test environments, for example a performance testing environment and a pre-production testing environment.

Your test environment can be in a different FileNet P8 domain or in the same FileNet P8 domain as the development environment, but with a different set of object stores to use for the staging and target object stores. There are no project areas used in the test environment. Solutions built in the development

environment are imported into the test environment.

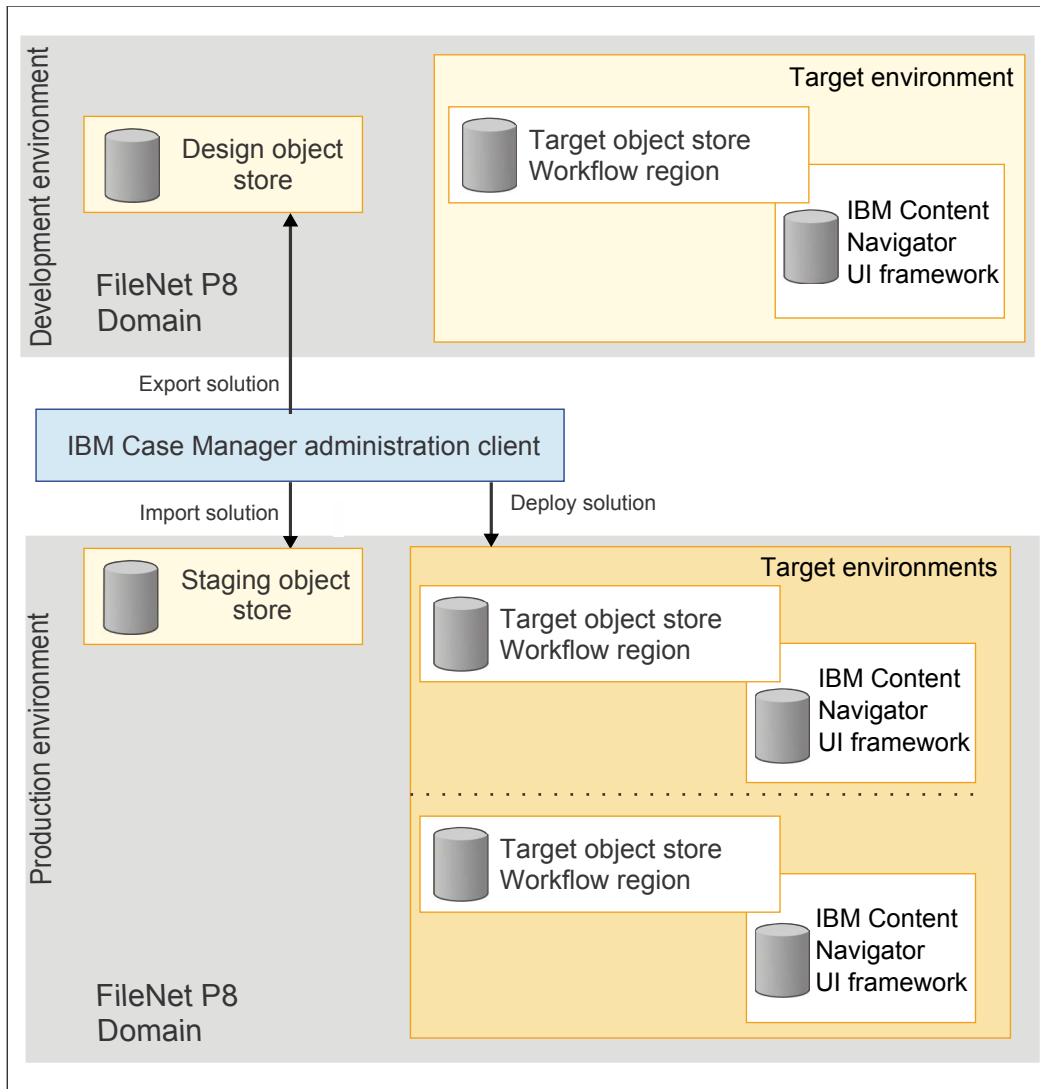


FileNet Deployment Manager and other tools are used to migrate assets that are not managed by IBM Case Manager tools.

Production environment

The production environment is where your solution is deployed into production for case workers to process cases.

Your production environment is in a different FileNet P8 domain. In your production environment, you need a single staging object store where solutions are imported to and deployed from. You also need target environments to deploy your solutions to. You can deploy many solutions into a single target environment. Ensure that you have enough system resources for the number of cases that you anticipate having in each database.



FileNet Deployment Manager can be used to move any assets that are not created in IBM Case Manager between the FileNet P8 object stores in the production environment.

Required databases and object stores

Before you install and configure your case management system, you must plan and prepare the required databases and object stores for your development, test, and production environments.

Remember: If you are using IBM Content Manager as your document repository, you must also prepare the IBM Content Manager environment.

Your case management system requires the following databases and object stores for each environment:

- The FileNet P8 Global Configuration Data (GCD) database for each FileNet P8 domain.
- The database for the case management design object store.

- The databases for the target environments. A target environment consists of one target object store and its associated workflow system. The target object store and its associated workflow system are collocated in the target environment database. You can have multiple target environments in a test and production domain.
- A case history store to record extended case history data.
- A database for IBM Content Navigator.

You can create new object stores to use with IBM Case Manager. You can also take advantage of the documents and objects that are already contained in an object store by designating an existing object store as your target object store.

“Planning for project areas”

“Planning for target environments” on page 27


Related concepts:


“IBM Case Manager configuration tool” on page 7

“IBM Case Manager architecture overview” on page 13

 Concepts: FileNet P8 domains

Related information:

 Redeployment restrictions for modifying a solution

 Resetting the test environment

Planning for project areas

Your development environment should have one default project area and zero or more secondary project areas. As you plan your project areas, ensure that you assign the appropriate user privileges when you create the target object store.

When creating the target object store, you must add users or groups to the administration group for the target object store so that in the IBM Case Manager administration client you can easily add the users to a project area. Users will also require access to the target object store for testing in the design environment or for resetting the test environment. A test environment reset requires that the target object store users have system administration privileges.

The IBM Case Manager administration client handles the privileges required for a user to access the design object store of the project area. The IBM Case Manager administration client does not add the privileges for the group in the target object store and workflow system region, which is why it is recommended that you plan master group access to a project area before you create the target object store and workflow system. Doing so will save you the extra step of re-configuring the target object store and workflow system configuration group. Add the master group with User object store permission when you create the object store.


When you set up the workflow system region, you must assign users that will be working in project areas to the workflow system security groups.

In a default project area, it is recommended that you manage users in an LDAP group so that you can assign the group to the default project area. If you need to add a user later, you can add the user to the LDAP group and the new user will automatically be added to the default project area. The group designated as the workflow system configuration group is the LDAP group that provides configuration privileges to the workflow system region associated to the project

area. The group designated as the workflow system administration group is the LDAP group that provides administration privileges to the workflow system region associated with the project area.

You should also use an LDAP group to manage access to the target object store and give the LDAP group administration privileges to the object store. If you need to add a user to the project area, you only need to add the user to the LDAP group to provide the user the administration privileges to the target object store of the project area.

Related information:

 [Resetting the test environment](#)

Planning for target environments

Your test environment and production environment each contain one staging object store and, typically, multiple target environments. Each target environment consists of one target object store and its associated workflow system, and a shared or dedicated IBM Content Navigator desktop onto which the target environment is registered.

As you plan your target environments, ensure that you assign the appropriate user privileges when you create a target object store in the object store creation wizard. It is recommended that you manage users in LDAP groups so that you can assign groups of users to target environments.

It is a best practice to create a case management master group to use for assigning access to object stores at the time that you create the object store. Give this group **Use object store** permission. You can grant new users access to the object store by adding them to the master group, which automatically grants the new users permission to access the target environment. This approach can prevent issues with changing security on an established object store. For information, see [Planning for security in the production environment](#).

Also use an LDAP group to manage administrator access to the target object store. Give this LDAP group administration privileges to the target object store. If you need to add an administrative user to the target environment, add the user to this LDAP group.

When you set up a workflow system, you must assign users who will be working in the target environment to the workflow system administration group.

You can associate a target environment with multiple IBM Content Navigator desktops by adding the target object store repository to your desktop or by running the task to register the target environment multiple times. However, only one IBM Content Navigator desktop is used by the test and assign roles URL that is returned by the deployed solution. This desktop is the desktop that was specified the last time that the register target environment task was run.

“Planning for shared or dedicated desktops”

Related tasks:

 [Setting up target environments](#)

Planning for shared or dedicated desktops

You can use a shared desktop to host multiple target environments and solutions. Or you can create extra desktops in IBM Content Navigator to separate and partition target environments and solutions.

If you have a limited number of target environments in production, you can use the default IBM Case Manager desktop to provide access to solutions through Case Manager Client. As your production environment grows, you might want to group and separate target environments that share a user base or some other distinguishing characteristic.

For example, you might separate target environments that are accessed by different groups of users. You might also want to group target environments based on organizational divisions or geographical locations.

Grouping and separating target environments can provide the following benefits:

- Faster solution discovery
- More relevant and specific security settings
- Application customization and themes for the user or organizational unit

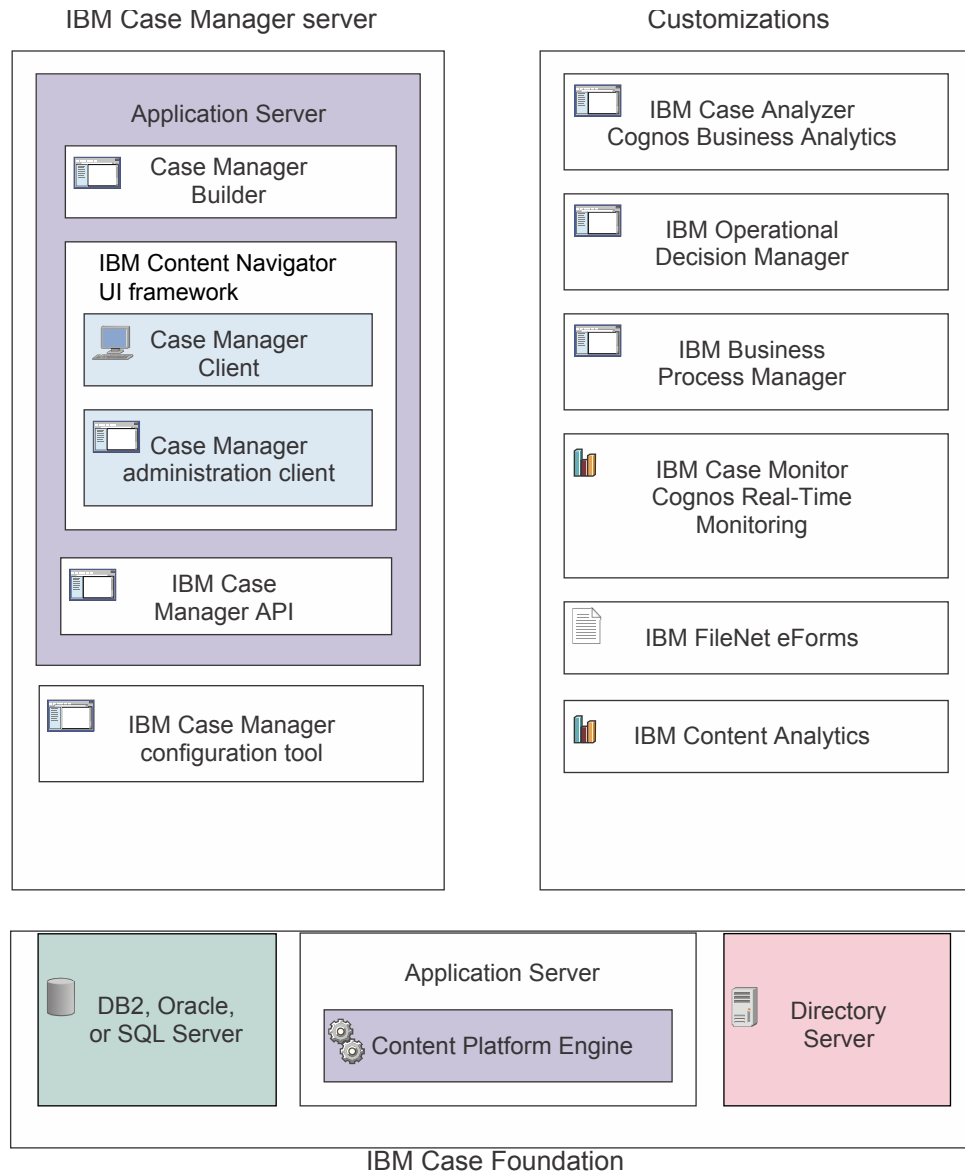
When you create solutions and target environments, consider whether it can benefit your production environment to group them by using a custom dedicated desktop.

Planning for IBM Case Manager installation

IBM Case Manager depends on IBM Case Foundation on the IBM FileNet P8 Platform for content and process management. You can take advantage of an existing installation for your IBM Case Manager environment, or you can install a new IBM FileNet P8 Platform.

You can install IBM Case Manager on a server that is part of an IBM FileNet P8 Platform environment. The server where you install IBM Case Manager must also have a supported application server and IBM Content Navigator installed.

You can also customize your IBM Case Manager system by adding applications that expand the capabilities of the system.



“Installation and configuration roles”

“Configuration checklist” on page 31

“Planning for IBM Case Foundation installation” on page 31

“Planning for IBM Case Manager server installation” on page 32

Related concepts:

“IBM Case Manager architecture overview” on page 13

“IBM Case Manager configuration tool” on page 7

Related tasks:

“Preparing your FileNet P8 system for IBM Case Manager” on page 77

Installation and configuration roles

During your planning, identify the administrators in your environment who can provide connection information, configuration assistance, and access rights for the installation. These roles represent areas of responsibility for the environment. These administrators can supply the parameters for your configuration checklist and assist with the installation, configuration, and maintenance of your system.

The configuration checklist identifies the properties and parameters that you must collect and provides a way to record their values. You can then refer to the checklist when you use the IBM Case Manager configuration tool to configure your development and production environments.

Tip: For many of the properties, you can record the values from your completed FileNet P8 installation and upgrade worksheet.

Installation administrator

- Runs the installation programs.
- Might also run the IBM Case Manager configuration tool to configure and deploy IBM Case Manager applications.
- Requires write access to installation directories on the IBM Case Manager server. Requires read, write, and execute access to the application server installation directory on the IBM Case Manager server.
- For single-server installations using the IBM Case Manager platform installation tool, requires local administrator access for a Windows server, or root access for an AIX® or Linux server.
- Abbreviated as IA. Responsible for coordinating the information described in the IBM Case Manager configuration checklist.

Information technology administrator

- Responsible for the networking and operating systems settings required by IBM Case Manager.
- Responsible for performing certain security configurations.
- Abbreviated as ITA. Responsible for providing the information in the rows in the IBM Case Manager configuration checklist with a value of ITA in the Role column.

Application server administrator

- Provides connectivity information and other parameters for application server configuration.
- Supports IBM Case Manager applications that are deployed on the application server.
- Abbreviated as ASA. Responsible for providing the information in the IBM Case Manager configuration checklist with a value of ASA in the Role column.

Database administrator

- Creates the new case history database.
- Administers database activity for IBM Case Manager.
- Abbreviated as DBA. Responsible for providing the information in the IBM Case Manager configuration checklist with a value of DBA in the Role column.

IBM FileNet P8 administrator

- Provides connectivity information for the FileNet P8 Platform components.
- Creates or designates object stores for use with IBM Case Manager.
- Abbreviated as P8A. Responsible for providing the information in the rows of the IBM Case Manager configuration checklist with a value of P8A in the Role column.

IBM Business Process Manager administrator

- Provides connectivity information for the IBM Business Process Manager components.
- Likely encompasses many of the roles described in this topic, but specifically for IBM Business Process Manager.
- Abbreviated as BPMA. Responsible for providing the information in the rows of the IBM Case Manager configuration checklist with a value of BPMA in the Role column.

IBM Content Manager administrator

- Provides connectivity information for the IBM Content Manager components.
- Creates or designates object stores for use with IBM Case Manager.
- Abbreviated as CMA. Responsible for providing the information in the rows of the IBM Case Manager configuration checklist with a value of CMA in the Role column.

Box enterprise account administrator

- Provides connectivity information for Box components.
- Abbreviated as BEAA. Responsible for providing the information in the rows of the IBM Case Manager configuration checklist with a value of BEAA in the Role column.


Configuration checklist

When you configure IBM Case Manager, you need information about the products that IBM Case Manager integrates with. To quickly and efficiently install and configure IBM Case Manager, work with the administrators of these products to collect this information before you start the installation and configuration.

The configuration checklist identifies the properties and parameters that you must collect and provides a way to record their values. You can then refer to the checklist when you use the IBM Case Manager configuration tool to configure your development and production environments.

Tip: For many of the properties, you can record the values from your completed FileNet P8 installation and upgrade worksheet.

Related information:

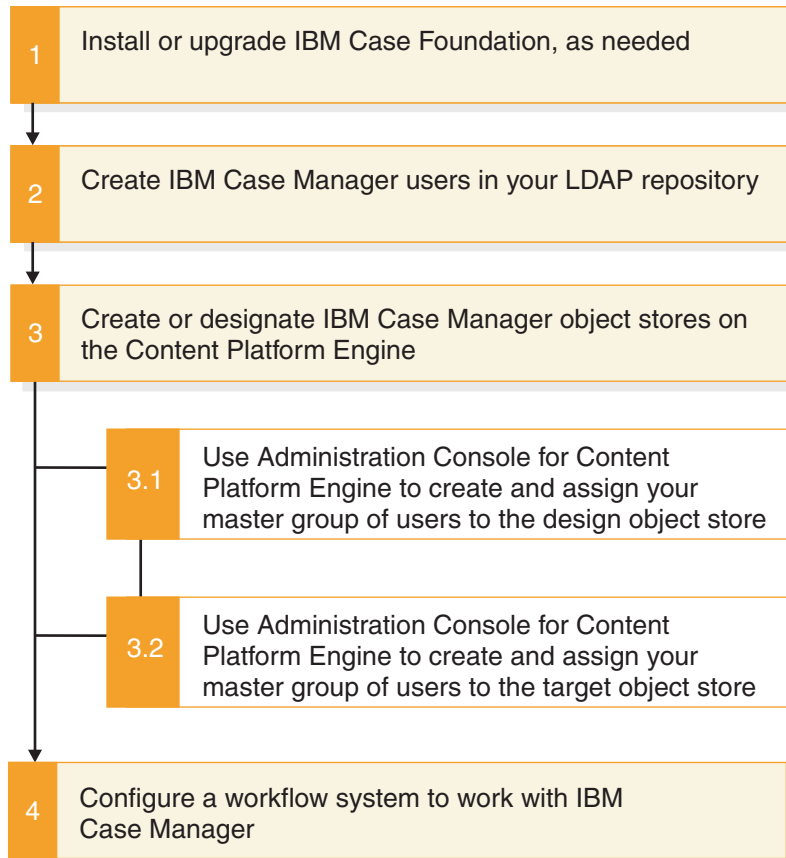
 [IBM Case Manager configuration checklist](#)

Planning for IBM Case Foundation installation

IBM Case Manager depends on IBM FileNet P8 Platform for content and process management. You must install and configure a standard distributed IBM FileNet P8 Platform environment before you install IBM Case Manager. You must configure object stores on the Content Platform Engine and configure a workflow system to work with IBM Case Manager.

You must install IBM Case Foundation before you can install and use IBM Case Manager. Use the IBM FileNet P8 Platform installation documentation to install and configure the environment.

When you create IBM Case Manager users, create a master group to add to your case management object stores. This method makes it easy to add users to your case management environment after the object stores have been created.



Planning for IBM Case Manager server installation

The server where you install IBM Case Manager requires installations of an application server and IBM Content Navigator. If some of the components are already installed before you install IBM Case Manager, upgrade the components and configure them to work together.

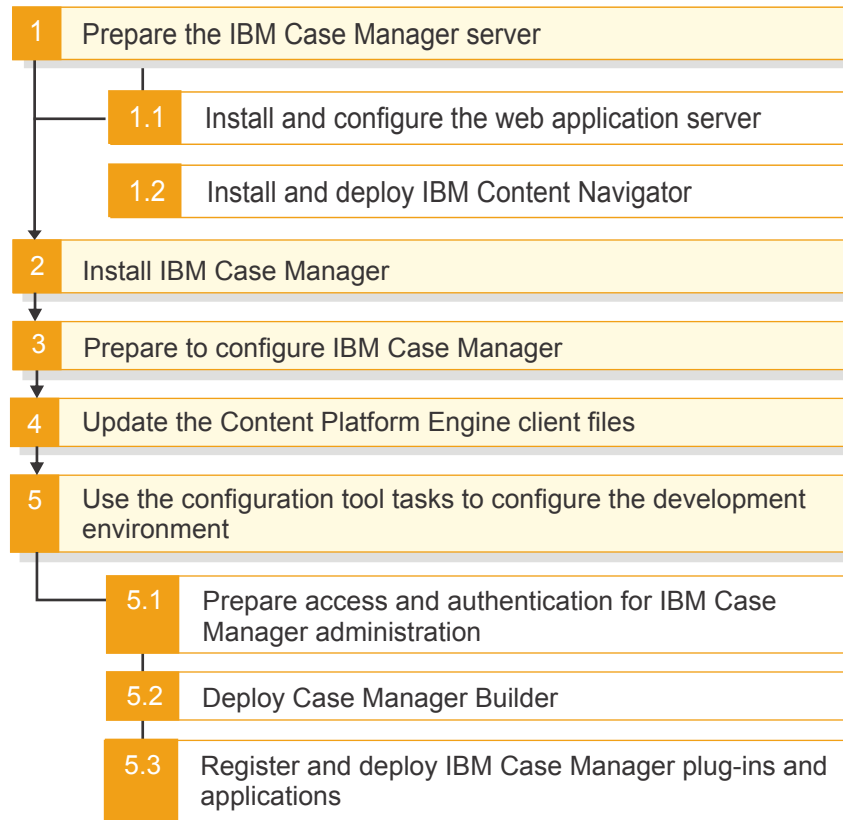
Installing a development environment to work with a distributed FileNet P8 system

IBM Case Manager is typically installed and configured to work with a standard distributed installation of IBM FileNet P8 Platform. On the server where you plan to install IBM Case Manager, you must install and deploy an application server and IBM Content Navigator.

The IBM Case Manager installation program checks for prerequisite software, and installs the IBM Case Manager software and client software for Content Platform Engine.

The IBM Case Manager configuration tool configures the connection between your IBM Case Manager server and the IBM FileNet P8 Platform environment.

After you deploy the IBM Case Manager applications by using the IBM Case Manager configuration tool deployment tasks, you can begin to use Case Manager Builder to create case management solutions.



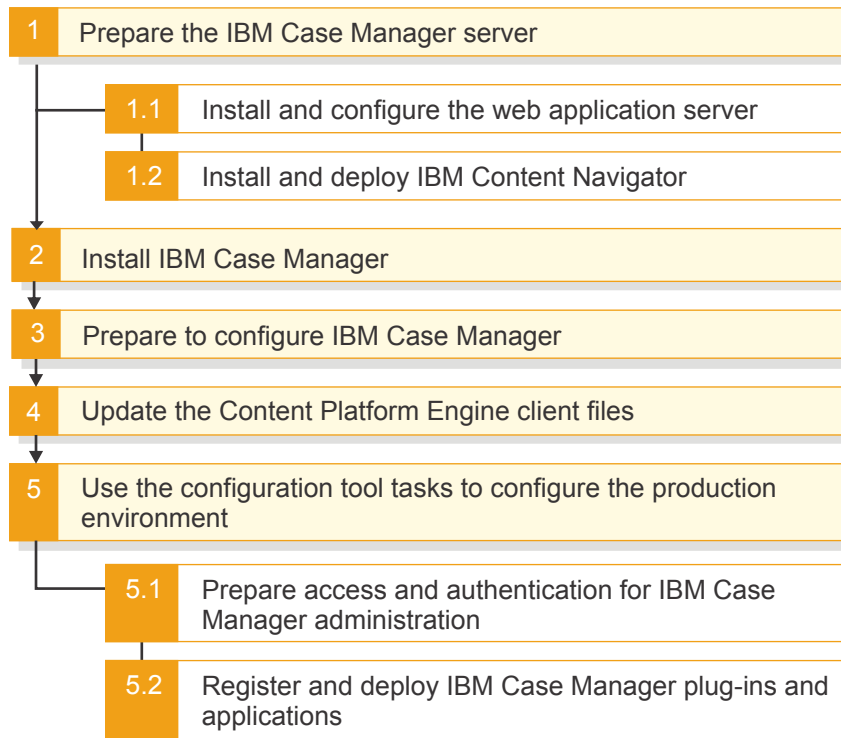
Installing a production environment to work with a distributed FileNet P8 system

IBM Case Manager is typically installed and configured to work with a standard distributed installation of IBM FileNet P8 Platform. On the server where IBM Case Manager is installed, you must install and deploy an application server and IBM Content Navigator.

The IBM Case Manager installation program checks for prerequisite software, and installs the IBM Case Manager software and client software for Content Platform Engine.

The IBM Case Manager configuration tool configures the connection between your IBM Case Manager server and the IBM FileNet P8 Platform environment.

After you deploy the IBM Case Manager applications by using the IBM Case Manager configuration tool deployment tasks, you can begin to test or to use your case management solutions.



Planning for non-English installations

IBM Case Manager is Unicode-enabled to support multiple languages and the installation package contains the necessary multilingual user interface files. A separate installation step is not required to install the translated version.

When you use Case Manager Builder and Case Manager Client in a specific locale, the solution and application that you create display in a combination of English and your chosen locale. The components and artifacts in an IBM Case Manager solution originate from multiple applications. To display a fully localized solution, you can edit the different artifacts and components that comprise the solution package.

The locale determines the language for the display names of case properties, case types, tasks, and other solution artifacts. Typically, you design and create a solution for a specific locale and then, as necessary, localize the strings. When you first deploy a solution, you must deploy the solution under the specific locale. If you specify a different locale during deployment, users can encounter issues when other locales are added for the solution.

Setting the locale for deployment depends on the tool you use to deploy the solution:

- If you use the administration client to deploy the solution, change the browser locale, or change the **Application Locale** value in the Change Language and Locale Settings dialog box.
- If you use the configuration tool or command line to deploy the solution, change the JVM locale for the configuration tool. You can find the JVM locale value in the `configmgr.ini` file in the `install_path\configure` folder. The default locale is the operating system locale.

“Available languages for IBM Case Manager” on page 35

Available languages for IBM Case Manager

The tools and components included with IBM Case Manager support multiple languages in addition to English. The languages that are supported depend on the tool or component you are using.

Available languages for the IBM Case Manager installation program, Case Manager Builder, Case Manager Client, and IBM Case Manager administration client

The IBM Case Manager installation program, Case Manager Builder, Case Manager Client, and IBM Case Manager administration client support multiple languages. The installation program provides a locale choice on the first screen. To change the displayed language for the Case Manager Builder and Case Manager Client applications, change the locale of the browser that you use to access the applications.

In addition to English, IBM Case Manager displays the installation program Case Manager Builder, Case Manager Client, and IBM Case Manager administration client in the following languages:

Language	Locale
Arabic	ar
Catalan	ca
Bulgarian	bg
Chinese (Simplified)	zh
Chinese (Traditional)	zh-tw
Croatian	hr
Czechoslovakian	cs
Danish	da
Dutch	nl
Finnish	fi
French	fr
German	de
Greek	el
Hebrew	he
Hungarian	hu
Italian	it
Japanese	ja
Kazakh	kk
Korean	ko
Norwegian	nb or no
Polish	pl
Portuguese	pt
Portuguese (Brazilian)	pt-br
Romanian	ro
Russian	ru
Slovak	sk

Language	Locale
Slovenian	sl
Spanish	es
Swedish	sv
Thai	th
Turkish	tr
Vietnamese	vi

Available languages for the IBM Case Manager configuration tool

The IBM Case Manager configuration tool supports only those languages that are supported both by IBM Case Manager and Eclipse. Therefore, Romanian, Slovenian, and Vietnamese are not supported.

In addition to English, IBM Case Manager displays the configuration tool in the following languages:

Language	Locale
Chinese (Simplified)	zh
Chinese (Traditional)	zh_TW
Czechoslovakian	cs
Danish	da
Dutch	nl
Finnish	fi
French	fr
German	de
Hungarian	hu
Italian	it
Japanese	ja
Korean	ko
Norwegian	nb or no
Polish	pl
Portuguese	pt
Portuguese (Brazilian)	pt_BR
Russian	ru
Spanish	es
Swedish	sv
Thai	th
Turkish	tr

The following locales are not fully supported by the IBM Case Manager configuration tool. Locales that are not listed here or in the preceding table are not supported by the IBM Case Manager configuration tool.

- Bulgarian
- Catalan

- Croatian
- Greek
- Kazakh
- Romanian
- Slovak
- Slovenian

In these locales, the IBM Case Manager configuration tool displays a mixture of English and non-English-language interface elements. If you prefer to have a consistent experience with the tool, modify the `configmgr.ini` file to include `-nl en_US` to force all strings to display in English.

The following sample shows the contents of the `configmgr.ini` file:

```
/opt/IBM/CaseManagement/java/sdk/bin
gui
-nl en_US
-debug
-vmargs
-Xms512M
-Xmx1024M
-XX:MaxPermSize=384m
-Djava.compiler=none
-Dlog4j.configuration=file:/opt/IBM/CaseManagement/configure/log4j.properties
-Djava.util.logging.config.file=/opt/IBM/CaseManagement/configure/configuration/cmlogging.properties
```

Available languages for business rules

You can select only one locale in which to write the business rules for your solutions when you run the Configure Business Rules task in the IBM Case Manager configuration tool. If you need to create solutions with business rules in other locales, rerun this task to change the rule persistence locale before you create the solution. After a solution is created, its rule persistence locale cannot be changed.

In addition to English, IBM Case Manager supports the following languages for business rules:

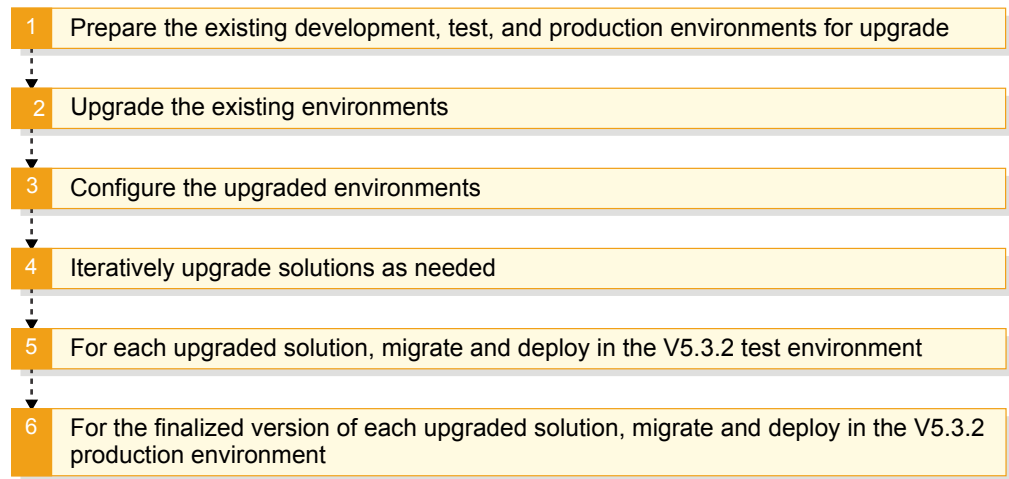
Language	Locale
Arabic	ar
Chinese (Simplified)	zh
Chinese (Traditional)	zh-tw
Dutch	nl
French	fr
German	de
Hebrew	iw
Italian	it
Japanese	ja
Korean	ko
Polish	pl
Portuguese	pt
Russian	ru

Tip: When you edit business rules in Case Manager Builder, ensure that the rule persistence locale is listed first in the list of languages for your web browser.

Planning for IBM Case Manager upgrade

To upgrade the IBM Case Manager system, you upgrade the software in each environment and upgrade your solutions.

The following graphic provides an overview of the tasks that are required to upgrade IBM Case Manager:



Preparing for upgrade

Before you upgrade the existing development, test, and production environments, ensure that you have the required versions of prerequisite software such as IBM FileNet P8, Case Analyzer, and IBM Content Navigator. You might also need to update other software products or components if you included them in your IBM Case Manager environment. For details on the required versions, see “System requirements” on page 10.

Before you begin the upgrade, determine if there are any known issues with products and components that are used with IBM Case Manager that might affect the upgrade. For more information about such known issues, see Case Manager upgrade/configuration issues for related components.

Upgrading and configuring


After you upgrade the development, test, and productions environments, you upgrade the solutions in the development environment and migrate them to the test environment. The testers communicate to the solution developers any issues that require modification of the solutions. After the issues are resolved, the finalized versions of the upgraded solutions are migrated and deployed to the production environment. You can upgrade and test one solution at a time and then migrate it to production, or upgrade and test multiple solutions and then migrate them all to production.

If you upgrade from an existing version, you do not need to upgrade your solutions to V5.3.3 unless you want to edit them in Case Manager Builder. You can continue to use solutions that were created with the existing version and are already deployed. You can simultaneously run these existing solutions and the solutions you create with V5.3.3.

“Supported upgrade paths”


“Upgrade scenarios”

Related tasks:

 Deploying prerequisite assets

 Business rules

Related information:

 Case Manager upgrade and configuration issues for related components

Supported upgrade paths

You can upgrade to IBM Case Manager V5.3.3 from one of the supported existing versions.

The following existing versions can be directly upgraded to V5.3.3

- V5.2.1
- V5.3.0
- V5.3.1

Tip: If you are upgrading from V5.2.1, ensure that you upgrade IBM Case Manager to the latest V5.2.1 fix pack level. You can find the latest updates on Fix Central.

Upgrade scenarios

You can follow various approaches to upgrade your IBM Case Manager system. You can install the new version on the same computer as the previous version or on a separate computer.

The upgrade steps also vary between the development environment and the test and production environments.

“Upgrading the development environment on the existing computer with the existing object stores”

“Upgrading the development environment on a new computer with the existing object stores” on page 40

“Upgrading the test or production environment on a new computer” on page 41

“Upgrading the test or production environment on the existing computer” on page 41

Upgrading the development environment on the existing computer with the existing object stores

In this scenario, you install the IBM Case Manager V5.3.3 development environment on the same computer and reuse the object stores that were created for your existing version. Any solutions that you upgrade to V5.3.3 replace the existing solutions.

Before you begin

Ensure that you have a current backup of the system before you start the upgrade.

About this task

Upgrade the development environment on the existing computer if you want to continue to run IBM Case Manager V5.3.3 on the same computer. Reuse the object stores that you created for your existing version.

Procedure

To upgrade the development environment on the same computer and reuse the existing object stores:

1. Upgrade and configure FileNet P8.
2. Ensure that the existing computer has sufficient disk space and other resources for the new IBM Case Manager installation.
3. If you are upgrading from V5.2.1, upgrade IBM Case Manager to the latest V5.2.1 fix pack level. You can find the latest updates on Fix Central.
4. Update or install IBM Content Navigator.
5. Install and configure IBM Case Manager V5.3.3. When you upgrade, the existing WebSphere Application Server profile is used for IBM Case Manager V5.3.3.
6. Upgrade and deploy the business solutions.
7. Test your business solutions in the IBM Case Manager V5.3.3 environment.

Upgrading the development environment on a new computer with the existing object stores

In this scenario, you install the IBM Case Manager V5.3.3 development environment on a new computer and reuse the object stores that were created for your existing version. Any solutions that you upgrade to V5.3.3 replace the existing solutions.

Before you begin

Ensure that you have a current backup of the system before you start the upgrade.

About this task

Upgrade the development environment on a new computer if you want to run IBM Case Manager V5.3.3 on a more powerful computer or on a different operating system. You can reuse the existing object stores.

Procedure

To upgrade the development environment on a new computer and reuse the existing object stores:

1. Upgrade and configure FileNet P8.
2. Determine how much disk space and other resources are required for the new IBM Case Manager environment.
3. If you are upgrading from V5.2.1, upgrade IBM Case Manager to the latest V5.2.1 fix pack level. You can find the latest updates on Fix Central.
4. Update or install IBM Content Navigator.

5. Install and configure IBM Case Manager V5.3.3. When you configure the system, reuse the existing object stores, create new project areas, and create a new WebSphere Application Server profile.
6. Upgrade and deploy the business solutions.
7. Test your business solutions in the IBM Case Manager V5.3.3 environment.

Upgrading the test or production environment on a new computer

In this scenario, you install the IBM Case Manager V5.3.3 test or production environment on a new computer and reuse the object stores that you created for your existing version. Any solutions that you upgrade to V5.3.3 replace the existing solutions.

Before you begin

Ensure that you have a current backup of the system before you start the upgrade.

About this task

Upgrade the test or production environment on a new computer if you want to test and deploy your solutions on a more powerful computer or on a different operating system.

Procedure

To upgrade the test or production environment on a new computer and reuse the existing object stores:

1. Upgrade and configure FileNet P8.
2. Determine how much disk space and other resources are required for the new IBM Case Manager environment.
3. If you are upgrading from V5.2.1, upgrade IBM Case Manager to the latest V5.2.1 fix pack level. You can find the latest updates on Fix Central.
4. Update or install IBM Content Navigator on the new computer.
5. Install and configure IBM Case Manager V5.3.3 on the new computer. When you configure the system, reuse the existing object stores and create a new WebSphere Application Server profile.
6. Migrate your business solutions from the development environment to the test or production environment.
7. Deploy the upgraded solutions and configure security.

Upgrading the test or production environment on the existing computer

In this scenario, you install the IBM Case Manager V5.3.3 test or production environment on the existing computer and reuse the object stores that you created for your existing version. Any solutions that you upgrade to V5.3.3 replace the existing solutions.

Before you begin

Ensure that you have a current backup of the system before you start the upgrade.

About this task

Upgrade the test or production environment on the existing computer if you want to continue to run IBM Case Manager V5.3.3 on the same computer.

Procedure

To upgrade the test or production environment on the same computer and reuse the existing object stores:

1. Upgrade and configure FileNet P8.
2. Ensure that the existing computer has sufficient disk space and other resources for the new IBM Case Manager installation.
3. If you are upgrading from V5.2.1, upgrade IBM Case Manager to the latest V5.2.1 fix pack level. You can find the latest updates on Fix Central.
4. Update IBM Content Navigator.
5. Install and configure IBM Case Manager V5.3.3. When you configure the system, reuse the existing object stores. You can also reuse the WebSphere Application Server profile that you created for your existing version.
6. Migrate your business solutions from the development environment to the test or production environment.
7. Deploy the upgraded solutions and configure security.

Planning for IBM Case Manager high availability

For a highly available installation, plan to install IBM Case Manager into an application server cluster. IBM Case Manager also supports highly available database configurations.

Installation

Configure your application server cluster before you install IBM Case Manager.

When you run the IBM Case Manager configuration tool to configure a development or production environment, use highly available connections for the following servers:

- Highly available Content Platform Engine EJB URI
- Highly available IBM Content Navigator

Ensure that a network share directory is available when you create and run the IBM Case Manager development and production profiles. This share directory must be accessible by all IBM Case Manager nodes in the IBM Case Manager application server managed cluster.

The following graphic shows an example of a highly available IBM Case Manager installation:

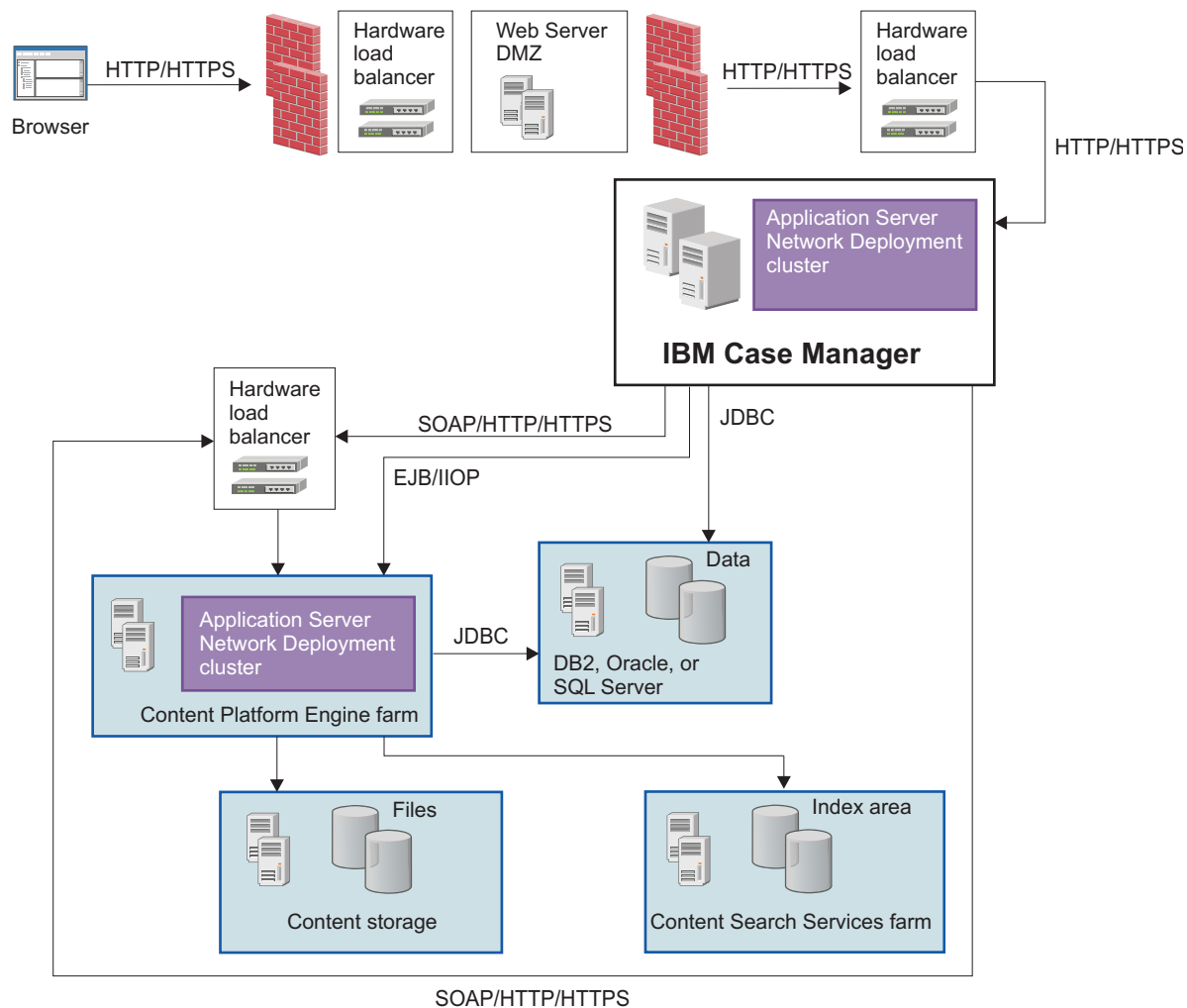


Figure 3. Highly available IBM Case Manager installation

Load balancing

Case workers connect to the Case Manager Client URL to log in and interact with cases. In a highly available IBM Case Manager application server profile, there are two more instances of the Case Manager Client application running. Load balancing and failover are achieved by fronting the application instances with a hardware or software-based load-balancing solution. This load-balancing solution can be either IBM HTTP Server (IHS) or a hardware-based device. Case worker client connections require session persistence. The load balancing mechanism must support session affinity or “sticky sessions.” Session affinity ensures that clients are always directed to the same instance resource initially chosen to receive the traffic.

Limitations for Content Platform Engine high availability

IBM Case Manager works with a highly available IBM FileNet P8 Platform environment. However, in a development environment for IBM Case Manager, your Content Platform Engine must be a stand-alone system, and not part of a farmed environment.

If a farmed Content Platform Engine is a requirement for development, you must have only a single node running when you run the reset development environment task from Case Manager Builder.

When the case history store is created in any environment, only a single Content Platform Engine node can be running.

Planning for performance

You can tune your IBM Case Manager system to improve system performance.

For more information about how to tune your system, see [Tuning IBM Case Manager](#).

You can also monitor the performance of your system at runtime. For more information, see [Monitoring system performance](#).

Installing and configuring IBM Case Manager

You must install your supporting software applications before you install IBM Case Manager. After you install the software, you use the IBM Case Manager administration client to configure and deploy the IBM Case Manager applications.

About this task

The installation process can vary depending on your starting point and your installation objective. You can perform any of the following installations:

- An installation of IBM Case Manager on a server that does not already have the prerequisite software installed
- An installation of IBM Case Manager on a server that already has your application server and IBM Content Navigator installed.
- An upgrade of IBM Case Manager

You install a distributed system of servers that includes the FileNet P8 Platform environment and a server for IBM Case Manager and the supporting applications. You perform different installation and configuration tasks depending on the prerequisite software that you already have installed. For example, if you do not have the prerequisite software installed on your IBM Case Manager server, you install those applications before you install IBM Case Manager.

The configuration steps are also different depending on whether you are installing in a cluster or network deployment environment or on a stand-alone server.

If you are upgrading from the previous version of IBM Case Manager, you perform additional tasks before and after the upgrade and configuration tasks.

Installing and configuring in a cluster deployment or network deployment

Before you install IBM Case Manager, you must first install the prerequisite software applications on the same server. Then you can use the IBM Case Manager tools to install and configure the IBM Case Manager applications.

Before you begin

For details about the hardware and software requirements, see “System requirements” on page 10.

About this task

A typical IBM Case Manager environment includes an FileNet P8 Platform system that is installed and configured on a distributed set of servers. You can use an existing installation, or install a new FileNet P8 Platform system to work with IBM Case Manager. Before you install IBM Case Manager, you must configure your FileNet P8 Platform environment to work with IBM Case Manager.

Both cluster deployment and network deployment include managed nodes and a deployment manager. In cluster deployment, you deploy to a set of managed

servers that are part of a cluster. In network deployment, you deploy to a managed individual server that is not part of a cluster.

If you did not prepare a server or servers for IBM Case Manager that includes the prerequisite software, you must install and configure the following applications to work with IBM Case Manager:

- WebSphere Application Server Network Deployment Edition
- IBM Content Navigator

You configure and deploy IBM Content Navigator as a client of the Content Platform Engine instance that hosts the IBM Case Manager object stores. IBM Content Navigator hosts the administration client and the Case Manager Client application.

After you install the prerequisites, you run the IBM Case Manager installation program. The IBM Case Manager installation program installs the IBM Case Manager files.

Use the IBM Case Manager configuration tool to configure the development and production environments. You use the configuration tool to create profiles that contain tasks, where you enter properties and settings for all aspects of your IBM Case Manager environment and applications. After you run the configuration tasks, your IBM Case Manager system is ready to use.

1. "Preparing your FileNet P8 system for IBM Case Manager"
2. "Preparing the IBM Case Manager server" on page 52
3. "Installing IBM Case Manager" on page 56
4. "Configuring IBM Case Manager" on page 58

Preparing your FileNet P8 system for IBM Case Manager

For your FileNet P8 environment to work with IBM Case Manager, you must install or upgrade FileNet P8, create users and object stores, and configure the workflow system.

About this task

The IBM Case Manager configuration tool uses many of the same values from your FileNet P8 installation and configuration to connect IBM Case Manager to the FileNet P8 environment. Before you install, upgrade, and configure, review the configuration checklist and collect values as applicable.

1. "Installing or upgrading FileNet P8"
2. "Enabling case management if you installed FileNet P8 by using IBM Content Foundation" on page 47
3. "Identifying IBM Case Manager users" on page 48
4. "Creating IBM Case Manager object stores on Content Platform Engine" on page 50
5. "Configuring a workflow system for IBM Case Manager" on page 51

Installing or upgrading FileNet P8

IBM Case Manager requires a minimum version of FileNet P8. You use the IBM Administration Console for Content Platform Engine to configure the object store, users, and workflow system.

Before you begin

For details about the hardware and software requirements, see “System requirements” on page 10.

Procedure

To install or upgrade your FileNet P8 Platform environment:

1. Plan and prepare for the installation or upgrade of your IBM FileNet P8 Platform.
2. Install or upgrade IBM FileNet P8 Platform.

Enabling case management if you installed FileNet P8 by using IBM Content Foundation

If you installed your FileNet P8 environment by using IBM Content Foundation and you now want to use IBM Case Manager, you must update the prerequisite software to add case management capabilities to your FileNet P8 environment.

Before you begin

For details about the hardware and software requirements, see “System requirements” on page 10.

About this task

If you installed your FileNet P8 environment by using IBM Content Foundation, you do not need to reinstall the Content Platform Engine (CPE) server software. The CPE server software that is provided with IBM Content Foundation is identical to the CPE server software that is provided with IBM FileNet Content Manager. However, the version of IBM Content Navigator that is provided with IBM Content Foundation is not supported by IBM Case Manager. You must install the correct version of IBM Content Navigator.

The following procedure assumes that you have a development environment in which IBM Content Navigator and IBM Case Manager are in the same application server instance.


Procedure

To add case management capabilities if you installed FileNet P8 by using IBM Content Foundation:

1. Download the following software:
 - a. From Passport Advantage, download a version of IBM Content Navigator that is supported for IBM Case Manager.
 - b. From Passport Advantage, download any of the IBM Content Foundation components that you want to use for case management, such as IBM Cognos Real-time Monitoring, and the IBM Case Manager components.
2. Install the version of IBM Content Navigator that you downloaded. Ensure you complete all applicable tasks in the configuration tool, including the Update the FileNet P8 Client Connector Files task.
3. Validate that IBM Content Navigator works correctly against the Content Platform Engine server that was installed by the IBM Content Foundation installation program.

4. Continue with the standard IBM Case Manager installation steps. Ensure that you complete the IBM Case Manager Update the Content Platform Engine Client Connector Files task and the other configuration tasks in the correct order, including the Create Case Manager Application task. These tasks will synchronize the client connector files with Content Platform Engine.
5. Validate that IBM Case Manager works correctly against the Content Platform Engine server that was installed by the IBM Content Foundation installation program.

Related tasks:

 [Getting fixes from Fix Central](#)

Identifying IBM Case Manager users

When you identify the Content Platform Engine object stores that are used for IBM Case Manager, you must identify the users that have access to these object stores. Your IBM Case Manager users must have the appropriate access permissions on the object stores. The required permissions vary depending on the user roles.

About this task

A best practice is to assign permissions to LDAP groups rather than individual users.

How you assign users and groups can vary based on the directory service provider in your environment. Use the documentation that is provided for your directory server to identify IBM Case Manager groups.

The groups or roles that are described in this task cover the main functions of the core IBM Case Manager applications. If you are extending your IBM Case Manager system, you might need to create or designate additional groups or roles.

It is a best practice to create a case management master group to use for assigning access to object stores at the time that you create the object store. Give this group Use object store permission. With this method, you can grant new users access to the object store by adding them to the master group. This approach can prevent issues with changing security on an established object store. For development environments, the master group can be #AUTHENTICATED-USERS. For a production environment, more controlled security is needed.

Procedure

To assign IBM Case Manager groups:

1. In your directory server, find the configured realm for the Content Platform Engine instance that you are using with IBM Case Manager.
2. Identify the following groups:

Table 6. Groups for business analysts and solution administrators

Group	Description
Business analysts	Responsible for designing the solution in Case Manager Builder and the user interface application in Case Manager Client. Business analysts work in a development environment to develop and test the solution. In order to create and edit solutions, and design the application, business analysts need access to objects in the design object store. In addition, the business analysts need access to the target object stores and the isolated region to deploy, test, and customize the solutions.
Solution administrators	Responsible for managing project areas. Responsible for copying and deploying solutions, and for promoting solutions to templates. Responsible for managing roles.

3. Ensure that both groups also have the following permissions:

Table 7. Group permissions

Component area	Permissions to assign
IBM FileNet P8 Domain GCD	Both the business analyst and the solution administrator groups require Global Configuration Domain (GCD) administrator rights. This role is referred to as the FileNet P8 Platform Administrator in FileNet P8 Platform documentation.
Content Platform Engine	<p>Add to Configuration groups rights to enable deployment, which requires creation of rosters, queues, applications spaces, and roles.</p> <p>Case workers can view the list of roles for a solution for reassigning work only if the user or group has access to the application space. You can add the users to the SysAdminG group or manually add the users to the access list of the application space</p> <p>If a business analyst must run Process Administrator in order to update work items, then also add the business analyst to the Process Administrator group.</p> <p>Tip: If a roster does not have users or groups that are assigned to it, then all users can access the roster. That is, all users have query and create rights. Users must have create rights to launch a workflow. If a queue does not have users or groups that are assigned to it, then all users can access the queue. That is, all users have query and process rights.</p>
Object store permissions	For the business analysts group, assign Use Object Store level permission for the design object store and target object stores.

Table 7. Group permissions (continued)

Component area	Permissions to assign
Process Designer	Business analysts must belong to the Workflow System Configuration group to edit workflows in the Process Designer application from Case Manager Builder. You can configure this group in IBM Administration Console for Content Platform Engine when you configure the target object store workflow system.

Creating IBM Case Manager object stores on Content Platform Engine

IBM Case Manager uses Content Platform Engine object stores for creating, storing, and deploying case solutions. You can use IBM Administration Console for Content Platform Engine to create the design object store and the target object store. You can also use an existing object store for the target object store.

About this task

You must create or designate the design object store and target object stores for your IBM Case Manager environment. In a typical use case, you create a new design object store to use for creating your solutions. You can use an existing object store that already contains documents and objects as the target object store for deployed solutions, or you can create a new target object store.


When you create the object store, add the case management master group that you created, and grant the group Use object store permission.

Procedure

To create the IBM Case Manager object stores:

1. In the IBM Administration Console for Content Platform Engine, create an object store by using the New Object Store wizard. For more information, see [Creating the initial object store](#).
2. In the Select Add-ons window, click the **Workplace/Workplace XT Configuration** button. This setting provides the add-ons that are required for IBM Case Manager. If you want only the minimum required add-ons, ensure that you select the following add-ons:
 - Content Engine Base Extensions, which are required for all Content Engine configurations.
 - Base Application Extensions, which are a prerequisite for Search Extensions and the Workplace Base Extensions.
 - Search Extensions, which are required to browse and search for content in IBM Content Navigator.
 - Workplace Base Extensions, which are required to browse and search for content in IBM Content Navigator.
 - Workplace Template Extensions, which are required to open folders in IBM Content Navigator.
3. In the Specify Object Store Administrators window, click **Add**. Then, click **Find**, and find the business analyst and solution administrator groups or the equivalent groups for your environment.
4. Complete the wizard and accept all remaining default values.

Related information:

 IBM FileNet P8 add-ons required for IBM Content Navigator

Configuring a workflow system for IBM Case Manager

IBM Case Manager uses workflow functionality to route and track user tasks. When you create a workflow system, you define an isolated region and its connection point. In addition, you can optionally customize the database storage parameters and configure email notification.

About this task

You can create a new object store to use as your IBM Case Manager target object store, or you can designate an existing object store.

- If you use a newly created object store, you must configure the isolated region and connection point as explained in this task. You use IBM Administration Console for Content Platform Engine to configure an isolated region and a corresponding connection point. The database connection that you define must point to the target object store database. Use this task to complete the configuration.
- If you use an existing object store that has never been configured for workflows, you must configure the isolated region and connection point in the same way that you would for a new object store. Use the steps in this task to complete the configuration.
- If you use an existing object store that has already been configured for workflows, an isolated region and connection point have already been configured for the object store. Skip this task.

Procedure

To configure a workflow system:

1. Start the IBM Administration Console for Content Platform Engine.
2. Start the New Workflow System wizard in the administration console.
 - a. In the domain navigation pane, click the object store.
 - b. In the object store navigation pane, right-click the **Administrative > Workflow System** folder and click **New** to start the wizard.
3. Complete the wizard steps by using the values in your worksheet. The values that are displayed in the wizard screens are default values, which you must change to match your IBM Case Manager values.

Related tasks:


“Configuring the development environment for cluster or network deployment” on page 60

“Configuring the production environment for cluster or network deployment” on page 67

“Configuring the development environment” on page 90

“Configuring the production environment” on page 96

Related information:

 Creating a workflow system

 Using the Process Configuration Console

Preparing the IBM Case Manager server

Before you can install, configure, and use IBM Case Manager, you must install the supporting software applications on the server where you want to install IBM Case Manager. A web application server deploys the IBM Case Manager applications. IBM Content Navigator hosts the IBM Case Manager administration client and the Case Manager Client.

Before you begin

For details about the hardware and software requirements, see “System requirements” on page 10.

For an AIX or Linux server that does not use Domain Name Service (DNS) or Network Information Service (NIS), verify that the `/etc/hosts` file contains the name and Internet Protocol (IP) address of all servers that the server communicates with, including the local host. Verify that the `etc/netsvc.conf` file contains the value `hosts = local`.

About this task

The IBM Case Manager installation program detects whether the correct version of IBM Content Navigator is installed. You prepare the server where you want to install IBM Case Manager by installing and configuring the supporting software applications.

The requirements for installing the supporting software can be different for development and production environments.

A development environment requires IBM Content Navigator. You must install IBM Case Manager in the same profile as IBM Content Navigator.

“Installing prerequisite software”

“Configuring the application server” on page 55

Installing prerequisite software

The Case Manager Builder application is deployed on WebSphere Application Server Network Deployment. IBM Content Navigator hosts the Case Manager Client. In development environments, IBM Case Manager also requires Process Designer.

Before you begin

For details about the hardware and software requirements, see “System requirements” on page 10.

About this task

You use the application server to deploy IBM Case Manager and IBM Content Navigator. You also use the application server to coordinate authentication between the IBM Case Manager applications and Content Platform Engine.

If you are installing IBM Case Manager on a server where your application server and IBM Content Navigator are already installed, upgrade the software to the minimum required version before you install IBM Case Manager.

You might need to increase the memory settings in your application server to enable better performance in your deployed IBM Case Manager applications. For more information, see [Adjusting the Java™ Virtual Machine \(JVM\) heap for IBM Case Manager](#).

Procedure

To install the prerequisite software:


1. Install and configure your cluster or network deployment environment.
2. Create a share directory that is visible and writeable by all nodes in the cluster. Map the share directory with the same path to all server nodes in the cluster.
3. Install your application server software. If you are using WebSphere Application Server Network Deployment, install the latest fix pack. You can get fix packs from Fix Central.
4. Install, configure, and deploy IBM Content Navigator.
Install one IBM Content Navigator server for each IBM Case Manager server that you plan to install. You cannot share a single IBM Content Navigator server among multiple IBM Case Manager servers.

WebSphere Application Server Network Deployment environments

only: IBM Content Navigator and IBM Case Manager must be deployed to the same server (runtime environment or JVM) or cluster.

Tip: Be sure to configure the viewer for your IBM Content Navigator instance. “Connecting and configuring additional repositories”

Related information:

 [Planning, installing, and configuring IBM Content Navigator](#)

Connecting and configuring additional repositories:

Case Manager Client users can add documents or attachments from a repository other than the case management object store. To enable this access, you must connect to a repository and configure the repository to use IBM Content Navigator as a web client. After you connect to and configure the repository, you must associate a desktop to enable users to access the content.

Before you begin

You can use IBM Content Navigator to connect to the following types of repositories:

- IBM Content Manager
- IBM Content Manager OnDemand
- IBM FileNet P8
- Repositories that support the OASIS Content Management Interoperability Services (CMIS) specification
- Box

The types of repositories that you can connect to depend on the repository connectors that are installed on your web application server. You use the IBM Content Navigator Configuration and Deployment Tool tasks for connecting to the repository that you plan to use. In the task, you must provide connection

properties such as database type, connection name, host name, database name, schema name, database port, connection ID, and password to configure the connection.

After you run the required tasks and deploy the web application, go to the IBM Content Navigator administration tool and connect to the repository server by using the required library server administration user ID, such as icmadmin.

About this task

When you are configuring the parameters for the repository, consider the configuration parameters like system properties and search.

When IBM Content Navigator connects to an IBM FileNet P8 repository that is in a FileNet P8 domain other than the domain that is used for the design and target object stores, all web servers that host Content Platform Engine instances must use the same LTPA keys. Also, all Content Platform Engine instances must be the same major, minor, and fix pack version.

When case workers add documents from another repository, a reference to the latest version of the document in the source repository is added to the case. If the document is deleted from the source repository, the reference is deleted from the case or the reference becomes invalid. For IBM FileNet P8 or Box repositories, case workers can add a copy of the current version of a document to the case management repository instead of referencing the document in the source repository. The copy remains in the case even if the document is deleted from the source repository. However, any changes that are made to the document in the source repository are not reflected in the case. To allow case workers to add a copy of a Box document to the current case, enable the Box copy feature for the case management repository in IBM Content Navigator. For IBM FileNet P8 repositories, no additional configuration in IBM Content Navigator is required to enable case workers to copy documents to the case.


Procedure

To connect and configure an external repository:

1. Open the IBM Content Navigator administration tool in the web client.
2. Click **Repositories > New Repository**.
3. Select the repository type.
4. Click **General** and enter the information that is specific to the repository that you are configuring. The repository information such as the display name, ID, and server name are required to configure the repository.
5. Click **Connect**. You can save the default configuration settings for the repository or continue to customize the settings.
6. Click **Configuration Parameters > System Properties > Browse** or **Search** to configure additional settings for the repository.
7. Save your settings.
8. Add the newly added repository to the Case Manager desktop:
 - a. In the IBM Content Navigator administration tool, click **Desktops** and open your Case Manager desktop.
 - b. On the **Repositories** tab, select the new repository from the **Available Repositories** list.

- c. Use the move arrow to add the new repository to the **Selected Repositories** list.
9. To enable case workers to add a copy of a Box document to the current case, enable the Box copy feature for the case management repository.
 - a. In the IBM Content Navigator administration tool, click **Repositories** and open the IBM FileNet Content Manager target object store that is used as the case management repository.
 - b. On the **Configuration Parameters** tab, enable the **Optional Features > Box copy** option.
10. For each case type in which you want users to be able to add documents or attachments from an external repository that you configured, edit the case type in Case Manager Builder and select **Allow documents and attachments from repositories other than the case management object stores**.

Related tasks:

 Adding and modifying case types

Related information:

 Integrating IBM Content Navigator with Box

 Configuring connections to repositories for IBM Content Navigator

Configuring the application server

You configure your application server to work with your installation of IBM Content Navigator. In most cases, these configuration steps cover the configuration that is required for IBM Case Manager on the application server. Additional configuration might be required for your IBM Case Manager environment.

“Configuring Active Directory user accounts in WebSphere Application Server”

Configuring Active Directory user accounts in WebSphere Application Server:

If you did not use the same full name, `samAccountName`, and display name when you created your Active Directory user accounts, you must configure the Login properties value in WebSphere Application Server.

Procedure

To set the Login properties value:

1. Log in to the WebSphere Application Server administrative console.
2. Click **Global security > Federated repositories > Manage repositories > my_LDAP_provider**.
3. In the **Security** section, set the **Login properties** value to one of the following values:

Option	Description
uid	Users can log in with <code>samAccountName</code>
cn	Users can log in with full name
uid;cn	Users can log in with either <code>samAccountName</code> or full name

4. Click **Apply**.
5. Save your changes.

Installing IBM Case Manager

You can install IBM Case Manager interactively, by using the installation program. You can also install silently, by adding installation values to an input file and running the installation program from a command line.

Before you begin

Install the prerequisite applications before you run the IBM Case Manager installation program.

For details about the hardware and software requirements, see “System requirements” on page 10.

“Installing IBM Case Manager interactively”

“Installing IBM Case Manager silently” on page 57

Installing IBM Case Manager interactively

The IBM Case Manager installation program detects whether you have prerequisite software installed. The program installs the IBM Case Manager files.

About this task

The installation program detects whether the prerequisite IBM Content Navigator software is installed. The installation program then installs the IBM Case Manager applications and the IBM Case Manager configuration tool.

If you are installing in a cluster and you are using IBM Forms 8.1 or earlier, you must run the installation program on each node in the cluster. Specify the same installation path on each server or node.

Procedure

To install IBM Case Manager interactively:

1. Log on to the managed node where you want to install IBM Case Manager. Log on as the same user who installed your application server and IBM Content Navigator. This user must have write access to the destination directory for your installation of IBM Case Manager.
2. Navigate to the IBM Case Manager software package in the installation media.
3. Run the installation program:

Operating system	Command
AIX	5.3.3.0-ICM-AIX.BIN
Linux	5.3.3.0-ICM-LINUX.BIN
Linux for System z [®]	5.3.3.0-ICM-ZLINUX.BIN
Windows	5.3.3.0-ICM-WIN.EXE

4. Complete the IBM Case Manager installation program.

Important: When the installation program prompts you for the license type, select either IBM Business Automation Workflow Enterprise or IBM Business Automation Workflow Express you are entitled to. Do not select **IBM Case Manager** unless you are upgrading an existing IBM Case Manager installation. For more information on upgrading, see “Upgrading IBM Case Manager” on page 186.

- Remember:** The installation path that you specify must be the same on the deployment manager server and on each managed node.
- When the installation completes, check for errors in the IBM Case Manager installation log. The `IBM_Case_Manager_5.3.3.0_2018.03_InstallLog.txt` is created in the installation directory. For example, review the `/opt/IBM/CaseManagement/logs/IBM_Case_Manager_5.3.3.0_2018.03_InstallLog.txt` file.
 - If you are using IBM Forms 8.1 or earlier, repeat the full installation on the managed node for network deployment or on each node in the cluster.

What to do next

Use IBM Case Manager configuration tool to configure your IBM Case Manager applications.

Installing IBM Case Manager silently

When you install IBM Case Manager silently, you run a command and specify an input file. Add the information for your environment in the input file before you start the installation. The installation program installs the files for the IBM Case Manager applications, as well as the configuration tool.

About this task

The installation program detects whether the prerequisite IBM Content Navigator software is installed. The installation program then installs the IBM Case Manager applications and the IBM Case Manager configuration tool.

If you are installing in a cluster and you are using IBM Forms 8.1 or earlier, you must run the installation program on each node in the cluster. Specify the same installation path on each server or node.

Procedure

To install IBM Case Manager silently:

- Log on to the managed node where you want to install IBM Case Manager. Log on as the same user who installed your application server. This user must have write access to the destination directory for your installation of IBM Case Manager.
- Navigate to the IBM Case Manager software package in the installation media.
- Edit the `cm_silent_install.txt` file to reflect the installation choices for your environment.

Important: Set the license type to the IBM Business Automation Workflow Enterprise license or the IBM Business Automation Workflow Express license to which you are entitled. Do not set the license type to **IBM Case Manager** unless you are upgrading an existing IBM Case Manager installation. For more information on upgrading, see “Upgrading IBM Case Manager” on page 186.

Remember: The installation path that you specify must be the same on the deployment manager server and on each managed node.

- Run the installation program:

Operating system	Command
AIX	5.3.3.0-ICM-AIX.BIN -i silent -f cm_silent_install.txt
Linux	5.3.3.0-ICM-LINUX.BIN -i silent -f cm_silent_install.txt
Linux for System z	5.3.3.0-CM-ZLINUX.BIN -i silent -f cm_silent_install.txt
Windows	5.3.3.0-CM-WIN.EXE -i silent -f cm_silent_install.txt

- When the installation completes, check for errors in the IBM Case Manager installation log. The `IBM_Case_Manager_5.3.3.0_2018.03_InstallLog.txt` is created in the installation directory. For example, review the `/opt/IBM/CaseManagement/logs/IBM_Case_Manager_5.3.3.0_2018.03_InstallLog.txt` file.
- If you are using IBM Forms 8.1 or earlier, repeat the full installation on the deployment manager server for network deployment or on each node in the cluster.

What to do next

Use IBM Case Manager configuration tool to configure your IBM Case Manager applications.

Configuring IBM Case Manager

You must configure IBM Case Manager before you can use it in development or production. Configuring your system prepares the Case Manager Builder application and the Case Manager Client application for deployment on the application server. After you deploy these applications, you can create, test, manage, deploy, and work with your business solutions.

About this task

Your case management system consists of a development environment for creating and testing case management solutions and a production environment for working with running case management solutions. You must configure both environments.

Configuring the development environment includes configuring Case Manager Builder and Case Manager Client. Configuring the production environment includes configuring only Case Manager Client.


You use the IBM Case Manager configuration tool to create a profile for each development environment instance and a profile for each production environment instance. The profile includes several configuration and deployment tasks that you must edit and run before you can create and deploy case management solutions. For example, the Deploy Case Manager Builder task requires data about the application server settings to deploy the solution design application.

If you use the graphical user interface for the configuration tool, you must edit the property values for each task in the profile, save your changes, and then run the task. The data that you enter in the graphical user interface is saved in XML files, but you do not directly edit the files.

If you use the command-line version of the configuration tool, you must directly edit the XML files that store the values for the task. The XML files contain the properties and values that describe the associated configuration and deployment tasks. Three XML files contain the information that is common to all tasks in the profile, and each configuration task in the profile has one configuration XML file.

1. "Preparing to configure your case management system"
2. "Configuring the development environment for cluster or network deployment" on page 60
3. "Configuring the production environment for cluster or network deployment" on page 67

Related information:

 [Running IBM Case Manager administration client from the command line](#)

Preparing to configure your case management system

Before you run the IBM Case Manager configuration tool, you must grant permission to the user who will configure your IBM Case Manager system. You must also prepare Content Platform Engine to connect with your IBM Case Manager applications.

About this task

The user who runs the IBM Case Manager configuration tool requires access to the files and directories that contain the configuration properties.

A connectivity task in the IBM Case Manager configuration tool configures a connection between the IBM Case Manager applications and Content Platform Engine. To prepare for this task, you must first ensure that LTPA is configured on Content Platform Engine.

"Granting directory permissions to the configuration tool user"

Granting directory permissions to the configuration tool user:

You must grant file and directory permissions to *config_tool_user*, which is the user who runs the IBM Case Manager configuration tool, to allow this user to run the configuration tool and create files in the *install_path/configure* directory.

Procedure

To grant permissions to the *config_tool_user* user:

1. Log in as *case_manager_install_user* to the server where you installed the IBM Case Manager configuration tool.
2. Grant permissions to the *config_tool_user* user for the executable file that you intend to use:

Operating system	Permissions
AIX	Grant execute permission on all files in the CaseManagement\configure\tools directory.
Linux	
Linux for System z	
Graphical user interface	

Operating system	Permissions
AIX Linux Linux for System z Command line	Grant execute permission on all files in the CaseManagement\configure\tools directory.
Windows: graphical user interface	Grant read and execute permissions on all files in the CaseManagement\configure\tools directory.
Windows: command line	Grant read and execute permissions on all files in the CaseManagement\configure\tools directory.

- Grant read and write permission to the *install_path* directory where you installed IBM Case Manager
- Grant read, write, and execute permissions to the application server installation directory.
- Before you start the configuration tool, log off the server where the configuration tool is installed and log on again as *config_tool_user*.

Configuring the development environment for cluster or network deployment

You must configure the development environment before you use IBM Case Manager to create and deploy solutions. You use the development environment to create, modify, and test solutions before moving them into a production environment.

Before you begin

Be sure to have your completed configuration checklist available.

About this task

Configuring the development environment prepares Case Manager Builder and Case Manager Client for use. When you provide the required values for the tasks and run the tasks, you configure all the required settings and deployments for your development environment.

- “Running the development environment configuration tasks”
- “Configuring IBM Case Manager to use the stand-alone IBM Process Designer” on page 64
- “Binding applications with WebSphere Application Server” on page 65
- “Adding users to a project area” on page 66
- “Verifying the IBM Case Manager applications in the development environment” on page 66

Related tasks:

“Configuring a workflow system for IBM Case Manager” on page 51

Running the development environment configuration tasks:

Use the configuration tool to create a development environment profile and run the configuration tasks.

Before you begin

Ensure that the cluster and your IBM Content Navigator instance are running when you run the configuration tool tasks.

Procedure

To configure the development environment:

1. Log in to the IBM Case Manager server. In a network deployment or cluster environment, you can run the configuration tasks from one of the managed nodes.
2. Start the configuration tool by running one of the following commands:

Operating system	Command
AIX	<ol style="list-style-type: none">1. Change to the <code>_install_path/configure</code> directory. <code>_install_path</code> is the location where IBM Case Manager is installed, for example, <code>/opt/IBM/CaseManagement</code>.2. Run the following command: <code>./configmgr</code>
Linux	<ol style="list-style-type: none">1. Change to the <code>_install_path/configure</code> directory. <code>_install_path</code> is the location where IBM Case Manager is installed, for example, <code>/opt/IBM/CaseManagement</code>.2. Run the following command: <code>./configmgr</code>
Linux for System z	<ol style="list-style-type: none">1. Change to the <code>_install_path/configure</code> directory. <code>_install_path</code> is the location where IBM Case Manager is installed, for example, <code>/opt/IBM/CaseManagement</code>.2. Run the following command: <code>./configmgr</code>
Windows	<p>Perform one of the following actions:</p> <ul style="list-style-type: none">• Click Start > All Programs > IBM Case Manager > Case Manager Configuration Tool.• Run the following command: <code>_install_path\configure\configmgr.exe</code> <code>_install_path</code> is the location where IBM Case Manager is installed, for example, one of the following directories:<ul style="list-style-type: none">– <code>C:\Program Files\IBM\CaseManagement</code>– <code>C:\Program Files (x86)\IBM\CaseManagement</code>

3. Click **File > Create profile** to create a development environment profile and use the values from your configuration checklist to complete the fields. In the **Network shared directory** field, ensure that you specify the shared location that you created. After the profile files are created, the profile is opened so that you can work with the individual tasks in the profile.

4. Edit, save, and run the Update the Content Platform Engine Client Connector Files task. Running this task ensures that your client connector files match the version of your Content Platform Engine. After you run this task, close and then restart the configuration tool.
5. Edit, save, and run the following tasks. You must run the tasks in the order listed.

Table 8. Task requirements for a development environment

Task	Required
Configure the Case Management Object Stores	Always
Define the Default Project Area	Always
Configure the IBM Content Manager Host Properties	Required if IBM Case Manager integrates with IBM Content Manager.
Configure IBM Business Process Manager	Required if IBM Case Manager integrates with IBM Business Process Manager.
Deploy the IBM Business Process Manager Integration Service (WebSphere Application Server only)	Required if IBM Case Manager integrates with IBM Business Process Manager and you are using WebSphere Application Server.
Register the IBM Business Automation Workflow Plug-in	<p>Required if you want to use the plug-in for IBM Business Process Manager that provides a access to your IBM Process Portal Work dashboard from your IBM Case Manager desktop. Save your changes and then run the task to apply your settings.</p> <p>This plug-in adds the Workflow > Launch Process action to the Action menu and pop-up menu in the Browse view of the IBM Case Manager desktop. You can use this action to launch an IBM BPM process from a document. You can also add the Launch Process action to the menu in the Documents view for the Case Information widget.</p> <p>Important: To use the IBM Business Automation Workflow plug-in, you must use the Hypertext Transfer Protocol Secure (HTTPS) in your IBM Content Navigator URL.</p>
Create Case Manager Applications	Always
Deploy the Case Manager API	Always
Register the IBM Case Manager Services Plug-in	Always
Register the IBM Content Platform Engine Applets Support Plug-in	Always
Deploy Case Manager Builder	Always
Deploy and Register Widgets Package	<p>Always</p> <p>Important: If you run this task in a cluster environment, you must ensure that the plug-in is loaded on each node of the cluster. Either restart the cluster to force the plug-in to be loaded on all nodes or manually load the plug-in on each node by using the IBM Content Navigator administration client.</p>

Table 8. Task requirements for a development environment (continued)

Task	Required
Deploy the Forms Application	<p>Required if IBM Case Manager integrates with IBM Forms or IBM FileNet P8 eForms.</p> <p>If you configure IBM Forms or IBM FileNet P8 eForms on a network deployment or cluster environment, run this task in the profile that contains the other tasks. Select Network Deployment or Cluster for the deployment type, eForms and IBM Forms for the forms type, and Deployment Manager Profile for the environment type.</p> <p>If you integrate with IBM Forms 8.1 or earlier on a network deployment or cluster environment, the following additional steps are required. These additional steps are not required if you integrate with IBM Forms 8.2 or later or with only IBM FileNet P8 eForms.</p> <ol style="list-style-type: none"> <li>1. For the managed nodes, create a profile on each managed node that includes only this task and run this task. Select Network Deployment or Cluster for the deployment type, eForms and IBM Forms for the forms type, and Managed Profile for the environment type. <li>2. After all nodes are configured, the managed node or cluster must be restarted to complete the forms integration. You can restart the managed node or cluster now, or after you run all other configuration tasks.
Register the IBM Case Manager Administration Client Plug-in	Always
Configure Box Collaboration	Required if you want to enable case workers to use Box to collaborate with external users. This task configures the connection to the Box server.
Register Project Area	Always

Table 8. Task requirements for a development environment (continued)

Task	Required
Configure Business Rules	<p>Required if you use business rules in your solution.</p> <p>Tips:</p> <ul style="list-style-type: none"> You can select only one locale in which to write the business rules for your solutions. If you must create solutions with business rules in other locales, rerun this task to change the rule persistence locale before you create the solution. After the first rule for a solution is saved, the rule persistence locale cannot be changed. If you rerun this task to change the location of the rules repository directory after you deploy any solutions, complete the following steps after you run the task: <ol style="list-style-type: none"> Stop Content Platform Engine. From the previous rules repository directory, move the res_data directory to the new location of the rules repository directory. In a cluster environment, the rules directory must be a shared directory that can be accessed by all Content Platform Engine cluster servers. Restart Content Platform Engine.
Register the External Data Service	Required for solutions that use the external data service.
Deploy and Register Extensions Package	<p>Required only when you add an extensions package for a custom property editor or controller.</p> <p>Important: If you run this task in a cluster environment, you must ensure that the plug-in is loaded on each node of the cluster. Either restart the cluster to force the plug-in to be loaded on all nodes or manually load the plug-in on each node by using the IBM Content Navigator administration client.</p>

6. Restart the cluster.

Configuring IBM Case Manager to use the stand-alone IBM Process Designer:

When you access Process Designer from Case Manager Builder or from the Content Platform Engine Applets Support plug-in for IBM Content Navigator, it runs as a Java applet from a browser with Java plug-in NSAPI support. Many browsers no longer support Java applets or are planning to drop support for Java applets. If your web browser does not support running Java applets, you can use a new stand-alone Process Designer that is available with Content Platform Engine.

About this task

This version of Process Designer runs as a stand-alone Java application without requiring a web browser.

Procedure

To configure IBM Case Manager to use the stand-alone Process Designer:

1. Install the stand-alone Process Designer on your local system. For more information about installing and using this software, see *Running Process Designer*.
2. To choose how the Process Designer is to be hosted, run the Create Case Manager Applications task in the IBM Case Manager configuration tool and select one of the following options:

Option	Description
CPE Support Applets Plug-in	Choose this option to use either use stand-alone Process Designer or the Process Designer applet.
Standalone Process Designer	Choose this option to disable running Process Designer as an applet. If you choose this option, you will no longer be able to access Process Designer from Case Manager Builder.

3. Run the Deploy Case Manager Builder task.
4. Copy the `CaseManagement/WorkplaceXTConfig/ICMSolutionEdit.jar` file to the `lib` folder in your Content Platform Engine installation directory in which you installed the stand-alone Process Designer. This file enables stand-alone Process Designer to support editing by multiple users.

What to do next

To use stand-alone Process Designer to edit workflows for your IBM Case Manager solution, launch the stand-alone Process Designer, and click **File > Solution > Edit** to navigate to the workflow definition file in your design object store. The workflow definition file is located in `/IBM Case Manager/Solutions/Solution Name`.

Binding applications with WebSphere Application Server:

If you use WebSphere Application Server, you must bind the web applications after you run the IBM Case Manager configuration tasks.

Procedure

After the deployment tasks complete successfully, use the WebSphere Application Server console to bind the following deployed applications to the web server:

- CaseClient
- CaseBuilder
- CaseForms, if used
- CaseManager
- ICMClient
- Any custom widgets packages and applications

Adding users to a project area:

You must add at least one user to the default project area before you start Case Manager Builder. Users who are not assigned to a project area cannot log into Case Manager Builder. Users can define and modify solutions only in the project area that the users are assigned to.

About this task

Each development environment has a default project area named `dev_env_connection_definition`. You must add at least one user to the default project area before you can use Case Manager Builder. You can define more project areas as needed to provide isolated work areas for developing and testing solutions in Case Manager Builder. To access a project area, you can move users and user groups from one project area to another as needed. You can add users in user groups to the default project area, but you can add only individual users to a nondefault project area. A user can belong only to one nondefault project area and the default project area.

Before you add users to the project area, add them to the master group that you configured for access to your object store.

You can add users to project areas by using the administration client. Select the default project area, click **Actions > View and Edit**, and click the **Security** tab to add users. For more information, see *Managing project areas*.

What to do next

Adding a user to a project area gives the user access to the solutions in the project area in the design object store. If the user is not an administrator for the target object store, then you must set the security for the user.

Verifying the IBM Case Manager applications in the development environment:

After you install your IBM Case Manager software, configure your environment, and deploy the applications, you can start and verify the IBM Case Manager applications in the development environment.

Procedure

To verify the IBM Case Manager applications:

1. Verify the IBM Case Manager API deployment by accessing the following link from a browser:

Environment	Application URL
High availability	<code>http://virtual_server_name/CaseManager/CASEREST/v1/info</code>
Stand-alone or network deployment	<code>http://server_name:port/CaseManager/CASEREST/v1/info</code>

2. Log in to the IBM Case Manager administration client by accessing the following link from a browser:

Environment	Application URL
High availability	http:// <i>virtual_server_name.domain.com</i> /navigator/?desktop=icmadmin
Stand-alone or network deployment	http:// <i>server_name:port</i> /navigator/?desktop=icmadmin

- Log in to the Case Manager Client by accessing the default IBM Case Manager desktop from a browser:

Environment	Application URL
High availability	http:// <i>virtual_server_name.domain.com</i> /navigator/?desktop=icm
Stand-alone or network deployment	http:// <i>server_name:port</i> /navigator/?desktop=icm

Verify that your specified Lightweight Directory Access Protocol (LDAP) users can log in to the Case Manager Client.

- Click the help icon to test whether the Case Manager Client help system displays content.
- Log in to the Case Manager Builder by accessing the following link from a browser:

Environment	Application URL
High availability	http:// <i>virtual_server_name</i> /CaseBuilder
Stand-alone or network deployment	http:// <i>server_name:port</i> /CaseBuilder

Verify that your specified LDAP users can log in to the Case Manager Builder.

- Click the help icon to test whether the Case Manager Builder help system displays content.

Configuring the production environment for cluster or network deployment

You must configure the production environment before you deploy your solutions to production. You configure the production environment after you configure the development environment.

Before you begin

Be sure to have your completed configuration checklist available.

About this task

Configuring the production environment prepares Case Manager Builder and Case Manager Client for use. You use the IBM Case Manager configuration tool to create a profile, which is a collection of configuration and deployment tasks. When you provide the required values for the tasks and run the tasks, you configure all the required settings and deployments for your production environment.

- "Running the production environment configuration tasks" on page 68
- "Binding applications with WebSphere Application Server" on page 72
- "Configuring production target object store indexes" on page 72
- "Configuring email notification" on page 73
- "Verifying the IBM Case Manager applications in the production environment" on page 75

Related tasks:

“Configuring a workflow system for IBM Case Manager” on page 51

Running the production environment configuration tasks:

Use the configuration tool to create a production environment profile and run the configuration tasks.

Before you begin

Ensure that the cluster and your IBM Content Navigator instance are running when you run the configuration tool tasks.

Procedure

To configure the production environment:

1. Log in to the IBM Case Manager server.
2. Start the configuration tool by running one of the following commands:

Operating system	Command
AIX	<ol style="list-style-type: none"> 1. Change to the <code>_install_path/configure</code> directory. <code>_install_path</code> is the location where IBM Case Manager is installed, for example, <code>/opt/IBM/CaseManagement</code>. 2. Run the following command: <code>./configmgr</code>
Linux	<ol style="list-style-type: none"> 1. Change to the <code>_install_path/configure</code> directory. <code>_install_path</code> is the location where IBM Case Manager is installed, for example, <code>/opt/IBM/CaseManagement</code>. 2. Run the following command: <code>./configmgr</code>
Linux for System z	<ol style="list-style-type: none"> 1. Change to the <code>_install_path/configure</code> directory. <code>_install_path</code> is the location where IBM Case Manager is installed, for example, <code>/opt/IBM/CaseManagement</code>. 2. Run the following command: <code>./configmgr</code>
Windows	<p>Perform one of the following actions:</p> <ul style="list-style-type: none"> • Click Start > All Programs > IBM Case Manager > Case Manager Configuration Tool. • Run the following command: <code>_install_path\configure\configmgr.exe</code> <code>_install_path</code> is the location where IBM Case Manager is installed, for example, one of the following directories: <ul style="list-style-type: none"> – <code>C:\Program Files\IBM\CaseManagement</code> – <code>C:\Program Files (x86)\IBM\CaseManagement</code>

3. Click **File > Create profile** to create a production environment profile and use the values from your configuration checklist to complete the fields. In the **Network shared directory** field, ensure that you specify the shared location that you created. After the profile files are created, the profile is opened so that you can work with the individual tasks in the profile.
4. Edit, save, and run the Update the Content Platform Engine Client Connector Files task. Running this task ensures that your client connector files match the version of your Content Platform Engine. After you run this task, close and then restart the configuration tool.
5. Edit, save, and run the following tasks. You must run the tasks in the order listed.

Table 9. Task requirements for a production environment

Task	Required
Configure the Case Management Object Stores	Required to configure each target environment.
Define Target Environment	Required to configure each target environment.
Configure the IBM Content Manager Host Properties	Required if IBM Case Manager integrates with IBM Content Manager.
Configure IBM Business Process Manager	Required if IBM Case Manager integrates with IBM Business Process Manager.
Register the IBM Business Automation Workflow Plug-in	<p>Required if you want to use the plug-in for IBM Business Process Manager that provides a access to your IBM Process Portal Work dashboard from your IBM Case Manager desktop. Save your changes and then run the task to apply your settings.</p> <p>This plug-in adds the Workflow > Launch Process action to the Action menu and pop-up menu in the Browse view of the IBM Case Manager desktop. You can use this action to launch an IBM BPM process from a document. You can also add the Launch Process action to the menu in the Documents view for the Case Information widget.</p> <p>Important: To use the IBM Business Automation Workflow plug-in, you must use the Hypertext Transfer Protocol Secure (HTTPS) in your IBM Content Navigator URL.</p>
Create Case Manager Applications	Always
Deploy the Case Manager API	Always
Register the IBM Case Manager Services Plug-in	Always
Deploy and Register Widgets Package	<p>Always</p> <p>Important: If you run this task in a cluster environment, you must ensure that the plug-in is loaded on each node of the cluster. Either restart the cluster to force the plug-in to be loaded on all nodes or manually load the plug-in on each node by using the IBM Content Navigator administration client.</p>

Table 9. Task requirements for a production environment (continued)

Task	Required
Deploy the Forms Application	<p>Required if IBM Case Manager integrates with IBM Forms or IBM FileNet P8 eForms.</p> <p>If you configure IBM Forms or IBM FileNet P8 eForms on a network deployment or cluster environment, run this task in the profile that contains the other tasks. Select Network Deployment or Cluster for the deployment type, eForms and IBM Forms for the forms type, and Deployment Manager Profile for the environment type.</p> <p>If you integrate with IBM Forms 8.1 or earlier on a network deployment or cluster environment, the following additional steps are required. These additional steps are not required if you integrate with IBM Forms 8.2 or later or with only IBM FileNet P8 eForms.</p> <ol style="list-style-type: none"> 1. For the managed nodes, create a profile on each managed node that includes only this task and run this task. Select Network Deployment or Cluster for the deployment type, eForms and IBM Forms for the forms type, and Managed Profile for the environment type. 2. After all nodes are configured, the managed node or cluster must be restarted to complete the forms integration. You can restart the managed node or cluster now, or after you run all other configuration tasks.
Register the IBM Case Manager Administration Client Plug-in	Always
Configure Box Collaboration	Required if you want to enable case workers to use Box to collaborate with external users. This task configures the connection to the Box server.
Register Target Environment	Required to configure each target environment.

Table 9. Task requirements for a production environment (continued)

Task	Required
Configure Business Rules	<p>Required if you use business rules in your solution.</p> <p>Tips:</p> <ul style="list-style-type: none"> You can select only one locale in which to write the business rules for your solutions. If you must create solutions with business rules in other locales, rerun this task to change the rule persistence locale before you create the solution. After the first rule for a solution is saved, the rule persistence locale cannot be changed. If you rerun this task to change the location of the rules repository directory after you deploy any solutions, complete the following steps after you run the task: <ol style="list-style-type: none"> Stop Content Platform Engine. From the previous rules repository directory, move the res_data directory to the new location of the rules repository directory. In a cluster environment, the rules directory must be a shared directory that can be accessed by all Content Platform Engine cluster servers. Restart Content Platform Engine.
Register the External Data Service	Required for solutions that use the external data service.
Deploy and Register Extensions Package	<p>Required only when you add an extensions package for a custom property editor or controller.</p> <p>Important: If you run this task in a cluster environment, you must ensure that the plug-in is loaded on each node of the cluster. Either restart the cluster to force the plug-in to be loaded on all nodes or manually load the plug-in on each node by using the IBM Content Navigator administration client.</p>

6. Restart the cluster.

“Configuring additional target environments”

Configuring additional target environments:

If you want to add new object stores to your production environment, you must also configure a complete target environment. The target environment includes creating the object store, creating a workflow system, and running additional configuration tasks.

Before you begin

Be sure to have your completed configuration checklist available.

About this task

For each additional object store that your environment requires, complete the full procedure for configuring a target environment.

Procedure

To configure additional target environments:

Use the instructions in Setting up target environments.

Binding applications with WebSphere Application Server:

If you use WebSphere Application Server, you must bind the web applications after you run the IBM Case Manager configuration tasks.

Procedure

After the deployment tasks complete successfully, use the WebSphere Application Server console to bind the following deployed applications to the web server:

- CaseClient
- CaseManager
- Any custom widgets packages and applications

Configuring production target object store indexes:

Your database administrator must create a four-part composite index for each production target object store that is used for case management. That database retrieval index is required for efficiently retrieving the case history in the Event table in target object stores.

About this task

Restriction: Create the index for production target object stores that do not already have a four part index. In previous releases of IBM Case Manager, a two part index was recommended, but a four part index is more effective. If a two part index was previously applied, you must replace it with the more effective, four-part index.

The index contains unique key values, and the four-part index uses the following format: *<case_folder_column, audit_sequence DESC, object_class_id, source_object_classid>*.

case_folder_column

The name of the database column that contains the CmAcmCaseFolder property. The property value is a globally unique identifier (GUID). The database column name might not be the same in different target object stores.

audit_sequence

The database column name for the CmAuditSequence property is always named *audit_sequence* in all target object stores. The *audit_sequence* column provides an accurate time sequence for events. The property type is float, but the property values are sequentially increasing positive integers that are generated as new events are stored in the Event table.

object_class_id

The name of this column is the same in all target object stores. This column is included in the index to make filtering the case history events more efficient when you search the case history.

source_object_class_id

The name of this column is the same in all object stores. This column is included in the index to make filtering the case history events more efficient when you search the case history.

Procedure

To create the four-part index:

1. If you previously created the two-part index, drop the index permanently.
2. Use Administration Console for Content Platform Engine to identify the database column name of the CmAcCaseFolder property in the Event table. Record the values for the TableDefinition and ColumnId properties for the CmAcCaseFolder property in the target object store.
 - a. Navigate to *Target Object Store* > **Data Design** > **Classes** > **Other Classes** > **Event**.
 - b. In the Properties tab, sort on **Property Name**.
 - c. Scroll down to find the property **Table Definition** and record the value.
 - d. Click **Property Value**. Another Administration Console for Content Platform Engine tab opens.
 - e. Open the **Column Definition** dropdown list and select column **CmAcCaseFolder**. The Column Definition Properties tab opens.
 - f. Record the value of the property **Column Name**.
3. Use your database tools to create the four-part index with the following form: `<case_folder_column, audit_sequence DESC, object_class_id, source_object_class_id>`. The audit_sequence field of the index must be specified as DESCENDING.
4. Repeat this procedure for each target object store in your production environment that uses IBM Case Manager solutions.

Configuring email notification:

You can optionally enable email notification of workflow activity. Users can configure which notifications they want to receive and their preferred locale. For example, users can choose to be notified when work is assigned or when work is approaching or passes a deadline. Configure email notification on the workflow server, in IBM Content Navigator, and in the Case Manager Client.

“Enabling notification in the Administration Console for Content Platform Engine”

“Enabling notification in IBM Content Navigator” on page 74

“Enabling notification in Case Manager Client” on page 75

Enabling notification in the Administration Console for Content Platform Engine:

Before you can enable email notification on your Content Platform Engine system, you must specify a language pack. You specify the language pack and enable notification by using the Administration Console for Content Platform Engine.

About this task

When you configure your language pack, the language you choose should match the default locale for the target object store. This locale value is specified on the **General** tab. The default locale for a new system is English.

Procedure

To enable email notification:

1. Log in to Administration Console for Content Platform Engine.
2. Expand Object stores, right-click your target object store, and click **Administrative > Workflow System..**
3. Click the **Language Packs** tab, and click **New**.
4. Add your language pack.
 - a. Select your locale from the dropdown menu. The locale selection will auto fill the date time mask.
 - b. Enter the Content Platform Engine template path. By default, the email template directory is set to the English language directory, which is `<install_path>/IBM/FileNet/ContentEngine/tools/PE/msg/en`.
5. Save your changes.
6. Configure the Remote Servers settings:
 - a. Click the **Remote Servers** tab.
 - b. Check the **Enable email notification** check box.
 - c. Enter the host name and port values for your SMTP server.
 - d. Enter an email ID as the sender of your notifications.
 - e. Enter the email login ID and password for the system user that logs into the server and sends the notification.
 - f. Save your changes.
7. Click the **Advanced** tab.
8. In the server list, change the value for the **CacheSyncFixupEmail** setting to false. The default value for this setting is true.
9. Save your changes.

Enabling notification in IBM Content Navigator:

You use the settings in IBM Content Navigator to enable email notifications through the administration desktop for IBM Case Manager.

About this task

When you configure your language pack, the language you choose should match the default locale for the target object store. This locale value is specified on the **General** tab. The default locale for a new system is English.

Procedure

To enable email notification:

1. Log in to IBM Content Navigator as an administrator. Enter the following URL in a browser:
`http://server:port/navigator`
server is the IBM Content Navigator server name or IP address.

port is the IBM Content Navigator port number.

2. Navigate to **Repositories > Your target object store > General**, and click **Connect**.
3. In the **Configuration Parameters** tab, make sure that the **Workflow connection point** field contains a valid value.
4. Navigate to **Desktops > Case Manager > Edit**.
5. On the **Appearance** tab, Select **Work** as a feature, and make sure that the target object store is specified as the default repository.
6. On the **General** tab, in the Additional Settings pane, select **Enable this desktop for FileNet P8 workflow email notification**.
7. Save your changes.

Enabling notification in Case Manager Client:

After you enable notification for your system, you must set your notification preferences in the Case Manager Client application.

About this task

The preferences in Case Manager Client control the destination address for email notification. Each user or login user of Case Manager Client must configure an email address in order to receive notification.

Procedure

To enable email notification in Case Manager Client:

1. Log in to the Case Manager Client by accessing the default IBM Case Manager desktop from a browser: `http://server_name:port/navigator/?desktop=icm`
2. Open the Work view and click **Preferences**.
3. Enter the email address where you want to receive notifications.
4. Use the **On** radio buttons to select the events for which you want to receive notification.
5. Save your changes.

Verifying the IBM Case Manager applications in the production environment:

After you configure your environment and deploy the applications, you can start and verify the IBM Case Manager applications in the production environment.

Procedure

To verify the IBM Case Manager applications:

1. Verify the IBM Case Manager API deployment by accessing the following link from a browser:

Environment	Application URL
High availability	<code>http://virtual_server_name/CaseManager/CASEREST/v1/info</code>
Stand-alone or network deployment	<code>http://server_name:port/CaseManager/CASEREST/v1/info</code>

2. Log in to the IBM Case Manager administration client by accessing the following link from a browser:

Environment	Application URL
High availability	http:// <i>virtual_server_name.domain.com</i> /navigator/?desktop=icmadmin
Stand-alone or network deployment	http:// <i>server_name:port</i> /navigator/?desktop=icmadmin

3. Log in to the Case Manager Client by accessing the default IBM Case Manager desktop from a browser:

Environment	Application URL
High availability	http:// <i>virtual_server_name.domain.com</i> /navigator/?desktop=icm
Stand-alone or network deployment	http:// <i>server_name:port</i> /navigator/?desktop=icm

Verify that your specified Lightweight Directory Access Protocol (LDAP) users can log in to the Case Manager Client.

4. Click the help icon to test whether the Case Manager Client help system displays content.

Installing and configuring on a stand-alone server

Before you install IBM Case Manager, you must first install the prerequisite software applications on the same server. Then you can use the IBM Case Manager tools to install and configure the IBM Case Manager applications.

Before you begin

For details about the hardware and software requirements, see “System requirements” on page 10.

About this task

A typical IBM Case Manager environment includes an IBM FileNet P8 Platform system that is installed and configured on a distributed set of servers. You can use an existing installation, or install a new FileNet P8 Platform system to work with IBM Case Manager. Before you install IBM Case Manager, you must configure your FileNet P8 Platform environment to work with IBM Case Manager.

If you have not prepared a server for IBM Case Manager that includes the prerequisite software, you must install and configure the following applications for IBM Case Manager:

- WebSphere Application Server
- IBM Content Navigator

For a development environment, you configure and deploy IBM Content Navigator as a client of the Content Platform Engine instance that hosts the IBM Case Manager object stores.

For a production environment, you again configure and deploy IBM Content Navigator as a client of Content Platform Engine.

Use the IBM Case Manager configuration tool to configure the development and production environments. You use the configuration tool to create profiles that

contain tasks, where you enter properties and settings for all aspects of your IBM Case Manager environment and applications. After you run the configuration tasks, your IBM Case Manager system is ready to use.

1. “Preparing your FileNet P8 system for IBM Case Manager”
2. “Preparing the IBM Case Manager server” on page 82
3. “Installing IBM Case Manager” on page 86
4. “Configuring IBM Case Manager” on page 88

Preparing your FileNet P8 system for IBM Case Manager

For your FileNet P8 environment to work with IBM Case Manager, you must install or upgrade FileNet P8, create users and object stores, and configure the workflow system.

About this task

The IBM Case Manager configuration tool uses many of the same values from your FileNet P8 installation and configuration to connect IBM Case Manager to the FileNet P8 environment. Before you install, upgrade, and configure, review the configuration checklist and collect values as applicable.

1. “Installing or upgrading FileNet P8”
2. “Enabling case management if you installed FileNet P8 by using IBM Content Foundation” on page 78
3. “Identifying IBM Case Manager users” on page 79
4. “Creating IBM Case Manager object stores on Content Platform Engine” on page 80
5. “Configuring a workflow system for IBM Case Manager” on page 81

Related reference:

“Configuration checklist” on page 31

Installing or upgrading FileNet P8

IBM Case Manager requires a minimum version of FileNet P8. You use the IBM Administration Console for Content Platform Engine to configure the object store, users, and workflow system.

Before you begin



For details about the hardware and software requirements, see “System requirements” on page 10.

Procedure

To install or upgrade your FileNet P8 Platform environment:

1. Plan and prepare for the installation or upgrade of your IBM FileNet P8 Platform.
2. Install or upgrade IBM FileNet P8 Platform.

Related information:

-  [Planning and preparing for IBM FileNet P8 installation](#)
-  [Planning and preparing for IBM FileNet P8 upgrade](#)

Enabling case management if you installed FileNet P8 by using IBM Content Foundation

If you installed your FileNet P8 environment by using IBM Content Foundation and you now want to use IBM Case Manager, you must update the prerequisite software to add case management capabilities to your FileNet P8 environment.

Before you begin

For details about the hardware and software requirements, see “System requirements” on page 10.

About this task

If you installed your FileNet P8 environment by using IBM Content Foundation, you do not need to reinstall the Content Platform Engine (CPE) server software. The CPE server software that is provided with IBM Content Foundation is identical to the CPE server software that is provided with IBM FileNet Content Manager. However, the version of IBM Content Navigator that is provided with IBM Content Foundation is not supported by IBM Case Manager. You must install the correct version of IBM Content Navigator.


The following procedure assumes that you have a development environment in which IBM Content Navigator and IBM Case Manager are in the same application server instance.

Procedure

To add case management capabilities if you installed FileNet P8 by using IBM Content Foundation:

1. Download the following software:
 - a. From Passport Advantage, download a version of IBM Content Navigator that is supported for IBM Case Manager.
 - b. From Passport Advantage, download any of the IBM Content Foundation components that you want to use for case management, such as IBM Cognos Real-time Monitoring, and the IBM Case Manager components.
2. Install the version of IBM Content Navigator that you downloaded. Ensure you complete all applicable tasks in the configuration tool, including the Update the FileNet P8 Client Connector Files task.
3. Validate that IBM Content Navigator works correctly against the Content Platform Engine server that was installed by the IBM Content Foundation installation program.
4. Continue with the standard IBM Case Manager installation steps. Ensure that you complete the IBM Case Manager Update the Content Platform Engine Client Connector Files task and the other configuration tasks in the correct order, including the Create Case Manager Application task. These tasks will synchronize the client connector files with Content Platform Engine.
5. Validate that IBM Case Manager works correctly against the Content Platform Engine server that was installed by the IBM Content Foundation installation program.

Related tasks:

 [Getting fixes from Fix Central](#)

Identifying IBM Case Manager users

When you identify the Content Platform Engine object stores that are used for IBM Case Manager, you must identify the users that have access to these object stores. Your IBM Case Manager users must have the appropriate access permissions on the object stores. The required permissions vary depending on the user roles.

About this task

A best practice is to assign permissions to LDAP groups rather than individual users.

How you assign users and groups can vary based on the directory service provider in your environment. Use the documentation that is provided for your directory server to identify IBM Case Manager groups.

The groups or roles that are described in this task cover the main functions of the core IBM Case Manager applications. If you are extending your IBM Case Manager system, you might need to create or designate additional groups or roles.

It is a best practice to create a case management master group to use for assigning access to object stores at the time that you create the object store. Give this group Use object store permission. With this method, you can grant new users access to the object store by adding them to the master group. This approach can prevent issues with changing security on an established object store. For development environments, the master group can be #AUTHENTICATED-USERS. For a production environment, more controlled security is needed.

Procedure

To assign IBM Case Manager groups:

1. In your directory server, find the configured realm for the Content Platform Engine instance that you are using with IBM Case Manager.
2. Identify the following groups:

Table 10. Groups for business analysts and solution administrators

Group	Description
Business analysts	Responsible for designing the solution in Case Manager Builder and the user interface application in Case Manager Client. Business analysts work in a development environment to develop and test the solution. In order to create and edit solutions, and design the application, business analysts need access to objects in the design object store. In addition, the business analysts need access to the target object stores and the isolated region to deploy, test, and customize the solutions.
Solution administrators	Responsible for managing project areas. Responsible for copying and deploying solutions, and for promoting solutions to templates. Responsible for managing roles.

3. Ensure that both groups also have the following permissions:

Table 11. Group permissions

Component area	Permissions to assign
IBM FileNet P8 Domain GCD	Both the business analyst and the solution administrator groups require Global Configuration Domain (GCD) administrator rights. This role is referred to as the FileNet P8 Platform Administrator in FileNet P8 Platform documentation.
Content Platform Engine	<p>Add to Configuration groups rights to enable deployment, which requires creation of rosters, queues, applications spaces, and roles.</p> <p>Case workers can view the list of roles for a solution for reassigning work only if the user or group has access to the application space. You can add the users to the SysAdminG group or manually add the users to the access list of the application space</p> <p>If a business analyst must run Process Administrator in order to update work items, then also add the business analyst to the Process Administrator group.</p> <p>Tip: If a roster does not have users or groups that are assigned to it, then all users can access the roster. That is, all users have query and create rights. Users must have create rights to launch a workflow. If a queue does not have users or groups that are assigned to it, then all users can access the queue. That is, all users have query and process rights.</p>
Object store permissions	For the business analysts group, assign Use Object Store level permission for the design object store and target object stores.
Process Designer	Business analysts must belong to the Workflow System Configuration group to edit workflows in the Process Designer application from Case Manager Builder. You can configure this group in IBM Administration Console for Content Platform Engine when you configure the target object store workflow system.

Related information:

 [Creating Content Engine directory server accounts](#)

Creating IBM Case Manager object stores on Content Platform Engine

IBM Case Manager uses Content Platform Engine object stores for creating, storing, and deploying case solutions. You can use IBM Administration Console for Content Platform Engine to create the design object store and the target object store. You can also use an existing object store for the target object store.

About this task

You must create or designate the design object store and target object stores for your IBM Case Manager environment. In a typical use case, you create a new design object store to use for creating your solutions. You can use an existing object store that already contains documents and objects as the target object store for deployed solutions, or you can create a new target object store.


When you create the object store, add the case management master group that you created, and grant the group Use object store permission.


Procedure

To create the IBM Case Manager object stores:

1. In the IBM Administration Console for Content Platform Engine, create an object store by using the New Object Store wizard. For more information, see [Creating the initial object store](#).
2. In the Select Add-ons window, click the **Workplace/Workplace XT Configuration** button. This setting provides the add-ons that are required for IBM Case Manager. If you want only the minimum required add-ons, ensure that you select the following add-ons:
 - Content Engine Base Extensions, which are required for all Content Engine configurations.
 - Base Application Extensions, which are a prerequisite for Search Extensions and the Workplace Base Extensions.
 - Search Extensions, which are required to browse and search for content in IBM Content Navigator.
 - Workplace Base Extensions, which are required to browse and search for content in IBM Content Navigator.
 - Workplace Template Extensions, which are required to open folders in IBM Content Navigator.
3. In the Specify Object Store Administrators window, click **Add**. Then, click **Find**, and find the business analyst and solution administrator groups or the equivalent groups for your environment.
4. Complete the wizard and accept all remaining default values.

Related information:

 [Concepts: object stores](#)

 [IBM FileNet P8 add-ons required for IBM Content Navigator](#)

Configuring a workflow system for IBM Case Manager

IBM Case Manager uses workflow functionality to route and track user tasks. When you create a workflow system, you define an isolated region and its connection point. In addition, you can optionally customize the database storage parameters and configure email notification.

About this task

You can create a new object store to use as your IBM Case Manager target object store, or you can designate an existing object store.

- If you use a newly created object store, you must configure the isolated region and connection point as explained in this task. You use IBM Administration Console for Content Platform Engine to configure an isolated region and a

corresponding connection point. The database connection that you define must point to the target object store database. Use this task to complete the configuration.

- If you use an existing object store that has never been configured for workflows, you must configure the isolated region and connection point in the same way that you would for a new object store. Use the steps in this task to complete the configuration.
- If you use an existing object store that has already been configured for workflows, an isolated region and connection point have already been configured for the object store. Skip this task.

Procedure

To configure a workflow system:

1. Start the IBM Administration Console for Content Platform Engine.
2. Start the New Workflow System wizard in the administration console.
 - a. In the domain navigation pane, click the object store.
 - b. In the object store navigation pane, right-click the **Administrative > Workflow System** folder and click **New** to start the wizard.
3. Complete the wizard steps by using the values in your worksheet. The values that are displayed in the wizard screens are default values, which you must change to match your IBM Case Manager values.

Preparing the IBM Case Manager server

Before you can install, configure, and use IBM Case Manager, you must install the supporting software applications on the server where you want to install IBM Case Manager. A web application server deploys the IBM Case Manager applications. IBM Content Navigator hosts the IBM Case Manager administration client and the Case Manager Client.

Before you begin

For details about the hardware and software requirements, see “System requirements” on page 10.

For an AIX or Linux server that does not use Domain Name Service (DNS) or Network Information Service (NIS), verify that the `/etc/hosts` file contains the name and Internet Protocol (IP) address of all servers that the server communicates with, including the local host. Verify that the `etc/netsvc.conf` file contains the value `hosts = local`.

About this task

The IBM Case Manager installation program detects whether the correct version of IBM Content Navigator is installed. You prepare the server where you want to install IBM Case Manager by installing and configuring the supporting software applications.

The requirements for installing the supporting software can be different for development and production environments.

A development environment requires IBM Content Navigator. You must install IBM Case Manager in the same profile as IBM Content Navigator.

1. "Installing prerequisite software"
2. "Configuring the application server" on page 85

Installing prerequisite software

The IBM Case Manager applications are deployed on a web application server. IBM Content Navigator hosts the IBM Case Manager administration client and Case Manager Client. In development environments, IBM Case Manager also requires Process Designer.

Before you begin

For details about the hardware and software requirements, see "System requirements" on page 10.

About this task

You use the application server to deploy IBM Case Manager and IBM Content Navigator. You also use the application server to coordinate authentication between the IBM Case Manager applications and Content Platform Engine.

If you are installing IBM Case Manager on a server where your application server and IBM Content Navigator are already installed, upgrade the software to the minimum required version before you install IBM Case Manager.

You might need to increase the memory settings in your application server to enable better performance in your deployed IBM Case Manager applications. For more information, see [Adjusting the Java Virtual Machine \(JVM\) heap for IBM Case Manager](#)

Procedure

To install the prerequisite software:

1. Install your application server, including the latest fix packs and updates.
2. Install, configure, and deploy IBM Content Navigator.



Install one IBM Content Navigator server for each IBM Case Manager server that you plan to install. You cannot share a single IBM Content Navigator server among multiple IBM Case Manager servers.

Tip: Note the directory service server host name in the IBM Content Navigator LDAP configuration task because you must use the same value when installing IBM Case Manager.

WebSphere Application Server environments only: You must deploy IBM Content Navigator and IBM Case Manager to the same server (runtime environment or JVM).

Tip: Be sure to configure the viewer for your IBM Content Navigator instance. "Connecting and configuring additional repositories" on page 84

Related information:

-  [WebSphere Application Server documentation](#)
-  [Planning, installing, and configuring IBM Content Navigator](#)

Connecting and configuring additional repositories:

Case Manager Client users can add documents or attachments from a repository other than the case management object store. To enable this access, you must connect to a repository and configure the repository to use IBM Content Navigator as a web client. After you connect to and configure the repository, you must associate a desktop to enable users to access the content.

Before you begin

You can use IBM Content Navigator to connect to the following types of repositories:

- IBM Content Manager
- IBM Content Manager OnDemand
- IBM FileNet P8
- Repositories that support the OASIS Content Management Interoperability Services (CMIS) specification
- Box

The types of repositories that you can connect to depend on the repository connectors that are installed on your web application server. You use the IBM Content Navigator Configuration and Deployment Tool tasks for connecting to the repository that you plan to use. In the task, you must provide connection properties such as database type, connection name, host name, database name, schema name, database port, connection ID, and password to configure the connection.

After you run the required tasks and deploy the web application, go to the IBM Content Navigator administration tool and connect to the repository server by using the required library server administration user ID, such as icmadmin.

About this task

When you are configuring the parameters for the repository, consider the configuration parameters like system properties and search.

When IBM Content Navigator connects to an IBM FileNet P8 repository that is in a FileNet P8 domain other than the domain that is used for the design and target object stores, all web servers that host Content Platform Engine instances must use the same LTPA keys. Also, all Content Platform Engine instances must be the same major, minor, and fix pack version.


When case workers add documents from another repository, a reference to the latest version of the document in the source repository is added to the case. If the document is deleted from the source repository, the reference is deleted from the case or the reference becomes invalid. For IBM FileNet P8 or Box repositories, case workers can add a copy of the current version of a document to the case management repository instead of referencing the document in the source repository. The copy remains in the case even if the document is deleted from the source repository. However, any changes that are made to the document in the source repository are not reflected in the case. To allow case workers to add a copy of a Box document to the current case, enable the Box copy feature for the case management repository in IBM Content Navigator. For IBM FileNet P8 repositories, no additional configuration in IBM Content Navigator is required to enable case workers to copy documents to the case.

Procedure

To connect and configure an external repository:

1. Open the IBM Content Navigator administration tool in the web client.
2. Click **Repositories > New Repository**.
3. Select the repository type.
4. Click **General** and enter the information that is specific to the repository that you are configuring. The repository information such as the display name, ID, and server name are required to configure the repository.
5. Click **Connect**. You can save the default configuration settings for the repository or continue to customize the settings.
6. Click **Configuration Parameters > System Properties > Browse** or **Search** to configure additional settings for the repository.
7. Save your settings.
8. Add the newly added repository to the Case Manager desktop:
 - a. In the IBM Content Navigator administration tool, click **Desktops** and open your Case Manager desktop.
 - b. On the **Repositories** tab, select the new repository from the **Available Repositories** list.
 - c. Use the move arrow to add the new repository to the **Selected Repositories** list.
9. To enable case workers to add a copy of a Box document to the current case, enable the Box copy feature for the case management repository.
 - a. In the IBM Content Navigator administration tool, click **Repositories** and open the IBM FileNet Content Manager target object store that is used as the case management repository.
 - b. On the **Configuration Parameters** tab, enable the **Optional Features > Box copy** option.
10. For each case type in which you want users to be able to add documents or attachments from an external repository that you configured, edit the case type in Case Manager Builder and select **Allow documents and attachments from repositories other than the case management object stores**.

Related tasks:

 Adding and modifying case types

Related information:

 Integrating IBM Content Navigator with Box

Configuring the application server

You configure your application server to work with your installation of IBM Content Navigator. In most cases, these configuration steps cover the configuration that is required for IBM Case Manager on the application server. Additional configuration might be required for your IBM Case Manager environment.

“Configuring Active Directory user accounts in WebSphere Application Server”

Configuring Active Directory user accounts in WebSphere Application Server:

If you did not use the same full name, samAccountName, and display name when you created your Active Directory user accounts, you must configure the Login properties value in WebSphere Application Server.

Procedure

To set the Login properties value:

1. Log in to the WebSphere Application Server administrative console.
2. Click **Global security > Federated repositories > Manage repositories > my_LDAP_provider**.
3. In the **Security** section, set the **Login properties** value to one of the following values:

Option	Description
uid	Users can log in with samAccountName
cn	Users can log in with full name
uid;cn	Users can log in with either samAccountName or full name

4. Click **Apply**.
5. Save your changes.

Installing IBM Case Manager

You can install IBM Case Manager interactively, by using the installation program. You can also install silently, by adding installation values to an input file and running the installation program from a command line.

Before you begin

Install the prerequisite applications before you run the IBM Case Manager installation program.

For details about the hardware and software requirements, see “System requirements” on page 10.

About this task

The IBM Case Manager installation program installs the required files for all the IBM Case Manager applications.

“Installing IBM Case Manager interactively”

“Installing IBM Case Manager silently” on page 87

Installing IBM Case Manager interactively

The IBM Case Manager installation program detects whether you have prerequisite software installed. The program installs the IBM Case Manager files.

About this task

The installation program detects whether the IBM Content Navigator software is installed. The installation program then installs the IBM Case Manager application files and the IBM Case Manager configuration tool.

Procedure

To install IBM Case Manager interactively:

1. Log on to the server where you want to install IBM Case Manager. Log on as a user with write access to the destination directory for your installation of IBM Case Manager, and with read, write, and execute access for the application server installation directory.
2. Navigate to the IBM Case Manager software package in the installation media.
3. Run the installation program:

Operating system	Command
AIX	5.3.3.0-ICM-AIX.BIN
Linux	5.3.3.0-ICM-LINUX.BIN
Linux for System z	5.3.3.0-ICM-ZLINUX.BIN
Windows	5.3.3.0-ICM-WIN.EXE

4. Complete the IBM Case Manager installation program.

Important: Set the license type to the IBM Business Automation Workflow Enterprise license or the IBM Business Automation Workflow Express license to which you are entitled. Do not set the license type to **IBM Case Manager** unless you are upgrading an existing IBM Case Manager installation. For more information on upgrading, see “Upgrading IBM Case Manager” on page 186.

5. When the installation completes, check for errors in the IBM Case Manager installation log. The `IBM_Case_Manager_5.3.3.0_2018.03_InstallLog.txt` is created in the installation directory. For example, review the `/opt/IBM/CaseManagement/logs/IBM_Case_Manager_5.3.3.0_2018.03_InstallLog.txt` file.

What to do next

Use the IBM Case Manager configuration tool to configure your IBM Case Manager applications.

Installing IBM Case Manager silently

When you install IBM Case Manager silently, you run a command and specify an input file. Add the information for your environment in the input file before you start the installation. The installation program installs IBM Case Manager applications.

About this task

The installation program detects whether the prerequisite IBM Content Navigator software is installed. The installation program then installs the IBM Case Manager applications and the IBM Case Manager configuration tool.

Procedure

To install IBM Case Manager silently:

1. Log on to the server where you plan to install IBM Case Manager. Log on as a user with write access to the destination directory for your installation of IBM Case Manager, and with read, write, and execute access for the application server installation directory.
2. Navigate to the IBM Case Manager software package in the installation media.
3. Edit the `cm_silent_install.txt` file to reflect the installation choices for your environment.

Important: Set the license type to the IBM Business Automation Workflow Enterprise license or the IBM Business Automation Workflow Express license to which you are entitled. Do not set the license type to **IBM Case Manager** unless you are upgrading an existing IBM Case Manager installation. For more information on upgrading, see “Upgrading IBM Case Manager” on page 186.

4. Run the installation program:

Operating system	Command
AIX	5.3.3.0-ICM-AIX.BIN -i silent -f cm_silent_install.txt
Linux	5.3.3.0-ICM-LINUX.BIN -i silent -f cm_silent_install.txt
Linux for System z	5.3.3.0-ICM-ZLINUX.BIN -i silent -f cm_silent_install.txt
Windows	5.3.3.0-ICM-WIN.EXE -i silent -f cm_silent_install.txt

5. When the installation completes, check for errors in the IBM Case Manager installation log. The `IBM_Case_Manager_5.3.3.0_2018.03_InstallLog.txt` is created in the installation directory. For example, review the `/opt/IBM/CaseManagement/logs/IBM_Case_Manager_5.3.3.0_2018.03_InstallLog.txt` file.

What to do next

Use IBM Case Manager configuration tool to configure your IBM Case Manager applications.

Configuring IBM Case Manager

You must configure IBM Case Manager before you can use it in development or production. Configuring your system prepares the Case Manager Builder application and the Case Manager Client application for deployment on the application server. After you deploy these applications, you can create, test, manage, deploy, and work with your business solutions.

About this task

Your case management system consists of a development environment for creating and testing case management solutions and a production environment for working with running case management solutions. You must configure both environments.

Configuring the development environment includes configuring Case Manager Builder and Case Manager Client. Configuring the production environment includes configuring only Case Manager Client.

You use the IBM Case Manager configuration tool to create a profile for each development environment instance and a profile for each production environment instance. The profile includes several configuration and deployment tasks that you must edit and run before you can create and deploy case management solutions. For example, the Deploy Case Manager Builder task requires data about the application server settings to deploy the solution design application.

If you use the graphical user interface for the configuration tool, you must edit the property values for each task in the profile, save your changes, and then run the task. The data that you enter in the graphical user interface is saved in XML files, but you do not directly edit the files.

If you use the command-line version of the configuration tool, you must directly edit the XML files that store the values for the task. The XML files contain the properties and values that describe the associated configuration and deployment tasks. Three XML files contain the information that is common to all tasks in the profile, and each configuration task in the profile has one configuration XML file.

1. "Preparing to configure your case management system"
2. "Configuring the development environment" on page 90
3. "Configuring the production environment" on page 96

Preparing to configure your case management system

Before you run the IBM Case Manager configuration tool, you must grant permission to the user who will configure your IBM Case Manager system. You must also prepare Content Platform Engine to connect with your IBM Case Manager applications.

About this task

The user who runs the IBM Case Manager configuration tool requires access to the files and directories that contain the configuration properties.

A connectivity task in the IBM Case Manager configuration tool configures a connection between the IBM Case Manager applications and Content Platform Engine. To prepare for this task, you must first ensure that LTPA is configured on Content Platform Engine.

"Granting directory permissions to the configuration tool user"

Granting directory permissions to the configuration tool user:

You must grant file and directory permissions to *config_tool_user*, which is the user who runs the IBM Case Manager configuration tool, to allow this user to run the configuration tool and create files in the *install_path/configure* directory.

Procedure

To grant permissions to the *config_tool_user* user:

1. Log in as *case_manager_install_user* to the server where you installed the IBM Case Manager configuration tool.
2. Grant permissions to the *config_tool_user* user for the executable file that you intend to use:

Operating system	Permissions
AIX	Grant execute permission on all files in the CaseManagement\configure\tools directory.
Linux	
Linux for System z	
Graphical user interface	

Operating system	Permissions
AIX Linux Linux for System z Command line	Grant execute permission on all files in the CaseManagement\configure\tools directory.
Windows: graphical user interface	Grant read and execute permissions on all files in the CaseManagement\configure\tools directory.
Windows: command line	Grant read and execute permissions on all files in the CaseManagement\configure\tools directory.

- Grant read and write permission to the *install_path* directory where you installed IBM Case Manager
- Grant read, write, and execute permissions to the application server installation directory.
- Before you start the configuration tool, log off the server where the configuration tool is installed and log on again as *config_tool_user*.

Configuring the development environment

You must configure the development environment before you use IBM Case Manager to create and deploy solutions. You use the development environment to create, modify, and test solutions before moving them into a production environment.

Before you begin

Be sure to have your completed configuration checklist available.

Procedure

To configure the development environment:

- Log in to the IBM Case Manager server.
- Start the configuration tool by running one of the following commands:

Operating system	Command
AIX	<ol style="list-style-type: none"> Change to the <i>_install_path</i>/configure directory. <i>_install_path</i> is the location where IBM Case Manager is installed, for example, /opt/IBM/CaseManagement. Run the following command: <code>./configmgr</code>
Linux	<ol style="list-style-type: none"> Change to the <i>_install_path</i>/configure directory. <i>_install_path</i> is the location where IBM Case Manager is installed, for example, /opt/IBM/CaseManagement. Run the following command: <code>./configmgr</code>

Operating system	Command
Linux for System z	<ol style="list-style-type: none"> 1. Change to the <code>_install_path/configure</code> directory. <code>_install_path</code> is the location where IBM Case Manager is installed, for example, <code>/opt/IBM/CaseManagement</code>. 2. Run the following command: <code>./configmgr</code>
Windows	<p>Perform one of the following actions:</p> <ul style="list-style-type: none"> • Click Start > All Programs > IBM Case Manager > Case Manager Configuration Tool. • Run the following command: <code>_install_path\configure\configmgr.exe</code> <code>_install_path</code> is the location where IBM Case Manager is installed, for example, one of the following directories: <ul style="list-style-type: none"> – <code>C:\Program Files\IBM\CaseManagement</code> – <code>C:\Program Files (x86)\IBM\CaseManagement</code>

3. Click **File > Create profile** to create a development environment profile and use the values from your configuration checklist to complete the fields. In the **Network shared directory** field, ensure that you specify the shared location that you created. After the profile files are created, the profile is opened so that you can work with the individual tasks in the profile.
4. Edit, save, and run the Update the Content Platform Engine Client Connector Files task. Running this task ensures that your client connector files match the version of your Content Platform Engine. After you run this task, close and then restart the configuration tool.
5. Edit, save, and run the following tasks. You must run the tasks in the order listed.

Table 12. Task requirements for a development environment

Task	Required
Configure the Case Management Object Stores	Always
Define the Default Project Area	Required if you create new object stores for the V5.3.3 development environment.
Configure the IBM Content Manager Host Properties	Required if IBM Case Manager integrates with IBM Content Manager.
Configure IBM Business Process Manager	Required if IBM Case Manager integrates with IBM Business Process Manager and you create new object stores for the V5.3.3 development environment. This task is applicable only if you use WebSphere Application Server.

Table 12. Task requirements for a development environment (continued)

Task	Required
Register the IBM Business Automation Workflow Plug-in	<p>Required if you want to use the plug-in for IBM Business Process Manager that provides a access to your IBM Process Portal Work dashboard from your IBM Case Manager desktop. Save your changes and then run the task to apply your settings.</p> <p>This plug-in adds the Workflow > Launch Process action to the Action menu and pop-up menu in the Browse view of the IBM Case Manager desktop. You can use this action to launch an IBM BPM process from a document. You can also add the Launch Process action to the menu in the Documents view for the Case Information widget.</p> <p>Important: To use the IBM Business Automation Workflow plug-in, you must use the Hypertext Transfer Protocol Secure (HTTPS) in your IBM Content Navigator URL.</p>
Create Case Manager Applications	Always
Deploy the Case Manager API	Always
Register the IBM Case Manager Services Plug-in	Always
Deploy Case Manager Builder	Always
Deploy and Register Widgets Package	<p>Always</p> <p>Important: If you run this task in a cluster environment, you must ensure that the plug-in is loaded on each node of the cluster. Either restart the cluster to force the plug-in to be loaded on all nodes or manually load the plug-in on each node by using the IBM Content Navigator administration client.</p>
Deploy the Forms Application	Required if IBM Case Manager integrates with IBM Forms or IBM FileNet P8 eForms.
Register the IBM Case Manager Administration Client Plug-in	Always
Configure Box Collaboration	Required if you want to enable case workers to use Box to collaborate with external users. This task configures the connection to the Box server.
Register Project Area	Always

Table 12. Task requirements for a development environment (continued)

Task	Required
Configure Business Rules	<p>Required if you use business rules in your solution.</p> <p>Tips:</p> <ul style="list-style-type: none"> You can select only one locale in which to write the business rules for your solutions. If you need to create solutions with business rules in other locales, rerun this task to change the rule persistence locale before you create the solution. After the first rule for a solution is saved, the rule persistence locale cannot be changed. If you rerun this task to change the location of the rules repository directory after you deploy any solutions, complete the following steps after you run the task: <ol style="list-style-type: none"> Stop Content Platform Engine. From the previous rules repository directory, move the res_data directory to the new location of the rules repository directory. In a cluster environment, the rules directory must be a shared directory that can be accessed by all Content Platform Engine cluster servers. Restart Content Platform Engine.
Register the External Data Service	Required for solutions that use the external data service.
Deploy and Register Extensions Package	<p>Required only when you add an extensions package for a custom property editor or controller.</p> <p>Important: If you run this task in a cluster environment, you must ensure that the plug-in is loaded on each node of the cluster. Either restart the cluster to force the plug-in to be loaded on all nodes or manually load the plug-in on each node by using the IBM Content Navigator administration client.</p>

6. Restart the application server.

“Configuring IBM Case Manager to use the stand-alone IBM Process Designer” on page 94

“Adding users to a project area” on page 94

“Verifying the IBM Case Manager applications in the development environment” on page 95

Related tasks:

“Configuring the production environment” on page 96

“Configuring a workflow system for IBM Case Manager” on page 51

Related reference:

“Configuration checklist” on page 31

Configuring IBM Case Manager to use the stand-alone IBM Process Designer:

When you access Process Designer from Case Manager Builder or from the Content Platform Engine Applets Support plug-in for IBM Content Navigator, it runs as a Java applet from a browser with Java plug-in NSAPI support. Many browsers no longer support Java applets or are planning to drop support for Java applets. If your web browser does not support running Java applets, you can use a new stand-alone Process Designer that is available with Content Platform Engine.

About this task

This version of Process Designer runs as a stand-alone Java application without requiring a web browser.

Procedure

To configure IBM Case Manager to use the stand-alone Process Designer:

1. Install the stand-alone Process Designer on your local system. For more information about installing and using this software, see *Running Process Designer*.
2. To choose how the Process Designer is to be hosted, run the Create Case Manager Applications task in the IBM Case Manager configuration tool and select one of the following options:

Option	Description
CPE Support Applets Plug-in	Choose this option to use either use stand-alone Process Designer or the Process Designer applet.
Standalone Process Designer	Choose this option to disable running Process Designer as an applet. If you choose this option, you will no longer be able to access Process Designer from Case Manager Builder.

3. Run the Deploy Case Manager Builder task.
4. Copy the `CaseManagement/WorkplaceXTConfig/ICMSolutionEdit.jar` file to the `lib` folder in your Content Platform Engine installation directory in which you installed the stand-alone Process Designer. This file enables stand-alone Process Designer to support editing by multiple users.

What to do next

To use stand-alone Process Designer to edit workflows for your IBM Case Manager solution, launch the stand-alone Process Designer, and click **File > Solution > Edit** to navigate to the workflow definition file in your design object store. The workflow definition file is located in `/IBM Case Manager/Solutions/Solution Name`.

Adding users to a project area:

You must add at least one user to the default project area before you start Case Manager Builder. Users who are not assigned to a project area cannot log into Case Manager Builder. Users can define and modify solutions only in the project area that the users are assigned to.

About this task

Each development environment has a default project area named `dev_env_connection_definition`. You must add at least one user to the default project area before you can use Case Manager Builder. You can define more project areas as needed to provide isolated work areas for developing and testing solutions in Case Manager Builder. To access a project area, you can move users and user groups from one project area to another as needed. You can add users in user groups to the default project area, but you can add only individual users to a nondefault project area. A user can belong only to one nondefault project area and the default project area.

Before you add users to the project area, add them to the master group that you configured for access to your object store.

You can add users to project areas by using the administration client. Select the default project area, click **Actions > View and Edit**, and click the **Security** tab to add users. For more information, see *Managing project areas*.

What to do next

Adding a user to a project area gives the user access to the solutions in the project area in the design object store. If the user is not an administrator for the target object store, then you must set the security for the user.

Verifying the IBM Case Manager applications in the development environment:

After you install your IBM Case Manager software, configure your environment, and deploy the applications, you can start and verify the IBM Case Manager applications in the development environment.

Procedure

To verify the IBM Case Manager applications:

1. Verify the IBM Case Manager API deployment by accessing the following link from a browser:

Environment	Application URL
High availability	<code>http://virtual_server_name/CaseManager/CASEREST/v1/info</code>
Stand-alone or network deployment	<code>http://server_name:port/CaseManager/CASEREST/v1/info</code>

2. Log in to the IBM Case Manager administration client by accessing the following link from a browser:

Environment	Application URL
High availability	<code>http://virtual_server_name.domain.com/navigator/?desktop=icmadmin</code>
Stand-alone or network deployment	<code>http://server_name:port/navigator/?desktop=icmadmin</code>

3. Log in to the Case Manager Client by accessing the default IBM Case Manager desktop from a browser:

Environment	Application URL
High availability	http://virtual_server_name.domain.com/navigator/?desktop=icm
Stand-alone or network deployment	http://server_name:port/navigator/?desktop=icm

Verify that your specified Lightweight Directory Access Protocol (LDAP) users can log in to the Case Manager Client.

- Click the help icon to test whether the Case Manager Client help system displays content.
- Log in to the Case Manager Builder by accessing the following link from a browser:

Environment	Application URL
High availability	http://virtual_server_name/CaseBuilder
Stand-alone or network deployment	http://server_name:port/CaseBuilder

Verify that your specified LDAP users can log in to the Case Manager Builder.

- Click the help icon to test whether the Case Manager Builder help system displays content.

Related tasks:

“Verifying the IBM Case Manager applications in the production environment” on page 103

Configuring the production environment

You must configure the production environment before you deploy your solutions to production. You configure the production environment after you configure the development environment.

Before you begin

Be sure to have your completed configuration checklist available.

About this task

Configuring the production environment prepares Case Manager Builder and Case Manager Client for use. You use the IBM Case Manager configuration tool to create a profile, which is a collection of configuration and deployment tasks. When you provide the required values for the tasks and run the tasks, you configure all the required settings and deployments for your production environment.

Procedure

To configure the production environment:

- Log in to the IBM Case Manager server.
- Start the configuration tool by running one of the following commands:

Operating system	Command
AIX	<ol style="list-style-type: none"> 1. Change to the <code>_install_path/configure</code> directory. <code>_install_path</code> is the location where IBM Case Manager is installed, for example, <code>/opt/IBM/CaseManagement</code>. 2. Run the following command: <code>./configmgr</code>
Linux	<ol style="list-style-type: none"> 1. Change to the <code>_install_path/configure</code> directory. <code>_install_path</code> is the location where IBM Case Manager is installed, for example, <code>/opt/IBM/CaseManagement</code>. 2. Run the following command: <code>./configmgr</code>
Linux for System z	<ol style="list-style-type: none"> 1. Change to the <code>_install_path/configure</code> directory. <code>_install_path</code> is the location where IBM Case Manager is installed, for example, <code>/opt/IBM/CaseManagement</code>. 2. Run the following command: <code>./configmgr</code>
Windows	<p>Perform one of the following actions:</p> <ul style="list-style-type: none"> • Click Start > All Programs > IBM Case Manager > Case Manager Configuration Tool. • Run the following command: <code>_install_path\configure\configmgr.exe</code> <code>_install_path</code> is the location where IBM Case Manager is installed, for example, one of the following directories: <ul style="list-style-type: none"> – <code>C:\Program Files\IBM\CaseManagement</code> – <code>C:\Program Files (x86)\IBM\CaseManagement</code>

3. Click **File > Create profile** to create a development environment profile and use the values from your configuration checklist to complete the fields. Ensure that you specify the following values:

- Use the default profile location, for example, `Dmgr01`.
- For the Content Engine connection, ensure that you are pointing to a single Content Engine node.

After the profile files are created, the profile is opened so that you can work with the individual tasks in the profile.

4. Edit, save, and run the Update the Content Platform Engine Client Connector Files task. Running this task ensures that your client connector files match the version of your Content Platform Engine. After you run this task, close and then restart the configuration tool.
5. Edit, save, and run the following tasks. You must run the tasks in the order listed.

Table 13. Task requirements for a production environment

Task	Required
Configure the Case Management Object Stores	Required to configure each target environment.
Define Target Environment	Required to configure each target environment.
Configure the IBM Content Manager Host Properties	Required if IBM Case Manager integrates with IBM Content Manager.
Configure IBM Business Process Manager	Required if IBM Case Manager integrates with IBM Business Process Manager.
Register the IBM Business Automation Workflow Plug-in	<p>Required if you want to use the plug-in for IBM Business Process Manager that provides a access to your IBM Process Portal Work dashboard from your IBM Case Manager desktop. Save your changes and then run the task to apply your settings.</p> <p>This plug-in adds the Workflow > Launch Process action to the Action menu and pop-up menu in the Browse view of the IBM Case Manager desktop. You can use this action to launch an IBM BPM process from a document. You can also add the Launch Process action to the menu in the Documents view for the Case Information widget.</p> <p>Important: To use the IBM Business Automation Workflow plug-in, you must use the Hypertext Transfer Protocol Secure (HTTPS) in your IBM Content Navigator URL.</p>
Create Case Manager Applications	Always
Deploy the Case Manager API	Always
Register the IBM Case Manager Services Plug-in	Always
Deploy and Register Widgets Package	<p>Always</p> <p>Important: If you run this task in a cluster environment, you must ensure that the plug-in is loaded on each node of the cluster. Either restart the cluster to force the plug-in to be loaded on all nodes or manually load the plug-in on each node by using the IBM Content Navigator administration client.</p>
Deploy the Forms Application	Required if IBM Case Manager integrates with IBM Forms or IBM FileNet P8 eForms.
Register the IBM Case Manager Administration Client Plug-in	Always
Configure Box Collaboration	Required if you want to enable case workers to use Box to collaborate with external users. This task configures the connection to the Box server.
Register Target Environment	Required to configure each target environment.

Table 13. Task requirements for a production environment (continued)

Task	Required
Configure Business Rules	<p>Required if you use business rules in your solution.</p> <p>Tips:</p> <ul style="list-style-type: none"> • You can select only one locale in which to write the business rules for your solutions. If you must create solutions with business rules in other locales, rerun this task to change the rule persistence locale before you create the solution. After the first rule for a solution is saved, the rule persistence locale cannot be changed. • If you rerun this task to change the location of the rules repository directory after you deploy any solutions, complete the following steps after you run the task: <ol style="list-style-type: none"> 1. Stop Content Platform Engine. 2. From the previous rules repository directory, move the res_data directory to the new location of the rules repository directory. In a cluster environment, the rules directory must be a shared directory that can be accessed by all Content Platform Engine cluster servers. 3. Restart Content Platform Engine.
Register the External Data Service	<p>Required for solutions that use the external data service.</p>
Deploy and Register Extensions Package	<p>Required only when you add an extensions package for a custom property editor or controller.</p> <p>Important: If you run this task in a cluster environment, you must ensure that the plug-in is loaded on each node of the cluster. Either restart the cluster to force the plug-in to be loaded on all nodes or manually load the plug-in on each node by using the IBM Content Navigator administration client.</p>

6. Restart the application server.

“Configuring additional target environments” on page 100

“Configuring production target object store indexes” on page 100

“Configuring email notification” on page 101

“Verifying the IBM Case Manager applications in the production environment” on page 103

Related tasks:

“Configuring the development environment” on page 90

“Configuring a workflow system for IBM Case Manager” on page 51

Related reference:

“Configuration checklist” on page 31

Configuring additional target environments:

If you want to add new object stores to your production environment, you must also configure a complete target environment. The target environment includes creating the object store, creating a workflow system, and running additional configuration tasks.

Before you begin

Be sure to have your completed configuration checklist available.

About this task

For each additional object store that your environment requires, complete the full procedure for configuring a target environment.

Procedure

To configure additional target environments:

Use the instructions in Setting up target environments.

Configuring production target object store indexes:

Your database administrator must create a four-part composite index for each production target object store that is used for case management. That database retrieval index is required for efficiently retrieving the case history in the Event table in target object stores.

About this task

Restriction: Create the index for production target object stores that do not already have a four part index. In previous releases of IBM Case Manager, a two part index was recommended, but a four part index is more effective. If a two part index was previously applied, you must replace it with the more effective, four-part index.

The index contains unique key values, and the four-part index uses the following format: *<case_folder_column, audit_sequence DESC, object_class_id, source_object_classid>*.

case_folder_column

The name of the database column that contains the CmAcmCaseFolder property. The property value is a globally unique identifier (GUID). The database column name might not be the same in different target object stores.

audit_sequence

The database column name for the CmAuditSequence property is always named *audit_sequence* in all target object stores. The *audit_sequence* column provides an accurate time sequence for events. The property type is float, but the property values are sequentially increasing positive integers that are generated as new events are stored in the Event table.

object_class_id

The name of this column is the same in all target object stores. This column is included in the index to make filtering the case history events more efficient when you search the case history.

source_object_class_id

The name of this column is the same in all object stores. This column is included in the index to make filtering the case history events more efficient when you search the case history.

Procedure

To create the four-part index:

1. If you previously created the two-part index, drop the index permanently.
2. Use Administration Console for Content Platform Engine to identify the database column name of the CmAcCaseFolder property in the Event table. Record the values for the TableDefinition and ColumnId properties for the CmAcCaseFolder property in the target object store.
 - a. Navigate to *Target Object Store* > **Data Design** > **Classes** > **Other Classes** > **Event**.
 - b. In the Properties tab, sort on **Property Name**.
 - c. Scroll down to find the property **Table Definition** and record the value.
 - d. Click **Property Value**. Another Administration Console for Content Platform Engine tab opens.
 - e. Open the **Column Definition** dropdown list and select column **CmAcCaseFolder**. The Column Definition Properties tab opens.
 - f. Record the value of the property **Column Name**.
3. Use your database tools to create the four-part index with the following form: `<case_folder_column, audit_sequence DESC, object_class_id, source_object_class_id>`. The audit_sequence field of the index must be specified as DESCENDING.
4. Repeat this procedure for each target object store in your production environment that uses IBM Case Manager solutions.

Configuring email notification:

You can optionally enable email notification of workflow activity. Users can configure which notifications they want to receive and their preferred locale. For example, users can choose to be notified when work is assigned or when work is approaching or passes a deadline. Configure email notification on the workflow server, in IBM Content Navigator, and in the Case Manager Client.

“Enabling notification in the Administration Console for Content Platform Engine”

“Enabling notification in IBM Content Navigator” on page 102

“Enabling notification in Case Manager Client” on page 103

Enabling notification in the Administration Console for Content Platform Engine:

Before you can enable email notification on your Content Platform Engine system, you must specify a language pack. You specify the language pack and enable notification by using the Administration Console for Content Platform Engine.

About this task

When you configure your language pack, the language you choose should match the default locale for the target object store. This locale value is specified on the **General** tab. The default locale for a new system is English.

Procedure

To enable email notification:

1. Log in to Administration Console for Content Platform Engine.
2. Expand Object stores, right-click your target object store, and click **Administrative > Workflow System..**
3. Click the **Language Packs** tab, and click **New**.
4. Add your language pack.
 - a. Select your locale from the dropdown menu. The locale selection will auto fill the date time mask.
 - b. Enter the Content Platform Engine template path. By default, the email template directory is set to the English language directory, which is `<install_path>/IBM/FileNet/ContentEngine/tools/PE/msg/en`.
5. Save your changes.
6. Configure the Remote Servers settings:
 - a. Click the **Remote Servers** tab.
 - b. Check the **Enable email notification** check box.
 - c. Enter the host name and port values for your SMTP server.
 - d. Enter an email ID as the sender of your notifications.
 - e. Enter the email login ID and password for the system user that logs into the server and sends the notification.
 - f. Save your changes.
7. Click the **Advanced** tab.
8. In the server list, change the value for the **CacheSyncFixupEmail** setting to false. The default value for this setting is true.
9. Save your changes.

Enabling notification in IBM Content Navigator:

You use the settings in IBM Content Navigator to enable email notifications through the administration desktop for IBM Case Manager.

About this task

When you configure your language pack, the language you choose should match the default locale for the target object store. This locale value is specified on the **General** tab. The default locale for a new system is English.

Procedure

To enable email notification:

1. Log in to IBM Content Navigator as an administrator. Enter the following URL in a browser:
`http://server:port/navigator`
server is the IBM Content Navigator server name or IP address.
port is the IBM Content Navigator port number.
2. Navigate to **Repositories > Your target object store > General**, and click **Connect**.
3. In the **Configuration Parameters** tab, make sure that the **Workflow connection point** field contains a valid value.

4. Navigate to **Desktops > Case Manager > Edit**.
5. On the **Appearance** tab, Select **Work** as a feature, and make sure that the target object store is specified as the default repository.
6. On the **General** tab, in the Additional Settings pane, select **Enable this desktop for FileNet P8 workflow email notification**.
7. Save your changes.

Enabling notification in Case Manager Client:

After you enable notification for your system, you must set your notification preferences in the Case Manager Client application.

About this task

The preferences in Case Manager Client control the destination address for email notification. Each user or login user of Case Manager Client must configure an email address in order to receive notification.

Procedure

To enable email notification in Case Manager Client:

1. Log in to the Case Manager Client by accessing the default IBM Case Manager desktop from a browser: `http://server_name:port/navigator/?desktop=icm`
2. Open the Work view and click **Preferences**.
3. Enter the email address where you want to receive notifications.
4. Use the **On** radio buttons to select the events for which you want to receive notification.
5. Save your changes.

Verifying the IBM Case Manager applications in the production environment:

After you configure your environment and deploy the applications, you can start and verify the IBM Case Manager applications in the production environment.

Procedure

To verify the IBM Case Manager applications:

1. Verify the IBM Case Manager API deployment by accessing the following link from a browser:

Environment	Application URL
High availability	<code>http://virtual_server_name/CaseManager/CASEREST/v1/info</code>
Stand-alone or network deployment	<code>http://server_name:port/CaseManager/CASEREST/v1/info</code>

2. Log in to the IBM Case Manager administration client by accessing the following link from a browser:

Environment	Application URL
High availability	<code>http://virtual_server_name.domain.com/navigator/?desktop=icmadmin</code>

Environment	Application URL
Stand-alone or network deployment	http:// <i>server_name:port</i> /navigator/?desktop=icmadmin

3. Log in to the Case Manager Client by accessing the default IBM Case Manager desktop from a browser:

Environment	Application URL
High availability	http:// <i>virtual_server_name.domain.com</i> /navigator/?desktop=icm
Stand-alone or network deployment	http:// <i>server_name:port</i> /navigator/?desktop=icm

Verify that your specified Lightweight Directory Access Protocol (LDAP) users can log in to the Case Manager Client.

4. Click the help icon to test whether the Case Manager Client help system displays content.

Related tasks:

“Verifying the IBM Case Manager applications in the development environment” on page 95

Extending your case management system

You can further enhance your case management solution by integrating forms, additional rules, analytics, and logging and reporting.

“Integrating forms into your solution”

“Integrating with IBM Business Process Manager” on page 116

“Integrating IBM case analytics tools” on page 124

“Integrating with the IBM Case Monitor Dashboard” on page 129

“Integrating IBM Watson Explorer Analytical Components” on page 133

“Integrating with IBM Content Manager” on page 135

“Integrating with IBM Enterprise Records” on page 153

“Integrating with IBM Sametime” on page 154

“Integrating with Operational Decision Manager” on page 159

“Integrating with a version control system (VCS)” on page 164

“Integrating with Box” on page 170

Integrating forms into your solution

You can integrate IBM Forms with IBM Case Manager to use forms with your solutions. Forms can provide customizable interfaces in the Case Manager Client Form widget and automation features such as custom field formats, custom field validation, and a calculation engine.

“Forms in solutions”

“Installing IBM Forms” on page 106

“Configuring IBM FileNet eForms for P8” on page 108

“Adding forms to your solution” on page 110

“Guidelines for designing a form to use in the Form widget” on page 112

“Unsupported features for forms in Case Manager Client” on page 114

“Form policies” on page 115

Related concepts:

 [Deployment overview](#)

Related information:

 [Form widget](#)

Forms in solutions

You can configure solutions to use the Form widget in place of the Properties widget to enable case workers to view and edit the property values for a case or for a step (work item).

For step (work item) properties, you can configure the Form widget to use a form attachment. When the widget opens, it finds and displays a form that is located in the target object store. After the case worker completes the step, a form data document is saved as a case document in the case folder and is attached to the step.

The form data document can collect hundreds of details about many aspects a case. To help manage a case, you can configure a form to extract key decision-making information from the form data document. You then map this subset of information to the case properties so that the information can be displayed to case workers in the Form widget. Case workers can also view a read-only version of the form by opening its form data document from either the Documents view in the Case Information widget or from the Attachment widget.

For both case and step (work item) properties, you can configure the Form widget to use a specific form template as an interface to collect data without saving a form data document. Case workers can create a case or view and edit the property values for a case or step. After a case worker completes the case or step, the updated case data are mapped to case properties. A form data document is not saved.

The Form widget is included by default on Add Case Form, Case Details Form, Add Task Form, Work Details Form, and Form Attachment Work Details pages.

Restriction: The Form widget does not support policy-based forms.

Installing IBM Forms

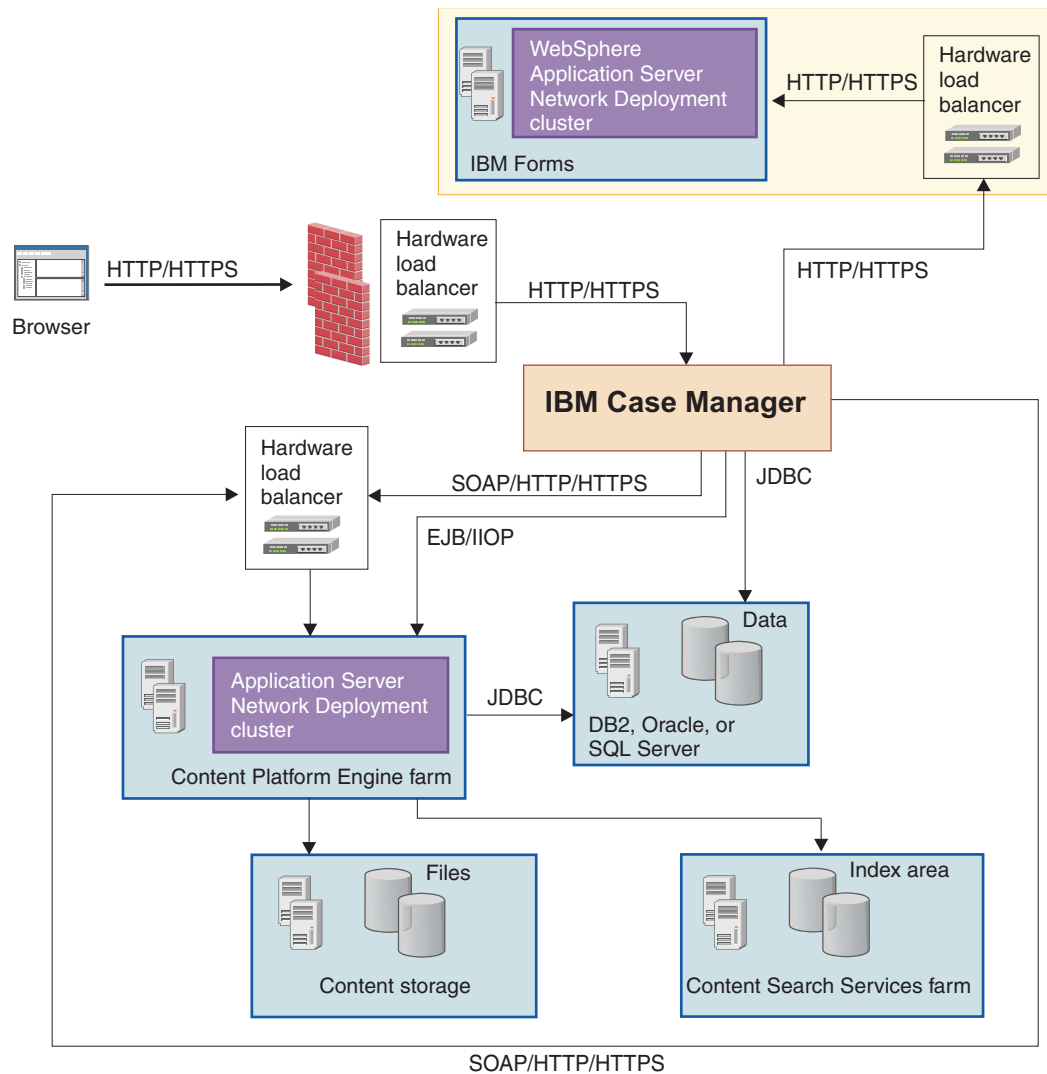
You can integrate IBM Forms to add form templates and form data documents to your IBM Case Manager solution. If you plan to use this integration, you must first install IBM Forms in your IBM Case Manager environment.

Before you begin

Workplace XT is required to edit a policy-based form. If you plan to use Workplace XT, ensure that Workplace XT is installed before you install IBM Forms. You must be root user to install IBM Forms in an AIX environment.

About this task

The following diagram shows IBM Forms with IBM Case Manager in a highly available environment.



The IBM Forms server or server cluster is called by the IBM Case Manager server or server cluster to provide electronic forms rendering capabilities and capture user data into the form for storage in the IBM FileNet P8.

If there is a WebForm Translator server installed on a remote server, there is no need to install it locally. Otherwise, user needs to select WebForm Translator component besides installing the ICM Integrator.

Procedure

To install IBM Forms:

1. Find the IBM Forms compressed file for your operating system. Extract all of the files and folders to a temporary directory on your system.
2. Double-click the appropriate executable file to start the IBM Forms server installation program.
3. Select the installation language and click **OK**.
4. Click **Next**. Then, accept the license agreement.
5. After IBM Autonomic Deployment Engine is installed and configured, enter a location for the server. Then, click **Next**.

6. Select **ICM Integrator** from the list of available components and click **Next**. If there is not a WebForm Translator server installed on a remote server, you must select to install the WebForm Translator component too. The details for how to install the WebForm Translator server can be found in the Webform Server 8 documentation.
7. On the Decisions panel, select **ICM Integrator 5.3** for use with IBM Case Manager V5.3.3 and click **Next**.
8. Provide the path to the installation location for IBM Case Manager and click **Next**.
9. Click **Install** to complete the installation.

What to do next

Run both the Create Case Manager Applications and Deploy Forms Application tasks in the IBM Case Manager configuration tool. If you integrate with IBM Forms 8.1 or earlier, restart the application server when you run the tasks on a stand-alone server.

In a cluster or network deployment environment, run both the Create Case Manager Applications and Deploy Forms Application tasks on the deployment management server. If you integrate with IBM Forms 8.1 or earlier, you must also run the tasks on each managed node and restart the application server cluster after you run the tasks on the last node. If you integrate with IBM Forms 8.2 or later, you do not need to run the tasks on the managed nodes or restart the application server cluster.

Related reference:

“Configuration checklist” on page 31

Related information:

 [Webform Server 8 documentation](#)

Configuring IBM FileNet eForms for P8

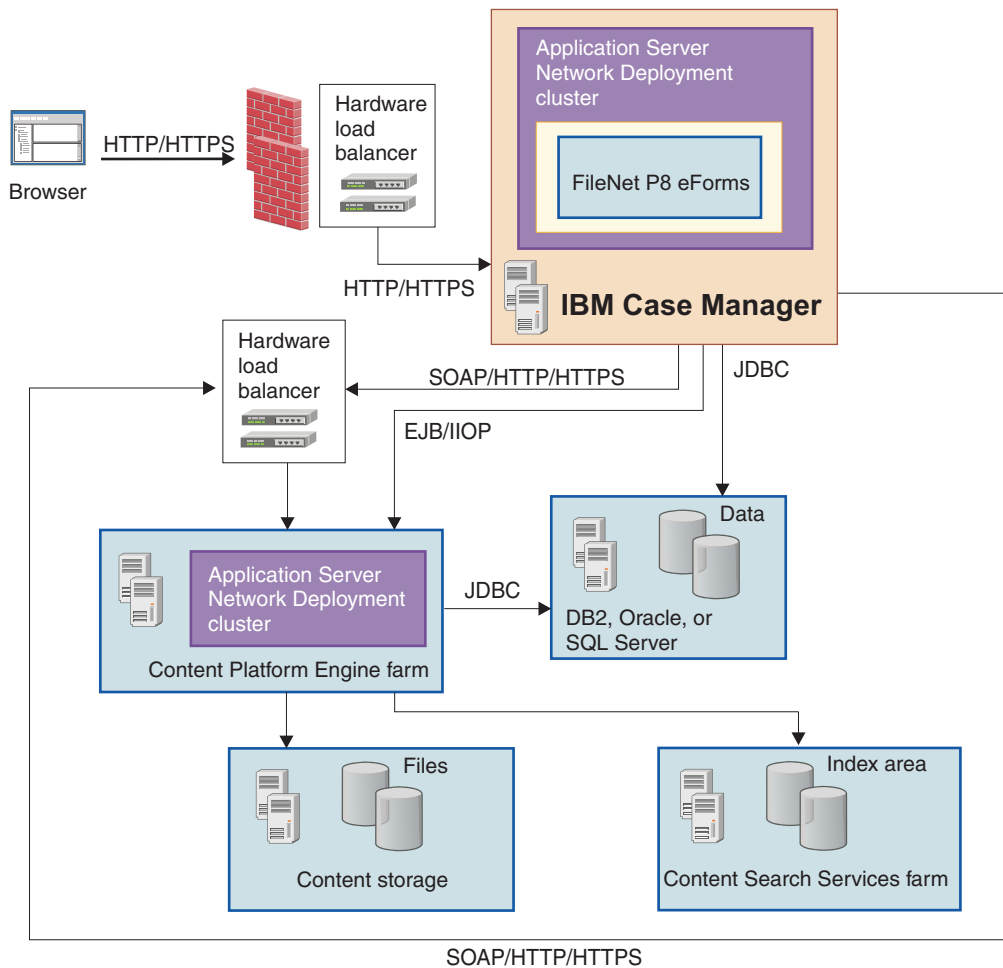
The FileNet P8 eForms application is included in the IBM Case Manager installation. To complete the configuration, you must run the Deploy Forms Application task in IBM Case Manager administration client.

Before you begin

Be sure to have your completed configuration checklist available.

About this task

The following diagram shows FileNet P8 eForms with IBM Case Manager in a highly available environment.



Tip: In general, FileNet P8 and IBM Case Manager are FIPS compliant. However, FileNet P8 eForms is not FIPS compliant if it calls an external data server. If FIPS compliance is required for your environment, ensure that FileNet P8 eForms does not call an external data server or use IBM Forms instead of FileNet P8 eForms.

Procedure

To complete the FileNet P8 eForms configuration:

1. Run both the Create Case Manager Applications and Deploy Forms Application tasks in the IBM Case Manager configuration tool. In a cluster or network deployment environment, run the Create Case Manager Applications and Deploy Forms Application tasks on the deployment management server. If you are installing only FileNet P8 eForms and you are not installing IBM Forms, you do not need to run this task on the managed nodes or restart the cluster or managed nodes.
2. If you plan to use policy-based forms, review the “Form policies” on page 115 and follow the instructions that are provided at the following link: [How FileNet P8 eForms Integrates with Workplace](#).

Important: Workplace XT is required to edit a policy-based form.

Related reference:

“Configuration checklist” on page 31

Adding forms to your solution

As a business analyst, you can integrate forms with your IBM Case Manager application. Case workers can then use these forms to enter the data that is required to complete tasks.

Before you begin

Create a form template by using one of the following applications:

IBM Forms

Use IBM Forms Designer to create a form template. To import a form that was created with IBM Forms or to attach that form to a case, the form must have the XFDD file extension. Additionally, you must select the ITXFormTemplate class or one of its subclasses as the document class when you import the form into Content Platform Engine.

IBM FileNet eForms for P8

Use FileNet eForms Designer to create a form template. A form template is an ITX file. You must select the ITXFormTemplate class or one of its subclasses as the document class when you import the form into Content Platform Engine.

Fields are mapped to case or step parameters by name. To map a form template field to a case or step parameter, name the field so that it matches the symbolic name of the parameter. In the Case Manager Client, the form template field reflects the settings of the associated case or step parameter. For example, if the parameter is marked as read-only, a case worker can view, but not modify, the form field that is associated with it.

After you design a form template, add it to the target object store.

Important: You must select the ITXFormTemplate class or one of its subclasses as the document class when you import the form into Content Platform Engine. You must save the form template file in the target object store or the form will not work in your solution. If you must move files from the target object store for any reason, such as resetting the test environment, be sure to back up all the form objects and return them to the target object store after the reset is complete. To prevent case workers from using the form template directly, instead of in the Form widget, do not put the form template or form data document in a case folder.

If your solution is not deployed, use Case Manager Builder to deploy the solution to the development environment.

Important: You cannot add an XFDD or ITX file by using Administration Console for Content Platform Engine. Even if the add operation appears successful, the resulting document will not work correctly as a form template. Using such a document results in errors.

To add a form with an XFDD or ITX file extension to your solution, you must use either IBM FileNet Workplace XT or IBM Content Navigator. You must add the XFDD or ITX file to Content Platform Engine as an instance of the ITX Form Template document class to ensure that the file is assigned the correct MIME type.

To use IBM Content Navigator to add an XFDD or ITX file, set the **Display form template class** option to **Yes** on the **Configuration Parameters** tab for the relevant target object store.

About this task

Case Manager Client includes several pages that you can use as a case data page, a step page, or a step launch page for a task that uses a form. These pages contain the Form widget by default. You can also configure a custom page to use the Form widget. You cannot include the Properties widget or the Attachments widget on the page with the Form widget.

To enable case workers to view a form template or view and edit a form policy or policy-based form data from the Case Document widget or Attachment widget, make sure that Workplace XT is installed. In addition, you must install the Workplace XT plug-in into IBM Content Navigator.

To enable case workers to add a form template from their local system into a case folder or attachment, you must also enable showing the form template class in IBM Content Navigator.

The Form widget supports two configuration options:

Use a specific form template

When you select this option, you specify a form template that is saved and used in the Form widget each time the page is rendered. Because the form template is always used in the configured page, you must create a new page for each form template that you want to use in the solution.

To find out the value of the version series ID, you must go to Workplace XT:

1. Right-click on a form template and select **Show HyperLink** in the menu.
2. Click **Show Released** to see the URL of the released version of the form template.

Within that URL, you can find the version series ID (vsId) parameter, for example, vsId = %7BXXXXXXXXXX%7D. The real vsID does not include %7B, which is at the beginning of the parameter or %7D, which is at the end of the parameter.

If you want to get the version ID of a specific version of the form template:

1. Click **Select From Versions**.
2. Select the version that you want to see the URL for that specific version, for example, id=%7BAAF32605-11FD-43E4-B268-530282539035%7D. The real ID is the value part without the %7B at beginning and %7D at the end.

Use a form attachment

When you select this option, the Form widget automatically selects a form attachment that is attached to the current task step each time the page is rendered. Because the form is selected dynamically at run time, a single page can use many different forms. Therefore, the page can be used multiple times for different tasks in the solution.

You can also select this option to support a general-purpose form processing task. For example, you create a task and configure a corresponding page to use a Form widget that is configured with this option. A launch step uses a page that contains the Properties widget and the Attachments widget, and the user can attach a form data document to

the task. Subsequent steps in the workflow can use the page that contains the Form widget, which selects the form that you attached to the task in the launch step.

Only a form template and form data that are generated from IBM Case Manager can be rendered in the Form widget. Workplace XT policy-based form data cannot be rendered in the Form widget. If you attach IBM Case Manager based form data into the attachment, when it is rendered in the Form widget the case property value is merged with the form field value. If a case property is mapped to a form field, then the case property value overwrites the form field value even though the case property value is null. If a case property is not mapped to a form field, then the value in the form field stays. If more than one form document is added into the Attachment widget, then only the first form is used.

Procedure


To add a form to your solution:

1. In Case Manager Builder, edit the solution and go to the **Pages** tab.
2. Expand the **Pages** tab for your solution and find the **Add Task Form** page, **Work Details Form** page, **Form Attachment Work Details** page, **Add Case Form** page, **Case Details Form** page, or the custom step page that you want to add.
3. Click **Edit Settings** in the Form widget. Configure the widget, then click **OK** to save the widget settings in the page.
4. Repeat these steps for each page that you want to add to this solution.
5. Go to the **Case Types** tab, and open the case type to which you want to add the pages.
6. In the Case Type page, you can select Form page as the default layout for the Add Case Page or the Case Details Page.
7. In the Step Designer, click the step in the workflow.
8. In the **Page_Layout** field, enter the name of the page that you created in a previous step.
9. In the Step Properties section, click the Edit icon (pencil) for the **Attachments** field.
10. To select an attachment for a step, you must define the attachment by clicking **Manage Attachments**.
11. Click **OK**.
12. Repeat these steps for each step that will display the form.
13. Validate your solution and save the changes.
14. Commit the changes and then redeploy your solution.

What to do next

In Case Manager Client, test the solution.

Related tasks:

 [Creating translated form templates for your case management application](#)

Guidelines for designing a form to use in the Form widget

When you configure the Form widget to use a form attachment or form template, you must design the form according to specific guidelines to ensure that form content displays correctly.

You can create the forms that are used by the Form widget by using IBM Forms or FileNet P8 eForms. You can save the form to a Content Platform Engine object store directly from IBM Forms or FileNet P8 eForms Designer.

You can then configure the Form widget by using one of the following methods:

- Configuring the Form widget to use a form template
- Configuring the Form widget to use a form attachment

Typically, you configure the Form widget to use a form template if you want to take advantage of the enhanced interface features that the form provides and you do not need to save form data documents each time that case or step properties are updated. If you want to save form data documents each time that case or step properties are updated, configure the Form widget to use a form attachment.

Tip: You do not need to create form policies, entry templates, and other documents that are related to IBM Forms or FileNet P8 eForms. These objects are not used in the Form widget implementation.

When designing a form, keep in mind that the attribute of a mapped case property is combined with the attribute of a form field. A case property can have a default value, and you can specify it as required or hidden. In a step, the case property can be read only, editable, or so on. A form field has a default value and you can specify that the form field is required, read only, and so on. When a case property is mapped to a form field, the attributes are combined. For example, if a case property is required, but the mapped form field is not required, then after combining the case property is still required. Another example is if a case property is editable, but the mapped form field is read only, then after mapping, the case property rendered in the form field is read only.

Designing a form by using IBM Forms

When you configure the Form widget to use a form that was designed in IBM Forms, the Form widget provides the following features that are not available in the Properties widget:

- High-precision multi-page user interface definition
- Dynamically hiding controls, sections, or pages
- Customizable accessibility and data formatting
- Wizard-driven interaction pages
- Ability to embed scripts, web service calls, calculations, and custom controls
- Inclusion of file attachments and XML digital signatures within the form

Use the following guidelines when you design a form by using IBM Forms:

- Ensure that the form field name and type match the corresponding case property field symbolic name and type. The widget maps the translated Name property of the workflow data field to the public data name that is specified in the form. This name is set in the Properties window when the form field is made public.

Tip: When designing an IBM Forms template, the form field that is going to map to case property has to be public.

- Design the form page layout to fit the expected dimensions of the widget.

- Choose font styles and color styles that match the other widgets in your environment. The Form widget renders these styles as they are defined in the template.
- To use an open selection combination box, a multiselection list box, or a multiselection check box group, map the form item to a single-valued case property instead of a choice list case property. Put the choice list in the form template.
- Use a column of a table item to map to an array case property.

Designing a form by using FileNet P8 eForms

When you configure the Form widget to use a form that was designed in FileNet P8 eForms, the Form widget provides the following features that are not available in the Properties widget:

- Customizable user interface
- Ability to embed scripts, calculations, and custom controls
- Multiple tabbed-page view
- Creation of high-resolution paper copies (PDF)


Use the following guidelines when you design a form by using FileNet P8 eForms:

- Ensure that the form field name and type match the corresponding case property field symbolic name and type.

The widget maps the translated Name property of the workflow data field to the Cell Name property or Display Name property in the form. The widget first checks the translated Name property against the Cell Name property. If no match is found, the widget checks the translated Name property against the Display Name property.

- Set the page size of the form to fit in the expected dimensions of the widget.
- Use short page names so that the page tab labels are readable in the widget view.
- Select font styles and color styles that match the other widgets in your environment. The Form widget renders these styles as they are defined in the template.

Related tasks:

-  [Creating translated form templates for your case management application](#)

Unsupported features for forms in Case Manager Client

When you design a form for use by the Form widget, be aware that Case Manager Client does not support certain features that are available in IBM Forms, in FileNet P8 eForms, or in the FileNet P8 platform.

Unsupported IBM Forms features

The Form widget does not support for the following IBM Forms features:

Form policies

The widget renders forms by using the form templates that are accessible from IBM Content Navigator. It does not use form policies to render forms.

Unsupported FileNet P8 eForms features

The Form widget does not support for the following FileNet P8 eForms features:

Form policies

The widget renders forms by using the form templates that are accessible from IBM Content Navigator. It does not use form policies to render forms.

Certain Forms Designer features

The widget does not support the following features:

- Signature fields
- Picture fields

Accessibility

The widget does not provide an accessible form.

Restriction: You cannot use external properties or properties that are associated with a task for forms in a case management solution. This limitation applies for both IBM Forms and FileNet P8 eForms.

Unsupported FileNet P8 platform features

The Form widget does not support the following globalization features:

- Although the Form widget does support application of custom date and number formats, it does not support globalized short, medium, long, and full date formats.
- You can create a form for languages that are read right to left. However, the Form widget does not automatically adapt the user interface layout based on the browser language setting.

Form policies

IBM Case Manager provides support for policy-based form data documents for reuse of existing content. You can use form policies to initiate new form-related documents or launch form-related processes.


A *policy-based* form data document is a document that is connected to a document form policy or a workflow form policy. Policy-based form data documents can be added to a case as task attachments or as content in the case folder. Case workers can use them to view or edit the form data in the case. Case workers can also open the policy document to generate form data or launch a form workflow.

Workplace XT is required to integrate form policies in your solutions and to enable editing of policy-based form data documents in a case. Use Workplace XT to add form templates to the target object store, manage entry templates, and create and manage form policies.

Policy-based form data documents are ignored by the Form widget when it selects form attachments. If a policy-based form data document is attached to the task, the widget skips the document.

Case workers can view policy-based form data documents in read-only format by opening them from either the Documents page in the Case Information widget or from the Attachment widget. The read-only format does not include additional form policy actions or configuration such as sidebar content or custom toolbar buttons. Case workers can edit policy-based form data documents by selecting the **Edit** option from the context menu. The documents are displayed in a separate browser window, and all form policy actions and configuration are available.

Related information:

 [Getting started with form policies](#)

Integrating with IBM Business Process Manager

By using IBM Business Process Manager with IBM Case Manager, you can take advantage of the features that each product offers. For example, IBM Business Process Manager provides a platform on which you can implement process applications that involve human tasks or automated business processes. IBM Case Manager provides a platform on which you can implement case tasks that require case workers to act on decisions that are based on the context of documents and other content objects.

Before you begin

In IBM Business Process Manager, you must create a Process Center profile and a Process Server profile. For more information, see one of the following topics in the IBM Business Process Manager documentation:

- On AIX: Configuring profiles and creating a network deployment environment
- On Linux: Configuring profiles and creating a network deployment environment
- On Windows: Configuring profiles and creating a network deployment environment

After you create the profiles, you must configure LDAP settings, single sign-on (SSO) and secure socket layer (SSL) support by completing the steps in Implementing single sign-on to minimize web user authentications in the IBM Business Process Manager documentation. The LDAP repository must be federated.

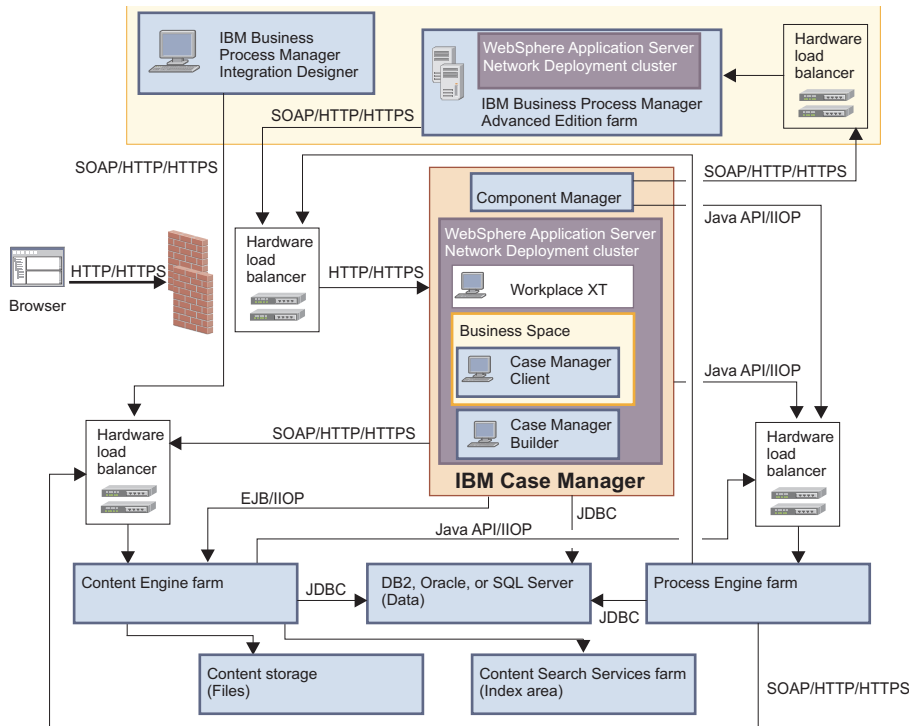
Tip: If you plan to use an LDAP server that is already configured for IBM Case Manager, you do not need to complete the step that describes how to add the user directory to the federated realm on the IBM Case Manager server. Also, configuring SSL is optional for IBM Case Manager, but it is a best practice.

Important: Users can connect to IBM Business Process Manager only by using SSL. Therefore, errors can occur if the SSL certificate is the default self-signed certificate, but has not been imported into the appropriate places. To prevent these errors, import the IBM Business Process Manager WebSphere Application Server SSL certificate into the Content Platform Engine and the JVM for the IBM Case Manager configuration tool. For information about importing the certificate, see IBM Case Manager configuration tool returns an SSLHandshakeException error.

About this task

To configure your systems to work with IBM Case Manager solutions from within IBM Business Process Manager, see the Building an IBM Case Manager Integration service topic in the IBM Business Process Manager documentation.

The following diagram shows the architecture of IBM Business Process Manager Advanced with IBM Case Manager in a highly available environment.



When you design solutions, the IBM Business Process Manager Integration Designer calls the Content Engine by using the Content Engine Web Services API to read the solution definition and modify the XPD file.

“Associating solutions with IBM Business Process Manager”

“Maintaining solutions that are associated with IBM Business Process Manager process applications” on page 121

“Troubleshooting IBM Business Process Manager integration” on page 122

Related reference:

“Configuration checklist” on page 31

Related information:

[IBM Business Process Manager documentation](#)

Associating solutions with IBM Business Process Manager

In Case Manager Builder, you can associate your IBM Case Manager solutions with IBM Business Process Manager automated business processes or with IBM Business Process Manager process applications. An automated business process is a set of business-related activities that are invoked to achieve a business goal. A process application is a component that allows people and services to interact.

Before you begin

Be sure to have your completed configuration checklist available.

Procedure

To set up your configuration so you can associate solutions with IBM Business Process Manager:

1. In the LDAP directory, select a user account to use as the IBM Business Process Manager integration user. The user must have the necessary privileges to start and carry out any IBM Business Process Manager process that is used by IBM Case Manager.

Tip: The IBM Business Process Manager integration user name and password are required for the IBM Case Manager configuration tool tasks that integrate IBM Business Process Manager with IBM Case Manager.


For more information about creating user accounts in IBM Business Process Manager, see *Administering users and groups* in the IBM Business Process Manager documentation.

2. In IBM Case Manager configuration tool, run the following tasks:
 - Configure IBM Business Process Manager
 - Deploy IBM Business Process Manager Integration Service
3. Build and deploy a solution.
 - “Creating a task that runs an IBM Business Process Manager process application”
 - “Creating a task that runs an IBM Business Process Manager automated business process” on page 119

Related reference:

“Configuration checklist” on page 31

Related information:

 [Authoring environments](#)

 [BPEL processes and human tasks](#)

Creating a task that runs an IBM Business Process Manager process application

To associate an IBM Case Manager solution with a process application that is created by using the IBM Business Process Manager Process Designer, create a task in Case Manager Builder. Then, use IBM Business Process Manager to map the task to one or more business process definitions.

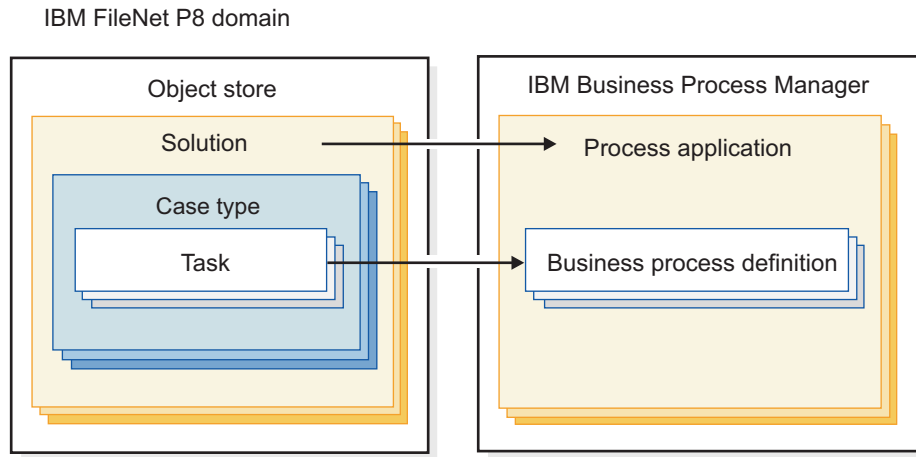
Before you begin

Ensure that a process application is created in the IBM Business Process Manager Process Center. Then, ensure that a snapshot of the process application is exported to the IBM Business Process Manager Process Server. The name of the process application must match the name of the IBM Case Manager solution.

If you run the process application in Process Server only, then you must make a snapshot of the process application and designate it as the default snapshot. If you run the process application in the Process Center, you do not need to designate a default snapshot. Instead, the snapshot that was most recently activated in the IBM Business Process Manager Process Admin Console is used by Case Manager Builder.

About this task

The following diagram shows the component architecture of a system that integrates IBM Business Process Manager with IBM Case Manager to enable IBM Case Manager to invoke a business process from a task. The diagram also provides an example of how IBM Business Process Manager process applications map to IBM Case Manager solutions.



The solution name must match the process application name.
More than one task can point to the same business process definition.

Procedure

Create the task in Case Manager Builder by completing the steps in Adding an IBM Business Process Manager process as a task.

What to do next

If a new snapshot becomes available for an IBM Case Manager solution, open the solution in Case Manager Builder to automatically discover and bind the solution to the new snapshot. Then, validate each case type that reuses the IBM Business Process Manager task to ensure that the process mapping is valid. Correct any mapping that is not valid, then save and redeploy the solution.

Related information:

Cannot access Process Designer from Case Manager Builder with Google Chrome

[Managing installed snapshots](#)

[Authoring environments](#)

Creating a task that runs an IBM Business Process Manager automated business process

To associate a solution with an automated process that is created by using IBM Business Process Manager Integration Designer, create a task in Case Manager Builder. Then, use IBM Business Process Manager to map the task to a new business process that implements the workflow for that task. The business process is implemented as an external web service.


Procedure

1. Create and map the task in Case Manager Builder by completing the steps in Adding an IBM Business Process Manager process as a task.
2. To expand the integration of business processes and cases, you can use the WebSphere Adapter for Enterprise Content Management. This adapter enables your business process to access objects, including case data and documents, from an IBM FileNet P8 object store.

“Specifying credentials for a web service” on page 120

“Accessing case content from IBM Business Process Manager” on page 120

Related information:

 [Authoring environments](#)

Specifying credentials for a web service:

By default, the FileNet P8 Component Manager service user credentials are used for authentication with a web service on IBM Business Process Manager. However, you can use the Component Manager in Process Task Manager to configure different credentials for the web service.

About this task

When you associate a task with a business process, Integration Designer adds a partner link reference to the XPD file for the solution. In the runtime environment, the partner link reference identifies the business process that is to be started when the task is started.


Important: SSL support in the FileNet P8 environment is a systemwide configuration that governs all web service traffic into Process Engine. Therefore, you must consider the ramifications on your overall system before you enable SSL.

Procedure

To specify different credentials for the web service:

1. In Process Task Manager, expand the **Component Managers** node and click the connection point for the web service.
2. Click the **Web Services** tab and then click the **Advanced** tab in the **Web Services** page.
3. Click **Add**.
4. Select the partner link reference for your web service.
5. Enter the user name and password that are to be used to access the web service.

Related reference:

 [Security considerations](#)

Accessing case content from IBM Business Process Manager:

You configure an automated process to access enterprise content, including case content, in a Content Engine object store. To do so, you use the Enterprise Content Management adapter that is provided in Integration Designer in IBM Business Process Manager Advanced.


About this task

With WebSphere Adapter for Enterprise Content Management, you can create integrated processes that include the exchange of information with a Content Engine object store, without special coding. The adapter uses the open source specification for content repositories called Content Management Interoperability Services (CMIS).

By using the adapter, your business process can send requests to the object store. For example, your business process can create a new document in the object store, update an existing document, or receive event notifications from the server when a document is created or deleted.

For an IBM Case Manager solution, you do not need to use the WebSphere Adapter for Enterprise Content Management to access case content. Instead, the access to case documents is provided through the case type definition.

Related reference:

 [WebSphere Adapter for Enterprise Content Management documentation](#)

Maintaining solutions that are associated with IBM Business Process Manager process applications

When you copy or move a solution that is associated with an IBM Business Process Manager process application, you must also copy or move the process application.

“Copying IBM Case Manager solutions that are associated with IBM Business Process Manager process applications”

“Moving IBM Case Manager solutions that are associated with IBM Business Process Manager process applications” on page 122

Copying IBM Case Manager solutions that are associated with IBM Business Process Manager process applications

When you copy an IBM Case Manager solution that is associated with an IBM Business Process Manager process application, you must also copy the associated IBM Business Process Manager process application.

About this task

You must complete these steps when you copy a solution, or when you create a solution from a template.

Procedure

To copy an IBM Case Manager solution or create a solution from a template and copy its associated IBM Business Process Manager process application:

1. In IBM Business Process Manager, clone the snapshot of the process application that is associated with the solution or solution template.
2. Change the name of the cloned process application to match the name of the new solution.
3. Create a snapshot of the cloned process application.
4. Install the snapshot on Process Server or activate the snapshot on the Process Center server.
5. In IBM Case Manager, copy the solution package by using the IBM Case Manager administration client or by using Case Manager Builder. When you copy the solution, IBM Case Manager automatically updates the solution definition file.

Important: If you copy the solution first, you must open and save the copied solution after you clone and create the snapshot of the process application to update the solution definition file.

6. Deploy the solution.

Related information:

- Adding and deploying a case management solution
- Creating a solution from a template
- Copying a solution to another development environment
- Importing and exporting process applications
- Managing snapshots

Moving IBM Case Manager solutions that are associated with IBM Business Process Manager process applications

When you move an IBM Case Manager solution from one domain, server, or environment to another, and it is associated with an IBM Business Process Manager process application, you must also move the associated IBM Business Process Manager process application.

Procedure

To move an IBM Case Manager solution and its associated IBM Business Process Manager process application:

1. In IBM Business Process Manager, export the snapshot of the process application that is associated with the solution.
2. In IBM Case Manager administration client, export the solution package from the source environment.
3. In IBM Business Process Manager, import the process application snapshot to the target IBM Business Process Manager environment.
4. In IBM Case Manager administration client, import the solution package to the target environment.
5. Install the snapshot on Process Server, or activate the snapshot on the Process Center server in the target IBM Business Process Manager environment.
6. Deploy the solution.

Related information:

- Migrating a solution from one environment to another
- Importing and exporting process applications
- Managing snapshots

Troubleshooting IBM Business Process Manager integration

Troubleshoot typical errors that might surface when you integrate IBM Business Process Manager with IBM Case Manager.

Related troubleshooting information

“Tasks are associated with the wrong snapshot of an IBM Business Process Manager process application” on page 123

“Changes to IBM Business Process Manager process applications are not reflected in tasks” on page 123

“Results output by IBM Business Process Manager are not shown in a task” on page 123

Tasks are associated with the wrong snapshot of an IBM Business Process Manager process application

If an IBM Business Process Manager process application has multiple active snapshots, Case Manager Builder might select the wrong snapshot to apply to tasks.




Symptoms

Case Manager Builder applies identifier for the first active snapshot that is listed for a process application in the IBM Business Process Manager Process Center. This snapshot might not be the default snapshot for a task.

Resolving the problem

In IBM Business Process Manager, deactivate any unused snapshots. Ensure that only one active snapshot is set as the default for the process application with which a task is associated.

Related information

-  Deactivating snapshots on a Process Center server
-  Activating snapshots for use with Process Portal
-  Designating default snapshots

Changes to IBM Business Process Manager process applications are not reflected in tasks

When an IBM Business Process Manager process application is changed, Case Manager Builder does not automatically apply the changes to tasks. These changes can include the creation of a new snapshot or the rollback to previous snapshot.

Symptoms

IBM Case Manager cannot invoke the IBM Business Process Manager process application at run time because the event action subscription cannot access the new snapshot ID from the IBM Business Process Manager server.

Resolving the problem

Whenever a change is made to the IBM Business Process Manager process application, open and save all associated tasks in Case Manager Builder to pick up the latest changes to the application. Then, redeploy the solution.

Related information

-  Administering IBM Case Manager tasks

Results output by IBM Business Process Manager are not shown in a task

A task that is associated with an IBM Business Process Manager is updated based on output results that are received by the Content Platform Engine server.

Symptoms

The task does not reflect updates that are made on the IBM Business Process Manager server.

Causes

This problem occurs because the IBM Business Process Manager server does not have the fully qualified path name to the Content Platform Engine server. As a result, IBM Case Manager does not receive the callback function package that contains the output results.

Resolving the problem

When you run the Configure Profile task in the IBM Case Manager configuration tool, ensure that you enter the fully qualified path in the **Content Platform Engine server name** field.

Integrating IBM case analytics tools

Case analytics tools can help you monitor and manage your daily business operations. The tools can also provide historical trend information that enables you to adjust future operations as needed. This information can help you discover new business patterns and trends, and to identify new business opportunities.

About this task

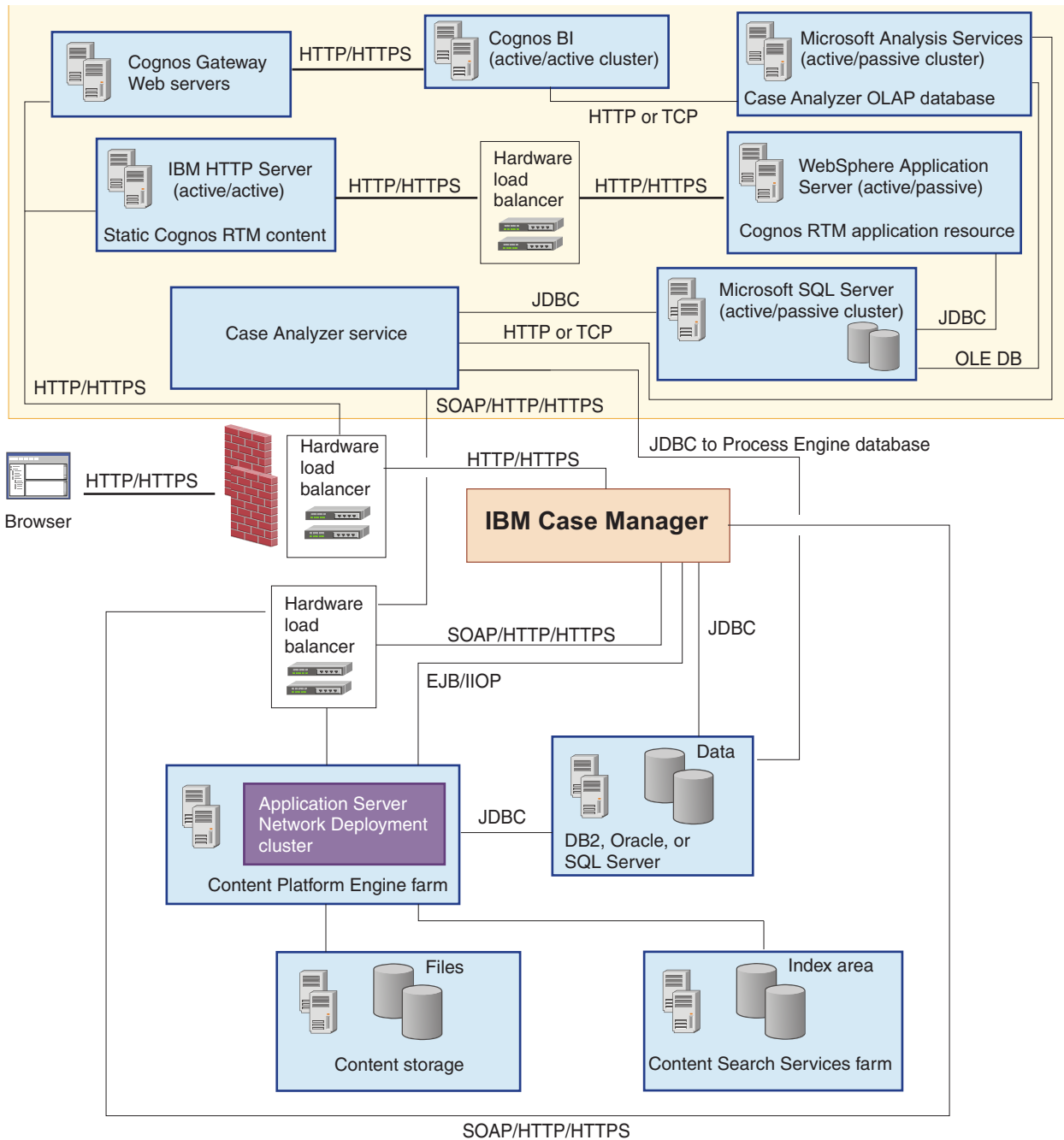
The following tools use the data that is extracted by the Case Analyzer services from case management solutions:

- IBM FileNet Case Monitor
- Case Analyzer Excel Reports
- Cognos Business Intelligence

With the data extracted by Case Analyzer services, you can generate real-time reports and historical data analysis by analyzing case, task, and workflow events. The Case Analyzer component integrates with Cognos Business Intelligence to provide web-based analytic and reporting capabilities. It also supports using Microsoft Excel as a thick client-based analytic and reporting solution.

IBM FileNet Case Monitor provides the capability to collect and report on case-specific events and metrics. It integrates with IBM Cognos Real-time Monitoring.

The following diagram shows these case analytic tools integrated with IBM Case Manager in a highly available environment.



For a high availability environment, you must install IBM Cognos Real-time Monitoring the same way on both a primary and secondary node. Each installation must be on separate physical servers. Only the primary node is started. An HTTP load balancer or proxy is used to detect which node is active and automatically directs user traffic to the active node. If the active node is offline, the passive node is started and is automatically detected by the load balancer.

The Case Analyzer service, which is a background task in the Content Platform Engine, collects data from the workflow system event logs and the object store audit log. The service stores the information in a database that is used by IBM Cognos Real-time Monitoring and Cognos Business Intelligence reports.

“Using Case Analyzer with OLAP integration” on page 126

“Integrating with IBM Case Monitor and IBM Cognos Real-time Monitoring”
on page 128

Using Case Analyzer with OLAP integration

Case Analyzer, a component of IBM Case Foundation, reads data from both workflow and Content Platform Engine event logs. Analytical data from both sources is published to a common Case Analyzer database. To support case management systems, new metrics that are related to cases and tasks were added to Case Analyzer, formerly known as FileNet Process Analyzer.

About this task

For reporting on Cases and Tasks that are currently active the Case Analyzer provides Cases In Progress and Tasks In Progress cubes. The Cases In Progress cube has metrics for case-related details, such as the current case count and the average age of cases. Tasks in Progress metrics can provide details such as current task count, wait time, processing time, and task age.

For historical reporting and analysis, the Case Analyzer provides Case Load and Task Load cubes. Case Load metrics can provide details, such as outgoing and incoming case numbers and average completion time for the various time periods. Task Load metrics provide details such as incoming and outgoing task numbers, and average wait time, ready time, processing time, and completion time for the various time periods.

To use the values of case, task, and workflow data fields in case analytic reports, you must identify which data fields will be exposed, specify their properties as dimensions or measures, and specify the appropriate OLAP cube to store the data. The values for case, task, and workflow data fields, which come from the Content Platform Engine and the workflow system, are stored in the Case Analyzer database.

You can view the Case Analyzer reports in the following formats:

- Microsoft Excel reports available when you install the Case Analyzer client
- Reports in the Cognos Business Intelligence console.

“Case Analyzer OLAP integration using Cognos Business Intelligence”

“Integrating with Case Analyzer to create Microsoft Excel reports” on page 127

Related information:

 [Manage Case Analyzer data fields](#)

Case Analyzer OLAP integration using Cognos Business Intelligence

The Cognos Business Intelligence integration can provide historical analytics for case trends and patterns. For example, you can get data on the average time to complete cases or business tasks during a specific time interval. You can also find the number of cases that were created, that are currently active, or that are complete during a specific time interval.

Before you begin

You must install the Cognos Business Intelligence software and the Case Analyzer software and databases.

About this task


This task provides a high level view of the configuration steps. Use the detailed instructions in the Case Analyzer documentation and the Cognos Business Intelligence documentation to ensure successful configuration.

Procedure


To configure integration with Case Analyzer

1. Set up the OLAP integration by installing and configuring Case Analyzer.
2. Use the audit configuration wizard in the IBM Case Manager administration client to enable auditing of the desired case and task properties.
3. Use the FileNet Process Task Manager to configure the Case Analyzer settings. In the Content Engine properties, for the Object Store Name, enter the name of the IBM Case Manager target object store. For more information, see *Configuring Case Analyzer components*.
4. Move the report templates to the Cognos Business Intelligence server, and use the Cognos Business Intelligence administration console to set up Case Analyzer reporting. For more information, see *Configure Cognos Business Intelligence project for Case Analyzer*.

Related tasks:

 [Preparing a database for the case history store](#)

Related information:

 [Installing and configuring Case Analyzer](#)

Integrating with Case Analyzer to create Microsoft Excel reports

The client software provided with Case Analyzer provides Microsoft Excel reporting. After you install and configure the Case Analyzer client, you can customize the reports and publish them to the web.

Before you begin

Install the Case Analyzer software and databases.

About this task

This task provides a high-level view of the configuration steps. Use the detailed instructions in the Case Analyzer documentation to ensure successful configuration.


Procedure

To configure integration with Case Analyzer so that you can create Microsoft Excel reports:


1. Set up the OLAP integration by installing and configuring Case Analyzer.
2. Use the audit configuration wizard in the IBM Case Manager administration client to enable auditing of the desired case and task properties.
3. Use the FileNet Process Task Manager to configure the Case Analyzer settings. In the Content Platform Engine properties, for the Object Store Name, enter the name of the IBM Case Manager target object store. For more information, see *Configuring Case Analyzer components*.

4. Install the Case Analyzer client. The Client system must have Microsoft Excel and Microsoft SQL Server software installed. You can choose to install the Case Analyzer client with the IBM Case Foundation installation. For more information, see *Installing IBM Case Foundation*.
5. Use the tasks in the IBM Case Analyzer user guide to configure, create, use, and publish your reports. During the configuration, you must also configure access to the Case Analyzer OLAP database. For more information, see *Configuring Excel Reports for Case Analyzer*.

Related tasks:

 [Preparing a database for the case history store](#)

Related information:

 [Installing and configuring Case Analyzer](#)

Integrating with IBM Case Monitor and IBM Cognos Real-time Monitoring

IBM Case Monitor integrates with Cognos Real-time Monitoring to provide a view of the current business activities. The updated Case Monitor objects that you import into Cognos Real-time Monitoring provide views of data that are specific to case management systems.

Before you begin

To use IBM FileNet Case Monitor with your case management application, you must install both Case Analyzer and Cognos Real-time Monitoring. Install the IBM Cognos Real-time Monitoring software on a server in your environment.

About this task

Cognos Real-time Monitoring provides the dashboard and workbench that you use to gather and display meaningful business metrics. You can use the Cognos Real-time Monitoring Workbench to define the queries that retrieve data about cases and workflows. You can use Cognos Real-time Monitoring Dashboard to view predefined dashboards and dashboard objects (charts) that display the data from the active cases and workflows.

IBM Case Monitor provides the set of objects that you import into Cognos Real-time Monitoring to monitor cases, tasks, workflows, and work items. After you import Case Monitor objects, you can use them as is, or you can customize them.

You can customize the monitoring and set up thresholds and alerts as needed. For example, you can monitor the following information:

- The number of active cases, tasks, work items, and workflows
- The number of active cases and tasks in each state
- The average age of active cases and tasks
- The average processing time for active work items and workflows
- The average time that tasks spend in each state
- The average idle time for active work items
- The average total processing time for active work items

Monitoring and tracking enables you to review volume, find and eliminate bottlenecks, and ensure that operations are working efficiently and effectively.


This task provides a high level view of the configuration steps. Use the detailed instructions in the Case Monitor documentation and the IBM Cognos Real-time Monitoring documentation to ensure successful configuration.

Procedure

To configure integration with IBM Case Monitor and IBM Cognos Real-time Monitoring:

1. Install and configure Case Analyzer. For more information, see *Installing and configuring Case Analyzer* in the FileNet P8 documentation.
2. Install and configure IBM Cognos Real-time Monitoring. For more information, see *Real-time Monitoring Installation and Configuration* in the IBM Cognos Real-time Monitoring documentation.
3. Configure Case Monitor. For more information, see *Case Monitor configuration* in the FileNet P8 documentation.
4. Use the audit configuration wizard in the IBM Case Manager administration client to enable auditing of the desired case and task properties.
5. Expose case properties to the Case Analyzer store that you want to monitor or add to a dashboard. For more information see *Manage Case Analyzer data fields* in the FileNet P8 documentation.
6. Configure and customize data fields for reporting by using the IBM Cognos Real-time Monitoring Workbench application. For more information, see *Basic Case Monitor functionality* in the FileNet P8 documentation.
7. Customize the reporting interface, and monitor reporting results by using the IBM Cognos Real-time Monitoring Dashboard. For more information, see *Advanced Case Monitor functionality* in the FileNet P8 documentation.

Related tasks:

 [Preparing a database for the case history store](#)

Related information:

 [IBM FileNet Case Monitor](#)

Integrating with the IBM Case Monitor Dashboard

You can use the IBM Case Monitor Dashboard to view of business activity data that is specific to case management systems. This dashboard, which is an IBM Content Navigator desktop, provides a dashboard that displays widgets that show case and task activity across solutions. You can use this data to review volume, find and eliminate bottlenecks, and ensure that operations are working efficiently and effectively.

About this task

The IBM Case Monitor Dashboard retrieves data about the solutions that are deployed to a target object store from the Case Analyzer store that you configure for that object store. In the dashboard, users can switch between Case Analyzer stores to obtain information about solutions in different target object stores.

Important: By default, any user who has access to the target object store has access to the IBM Case Monitor Dashboard.

Procedure

To configure the IBM Case Monitor Dashboard:

1. In the IBM Case Manager configuration tool, edit and run the Register the IBM Case Monitor Widgets Package task.

Important: If you run this task in a cluster environment, you must ensure that the plug-in is loaded on each node of the cluster. Either restart the cluster to force the plug-in to be loaded on all nodes or manually load the plug-in on each node by using the IBM Content Navigator administration client.

2. Optional: In IBM Content Navigator, change the refresh interval, time unit, and color scheme for the IBM Case Monitor Dashboard Plug-in.

The refresh interval determines how often the IBM Case Monitor Dashboard is to retrieve information from the Case Analyzer store and refresh the chart widgets. By default, the dashboard refreshes the chart widgets every 300 seconds. Setting the refresh time to 60 seconds or less affect performance negatively.

The time unit determines whether time values in the dashboard are displayed in days, hours, or minutes.

3. Configure a Case Analyzer store for each target object store that you want to monitor. For more information, see “Configuring the IBM Case Monitor Dashboard” on page 132.

“IBM Case Monitor Dashboard pages”

“Configuring the IBM Case Monitor Dashboard” on page 132

“Troubleshooting the IBM Case Monitor Dashboard” on page 132

IBM Case Monitor Dashboard pages

The IBM Case Monitor Dashboard includes a set of pages that display the chart widgets. Each page displays the activity for a specific type of case artifact such as cases or tasks.

“Case dashboard page”

“Task dashboard page” on page 131

Case dashboard page

The case dashboard page displays chart widgets that provide case-related statistics. The data is retrieved for all cases within a specified Case Analyzer store that processes data from the Content Platform Engine logs on the target object store. You can switch to different Case Analyzer stores as needed.

The case dashboard page contains the following widgets:

Cases in Progress widget

This widget displays a bar graph in which each bar shows the number of cases that are active for a case type. When you hover on a bar in the graph, a tooltip displays the case type name and the number of cases in progress.

Cases in Each State widget

This widget displays a pie chart shows the proportion of active cases each of three states: initializing, working, and failed. When you hover on a sector of the pie, a tooltip displays the number of cases in that state.

Average Age of Cases widget

This widget displays a bar graph in which each bar shows the average age of active cases for a case type. The average age is calculated by adding the

elapsed time for each case and dividing by the number of cases. When you hover on a bar in the graph, a tooltip displays the case type name and the average age.

Average Elapsed Time of Completed Cases widget

This widget displays a line graph that shows the average elapsed time for each case type of the cases that completed in the current calendar quarter. When you hover on a point in the line, a tooltip displays the case type name and the average elapsed time of completed cases.

Incoming and Outgoing Cases in Current Quarter widget

This widget displays a bar graph in which two bars show the number of cases that opened and closed in the current calendar quarter for a case type. When you hover of a bar in the graph, a tooltip indicates whether the bar represents incoming or outgoing cases. The tooltip also displays the case type name and the number of incoming or outgoing cases.

Task dashboard page

The task dashboard page displays chart widgets that provide task-related statistics. The data is retrieved for all tasks within a specified Case Analyzer store that processes data from the Content Platform Engine logs on the target object store. You can switch to different Case Analyzer stores as needed.

The task dashboard page contains the following widgets:

Tasks in Progress widget

This widget displays a bar graph in which each bar shows the number of tasks that are active for a task type. When you hover on a bar in the graph, a tooltip displays the task type name and the number of tasks in progress.

Tasks in Each State widget

This widget displays a pie chart shows the proportion of active tasks in each of four states: failed, ready, waiting, and working. When you hover on a sector of the pie, a tooltip displays the number of tasks in that state.

Average Age of Active Tasks widget

This widget displays a bar graph in which each bar shows the average age of active tasks for a task type. The average age is calculated by adding the elapsed time for each task and dividing by the number of tasks. When you hover on a bar in the graph, a tooltip displays the task type name and the average age.

Average Elapsed Time of Active Tasks by State widget

This widget displays a bar graph in which each bar shows for a task type the average elapsed time of active tasks in a particular state. The bars are grouped by the four states: failed, ready, waiting, and working. When you hover on a bar in the graph, a tooltip displays the task type name, task state, and the average elapsed time of that task type in particular state.

Incoming and Outgoing Tasks in Current Quarter widget

This widget displays a bar graph in which two bars show the number of tasks that opened and closed in the current calendar quarter for a task type. When you hover on a bar in the graph, a tooltip indicates whether the bar represents incoming or outgoing tasks. The tooltip also displays the task type name and the number of incoming or outgoing tasks.

Average Elapsed Time of Completed Tasks

This widget displays a line graph that shows the average elapsed time for each task type of the tasks that completed in the current calendar quarter.

When you hover on a point in the line, a tooltip displays the task type name and the average elapsed time of completed tasks.

Configuring the IBM Case Monitor Dashboard

The IBM Case Monitor Dashboard is a separate IBM Content Navigator desktop that is included in the IBM Case Manager installation. To complete the configuration, you must configure a Case Analyzer store and register the plug-in.

Procedure

To configure the IBM Case Monitor Dashboard:

1. Prepare the database for the Case Analyzer store. For more information, see Database administrator installation tasks.
 - a. Create JDBC data sources. Run the Configure JDBC Data Sources task by using the IBM FileNet P8 Configuration Manager. For more information, see Editing the Configure JDBC Data Sources tasks and Configuration Manager reference.
 - b. Create a database connection. For more information, see Creating a database connection. Based on performance considerations, you might want to share data sources. For more information, see Sharing data sources. You enter the database schema name when you configure and enable the Case Analyzer store by using the IBM Case Manager administration client.
2. Create the Case Analyzer store:
 - a. Log in to the IBM Case Manager administration client.
 - b. Under the domain, expand **Object Stores** and click the target object store in which you want to create the Case Analyzer store.
 - c. Click **New Case Analyzer Store** and enter the information for the new store.

You can also create a Case Analyzer store by using Administration Console for Content Platform Engine. However, the administration console provides many options that are not used in IBM Case Manager.

3. Log in to the IBM Case Manager configuration tool and run the Register the Case Monitor Widgets Package task to add the IBM Case Monitor Dashboard desktop to IBM Content Navigator:

Troubleshooting the IBM Case Monitor Dashboard

You can troubleshoot problems with the IBM Case Monitor Dashboard by appending a debugging parameter to the URL that is used.

The debugging parameter that you use depends on what you are troubleshooting:

- To troubleshoot the IBM Case Monitor Dashboard source code only, append the **&debugmonitor** parameter to the URL as shown in the following example:
`http://server:9080/navigator/?desktop=icmmonitor&debugmonitor=true`
- To troubleshoot the IBM Case Monitor Dashboard and Case Manager Client dependency source code, append the **&icmdebug** parameter to the URL as shown in the following example:
`http://server:9080/navigator/?desktop=icmmonitor&icmdebug=true`
- To troubleshoot the ICASE Manager Client and IBM Content Navigator dependency source code for IBM Case Monitor Dashboard, append the **&debug** parameter to the URL as shown in the following example:
`http://server:9080/navigator/?desktop=icmmonitor&debug=true`

Integrating IBM Watson Explorer Analytical Components

IBM Watson Explorer Analytical Components provides unstructured analytics based on textual pattern discovery. The IBM Watson Explorer Analytical Components integration with IBM FileNet P8 is extended to include a crawler that is specific to case management solutions.

Before you begin

Before you complete this task, install the IBM Watson Explorer Analytical Components software on a server in your environment.

About this task

The IBM Watson Explorer Analytical Components crawler for case management solutions can be configured with filters to include or exclude specific objects, such as case type, document class, file extension, or document name pattern.

The crawler also indexes cases for specific properties, for example, name, state, creation date, or comments. You can specify which properties to index in the IBM Watson Explorer Analytical Components administration console.

You configure a collection in IBM Watson Explorer Analytical Components by specifying the location of the content source, parameters for discovery, and parameters for content analysis. You can then use the IBM Watson Explorer Analytical Components content analytics miner application to explore the analyzed content, discover unexpected correlations between words and phrases, and see which words and phrases occur frequently in many cases.

You can use multiple views to explore the analyzed content from different perspectives. For example, you might want to explore trends or deviations in the data, or you might want to look for connections between cases by exploring correlation and frequency values through two facets at the same time.

As you explore a collection and view the results, you can iteratively fine tune your query, zoom in on particular items of interest, and expand or narrow the set of case documents that you want to focus on.

Procedure

To configure IBM Watson Explorer Analytical Components for IBM Case Manager:

1. Install the Content Engine Client software on the IBM Watson Explorer Analytical Components crawler server. For more information, see [Configuring the crawler server to support Case Manager and FileNet P8 crawlers](#).
2. In the IBM Watson Explorer Analytical Components administration console, create a collection for your IBM Case Manager content. For more information, see [Creating a collection](#).
3. In the IBM Watson Explorer Analytical Components administration console, create the Case Manager crawler. To create the crawler, you run a wizard that helps you identify the content that you want to crawl, or analyze, as well as additional settings such as security options. For more information, see [Case Manager crawlers](#).
4. Set up text analysis rules. This task is usually performed by a business analyst or subject matter expert who determines how the text will be analyzed. For more information, see [Analytic resources and content analytics](#).

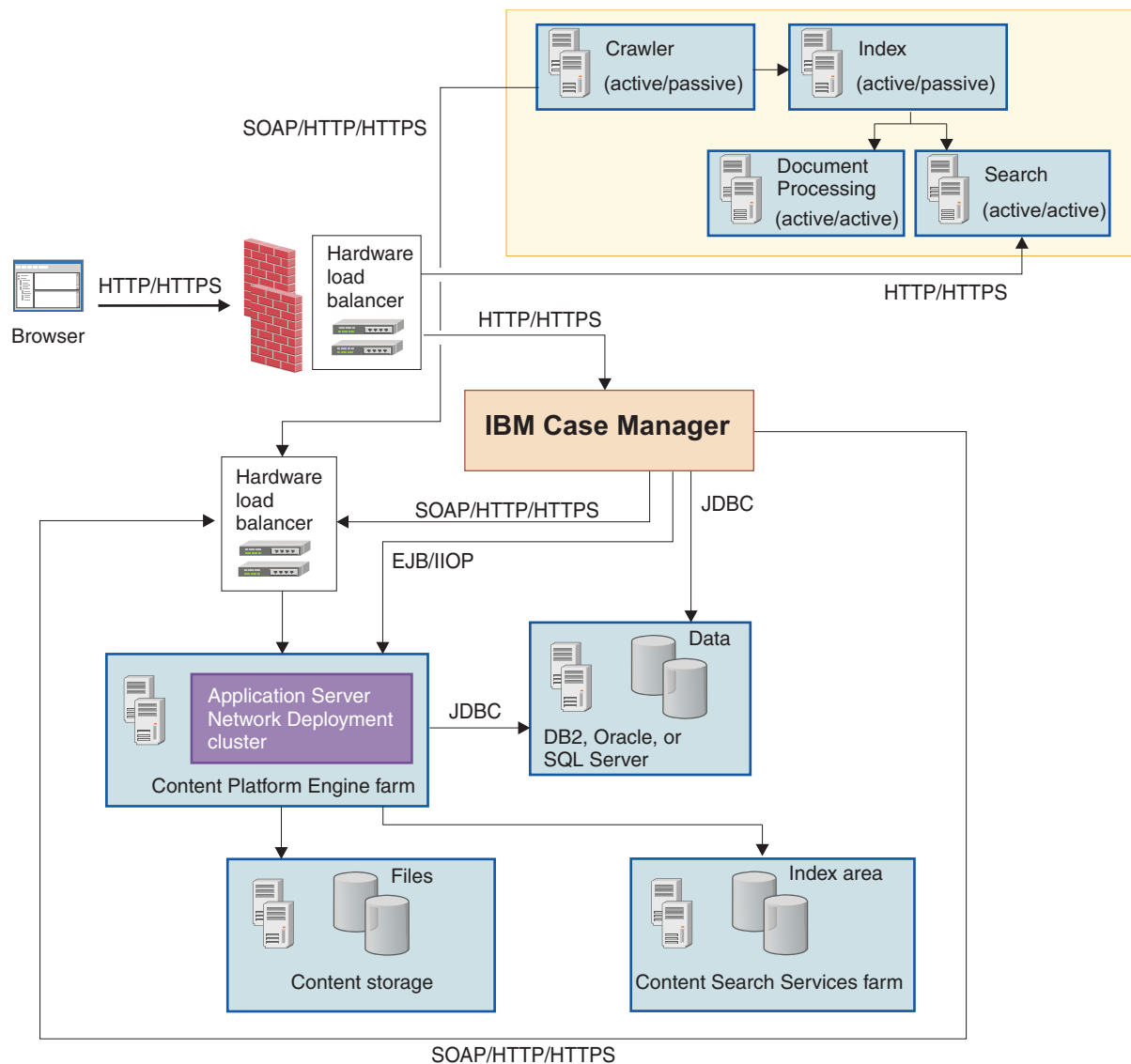
5. Set up a schedule for running the Case Manager crawler. For more information, see Crawler schedules.
6. After the crawler runs, use the content analytics miner application to view, query, and analyze the collected, indexed data. For more information, see Analyzing content.
“Installing IBM Watson Explorer Analytical Components”

Installing IBM Watson Explorer Analytical Components

IBM Watson Explorer Analytical Components is a tool for crawling and interactively analyzing the text and metadata of documents and content objects. IBM Watson Explorer Analytical Components provides a specific IBM Case Manager Crawler, which can be used to analyze case comments in a case management system. IBM Watson Explorer Analytical Components is a separate installation and configuration from IBM Case Manager.

About this task

The following diagram shows IBM Watson Explorer Analytical Components with IBM Case Manager in a highly available environment.



Procedure

To install IBM Watson Explorer Analytical Components:

Follow the installation and configuration instructions that are provided at the following link: [Installing Watson Explorer Content Analytics](#).

Integrating with IBM Content Manager

By integrating IBM Content Manager with IBM Case Manager, you can use documents that are stored in IBM Content Manager in your case management solution. IBM Content Manager becomes the repository for the documents that are attached to cases and tasks.

About this task

By integrating IBM Content Manager with IBM Case Manager, your solution can incorporate the following features:

Case processing

You can create cases, add documents to cases, and delete documents from cases in IBM Case Manager based on actions that are done on IBM Content Manager items.

When you configure a solution to use an IBM Content Manager item type, certain events are associated with the item type. These associations are called event subscriptions. As a caseworker works with a document or item in that item type, appropriate actions are triggered in IBM Case Manager. For example, you can configure a solution so that when a caseworker creates a document with an IBM Content Manager item type, a new case is created in IBM Case Manager.

Proxy objects

Integrating with IBM Content Manager creates a system of proxy objects that enables the coordination between IBM Content Manager documents and IBM Case Manager cases.

In IBM Content Manager, the proxy object represents the case folder. For each case folder in IBM Case Manager, there is a proxy object in IBM Content Manager. This proxy object does not include any user properties. Instead, the proxy object contains the following properties that identify the case folder in IBM Case Manager:

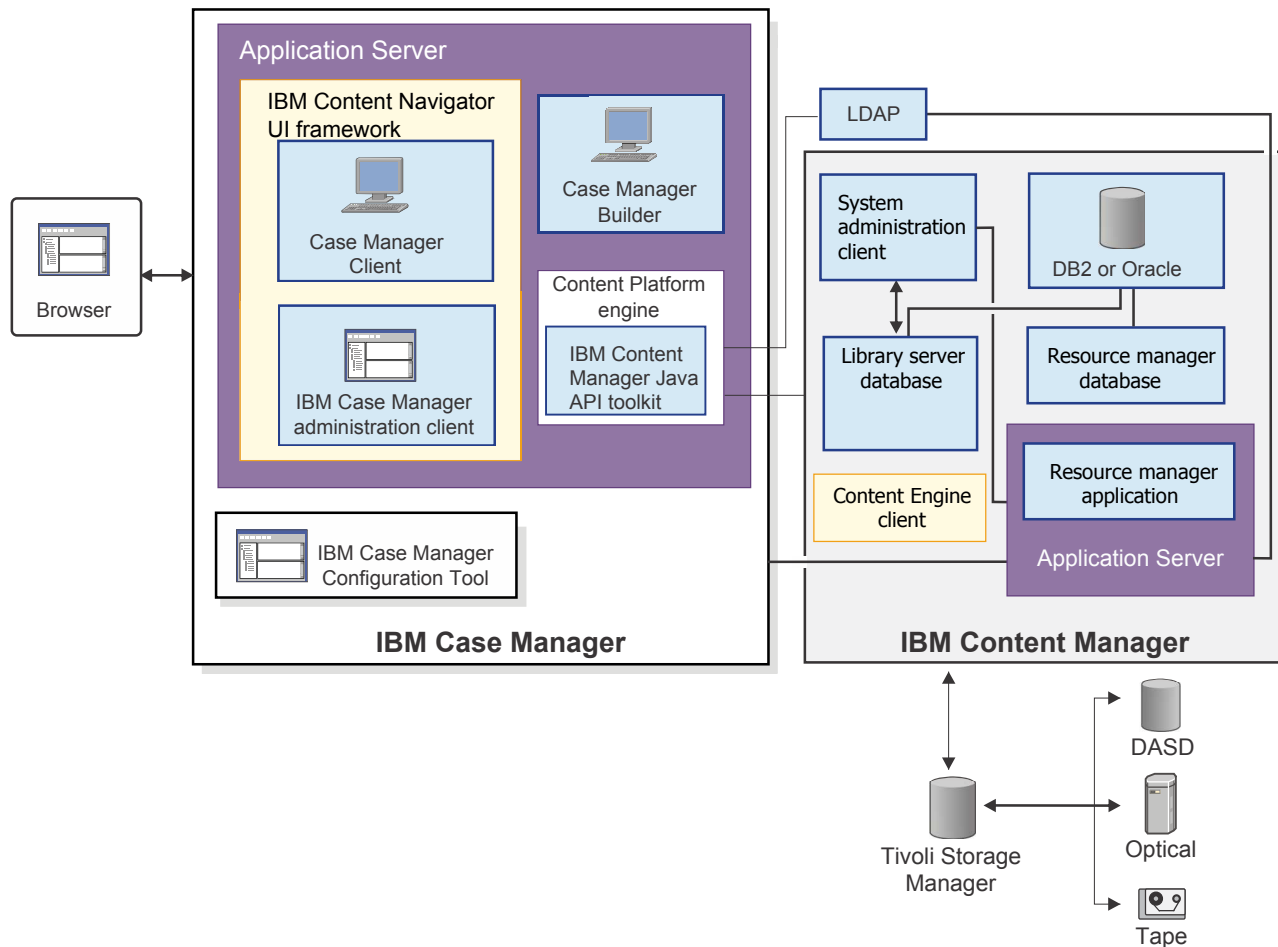
- Case ID
- Case folder GUID
- Initiating document ID
- Object store symbolic name
- Solution name
- Case type
- Case folder name

In IBM Case Manager, the proxy object is a proxy document that represents a document or a folder. For each document or folder in IBM Content Manager, the proxy object in IBM Case Manager contains an external reference to IBM Content Manager and no user properties.

The creation, modification, and deletion of these proxy objects is done through event handlers in both the IBM Content Manager and IBM Case Manager systems.

Important: Integrate with IBM Content Manager if your solution requires the ability to update documents in the IBM Content Manager repository based on case events. If your solution does not require this ability, consider configuring your solution to use IBM Content Manager as an external repository. For information about configuring external repositories, see “Connecting and configuring additional repositories” on page 53.

The following diagram shows the component architecture of a system that integrates IBM Content Manager with IBM Case Manager.



You could also use a single WebSphere Application Server instance where IBM Case Manager, the IBM Content Manager resource manager application, and the IBM FileNet P8 Content Engine are all on the same machine.

Restrictions:

- IBM Case Manager solutions are specific to the content management repository in which the solution was created. A solution from an IBM FileNet Content Manager repository cannot run in an IBM Content Manager repository, and a solution from an IBM Content Manager repository cannot run in an IBM FileNet Content Manager repository.
- Case operations are not supported when you integrate IBM Case Manager with IBM Content Manager.
 - “Comparison of access to documents in an IBM Content Manager repository” on page 138
 - “Preparing the IBM Content Manager server” on page 139
 - “Configuring access to Content Platform Engine” on page 142
 - “Integrating IBM Content Manager with IBM Case Manager” on page 144
 - “Known limitations and differences for IBM Content Manager” on page 145

Comparison of access to documents in an IBM Content Manager repository

There are two ways in which you can provide case workers with access to documents in an IBM Content Manager repository. You can integrate with IBM Content Manager to make that repository the primary storage for case documents. Alternatively, you can use an IBM Content Manager repository as the primary storage and configure access to IBM Content Manager as an external repository.

These approaches provide different levels of access to the documents in a IBM Content Manager repository. The following table summarizes support each approach provides for specified IBM Case Manager features.

IBM Case Manager feature	Integration with IBM Content Manager	IBM Content Manager as an external repository
Initiate a case when a document is created	Supported	Not supported
Copy a document property to case property	Partial support	Not supported
Search for existing documents	Supported	Supported
File or unfile a document in a case	Supported	Supported
Check a case document in or out	Supported	Supported
View or retrieve a case document	Latest version	Latest version
Update a document property from IBM Case Manager	Supported	Supported
Delete a document from IBM Case Manager	Supported	Supported
Delete a case document from the IBM Content Manager system	Supported	Not supported
Start a task when a document is added to a case	Supported	Not supported
Access documents from multiple IBM Content Manager systems	Not supported	Supported
Case History	Filing and unfiling documents are recorded	Filing and unfiled documents are recorded
File documents in case subfolders	Not supported	Supported
Include documents from any CMIS repository into Case along with IBM Content Manager	Not supported	Supported

In addition to the differences in feature support, IBM Content Manager integration requires you to set up an IBM Content Manager event monitor. The event monitor is not required if you use IBM Content Manager as an external repository.

Preparing the IBM Content Manager server

Ensure that the IBM Content Manager server is at the correct version level for integration with IBM Case Manager. Also, install the Content Engine client on the IBM Content Manager server and set up three IBM Content Manager user IDs.

Procedure

To configure your IBM Content Manager server for integration with IBM Case Manager:

1. If you have not already done so, install and set up your IBM Content Manager environment.

In addition to an IBM Content Manager production server, set up a development or test server to use when you design solutions.

Typically, your test server mirrors the production server that your solution will use. Import any item types that will be reused in your solution into the test server. You can also create new item types in the test server that will later be imported into the production server.

Restriction: You cannot create item types in Case Manager Builder. Instead, reuse the item types that were created in IBM Content Manager. Proxy document objects are created in IBM Case Manager to represent the reused item types.

2. Ensure that the IBM Content Manager system is at Version 8.4.3 Fix Pack 1 or later.

Version 8.4.3 Fix Pack 1 performs the following tasks to support integration with IBM Case Manager:

- Adds new database tables to the library server for event subscription and processing specific to IBM Case Manager.
- Installs the case event handler on your IBM Content Manager system.
- Updates the event monitor for IBM Case Manager integration.

3. Install the Content Platform Engine client on the IBM Content Manager server where the system administration client resides and where the case event handler will be run.

Important: Install the version of the Content Platform Engine client that is used by IBM Case Manager.

The Content Platform Engine client is required by the case event handler so that IBM Content Manager can communicate with the IBM Case Manager server.

4. Configure LDAP integration and import LDAP users for IBM Content Manager:
 - a. Configure LDAP integration to ensure that IBM Content Manager and IBM Case Manager use the same LDAP server.
 - b. Create the following privilege sets to configure IBM Content Manager document security for IBM Case Manager users:
 - *ICMCasePrivAll*
 - *ICMCaseViewOnly*

For information on creating these privilege sets and assigning users to them, see Requirements and best practices for configuring IBM Content Manager to work with IBM Case Manager.

Best practice: Ensure that the application server LDAP configurations for the IBM Content Manager server and the Content Platform Engine server are identical and that they use the same LTPA key. You also need this security information when you configure the IBM Content Navigator and IBM Case Manager servers.

5. Ensure that the following IBM Content Manager IDs are created and that they have the permissions that are required for use with IBM Case Manager:
 - *icmadmin*
 - *icmconct*
 - *icmintid*
6. Enable single sign-on in the Content Manager EE library server.
7. Be sure to use the ICM\$NAME attribute when you define item types in IBM Content Manager.

If you do not use the ICM\$NAME attribute, IBM Content Navigator displays a blank name for the document.

“User IDs and privilege sets for IBM Content Manager integration”

User IDs and privilege sets for IBM Content Manager integration

To integrate IBM Content Manager with IBM Case Manager, you must set up certain user IDs and privilege sets in the IBM Content Manager environment.

User IDs

IBM Case Manager uses the following user IDs to log on to IBM Content Manager:

Table 14. IBM Content Manager IDs that are required by IBM Case Manager

User ID	Description
<i>icmadmin</i>	<p>This IBM Content Manager administration ID represents a super user or a library server administrator. By default, the ID for this user is <i>icmadmin</i>.</p> <p>You specify the credentials for this ID when you run the Configure IBM Content Manager Host Properties task in the IBM Case Manager configuration tool.</p> <p>IBM Case Manager uses this ID one time to log in to IBM Content Manager and create the ICMPROXYFDRS item type that is used for the proxy case folders. This item type includes attributes and event subscriptions that are required for IBM Case Manager.</p> <p>The <i>icmadmin</i> credentials are not stored in IBM Case Manager.</p>
<i>icmconct</i>	<p>This IBM Content Manager shared database connection ID is used to connect to the database server. By default, the ID for this user is <i>icmconct</i>.</p> <p>You specify the credentials for this ID when you run the Configure IBM Content Manager Host Properties task in the IBM Case Manager configuration tool.</p> <p>IBM Case Manager uses this ID to connect to the IBM Content Manager database to enable single sign-on from Case Manager Client.</p> <p>The <i>icmconct</i> credentials are encrypted and stored in the Content Platform Engine connection object.</p>

Table 14. IBM Content Manager IDs that are required by IBM Case Manager (continued)

User ID	Description
<i>icmintid</i>	<p>This IBM Content Manager integration ID is used specifically for IBM Case Manager. By default, the ID for this user is <i>icmintid</i>.</p> <p>You assign ICMIntPrivSet privilege set to this integration ID.</p> <p>You specify the credentials for this ID when you run the Configure IBM Content Manager Host Properties task in the IBM Case Manager configuration tool.</p> <p>IBM Case Manager stores this ID in the Content Platform Engine connection object for use by the IBM Case Manager REST API and the Content Platform Engine event handlers.</p> <p>The <i>icmintid</i> credentials are encrypted and stored in the Content Platform Engine connection object.</p>

Privilege sets

IBM Case Manager users who work with objects that are stored in the IBM Content Manager repository must have IBM Content Manager privileges to work with those objects. The most efficient way to assign only the required privileges is to create the following custom privilege sets for the IBM Case Manager users.

Table 15. IBM Content Manager privilege sets that are required by IBM Case Manager

Privilege set	Description
<i>ICMCasePrivAll</i>	<p>You assign the following privileges to this privilege set:</p> <ul style="list-style-type: none"> • All the privileges from the system-defined ClientTaskAll privilege group • The AllowTrustedLogon privilege • The SystemQueryUserPrivs privilege <p>You assign case users who need read and write access to IBM Content Manager documents to the ICMCasePrivAll privilege set. For example, in production environment, you can assign case administrators and case workers to this privilege set. In the development environment, you can assign all case users to this privilege set.</p>
<i>ICMCaseViewOnly</i>	<p>You assign the following privileges to this privilege set:</p> <ul style="list-style-type: none"> • All the privileges from the system-defined ClientTaskView privilege group • The AllowTrustedLogon privilege • The SystemQueryUserPrivs privilege <p>You assign case users who need read-only access to IBM Content Manager documents to this privilege set. For example, in the production environment, you can assign case viewers and case initiators to this privilege set.</p>

Table 15. IBM Content Manager privilege sets that are required by IBM Case Manager (continued)

Privilege set	Description
<i>ICMIntPrivSet</i>	<p>You assign the following privileges to this privilege set:</p> <ul style="list-style-type: none"> • All the privileges from the system-defined ClientTaskAll privilege group • The SystemSuperDomainAdmin privilege <p>You assign the icmintid user ID to this privilege set.</p>

Configuring access to Content Platform Engine

To access Content Platform Engine documents in your case management system, you must create a user account that is used by IBM Content Manager to access case data in Content Platform Engine. You must also configure access to the **Proxy Document** class that is used to represent IBM Content Manager documents in the IBM Case Manager environment.

Before you begin

Before you configure access to Content Platform Engine, ensure that the following tasks are complete:

- IBM Case Manager V5.3.3 or later is installed.
- The development environment is configured by running the required tasks in the IBM Case Manager configuration tool.
- The connection to your LDAP server is configured in IBM Content Navigator. You must use the same configuration settings that you used for IBM Content Manager.
- The user account that the IBM Content Manager case event handler uses to access Content Platform Engine exists in the LDAP. By default, the user ID for this account is *cm8intid*.

Important: You must use the same LDAP for IBM Case Manager, IBM Content Manager, and Content Platform Engine.

Restriction: You cannot create multiple project areas when you are integrating with IBM Content Manager. You must use the default project area.

Procedure

1. Log on to IBM Administration Console for Content Platform Engine as an object store administrator.
2. Click the target object store, and then click **Data Design > Classes > Document > CM8 Proxy Document** to open the property sheet for the CM8 Proxy Document class.
3. On the **Security** tab, click **Add**. Add the *cm8intid* user to the **Selected Users and Groups** list and set the security as follows in the **Permissions** area:
 - a. In the **Permission type** list, click **Allow**.
 - b. In the **Apply to** list, click **This object and all children**.
 - c. In the **Permission group** list, click **View properties**.
 - d. Ensure that the following check boxes are selected:

- **View all properties**
 - **Create instance**
 - **Read permissions**
- e. Optional: Delete the #AUTHENTICATED-USERS ACE from the list of ACEs. If you delete the #AUTHENTICATED-USERS ACE, you must repeat these steps to add case workers or groups. Assign these users the View properties level with View all properties right and the Read permissions right selected.
4. On the Default Instance Security tab, click **Add**. Add the *cm8intid* user to the **Selected Users and Groups** list and set the default security as follows in the **Permissions** area:
- a. In the **Permission type** list, click **Allow**.
 - b. In the **Apply to** list, click **This object only**.
 - c. In the **Permission group** list, click **View properties**.
 - d. Ensure that the following check boxes are selected:

Table 16.

Option	Selected check boxes
For users who require rights to view comments on cases	<ul style="list-style-type: none"> • View all properties • Read permissions
For users who require rights to view and add comments to cases	<ul style="list-style-type: none"> • View all properties • Link a document/Annotate • Read permissions


5. Add the *cm8intid* user to your master user group or, alternatively, to the target object store users group. For information on adding users, see Update object store with new users and groups.
6. Configure the Solution Deployments folder to give the *cm8intid* user access rights to case objects in the Content Platform Engine:
 - a. In the navigation for the target object store node, click **Root Folder > IBM Case Manager > Solution Deployments**.
 - b. On the Security tab, click **Add**. Add the *cm8intid* user to the **Selected Users and Groups** list and set the security as follows in the **Permissions** area:
 - In the **Permission type** list, click **Allow**.
 - In the **Apply to** list, click **This object and all children**.
 - In the **Permission group** list, click **Modify properties**.
7. After IBM Case Manager solutions are deployed in the target environment in the production domain, grant the *cm8intid* user **Create rights** privileges to the rosters of your solutions. Roster permissions are assigned in the Process Configuration Console.

Important: This step is required only in the production domain. If you grant *cm8intid* user **Create rights** privileges to the rosters of your solutions in the development domain, you will break the security.

Related tasks:

“Installing and configuring IBM Case Manager” on page 45

Related information:

 [Configuring the roster to enable launching task workflows](#)

Integrating IBM Content Manager with IBM Case Manager

To access IBM Content Manager documents in your case management system, you must configure IBM Case Manager by running several tasks in the IBM Case Manager configuration tool.

Procedure

To integrate your IBM Case Manager environment with IBM Content Manager:

1. If IBM Content Manager uses an Oracle database, verify that the Oracle JDBC driver (ojdbc6.jar) is on the IBM Case Manager server, then edit the *ICM_install_home/configure/configuration/config.ini* file to ensure that the `oracle.driver.location` element is set to the full path of the driver.

Important: Even if Content Platform Engine is not using an Oracle database, the Oracle JDBC driver (ojdbc6.jar) must be installed on the Content Platform Engine application server and the application server environment variables must be updated to include a reference to the driver.

2. In the IBM Case Manager configuration tool, run the Configure IBM Content Manager Host Properties task.

Important: The default instance security for the IBM Content Manager Integration Data custom object in Content Platform Engine uses the security for the object store (Full Control for object store administrators and Use Object Store for users). If you have sensitive data in your development environment or users change the default security, you might want to secure the custom object by configuring an ACL for it.

- The ACL must give owner, read, and write access to the administrator who runs the IBM Case Manager configuration tool.
- The ACL must give read access to all other accounts.
- Case Manager Builder requires read access to the Content Engine custom object to connect to the IBM Content Manager development host.

This access enables Case Manager Builder to discover item types that are defined on the IBM Content Manager development host and reuse them in the solution. Case Manager Builder is not run in the production environment, so only the IBM Case Manager configuration tool needs access to the custom object in the production environment.

3. Complete the IBM Content Manager system administration tasks that are required to establish communication between IBM Case Manager and IBM Content Manager. For more information, see Modifying the event monitor, event handler, and case event handler settings.

“Configuring the Oracle JDBC driver for integration with IBM Content Manager”

Configuring the Oracle JDBC driver for integration with IBM Content Manager

If you are using Oracle as your IBM Content Manager database, you must configure the Oracle JDBC Driver in the WebSphere Application Server profiles for the IBM Case Manager REST API and Content Platform Engine.

Procedure

To configure the Oracle JDBC driver, make the following changes in the IBM Case Manager REST API profile and Content Platform Engine profile:

1. In WebSphere Application Server, click **Environment > WebSphere variables**.
2. Ensure that the **ORACLE_JDBC_DRIVER_PATH** variable contains the correct path to the Oracle JDBC driver ojdbc6.jar file.

For IBM Case Manager, the full path for this file is `<WAS_Home>/jdbcdrivers/Oracle/ojdbc6.jar`.

If Content Platform Engine uses an Oracle database, you must use the ojdbc6.jar file to set the Oracle JDBC driver for Content Platform Engine. Although Content Platform Engine also supports the ojdbc5.jar file, the ojdbc6.jar file is required to enable Content Platform Engine to communicate with the IBM Case Manager Oracle database.

3. Add the path to the Oracle JDBC driver to the **JVM classpath** field:

Operating system	JAR file path
AIX	<code>\${ORACLE_JDBC_DRIVER_PATH}/ojdbc6.jar</code>
Linux	<code>\${ORACLE_JDBC_DRIVER_PATH}/ojdbc6.jar</code>
Linux for System z	<code>\${ORACLE_JDBC_DRIVER_PATH}/ojdbc6.jar</code>
Windows	<code>\${ORACLE_JDBC_DRIVER_PATH}\\\\ojdbc6.jar</code>

Known limitations and differences for IBM Content Manager

Resetting the test environment, deploying solutions, and other tasks that you do in IBM Case Manager require additional steps or have limitations when you use IBM Content Manager as a document repository.

“Resetting the test environment with IBM Content Manager”

“Deploying the solution to the production environment for IBM Content Manager” on page 150

“Item types in Case Manager Builder” on page 150

“IBM Content Manager metadata name is displayed by using the IBM Case Manager server locale” on page 150

“Item reindexing for IBM Content Manager” on page 151

“Folders” on page 152

“Wildcard characters and search” on page 152

“Project areas” on page 152

“Case history for IBM Content Manager documents” on page 153

Resetting the test environment with IBM Content Manager

You can use the Case Manager Builder Reset Test Environment feature to remove the deployed solutions and other data from the development environment project area. This feature removes the deployed solutions and cases from your FileNet P8 development environment. It also removes the IBM Content Manager proxy case folders and the documents filed in them. Additionally, it removes event subscriptions for any IBM Content Manager item types that are reused in solutions deployed to the project area that is associated with an IBM Content Manager library server.

About this task

When you reset the test environment for IBM Case Manager by clicking **Reset Test Environment**, this action removes the proxy case folder objects and their filed

documents from your IBM Content Manager test repository. However, it does not remove documents that are not instances of the IBM Content Manager item types that are reused for solutions.

To remove these objects, you must do several tasks manually in IBM Content Manager.

You must be a system administrator and a database administrator for IBM Content Manager to complete these tasks.

Procedure

To complete the IBM Content Manager steps that are required to remove the unused objects:

1. Export the item types in the IBM Content Manager test system as an XML file:
 - a. Log in to the IBM Content Manager system administration client.
 - b. Export the item types as an XML file. If the item types in the IBM Content Manager test system do not exist in the IBM Content Manager production system or if they were changed in the IBM Content Manager test system so that the data model objects are not synchronized with the objects in the production system, then to preserve the data in the item types, you must export them. When you export item types, you can also export dependent objects such as item type attributes.
2. Stop the resource manager application from the WebSphere Application Server administrative console.
3. Remove the configuration for IBM Content Manager components:
 - a. Log in as the root user or administrator on the library server.
 - b. Run the following command to start the configuration wizard:
IBMCMROOT/bin/config_CM. *IBMCMROOT* is the default installation location for IBM Content Manager. For example, the default location is */opt/IBM/db2cmv8/* for AIX and *C:\Program Files\IBM\db2cmv8* for Windows.
 - c. Select **Remove configuration**. Then, select **Library server** to remove the configuration for the library server database. If the resource manager database and resource manager application are installed on the same machine, select **Resource manager database** and **Resource manager application**.
 - d. Follow the instructions in the configuration wizard to complete the steps to remove the configuration of components.
 - e. If the resource manager database and application are installed on a different machine, log in as the root user or administrator of the resource manager machine and repeat these steps to remove the configuration on the machine for the resource manager.
4. Drop the library server database and resource manager database:

Option	Description
<p>The library server and resource manager databases are on the same machine.</p>	<ol style="list-style-type: none"> 1. On the library server machine, log in as the library server database administrator ID. The default library server administrator ID is icmadmin. 2. Enter the following commands to drop the databases: <ul style="list-style-type: none"> • For a DB2[®] database, open a DB2 command-line window and enter the following commands: <pre>db2 force applications all db2 drop db <i>ls_db_name</i> db2 drop db <i>rm_db_name</i></pre> <p><i>ls_db_name</i> is the name of the library server database and <i>rm_db_name</i> is the name of the resource manager database. The default name of the library server database is icmnlbdb. The default name of the resource manager database is rmdb.</p> • For an Oracle database, start the database in restrict mode and bring it in mount state. Then, enter the following commands: <pre>sqlplus / as sysdba shutdown immediate; startup restrict mount; drop database; exit</pre>

Option	Description
<p>The library server and resource manager databases are on different machines.</p>	<ol style="list-style-type: none"> 1. Drop the library server database: <ol style="list-style-type: none"> a. On the library server machine, log in as the library server database administrator ID. The default library server administrator ID is icmadmin. b. Enter the following commands to drop the database: <ul style="list-style-type: none"> • For a DB2 database, open a DB2 command-line window and enter the following commands: <pre>db2 force applications all db2 drop db <i>ls_db_name</i></pre> <p><i>ls_db_name</i> is the name of the library server database. The default name of the library server database is icmnlbdb.</p> • For an Oracle database, start the database in restrict mode and bring it in mount state. Then, enter the following commands: <pre>sqlplus / as sysdba shutdown immediate; startup restrict mount; drop database; exit</pre> 2. Drop the resource manager database: <ol style="list-style-type: none"> a. On the resource manager machine, log in as the resource manager database administrator ID. The default resource manager database administrator ID is radmin. b. Enter the following commands to drop the database: <ul style="list-style-type: none"> • For a DB2 database, open a DB2 command-line window and enter the following commands: <pre>db2 force applications all db2 drop db <i>rm_db_name</i></pre> <p><i>rm_db_name</i> is the name of the resource manager database. The default name of the resource manager database is rmdb</p> • For an Oracle database, start the database in restrict mode and bring it in mount state. Then, enter the following commands: <pre>sqlplus / as sysdba shutdown immediate; startup restrict mount; drop database; exit</pre>

5. Remove data from the resource manager staging area:
 - a. Log in to the resource manager machine as the root user or with an ID that has privileges to delete directories and files.
 - b. Delete all files in the staging area. An example path for the staging area on a Windows machine is C:\staging.
 - c. Delete all files and directories in the hard disk collection. An example location is the file system volume LBOSDATA. On Windows, an example path is C:\lbosdata.
6. If you are using Oracle as your IBM Content Manager database, you must create the Oracle databases for the IBM Content Manager library server and resource manager.
7. Add the configuration for IBM Content Manager components:
 - a. Log in as the root user on the library server machine.
 - b. Run the following command to start the configuration wizard:
IBMCMROOT/bin/config_CM. *IBMCMROOT* is the default installation location for IBM Content Manager. For example, the default location is /opt/IBM/db2cmv8/ for AIX and C:\Program Files\IBM\db2cmv8 for Windows.
 - c. Select **Add configuration** if other IBM Content Manager components are still installed on this machine.
 - d. Select **Library server** to add the configuration for the library server database. If the resource manager database and resource manager application are installed on the same machine, select **Resource manager database** and **Resource manager application**.
 - e. Follow the instructions in the configuration wizard to complete the steps to add the configuration of components.
 - f. If the resource manager database and application are installed on a different machine, log in as the root user of the resource manager machine and repeat these steps to add the configuration on the machine for the resource manager.
8. Start the resource manager application from the WebSphere Application Server administrative console.
9. Import the exported item types back into the IBM Content Manager test system:
 - a. Log in to the system administration client.
 - b. Import the item types and other data model objects from the XML file into the IBM Content Manager system.
 - c. Because the Reset Test Environment feature removes all event subscriptions from the item types, you must manually add the event subscriptions back into the item types after you reimport them.

Tip: Any IBM Case Manager event descriptions are added when the solution is redeployed, so you do not need to add them manually.
10. Log in to the IBM Case Manager configuration tool and rerun the Configure IBM Content Manager Host Properties task to bootstrap the IBM Content Manager test system.
11. Re-configure the security for the *cm8intid* user. During the reset of the test environment the Content Platform Engine security is restored to the original state.

Deploying the solution to the production environment for IBM Content Manager

After you complete the development and initial testing of a case management solution, you can deploy the solution to a Content Platform Engine production object store to make the solution available for your case workers. The IBM Case Manager administration client does not package IBM Content Manager item types for deployment. Therefore, if you are using a IBM Content Manager repository for your solution, you must export any new or modified item types from your test repository and then import them to your production repository.

Procedure

To deploy item types from a IBM Content Manager test repository to a IBM Content Manager production repository:

1. Ensure that your production environment is configured for integrating IBM Content Manager with IBM Case Manager. For more information, see the following topics:
 - “Preparing the IBM Content Manager server” on page 139
 - “Integrating IBM Content Manager with IBM Case Manager” on page 144
2. Use the IBM Content Manager system administration client to export the item types and their attributes from the test repository to an XML file. For more information, see Exporting data as XML.
3. Import the item types from the XML file to the IBM Content Manager production repository. For more information see, Importing data.
4. Deploy the solution from development environment to the production environment. For more information, see Deploying migrated solutions.
5. Configure security for production environment. For more information, see Configuring security for IBM Content Manager solutions

Item types in Case Manager Builder

Item types are the IBM Content Manager equivalent of the document classes that are used in IBM Case Manager. You associate item types with a solution to organize and classify the IBM Content Manager documents that belong to a case.

Unlike document classes, you cannot create item types in Case Manager Builder. Instead, you must reuse item types that were created in IBM Content Manager.

You cannot modify a reused item type in Case Manager Builder. Properties of a reused item type are not displayed in Case Manager Builder, and you cannot add new properties to the reused item type.

Deleting an item type from a IBM Content Manager repository does not delete it from IBM Case Manager. You must use Case Manager Builder to delete the item type from each solution in which it is used and then redeploy the solution.

IBM Content Manager metadata name is displayed by using the IBM Case Manager server locale

When IBM Content Manager metadata name is displayed in Case Manager Builder or Case Manager Client, the metadata name does not use the locale that is set for the browser. Instead, the metadata name is displayed by using the locale of the IBM Case Manager server.

Item reindexing for IBM Content Manager

You can create an event subscription in IBM Content Manager so that you are notified when an item is reindexed.

Reindexing an item moves that item from the source item type to the target item type. The event that is generated depends on the event subscription:

- If the target item type has an event subscription for the REINDEX event, then the reindex to an item type event will be generated.
- If the source item type has an event subscription for the REINDEXFROM event, then the reindex from an item type event will be generated.

Restriction: You cannot reindex an IBM Content Manager item that is attached to a task or an IBM Business Process Manager process in IBM Case Manager. Reindexing the item breaks the task or process.

Reindex an item event

Tip: The reindex an item event is displayed as **Add To Item Type** in the IBM Content Manager system administration client.

For the reindex an item event, the case event handler first verifies that the target item type is used in the solution.

If the target item type is used in the solution but the source item type is not, the case event handler uses the item ID of the original document to search the case folders on the IBM Case Manager server for a proxy document that corresponds to the document that was reindexed:

- If the handler does not find the proxy document, the handler creates a new proxy document under the document class that corresponds to the new item type name. If this new item type is configured to initiate a new case, the handler creates a new case instance and files the proxy document in the folder for that case. If this new item type is configured as a precondition to initiate a new task, the handler creates a new task.
- If the case event handler finds the proxy document, the handler updates the values of the PID and document class of the proxy document to match the values of the reindexed item. If the target item type is configured to initiate a new case, the reindexed document does not initiate the new case because the document is already in an existing case.

If the target item type is not used in case management, no action is taken and the event is marked as processed in the event monitor database queue.

Reindex from an item event

Tip: The reindex from an item event is displayed as **Remove From Item Type** in the IBM Content Manager system administration client.

For the reindex from an item event, the case event handler first verifies that the source item type is used in the solution.

If the source item type is used in the solution, the case event handler finds the proxy document on the IBM Case Manager server and updates the values of the PID and document class of the proxy document to match the values of the reindexed item.

If the case event handler does not find the proxy document, the handler creates a proxy document under the document class that corresponds to the new item type name.

Folders

You can define an IBM Content Manager item type so that a new case is created automatically when a document of that item type is created. When you open the new case folder in Case Manager Client, you can see the document filed in the Home folder.

You cannot define subfolders

You cannot define subfolders for a case type from Case Manager Builder. You cannot view or perform any other actions on such a subfolder in Case Manager Client.

You can do only limited actions with folders

You cannot click on any IBM Content Manager folders in Case Manager Client.

You can right-click an IBM Content Manager folder in the Attachments widget to display a pop-up menu that contains only the following actions: **Properties**, **Remove Attachment**, and **Refresh**.

No pop-up menu is available for IBM Content Manager folders in the Documents view of the Case Information widget.

Document not displayed in case folder

When a document that is part of a case is reindexed by using an IBM Content Manager client such as eClient or IBM WEBi, you might not see the document in the case folder. Restarting the IBM Content Management Interoperability Services for Content Manager web application from your IBM WebSphere Application Server administrative console should fix this issue.

Wildcard characters and search

If you are using a Content Platform Engine object store that supports content-based searches, you can use a question mark (?) as a single-character wildcard in your queries. If you are using a IBM Content Manager repository, the ? wildcard character is not supported. However, you can use the asterisk (*) as a multiple-character wildcard.

Project areas

To limit the effects of resetting the test environment, you can define a project area. You can assign solutions and users to a project area, and later remove the project area without interrupting other users in the development environment.

If you are using IBM Content Manager, you can define only one project area.

Related tasks:

Creating new project areas

Related information:

 [Creating new project areas](#)

Case history for IBM Content Manager documents

Typically, all events that are performed on case documents are recorded in the case history. However, not all events performed on IBM Content Manager documents are recorded. The case history from Case Manager Client contains entries only for the following events on these documents: Case File, Case Unfile, and Document Delete.

Tip: You can ignore the properties update events on IBM Content Manager documents because they are generated by IBM Content Manager document creation or reindex. These property updates are not for IBM Content Manager document property update.

Integrating with IBM Enterprise Records

You can declare IBM Case Manager documents as records. To use IBM Enterprise Records with IBM Case Manager, you must connect the IBM Enterprise Records system and the IBM Case Manager system to the same object store.

About this task

By integrating IBM Enterprise Records with IBM Case Manager, your solution can incorporate the following features and benefits:

- Documents in a case can be declared as records. The record is stored in the IBM Enterprise Records file plan object store.

Important: When you manually declare a record from the search results in IBM Content Navigator and this document is already attached to a case, you must search for the document and declare it as a record from the search results. You cannot browse for the document.

- A source document that was declared as a record can be added to a case because the record object store on the IBM Enterprise Records system is also configured as the target object store on the IBM Case Manager system.
- The IBM Enterprise Records and IBM Case Manager applications can exist on the same application server. However, coexistence is not required.
- The IBM Enterprise Records system and the IBM Case Manager system must use the same object store.
- When you configure your IBM Enterprise Records system and your IBM Case Manager system at the same time and connect to the same object store, all documents that are added to the target object store can be declared as records.

Procedure

To integrate IBM Enterprise Records with IBM Case Manager:




1. Install and configure IBM Case Manager.
2. Install and configure IBM Enterprise Records.
3. Create an object store that is configured as both a target object store and a record object store.
4. Optional: Declare source documents in your cases on IBM Case Manager as records from the search results in IBM Content Navigator.

“Known limitations for IBM Enterprise Records” on page 154

Related tasks:

“Installing and configuring IBM Case Manager” on page 45

Related information:

-  [IBM Enterprise Records Installation and Upgrade](#)
-  [Creating the IBM Enterprise Records Object store configuration profile and running the profile tasks](#)
-  [Declare records](#)

Known limitations for IBM Enterprise Records

Integrating IBM Case Manager with IBM Enterprise Records has several limitations.

Limitations

The following limitations apply when you integrate IBM Case Manager with IBM Enterprise Records:

- You cannot declare a record directly from IBM Case Manager.
- There is no support for configuring a file plan object store as a target object store or a source object store.
- You must configure a single object store for both applications as a place to store the source documents. You must create a single object store and configure it as a target object store on IBM Case Manager and as a record-enabled object store (ROS) on IBM Enterprise Records.
- When a source document is declared as a record, the security of the record is controlled by IBM Enterprise Records, overriding any security settings in your case.
- You cannot determine whether a source document has been declared as a record from the IBM Case Manager user interface.
- To declare a document that is already attached to a case as record, you must search for the document in IBM Content Navigator and then declare it as a record from the search results. You cannot browse for the document.

Tip: If you use the traditional IBM Enterprise Records client, search for the record in Workplace XT.

Integrating with IBM Sametime

You can integrate IBM Sametime® capabilities with Case Manager Client. With IBM Sametime integration, case workers can check whether other workers who are involved in a case are logged in to the application. They can chat with other case workers in an instant messaging window by using the IBM Sametime web interface.

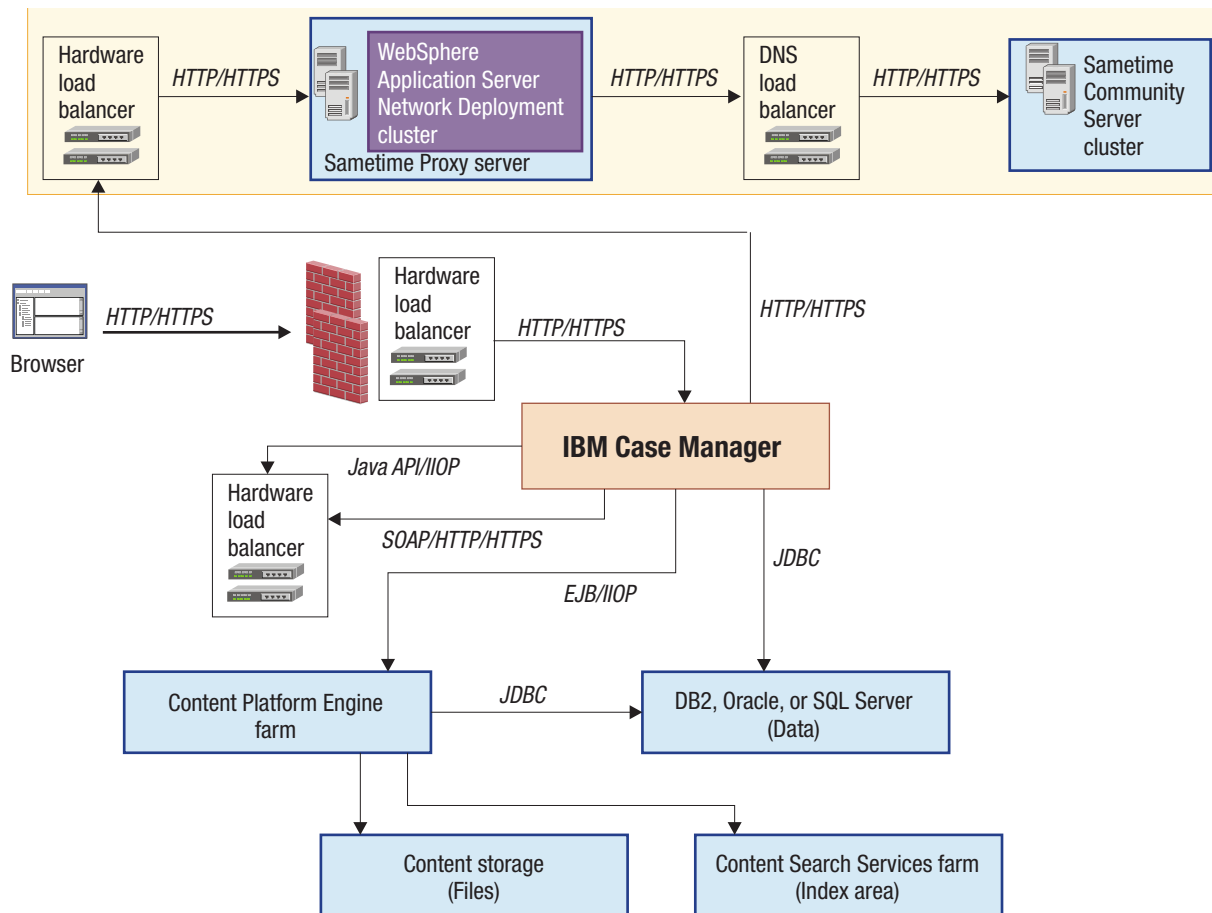
About this task

Restriction: IBM Case Manager supports IBM Sametime integration for users who are upgrading from an earlier version of IBM Case Manager that was integrated with IBM Sametime. You can get more information about IBM Case Manager support for IBM Sametime from the Software Product Compatibility Report. For information about generating this report, see “System requirements” on page 10

For IBM Sametime integration, client requests on the IBM Content Navigator server are communicated through an HTTP proxy to the IBM Sametime proxy server, and then to the IBM Sametime server. You should have all servers on the same local area network (LAN).

IBM Sametime integration does not require a thick client installation on the user desktop. Chat services are connected with the rest of the case management components through a single sign-on (SSO) configuration in WebSphere Application Server.

The following diagram shows IBM Sametime with IBM Case Manager in a highly available environment.



“Installing and configuring the IBM Sametime integration”

Installing and configuring the IBM Sametime integration

You can install and configure IBM Sametime to enable chat services in Case Manager Client. To prepare for IBM Sametime integration, you must install and configure a Lotus® Domino® server, an IBM Sametime community server, and an IBM Sametime proxy server. You must also configure single sign-on (SSO) between your WebSphere Application Server for IBM Case Manager and the Lotus Domino server.

About this task

Important: The IBM Connections profile in the IBM Connections plug-in for IBM Sametime is provided only as a sample. Additional configuration and resources are needed for the IBM Connections profile portion of the plug-in. For more information, see the following developerWorks article: [Expand Your IBM Case Manager System – Integrating with IBM Sametime](#).

Procedure

To install and configure IBM Sametime integration:

1. Install the IBM Sametime server version 8.5.2 Interim Feature Release 1 (8.5.2IFR1). For complete instructions, see [Administering Sametime Standard 8.5.2 Interim Feature Release 1 documentation](#).
 - a. Install IBM Sametime Domino server. For an AIX or Linux installation, see [Installing a Domino server on AIX, Linux, or Solaris](#). For a Windows installation, see [Installing a Domino server on Windows](#).
 - b. Install the Notes® client and the Domino administrator client. For more information, see [Installing the Notes client and Domino administrative client](#).
 - c. Install the IBM Sametime community server. For more information, see [Installing a community server on AIX, Linux, Solaris, or Windows](#).
 - d. Install the IBM Sametime proxy server. For more information, see [Installing a Lotus Sametime Proxy Server](#).
 - e. Record the names of the of the IBM Sametime server and the IBM Sametime proxy server to use when you configure your case management system.
 - f. Configure SSO. For more information, see [Enabling Single Sign-on](#).
2. Confirm that SSO is enabled for your servers. Confirm that SSO is enabled on both the Lotus Sametime server and the case management server.
 - a. In the WebSphere administration console, navigate to **Security > Global Security > Web and SIP security > Single sign-on (SSO)** and ensure that the following settings are selected:
 - **Enabled**
 - **Interoperability Mode**
 - **Web inbound security attribute propagation**
 - b. In **Domain name**, specify the IBM Sametime server domain. For example, you might enter a server domain such as `ibm.com`.

Tip: The IBM Sametime server and IBM Case Manager server must be in the same domain as specified in the **Domain name** field. For example, `lotus.ibm.com` and `ecm.ibm.com` are part of the `ibm.com` domain. However, if you specify `lotus.ibm.com` as the IBM Sametime server domain and `ecm.ibm.com` as the IBM Case Manager, SSO will not work between the two machines. You must use the common part of the domain name, `ibm.com`, to establish SSO.
 - c. Save any changes and restart WebSphere Application Server. If you did not make any changes, you do not need to restart WebSphere Application Server.
3. Install the IBM Ajax proxy server to the WebSphere Application Server that is running the IBM Case Manager and IBM Content Navigator services. Configure the `proxy-config.xml` file in the IBM Ajax proxy service.

For WebSphere Application Server V8.5.0 or later, the AjaxProxy.war file is available in the \$WAS_HOME\installableApps folder (for example, C:\IBM\WebSphere\AppServer\installableApps).

For earlier versions of WebSphere Application Server, the AjaxProxy.war file is available in the \$WAS_HOME\web2mobilefef_1.1\installableApps\AjaxProxy folder (for example, C:\IBM\WebSphere\AppServer\ web2mobilefef_1.1\installableApps\AjaxProxy). If you are using WebSphere Application Server V8.0 or earlier, you must install the Web 2.0 and Mobile Feature Pack. You can download this feature pack from the following web page: <http://www.ibm.com/software/products/en/web2mobile>

- a. Install the AjaxProxy.war file as a web application on the WebSphere Application Server that is running the IBM Case Manager and IBM Content Navigator services. Use AjaxProxy as the context root. You can find the AjaxProxy.war file in the WebSphere Feature Pack for Web 2.0.
- b. Edit the proxy-config.xml file that is included in the AjaxProxy.war file with the following changes:

- For security, remove the default mapping for any URL by removing or commenting out the following two lines:

```
<proxy:mapping contextpath="/http/*">
<proxy:mapping contextpath="/https/*"/>
```

- Add the following proxy mapping to the IBM Sametime server URL. Replace 9082 with the port number of your IBM Sametime server.

```
<proxy:mapping contextpath="/http/SametimeServer.yourCompany.com:9082/*">
```

- Allow forwarding only for the IBM Sametime server by adding the following code to the proxy-config.xml file. Replace the URL with the URL of your IBM Sametime server. This code sets the proxy mapping to pass cookies and headers and to maintain states.

```
<proxy:policy acf="none" basic-auth-support="true"
  url="http://SametimeServer.yourCompany.com:9082*">
  <proxy:actions>
    <proxy:method>GET</proxy:method>
    <proxy:method>HEAD</proxy:method>
    <proxy:method>POST</proxy:method>
    <proxy:method>PUT</proxy:method>
    <proxy:method>DELETE</proxy:method>
  </proxy:actions>
  <proxy:cookies>
    <proxy:cookie>LtpaToken</proxy:cookie>
    <proxy:cookie>LtpaToken2</proxy:cookie>
    <proxy:cookie>loginName</proxy:cookie>
    <proxy:cookie>sid</proxy:cookie>
    <proxy:cookie>selectorMap</proxy:cookie>
    <proxy:cookie>headUpdaterWindowName</proxy:cookie>
    <proxy:cookie>UnicaNIOID</proxy:cookie>
    <proxy:cookie>x-Q-App-Context</proxy:cookie>
    <proxy:cookie>flushedId</proxy:cookie>
    <proxy:cookie>JSESSIONID</proxy:cookie>
  </proxy:cookies>
  <proxy:headers>
    <proxy:header>User-Agent</proxy:header>
    <proxy:header>Accept*</proxy:header>
    <proxy:header>Content*</proxy:header>
    <proxy:header>Authorization*</proxy:header>
    <proxy:header>X-Method-Override</proxy:header>
    <proxy:header>Set-Cookie</proxy:header>
    <proxy:header>If-Modified-Since</proxy:header>
    <proxy:header>If-None-Match</proxy:header>
    <proxy:header>Rtc4web-Nonce</proxy:header>
    <proxy:header>Host</proxy:header>
```

```

        <proxy:header>Accept</proxy:header>
        <proxy:header>Keep-Alive</proxy:header>
        <proxy:header>Connection</proxy:header>
        <proxy:header>X-Requested-With</proxy:header>
        <proxy:header>Referer</proxy:header>
        <proxy:header>Cookie</proxy:header>
    </proxy:headers>
</proxy:policy>

```

- If IP address of the IBM Sametime server is required, add another copy of the preceding code and replace `SametimeServer.yourCompany.com:9082` with the IP address of your Sametime server and its port number.
4. Register and configure the IBM Connections Plug-in for IBM Sametime in IBM Content Navigator:
 - a. Log in to the IBM Content Navigator administrator desktop. Click the **Open Administration View** icon in Case Manager Client.
 - b. Click **Plug-ins** and then click **New Plug-in**.
 - c. Select the **Jar file path** radio button, and then enter the path to the `ProfilePlugin.jar` file. Typically, this file is in the `IBM/ECMClient/plugins` folder.
 - d. Click **Load**.
 - e. Set the IBM Sametime proxy server URL to your IBM Sametime server URL
 - f. Set the context root for the Ajax proxy server to the IBM Ajax proxy service URL.
 - g. Verify that the `proxy-config.xml` file is correctly configured in the IBM Sametime configuration setting in the profile plug-in by clicking the **Test** button in the configuration. The profile plug-in tests the configuration by fetching a JavaScript source on the IBM Sametime server through the Ajax proxy.

Important: You must use a fully qualified URL to access the IBM Case Manager server. The test will fail if you are using an IP address or a non-qualified URL for your IBM Case Manager server. If the test is successful, this means that the proxy server is set up correctly.
 - h. Select the IBM Sametime proxy server polling to one of the following values:
 - Disabled
 - Display Sametime status automatically
 - Display Sametime status after a click action

If you choose to display IBM Sametime status after a click action, the IBM Sametime status of the user is displayed only when you click on the user name.
 - i. Select the **Display Name** check box to show the display name instead of the login name.

What to do next

After you install and configure the IBM Sametime server and Sametime proxy server, you must enable IBM Sametime integration in the IBM Case Manager administration client.

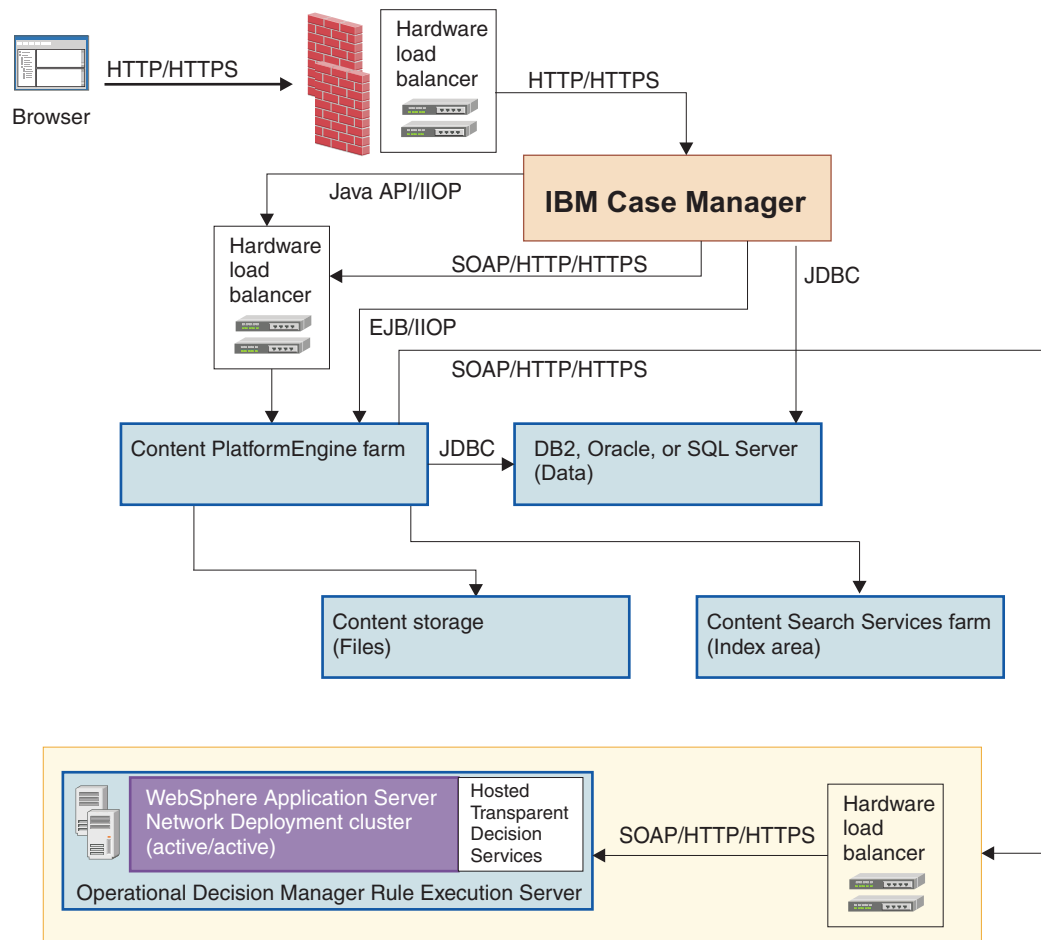
Integrating with Operational Decision Manager

You can integrate Operational Decision Manager with IBM Case Manager to manage your IBM Case Manager rules and rules from other parts of your business in a single application. If you plan to use this integration, you must first install the Operational Decision Manager licensed program on a server in your IBM Case Manager environment.

About this task

As an alternative to creating business rules in Case Manager Builder, you can create and deploy rules in Operational Decision Manager to allow more sophisticated decisions and a full range of management capabilities. You can also export rules that you created in Case Manager Builder and deploy them in Operational Decision Manager.

The following diagram shows a sample configuration in which Operational Decision Manager is deployed to a dedicated server cluster. Alternatively, you can collocate Operational Decision Manager on an existing server. Operational Decision Manager is compatible with various application servers, including WebSphere Application Server.



Operational Decision Manager allows rules to be independently managed and exposed as web services. These decision services can be imported into IBM Case Manager and called by Process Engine to allow workflow steps to be controlled by

the rules without modifying the workflow definition.

Procedure

To install Operational Decision Manager:

Follow the installation and configuration instructions in the Operational Decision Manager documentation.

“Exporting business rules to IBM Operational Decision Manager”

“Adding business rules from IBM Operational Decision Manager to a solution”
on page 161

Related concepts:

 Business rules

 Rules integration using web services

Exporting business rules to IBM Operational Decision Manager

You can export business rules to IBM Operational Decision Manager by using the IBM Case Manager administration client. For example, you might want to export to IBM Operational Decision Manager to manage your IBM Case Manager rules along with rules from other parts of your business in a single application.

Procedure

To export business rules to IBM Operational Decision Manager:

1. Start the IBM Case Manager administration client. Enter the following URL in a browser:
`http://server:port/navigator/?desktop=icmadmin`
server is the IBM Content Navigator IP address or fully qualified server name.
port is the IBM Content Navigator port number.
2. In the navigation tree in the left pane, select a design object store and click **Solutions**.
3. On the Solutions page in the right pane, select the solution with business rules that you want to export.
4. Click **Actions** > **Export** > **Business Rules** and complete the wizard steps.
5. After the rules are exported, download and save the exported rules archive file.

What to do next

The exported archive file contains individual archive files for each business rule that is associated with the solution. The individual rule archive files are organized according to the case type with which they are associated. Extract the exported archive file, and then import the individual rule archive files into the IBM Operational Decision Manager Rule Designer or Decision Center.


Tip: Centralized rule management, such as provided by the Decision Center component of IBM Operational Decision Manager, requires the definition of a persistence locale that is supported by all rule projects that are being managed. This term refers to the locale that you choose for your environment to use for creating rules. The locale choice is important because the rules persist in the locale in which you create them. If you have users in more than one locale, and you want your solutions for these users to include business rules, it is possible to create the


solutions in a single instance of IBM Case Manager. However, you cannot import rules from IBM Case Manager into Decision Center component of IBM Operational Decision Manager if the locale of your solution does not match the locale of your Decision Center instance.


If you export rules from solutions that are from a different persistence locale, you must import the rules into Rule Designer and refactor them to provide a vocabulary and parameters that can be associated with the persistence locale. After the rules are refactored, use Rule Designer synchronization commands to publish the project to Decision Center. If your exported rule projects already support the IBM Operational Decision Manager persistence locale, you can import them directly into Decision Center. For more information, see the IBM Operational Decision Manager documentation.

Related tasks:

“Adding business rules from IBM Operational Decision Manager to a solution”

 Tutorial: Importing and managing rules with IBM Operational Decision Manager

 Importing business rules into IBM Operational Decision Manager Decision Center

 Importing into Rule Designer

Adding business rules from IBM Operational Decision Manager to a solution

You can add business rules from IBM Operational Decision Manager to the steps of the workflow definition for a task, and then modify the business rules without modifying the workflow definition.

Before you begin

Before you can add business rules from IBM Operational Decision Manager to a solution, you must install and configure IBM Operational Decision Manager to use web services to generate a Web Service Definition Language (WSDL) file that describes the interface for invoking the business rule.

Before you add a business rule to a solution, review the rule and verify that the rule was deployed in IBM Operational Decision Manager.

About this task

A business rule captures and implements business policies and practices, such as enforcing a business policy or making a decision that is based on specific data. For example, a business rule can update a particular case property to indicate that a fraud investigation task is required if an automobile insurance claim is filed by the driver of a sports car.

You can use rules software, such as IBM Operational Decision Manager, to separate the business rules from the process, which makes it easier for a business analyst to independently manage the process and the rules for the process, rather than modifying a workflow definition.

Procedure

To add business rules from IBM Operational Decision Manager to a solution:

1. Open the solution in Case Manager Builder and add case properties, case types, tasks, steps, and roles as necessary. Include properties that can be parameters for the Operational Decision Manager rule in this solution. For example, an automobile insurance claims solution might have case properties that include Vehicle Year (integer), Vehicle Make (string), Policy Number (string), Claimant Age (integer), and Potential Fraud (Boolean).
2. Deploy and test the solution.
3. In the Operational Decision Manager Rule Execution Server console, select the ruleset that contains the rules that are related to your solution to verify that the rules are deployed in Operational Decision Manager.
4. Obtain the URL for the Web Service Definition Language (WSDL) file.
 - a. In the Rule Execution Server console, click **Explorer** and click the RuleApp that contains your ruleset.
 - b. In the RuleApp view, click the ruleset and click **Retrieve HTDS Description File**.
 - c. Select the **Latest ruleset version** and **Latest RuleApp version** options.
 - d. Click **View** to open the file in a web browser.
 - e. Copy the URL from the address bar of the browser and paste it into a text document so that you can refer to the URL in the next step. For example, the URL might be `http://localhost:9082/DecisionService/ws/AutomobileFraudCheckRuleApp/1.0/AutomobileFraudCheck/1.0?WSDL`
5. Define the partner link to the web service. A partner link consists of a name and the WSDL URL for Invoke functions.
 - a. Open the solution in Process Designer. On the Manage Solutions page in Case Manager Builder, click **Open Process Designer** from the **More Actions** option for your solution.
 - b. Select a case type and a task.
 - c. Click **Workflow Properties > Web Services > Partner Links**.
 - d. Specify a name for the partner link.
 - e. Select **Invoke** and paste the WSDL URL into the **WSDL URL** field.
 - f. Click the **Browse** icon (...), which populates the available port types and select the port type from the menu.
6. Add the following parameters to the workflow definition on the **Workflow Properties > Data Fields** tab in Process Designer.

ODMDecisionID

String

ODMOutput

String

ODMRulesCount

Integer

The parameters are specific to Operational Decision Manager and therefore are not included in your solution.

7. Complete this step for business rules that you created in Case Manager Builder and exported to Operational Decision Manager, and any other rules that use a case object to represent the set of case properties in a single object: Create an XML data field to store the execution results that are returned from the IBM Operational Decision Manager web services. In Process Designer, click **Workflow Properties > Web Services > XML Data Fields** and add a field with the name ODMOutputXML.

8. Create a system step to implement the rules:
 - a. Add a system step to your solution workflow in Process Designer. You might have created a stub step for this purpose in Case Manager Builder.
 - b. Connect the final workflow step to the new system step.
 - c. Specify a name for the step.
 - d. Select the **Invoke** function from the **Available Functions** list and move it to the **Selected Functions** list.
 - e. In the **Selected Functions** list, double-click **Invoke**.
 - f. Click **Messages**. Then, select the partner link and the operation. The incoming and outgoing parameters are automatically populated with the Operational Decision Manager rules parameters
 - g. Define the outgoing and incoming values.
 - For typical business rules that you created in Operational Decision Manager:
 - 1) In the **Outgoing Parameters** list, select the matching case property for each parameter from the **Expression** menu.
 - 2) In the **Incoming Parameters** list, select the matching data field for each parameter from the **Field Name** menu. You created the data fields in a previous step. You can also use a field assignment to assign values.
 - For business rules that you created in Case Manager Builder and exported to Operational Decision Manager, and any other rules that use a case object to represent the set of case properties in a single object:
 - 1) For the **Message Type** option, select **XML**.
 - 2) In the **Outgoing Message** field, replace the place holder values in the <caseObject> XML element with expressions that represent the case properties and data fields that are mapped to custom rule parameters. Use the format `F_CaseFolder.attribute_name`. For example, change the value "`<Creator>`" + "`Creator`" + "`</Creator>`" to "`<Creator>`" + `F_CaseFolder.Creator` + "`</Creator>`". For the `CmAcmCaseState` property, set the value to "`<CmAcmCaseState>`" + "`Working`" + "`</CmAcmCaseState>`".

Tip: All parameter values in the <caseObject> XML element must be strings. To avoid validation errors, use Expression builder to change time and date values to `timetostring` functions and `numbertostring` functions.

- 3) In the **Incoming XML Data Field** field, specify `ODMOutputXML`.
- 4) Select the **Assign** function from the **Available Functions** list and move it to the **Selected Functions** list.
- 5) In the **Selected Functions** list, double-click **Assign** to view the assignment parameters that correspond to case properties and data fields that are mapped to custom rule parameters.
- 6) For the `ODMOutputXML` parameter, specify the following expression:




```
substitute(ODMOutputXML, "xsi:type=""ns0:caseType"", "")
```
- 7) For each case property or data field whose value is set by the business rule, specify an XPath expression that returns the corresponding value from the `ODMOutputXML` data field. For example, specify the following XPath expression to the value of a case property:

```
xmlstringexpr(ODMOutputXML, "/", "/*[local-  
name()=\"\"CSR1_CT1_RuleName\"\"/*[local-name()=\"\"caseObject\"\"]/  
*[local-name()=\"\"caseObject\"\"/*[local-  
name()=\"\"F_CaseFolder.CSR1_StringProperty\"\"]")
```

9. Validate, transfer, and check the workflow.
10. In Case Manager Builder, click **Manage Solutions** and deploy the solution to the development environment for testing.

Related tasks:

“Exporting business rules to IBM Operational Decision Manager” on page 160

-  Using web services: XML message example
-  Web services integration using XML data mapping

Integrating with a version control system (VCS)

You can integrate IBM Case Manager with a version control system (VCS) such as IBM Rational Team Concert or PTC Integrity. You can then keep a record in the VCS of the changes made to a solution over time.

About this task

Whenever you click **Commit** on the Manage Solutions page in Case Manager Builder, the server saves new and updated solution assets to the design object store. If you integrate with a VCS, the server also copies the changed solution files to the directory that you designated to act as the sandbox. This sandbox provides a staging area for the solution files that are to be stored in the VCS. Solution files are copied to the appropriate sandbox subdirectory according to the solution and the user. The server then runs your commit script to check in the changes from the sandbox to the VCS. The commit script creates a change set that contains all new or modified solution assets, associates comments with each asset, and checks the change set into the VCS.

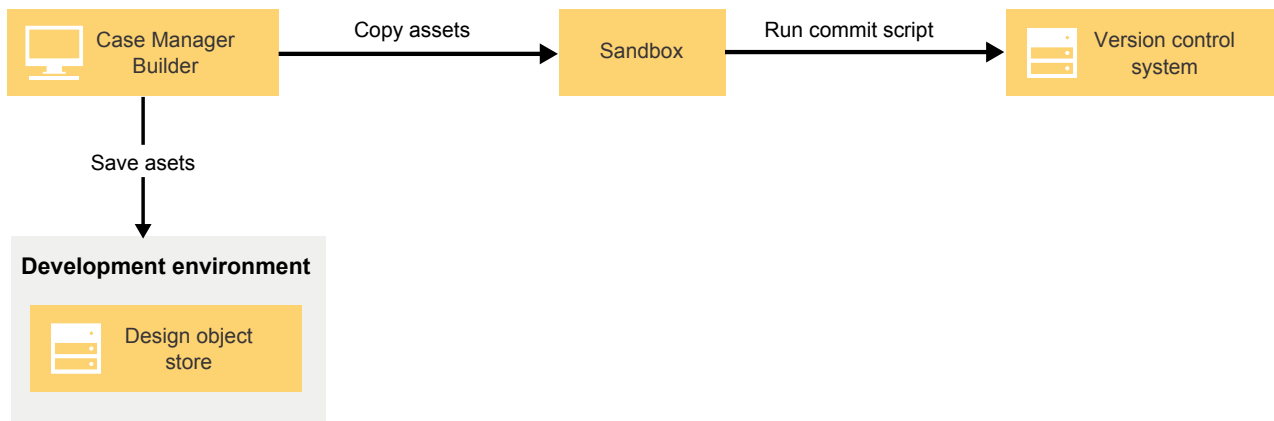


Figure 4. Committing new and changed solution assets

After a solution is committed, you can click **Deliver** to check in the solution as a whole to the VCS. After the server copies all solution files and a solution manifest file to the sandbox, the server runs your deliver script to check in the files from the sandbox to the VCS. The script then creates and labels a baseline or snapshot of the solution and delivers it to the VCS.



Figure 5. Delivering the entire solution

After you deliver the files, you can deploy an IBM Case Manager solution from the VCS into another environment, such as a production environment or a different development environment. You first extract the solution assets and solution manifest from the VCS according to a specific delivery label. You then use the solution manifest file to import the solution into the design object store in the new environment before you deploy the solution.

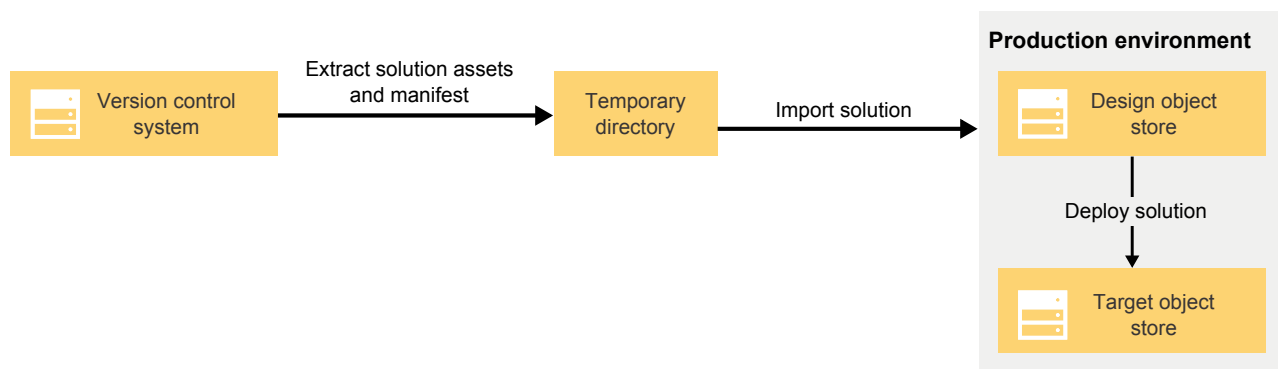


Figure 6. Deploying the solution into another environment

You can use the graphical user interface of your VCS to export the solution assets and solution manifest from the VCS according to a delivery label and then use the IBM Case Manager administration client to import and deploy the solution to the new environment. Alternatively, you can create a custom script to automatically extract, import, and deploy the solution.

“Setting up and configuring VCS integration”

“Commit and deliver scripts” on page 167

“Disabling VCS integration” on page 169

“Adding an existing or a copied solution to a VCS” on page 169

“Deleting a solution from a VCS” on page 170

Related tasks:

- Importing IBM Case Manager assets by using a solution manifest
- Exporting IBM Case Manager assets from a VCS

Setting up and configuring VCS integration

To integrate IBM Case Manager with a version control system (VCS), you must first designate a directory to act as a sandbox. You then create scripts to check in and deliver solution files to the VCS, and use the IBM Case Manager configuration tool to enable and configure the VCS integration.

Procedure

To set up and configure VCS integration:

1. Create a directory on a network shared directory to serve as a sandbox for the VCS integration. This sandbox provides a staging area for the solution files that are to be stored in the VCS.
 - In a cluster environment, the network shared directory must be available to all nodes. You can make the directory available to all nodes by mapping the file system on one server so that the file system is available to other nodes in the cluster. Alternatively, you can use a file storage device to make the network shared directory available to all nodes.
 - In a standalone environment, the network shared directory can be the local file system.
2. Create the scripts that Case Manager Builder runs to commit and deliver to the VCS the changes that are made to a solution in Case Manager Builder. For more information about creating the scripts, see “Commit and deliver scripts” on page 167.
3. Optional: Create custom scripts to automate the deployment of solutions to other environments, such as staging or production environments. You can create a single script to do the following tasks:
 - a. Extract solution assets that are associated with a specific label from the VCS.
 - b. Call the IBM Case Manager configuration tool to import the solution assets to the target environment.
 - c. Call the IBM Case Manager configuration tool to deploy the solution to the target environment.

Tip: Instead of using a custom script to extract the solution assets, you can use the user interface for your VCS to download the solution assets.

4. If the VCS requires additional credentials, configure a keystore or other solution for handling sensitive parameters, such as the credentials for the VCS user. Case Manager Builder does not pass sensitive parameters, such as passwords, to the VCS scripts. Therefore, the scripts must look up the credentials based on the FileNet P8 user that does a commit or deliver, or on nonsensitive parameters that are collected from the user.
5. In the IBM Case Manager configuration tool, edit and run the Create Case Manager Applications task to enable and configure VCS integration.
 - a. Select the **Enable VCS integration** check box.
 - b. Specify the path to the directory that you designated to serve as a sandbox for the VCS integration.
 - c. Optional: To prompt users for custom parameters that Case Manager Builder passes to your commit or deliver script, enter a label for each parameter. Enter the values in a comma-separated list, as shown in the following example:
VCS ID,Project Name,Approving Manager

Tip: You do not need to specify custom parameters for comments or labels. Case Manager Builder automatically prompts the user for comments for a commit or a delivery. For a delivery, Case Manager Builder also prompts the user for a label.

- d. Optional: Specify a heartbeat interval that indicates the time in seconds that must elapse between periodic updates from your commit and deliver scripts before a commit or deliver operation fails.

The heartbeat interval measures the activity of your commit script or deliver scripts. You specify this interval to detect problems in script execution before the script times out. For example, the heartbeat can alert

you to problems such as the script hanging or Case Manager Builder terminating unexpectedly. The heartbeat is determined by the time that the `output.txt` file was last modified. Therefore, your scripts must periodically check the status of its own threads and update `output.txt`.

If you do not want to check for a heartbeat, leave this field blank.

- e. Specify the maximum time in seconds that must elapse before the commit and deliver scripts time out.
 - f. Run the Create Case Manager Applications task.
6. In the configuration tool, run the Deploy Case Manager Builder task.

Results

In Case Manager Builder, your commit script is run automatically when a user clicks **Commit** on the Manage Solutions page. A **Deliver** action that runs your deliver script appears in the **More Actions** menu on the Manage Solutions page.

Commit and deliver scripts

To integrate with a version control system (VCS), you must create two scripts to deliver change sets that contain new and modified solution assets the VCS. These scripts work with the **Commit** and **Deliver** actions in Case Manager Builder.

Commit script

When a user clicks the **Commit** action on the Manager Solutions page, Case Manager Builder takes the following actions:

- Commits the changes to the IBM Case Manager repository
- Copies the changed solution files to the sandbox
- Runs a commit script that you provided to check the set of changes from the sandbox into the VCS

The commit script, which you must call `commitSandBoxChanges`, does the following tasks:

- Reads the input parameters supplied in the `input.properties` file
- Handles deleted solution assets
- Creates a change set that contains any new or modified solution assets
- Associates the comments that the user entered for the **Commit** action with each asset
- Checks the change set into the VCS

Deliver script

After a solution is committed, the user clicks the **Deliver** action on the Manager Solutions page. Case Manager Builder then runs the deliver script that you provided. This script checks the modified solution as a whole into the VCS.

The deliver script, which you must call `deliverSolutionChanges`, does the following tasks:

- Reads the input parameters supplied in the `input.properties` file
- Checks all of the solution assets and the solution manifest into the VCS
- Associates the comments that the user entered for the **Deliver** action with each asset

- Creates a baseline or snapshot of the solution
- Labels the baseline and delivers it to the VCS

Script requirements

The scripts can be either `.sh` files for Linux or AIX systems or `.bat` files for Windows systems.

The scripts must be in the `scripts` subdirectory of the sandbox. You can edit the stub scripts that the IBM Case Manager configuration tool creates in the `scripts` subdirectory. Alternatively, you can create your own scripts to replace the stub script files. If you create the scripts, you must give them the same names as the stub script files.

Important: On a Linux system, you must manually give the scripts execute permissions before the commit is run.

Case Manager Builder passes to the scripts the path to the user's sandbox. This path takes the following form: `sandbox\solution prefix\user name`. For example, the path might be `C:\sandbox_CreditCard\DISP\ajones` where `C:\sandbox_CreditCard` is the sandbox, `DISP` is the solution prefix, and `ajones` is the name of the user who is committing or delivering the solution.

The scripts must read and process the `input.properties` file that is located in the user's sandbox. This file contains the following information:

deliverLabel

For a delivery, a label that is used to identify the new baseline that is being created in the VCS.

Tip: You can use the label that is assigned to the baseline to later extract a solution from the VCS.

comment

The comment that the user entered during the Commit or Deliver action.

Custom parameters

The additional parameters that were specified when you configured VCS integration. The user provides values for these parameters as part of the Commit or Deliver action.

deletedFiles

A list of assets that were deleted from the solution. If no assets were deleted, this parameter is empty.

newAndModifiedFiles

A list of solution assets that the user created or modified assets. This list also includes the name of the manifest file for the delivery.

userName

The name of the user who committed or delivered the solution.

solutionPrefix

The prefix of the solution that is being committed or delivered.

These scripts must return an integer code. Use the return code 0 to indicate successful execution of the script.

If you specify a heartbeat interval when you configure VCS integration, the scripts must modify the `output.txt` file in the sandbox to serve as the heartbeat. The scripts can output error messages and other information messages to either the `output.txt` file or to standard output. IBM Case Manager captures and logs the content of the `output.txt` file.

Disabling VCS integration

You can disable integration with a version control system (VCS).

About this task

Disabling VCS integration stops IBM Case Manager from running the commit and deliver scripts that are used to copy solution information to the VCS.

Tip: If you later re-enable VCS integration, any commits that occurred while the feature was disabled are not tracked. To ensure that the VCS contains the latest versions of a solution after you re-enable VCS integration, deliver that solution to establish a baseline.

Procedure

To disable VCS integration:

1. In the IBM Case Manager configuration tool, clear the **Enable VCS integration** check box in the Create Case Manager Applications task. Then, run the task. You do not need to clear any of the other VCS integration fields.
2. Run the Deploy Case Manager Builder task.
3. Optional: Remove the files from the sandbox. IBM Case Manager does not remove the files from the sandbox when you disable VCS integration.

Results

After you disable VCS integration, the **Deliver** option is no longer available in Case Manager Builder. The **Commit** action is available, but does not run the commit script.

Adding an existing or a copied solution to a VCS

For a solution that existed before you integrated with a version control system (VCS), you should establish an initial baseline version in the VCS before you make additional changes to that solution. You should also establish an initial baseline version for a copied solution.

Procedure

To create a baseline in the VCS for an existing or a copied solution:

1. Open Case Manager Builder.
2. On the Manage Solutions page, click **More actions** > **Deliver** for the solution.

Results

Case Manager Builder runs your deliver script to create a baseline for the solution in the VCS. You can now edit the solution.

Deleting a solution from a VCS

If you delete a solution in IBM Case Manager, the solution is not deleted from the version control system (VCS). If your company's established procedure requires a solution to be deleted, you must delete the solution separately from the VCS.

About this task

Procedure

To delete a solution:

1. In Case Manager Builder, find the solution on the Manage Solutions page and click **Remove**. The solution and the solution artifacts are removed from the design object store.
2. In the VCS, follow your company's established procedure to decommission the solution and to remove the solution artifacts from the VCS.

Integrating with Box

You can integrate with Box so case workers can collaborate with external users. You can use Box as an external repository for IBM Case Manager and for sharing case documents or attachments with other users.

About this task

If you enable Box collaboration, case workers can associate a case with a Box folder so that internal and external users can exchange content. For example, a customer service representative at an automobile insurance company receives a new claim request. The customer service representative creates a Box collaboration folder for the case, and invites the claimant to be a collaborator on the folder. The customer service representative copies a claims form to the Box folder and then assigns a task to the claimant to complete and return the claims form. The claimant receives an email notification about the task, and clicks a link in the email to open the Box folder. The claimant downloads the form, completes the relevant information, and uploads the completed form and the police report about the accident. The customer service representative can then copy the completed form and the police report from the Box folder to the case folder.

If you configure Box as an external repository, case workers can add Box documents as case documents and task attachments. Case workers can also add local documents to a case or work item and save the documents in Box.

By default, when case workers add Box documents to a case, a reference to the latest version of the document in Box is added to the case. If the document is deleted from Box, the reference from the case becomes invalid. You can allow case workers to add a copy of the current version of a document to the case management repository instead of referencing the document in Box. The copy remains in the case even if the document is deleted from Box. However, any changes that are made to the document in Box are not reflected in the case. To allow case workers to add a copy of a Box document to the current case, enable the Box copy feature for the case management repository in IBM Content Navigator.

Restriction: The Box copy feature is available only if the case management repository is an IBM FileNet Content Manager object store.

IBM Case Manager uses the Box share feature of IBM Content Navigator to enable case workers to share case documents and task attachments that are in an IBM FileNet Content Manager or IBM Content Manager repository. When a case worker selects a document to share, IBM Content Navigator saves the document to Box and creates a link to the specific version of the document. If the case worker later deletes the share, the document is removed from Box.

Important: By default, no security constraints are applied to a shared document. Anyone who receives the link can view the document.

“Setting up Box collaboration”

“Setting up Box as an external repository and for sharing” on page 178

Setting up Box collaboration

You can integrate with Box so case workers and external users can use Box to exchange documents.

Procedure

To set up Box collaboration:

1. Create a Box application for the IBM Case Manager environment. Alternatively, you can modify an existing application that was created for IBM Content Navigator.
 - a. Go to <https://developer.box.com/> and log in.
 - b. In the **My Applications** window, click **Create a Box Application**.
 - c. Select **Enterprise Application** as an application type.
 - d. Select **OAuth 2.0 with JWT (Server Authentication)** as an authentication method.
 - e. In the **Application Name** field, enter the name of your IBM Case Manager server and then click **Create Application**.
 - f. Click **View Application** and configure the following settings:

Setting	Value
Application Access	Enterprise
Application Scope	Leave the default settings
Advance Features	Generate User Access Token

- g. Click **Save Application** to save your changes.
2. Authorize the Box application for IBM Case Manager to access your Box enterprise account.
 - a. Log in to your Box application as an administrative user.
 - b. Click **Admin Console**, click the gear icon, and select **Elite Settings**.
 - c. From the **Account Info** tab, record the value of the **Enterprise ID** field. You must specify this value later when you run the IBM Case Manager configuration tool.
 - d. Select the **Apps** tab, go to the **Custom Applications** section, and click **Authorize New App**. In the **Api Key** field, specify the **client_id** value that was displayed when you created the application and click **Next**. Click **Authorize**.
3. Generate a JSON web token and Box server token. For more information, see the Box documentation at <https://docs.box.com/docs>.
 - a. Generate an RSA key pair.

- 1) To generate the RSA key pair on a Windows system, download the Cygwin application and run the following OpenSSL commands on the Cygwin terminal. Otherwise, enter the commands on a Linux system.
 - 2) Generate a private key by running the following command at the command prompt: `openssl genrsa -aes256 -out private_key.pem 2048`. After you enter a passphrase, record the value for use in the next step.
 - 3) Generate a private key in PKCS8 format by running the following command: `openssl pkcs8 -topk8 -inform pem -in private_key.pem -outform der -nocrypt -out private_pkcs8.der`. Specify the passphrase that you used in the previous step.
 - 4) Generate a public key by running the following command: `openssl rsa -pubout -in private_key.pem -out public_key.pem`
 - 5) Locate the generated key files. For example, look for the key files under your Cygwin installation directory, such as in the `c:\cygwin64\home\LoginName` directory.
- b. Submit the public key:
- 1) Go to <https://developer.box.com/> and log in.
 - 2) Click the **Edit Application** button for your application.
 - 3) In the **Public Key Management** section, click **Add Public Key**. You might be prompted to enable two-factor authentication and be asked to give your mobile phone number to receive a verification code. You can disable this two-factor authentication feature after you submit the public key.
 - 4) Copy your public key from your key file and paste it in the **Public Key** field. Then, click **Verify**. After the key is verified, click **Save**. Your public key and key ID are now displayed in the **Public Key Management** section. Record the **Key ID** value. You must specify this value later when you run the IBM Case Manager configuration tool.
 - 5) Scroll to the bottom of the page and click **Save Application**.
 - 6) Disable two-factor authentication. At the top of the page, click the gear icon and select **Account Settings**. Click the **Security** tab and clear the **Login verification** check box.
4. Configure a connection to the Box server in your development and productions environments by using the IBM Case Manager configuration tool or administration client.
 - In the configuration tool, run the Configure Box Collaboration task and then run the Register Project Area or Register Target Environment task.

Tip: For new profiles, select the **Configure Box collaboration** option in the new profile wizard. For existing profiles, add the Configure Box Collaboration task after the Register the IBM Case Manager Administration Client Plug-in task but before the Register Project Area or Register Target Environment task.
 - In the administration client, open a target object store and click **New Box Connection**.
 5. Enable case types to support Box collaboration. In Case Manager Builder, edit each case type for which you want case workers to be able to collaborate with external users in Box and select **Case workers can use Box to collaborate with external users**.
 6. To use Box collaboration in existing solutions that were created before Box collaboration was enabled, manually add the **Add Box Collaboration Folder**, **Manage Collaborators**, **Assign Box Task**, and **Box Copy** actions by editing the

solution in Case Manager Builder. For solutions that are created after Box collaboration was enabled, the Box collaboration actions are displayed by default in the Documents view.

7. Optional: Enable additional Box integration features that you want to use.

Feature	Procedure
Box as an external repository	Enable case types to support external documents. In Case Manager Builder, edit each case type for which you want users to be able to add documents or attachments from Box to the case and select Allow documents and attachments from repositories other than the case management object stores . This option is not required if you use Box only to share case documents and task attachments that are in an IBM FileNet Content Manager or IBM Content Manager repository.

Feature	Procedure
Sharing case documents and attachments	<ol style="list-style-type: none"> 1. Manually set the Share administrator field for the Box repository. In the IBM Content Navigator administration tool of the web client, click Repositories, select your Box repository, and set the Share administrator field. 2. Enable the Box share option for your IBM Case Manager desktop and for each IBM FileNet Content Manager or IBM Content Manager repository that you want to share documents from: <ul style="list-style-type: none"> IBM Case Manager desktop <ol style="list-style-type: none"> a. In the IBM Content Navigator administration tool, click Desktops and open your IBM Case Manager desktop. b. On the General tab, enable the Box share services option and select the Box repository for shared files. IBM FileNet Content Manager or IBM Content Manager repository <ol style="list-style-type: none"> a. In the IBM Content Navigator administration tool, click Repositories and open each IBM FileNet Content Manager or IBM Content Manager repository. b. On the Configuration Parameters tab, enable the Optional Features > Box share option. 3. If you want to share documents in existing solutions that were created before IBM Case Manager V5.2.1 Fix Pack 3, manually add the Box Share and Delete Box Share menu actions by editing the solution in Case Manager Builder. The Box Share and Delete Box Share menu actions are displayed by default in the Documents view.

8. Deploy your solution.
9. Configure SSL on the application server for your solution to access Box. For more information, see [Configuring SSL for Box](#).

Adding Box collaboration actions for existing solutions

You can enable Box collaboration. For solutions that are created after Box collaboration is enabled, the Box collaboration actions are displayed by default in the Documents view. For solutions that were created before Box collaboration was enabled, you must manually add these actions by editing the solution in Case Manager Builder.

Before you begin

Install IBM Case Manager and enable Box collaboration.

Procedure

To add the Box collaboration actions to an existing solution:

1. Open the solution in Case Manager Builder.
2. On the **Pages** tab, edit all solution pages that contain the Case Information widget or any other custom widget that has a Documents view menu. By default, the Case Information widget is included on the Case Details page.
3. In Page Designer, click the **Edit Settings** icon for each widget that has a Documents view to configure the Box actions.
 - a. On the **Toolbars** tab, add the **Add Box Collaboration Folder** action to the **Documents view** toolbar.
 - b. On the **Menus** tab, add the **Manage Collaborators** and **Assign Box Task** actions to the **Documents view (Folder)** menu/
 - c. On the **Menus** tab, add the **Box Copy** and **Assign Box Task** actions to the **Documents view (Documents)** menu.
4. After you update the relevant pages, save and redeploy the solution.

Access levels for Box collaborators

IBM Case Manager supports the access levels that Box defines for collaborators folders. To ensure the security and privacy of documents in a Box folder, ensure that case workers assign the correct access levels when they invite collaborators into folders.

Related information:

 [What Are The Different Access Levels For Collaborators?](#)

Monitoring events for a Box collaboration folder

You can use the IBM Case Manager Box Event Listener to monitor events in a Box collaboration folder. You can then implement event handlers to perform actions such as creating cases and launching workflows or tasks in response to these events.

About this task

The IBM Case Manager Box Event Listener uses Java event handlers to define the actions that are to be performed for events. You can use the Box document copy event handler that is provided by IBM Case Manager Box Event Listener. The event handler copies a Box document and file that document in a case. You can then configure a case task to launch automatically when the Box document is filed in the case. This event handler displays a dialog box from which a user selects the document class that is used to copy the Box document to the FileNet P8 object store. The user also can choose whether to file the document in the case as part of the copy.

Alternatively, you can define a custom event handler plug-in that is a subclass of the `com.ibm.casemgmt.api.handlers.BaseHandler` class.

Configuring the IBM Case Manager Box Event Listener:

To use the IBM Case Manager Box Event Listener, you must enable the plug-in in the IBM Case Manager administration desktop.

About this task

You run the IBM Case Manager Box Event Listener as a task. Therefore, the task manager component must be available in IBM Content Navigator.

Procedure

To configure the IBM Case Manager Box Event Listener:

1. If the optional task manager component is not available in IBM Content Navigator, configure and deploy the component. For more information, see [Configuring and deploying the task manager component](#).
The event listener requires the task manager URL to the HTTPS protocol: `https://server_host_name:port_number/taskManagerWeb/api/v1/tasks/ping`. If the task manager service uses the HTTP protocol, the event listener encounters errors.
 - a. Log in to IBM Content Navigator administration tool and click **Settings**.
 - b. In the **Task Manager Configuration** section, ensure that the URL in the **Task manager service URL** field has the following format:
`https://server_host_name:port_number/taskManagerWeb/api/v1/tasks/ping`
2. Assign the user who will run the event listener to the task manager administrator role. For information on assigning the user on the WebSphere Application Server, see [Associating users with task manager roles \(WebSphere Application Server\)](#).
3. In the IBM Case Manager configuration tool, register the event listener to make the plug-in available to a desktop.
 - a. Run the Register the IBM Case Manager Box Event Listener Plug-in task to register the event listener.
 - b. Run the Register Project Area task or Register Target Environment task to make the event listener plug-in available to the desktop. This step adds the event listener to the Case Manager administration desktop.
4. To run the event listener from a custom desktop, enable the event listener plug-in in that desktop:
 - a. Log in to IBM Content Navigator administration tool, click **Desktops**, and double-click the desktop to which you want to add the event listener.
 - b. In the **Plug-ins** section on the General tab, select the **IBM Case Manager API plug-in** check box and the **IBM Case Manager Box Event Listener plug-in** check box. The event listener requires the IBM Case Manager API plug-in.
 - c. On the Layout tab, select the **Asynchronous tasks** check box to add the task manager feature to the custom desktop.

Creating a custom event handler for the IBM Case Manager Box Event Listener:

You can create a custom event handler to process events that are detected by the IBM Case Manager Box Event Listener.

Before you begin

Ensure that you have the following files that are required to compile and build a custom event handler:

File	Description
ICNTasks.jar	<p>This file contains the <code>com.ibm.ecm.icm.boxeventhandlers.BaseHandler</code> that you must extend to create a custom event handler.</p> <p>You can find this file in <i>Installation_directory</i>\configure\explodedformat\taskManager\taskManagerWeb\WEB-INF\dropins, where <i>Installation_directory</i> is the directory in which IBM Content Navigator is installed.</p>
acmapi.jar	<p>This file contains the IBM Case Manager Java API.</p> <p>You can find this file in <i>Installation_directory</i>\CaseAPI\lib, where <i>Installation_directory</i> is the directory in which IBM Case Manager is installed.</p>
Box-java-sdk-1.0.0.jar	<p>This file contains the Box API.</p> <p>You can find this file in <i>Installation_directory</i>\configure\explodedformat\taskManager\taskManagerWeb\WEB-INF\lib, where <i>Installation_directory</i> is the directory in which IBM Content Navigator is installed.</p>
Minimal-json-0.9.2-SNAPSHOT.jar	<p>This file contains the minimal JSON parser and writer that the Box API uses.</p> <p>You can find this file in <i>Installation_directory</i>\configure\explodedformat\taskManager\taskManagerWeb\WEB-INF\lib, where <i>Installation_directory</i> is the directory in which IBM Content Navigator is installed.</p>

About this task

You can find sample custom event handler plug-ins in the following location:
<https://github.com/ibm-ecm/ibm-casemanager-samples>

Procedure

1. Create a Java class that extends the `com.ibm.ecm.icm.boxeventhandlers.BaseHandler` class that is provided by the IBM Case Manager Box Event Listener.

This new class must implement the following methods:

processBoxEvent

This method is called by the event listener to process an event.

The `processBoxEvent` method takes the following parameters:

boxEvent

A Box object that contains detailed information about the event.

caseID

A string that contains the identifier of the case in which the event occurred.

eventSupported

This method is called by the event listener to determine whether the event handler supports a specific event. If the event is supported, the method returns true.

The eventSupported method takes the following parameter:

boxEvent

A Box object that contains detailed information about the event.

2. If your custom class requires any input or configuration from the user, create a Dojo JavaScript class that inherits from the `boxEventListener/eventHandler/configuration/BaseConfigurationPane` class that is provided by the event listener.

The new class must implement the following methods:

getInput

This method returns a JSON object that contains the configuration information that the user enters.

setInput

This method populates and initializes the user interface that is used to collect the user input.

The setInput method takes the following parameter:

inputParam

A JSON object that contains the information that is used to populate the user interface.

3. Create an IBM Content Navigator plug-in that includes your compiled Java event handler class and, if applicable, your JavaScript configuration class in the plug-in JAR file. For more information, see *Creating plug-ins to IBM Content Navigator*,
4. Deploy your plug-in JAR file into the Task Manager Web-INF/Dropins directory. The location of this directory depends on your application server settings. For example, if you use IBM WebSphere Application Server, the directory location might be `C:\IBM\WebSphere\AppServer\profiles\AppSrv02\installedApps\oc1v0288Node02Cell\navigator.ear\taskManagerWeb.war\WEB-INF \ dropins`.
5. In the IBM Content Navigator administration desktop, add the new plug-in to the IBM Case Manager administration desktop.
6. Register your custom event handler with the IBM Case Manager Box Event Listener plug-in.
 - a. On the Configuration tab for the event listener, click **Register**.
 - b. Complete the Custom Event Handler Registration dialog box, and click **OK**.
7. In task manager, configure the IBM Case Manager Box Event Listener and select your custom event handler.

Setting up Box as an external repository and for sharing

You can set up Box as an external repository for IBM Case Manager. You can also use Box to share case documents or attachments with other users.

About this task

For detailed information about configuring IBM Content Navigator to connect to Box and enabling document sharing, see *Integrating IBM Content Navigator with Box*.

Procedure

To integrate IBM Case Manager with Box:

1. Create a Box application for the IBM Content Navigator server.
2. Configure a connection to Box. In the IBM Content Navigator administration tool of the web client, click **Repositories** > **New Repository** to create a Box repository. If you plan to use Box to share documents, ensure that you set the share administrator.
3. Add the Box repository to the IBM Case Manager desktop.
 - a. In the IBM Content Navigator administration tool, click **Desktops** and open your IBM Case Manager desktop.
 - b. On the **Repositories** tab, add the Box repository to the **Selected Repositories** list and save your changes.
4. Enable the Box integration features that you want to use.

Feature	Procedure
Box as an external repository	<p>Enable case types to support external documents. In Case Manager Builder, edit each case type for which you want users to be able to add documents or attachments from Box and select Allow documents and attachments from repositories other than the case management object stores. This option is not required if you use Box only to share documents.</p> <p>If you want to enable case workers to add a copy of a Box document to the current case instead of referencing the document in Box, enable the Box copy option for the case management repository:</p> <ol style="list-style-type: none"> 1. In the IBM Content Navigator administration tool, click Repositories and open the IBM FileNet Content Manager target object store that is used as the case management repository. 2. On the Configuration Parameters tab, enable the Optional Features > Box copy option.

Feature	Procedure
<p>Document sharing</p>	<p>Enable the Box share option for your IBM Case Manager desktop and for each IBM FileNet Content Manager or IBM Content Manager repository that you want to share documents from:</p> <p>IBM Case Manager desktop</p> <ol style="list-style-type: none"> 1. In the IBM Content Navigator administration tool, click Desktops and open your IBM Case Manager desktop. 2. On the General tab, enable the Box share services option and select the Box repository for shared files. <p>IBM FileNet Content Manager or IBM Content Manager repository</p> <ol style="list-style-type: none"> 1. In the IBM Content Navigator administration tool, click Repositories and open each IBM FileNet Content Manager or IBM Content Manager repository. 2. On the Configuration Parameters tab, enable the Optional Features > Box share option. <p>If you want to share documents in existing solutions that were created before IBM Case Manager V5.2.1 Fix Pack 3, manually add the Box Share and Delete Box Share menu actions by editing the solution in Case Manager Builder. The Box Share and Delete Box Share menu actions are displayed by default in the Documents view.</p>

5. Deploy your solution.

Adding Box Share menu actions for existing solutions

The **Box Share** and **Delete Box Share** menu actions are displayed by default in the Documents view. However, for solutions that were created before V5.2.1 Fix Pack 3, you must manually add these menu actions by editing the solution in Case Manager Builder.

Procedure

To add the **Box Share** and **Delete Box Share** menu actions to an existing solution:

1. Install IBM Case Manager.
2. Open the solution in Case Manager Builder.
3. On the **Pages** tab, edit all solution pages that contain the Case Information widget, the Attachment widget, or any other custom widget that has a Documents view menu. By default, the Case Information widget is included on the Case Details page and the Attachments widget is included on the Work Details page.

- a. In Page Designer, click the **Edit Settings** icon for each widget that has a Documents view.
- b. On the **Menus** tab, select the **Documents view (Documents)** menu.
- c. Click the **Add Menu Item** icon and select the **Box Share** and **Delete Box Share** actions.

Tip: By default, the menu actions are added at the end of the list of actions. You can use the **Move up** and **Move down** icons to move the new actions to a different location in the list.

4. After you update the relevant pages, save and redeploy the solution.

Upgrading and configuring IBM Case Manager

The steps for upgrading IBM Case Manager are the same for a single-server installation or a distributed installation. To prepare for an upgrade, you must update the IBM Case Manager software and supporting software to a minimum update version level.

Before you begin

For details about the hardware and software requirements, see “System requirements” on page 10.

About this task

If you upgrade from an existing IBM Case Manager version on the same server, the installation of V5.3.3 upgrades the installation of the existing version.

You can upgrade to IBM Case Manager V5.3.3 from any of the following existing versions:

- V5.2.1
- V5.3.0
- V5.3.1
- V5.3.2

Upgrade and configure the development environment

After the supporting applications and IBM Case Manager V5.3.3 software is installed, you use the IBM Case Manager configuration tool to configure the development environment. You use the tool to create an upgrade profile that contains tasks, where you enter properties for all aspects of your development environment applications and connections.

When you run the configuration tool, you must specify connection information for a new WebSphere Application Server profile if you upgrade on a new server. If you upgrade on the existing server, the existing WebSphere Application Server profile is used for IBM Case Manager V5.3.3.

Before you export a solution to the test or production environment, ensure that the solution works correctly in the new client framework.

Upgrade and configure the test or production environment

After the supporting applications and IBM Case Manager V5.3.3 software is installed, you use the IBM Case Manager configuration tool to configure the production environment. You use the tool to create an upgrade profile that contains tasks, where you enter properties for all aspects of your production environment applications and connections.

When you run the configuration tool, you must specify connection information for a new WebSphere Application Server profile except if you upgrade on a new server. If you upgrade on the existing server, the existing WebSphere Application Server profile is used for IBM Case Manager V5.3.3.

The first time that you run the configuration tool, you must define at least one target environment. For an existing target object store, the definition of the target environment on V5.3.3 upgrades the underlying target object store to V5.3.3. Later, as you upgrade solutions, you can upgrade individual target environments as needed to support the upgraded solutions.

After you convert and test an upgraded solution in the development environment, you can import it into the staging object store. After you deploy the imported solution, the solution becomes visible through the Case Manager Client and your IBM Case Manager V5.3.3 system is ready to use.

1. “Preparing the IBM Case Manager environment for upgrade”
2. “Upgrading IBM Case Manager” on page 186
3. “Configuring IBM Case Manager after you upgrade the software” on page 188

Preparing the IBM Case Manager environment for upgrade

To prepare for upgrade, ensure that your existing IBM Case Manager version is upgraded to the latest fix pack level. You can install the IBM Case Manager V5.3.3 software the same server where you installed your existing system or on a separate server. If you install on the same server, IBM Case Manager V5.3.3 installs to the same location as the existing version was installed.

Before you begin

For details about the hardware and software requirements, see “System requirements” on page 10.

You must ensure that supported versions of IBM Case Foundation and IBM Content Navigator are installed on the server or servers where you plan to install IBM Case Manager V5.3.3.

Upgrade Content Platform Engine to the latest fix pack.

AIX and Linux guidelines: AIX and Linux servers might require the installation of additional libraries.

For an AIX server or a Linux server that does not use Domain Name Service (DNS) or Network Information Service (NIS), verify that the `/etc/hosts` file contains the name and Internet Protocol (IP) address of all servers that the server communicates with, including the local host. Verify that the `etc/netsvc.conf` file contains the value `hosts = local`.

Application server guidelines: Ensure that your application server is updated to a version that is supported by IBM Case Manager V5.3.3. IBM Case Manager and all of the supporting products must use the same version of the application server. In addition, the application server you use must support Java 7 or later.

About this task

You can upgrade to IBM Case Manager V5.3.3 from any of the following existing versions:

- V5.2.1
- V5.3.0

- V5.3.1
- V5.3.2

Procedure

To prepare the IBM Case Manager environment for upgrade:



1. Back up your existing IBM Case Manager system.
2. If your existing version is IBM Case Manager V5.2.1, upgrade to the latest fix pack or iFix level. You can find the latest update on Fix Central.
3. If your existing version of IBM Case Manager is configured to integrate with IBM Forms, ensure that you are using the version of IBM Forms that IBM Case Manager V5.3.3 supports. If you are using an earlier version of IBM Forms, remove the existing IBM Forms software, and then install the supported version.

When you install IBM Forms, select the IBM Case Manager Integrator, which is compatible with both the existing IBM Case Manager version and V5.3.3. To configure support for forms for the IBM Case Manager in your existing profile, run the **Create Case Manager Applications** task and **Deploy the Forms Application** task in the IBM Case Manager configuration tool for your existing version.

After you upgrade IBM Case Manager to V5.3.3, you do not need to run the IBM Forms installation program again. To configure support for forms, run the **Create Case Manager Applications** task and **Deploy the Forms Application** task in the IBM Case Manager V5.3.3 configuration tool.

4. Upgrade IBM Case Foundation to the latest required version.
 - a. Plan your upgrade. For information, see Planning and preparing for FileNet P8 upgrade.
 - b. Upgrade IBM Case Foundation. For instructions, see Upgrading and configuring FileNet P8.
5. Verify that IBM Content Navigator meets the following requirements:
 - IBM Content Navigator is installed to use the same WebSphere Application Server profile that you created for your existing IBM Case Manager version.
 - IBM Case Manager requires one IBM Content Navigator server for each IBM Case Manager server. That is, you cannot share a IBM Content Navigator server with multiple IBM Case Manager servers.
 - If applicable, upgrade the Content Platform Engine client files on the IBM Content Navigator server. The Content Platform Engine client files must match the version of the Content Platform Engine server and the client files that are installed on the IBM Case Manager server.
 - On your development environment server, ensure that IBM Content Navigator is configured to render forms. If the applications are not configured to render forms, you can still open forms from the Form widget but you cannot open forms from the Case Information and Attachments widgets. For instructions, see the IBM Content Navigator documentation.

Related information:

-  [WebSphere Application Server documentation](#)
-  [Case Manager upgrade and configuration issues for related components](#)

Upgrading IBM Case Manager

To install the IBM Case Manager software, you can run the installation program interactively or you can enter a command that applies values from an installation setup file.

“Upgrading IBM Case Manager interactively”

“Upgrading IBM Case Manager silently” on page 187

Upgrading IBM Case Manager interactively

To upgrade IBM Case Manager interactively, provide the values for your environment to the installation program.

About this task

If you upgrade from an existing IBM Case Manager version on the same server, the installation of V5.3.3 upgrades the installation of the existing version.

The installation program detects whether the prerequisite components are installed.

If you use IBM Forms and you are upgrading in a WebSphere Application Server cluster, you must repeat this procedure on the deployment manager server and on each node in the cluster.

Procedure

To upgrade IBM Case Manager interactively:

1. Log on to the IBM Case Manager server as a user with write access to the installation directory.
2. Locate the IBM Case Manager software package in the installation media.
3. Run the installation program:

Operating system	Command
AIX	5.3.3.0-ICM-AIX.BIN
Linux	5.3.3.0-ICM-LINUX.BIN
Linux for System z	5.3.3.0-ICM-ZLINUX.BIN
Windows	5.3.3.0-ICM-WIN.EXE

4. Complete the program by entering the values for your environment.

Important: Set the license type to the **IBM Case Manager**.

5. Review the preinstallation summary, and click **Install**.
6. When the installation completes, click **Next**.
7. When the program completes, check for errors in the IBM Case Manager installation log. The log file is created in the installation directory. For example, review the `/opt/IBM/CaseManagement/logs/IBM_Case_Manager_5.3.3.0_2018.03_InstallLog.txt` file.

What to do next

Configure your new installation of IBM Case Manager by using the configuration tool.

Upgrading IBM Case Manager silently

When you upgrade IBM Case Manager silently, you run a command in the IBM Case Manager software package that refers to parameters in an installation text file.

About this task

If you upgrade from an existing IBM Case Manager version on the same server, the installation of V5.3.3 upgrades the installation of the existing version.

The installation program detects whether the prerequisite components are installed.

If you use IBM Forms and you are upgrading in a WebSphere Application Server cluster, you must repeat this procedure on the deployment manager server and on each node in the cluster.

Procedure

To upgrade IBM Case Manager silently:

1. Log on to the IBM Case Manager server as a user with write access to the installation directory.
2. Locate the IBM Case Manager software package in the installation media.
3. Edit the `cm_silent_install.txt` file to reflect the installation choices for your environment.

Important: Set the license type to the **IBM Case Manager**.

4. Run the installation program:

Operating system	Command
AIX	5.3.3.0-ICM-AIX.BIN -i silent -f cm_silent_install.txt
Linux	5.3.3.0-ICM-LINUX.BIN -i silent -f cm_silent_install.txt
Linux for System z	5.3.3.0-ICM-ZLINUX.BIN -i silent -f cm_silent_install.txt
Windows	5.3.3.0-ICM-WIN.EXE -i silent -f cm_silent_install.txt

5. When the program completes, check for errors in the IBM Case Manager installation log. The log file is created in the installation directory. For example, review the `/opt/IBM/CaseManagement/logs/IBM_Case_Manager_5.3.3.0_2018.03_InstallLog.txt` file.

What to do next

Configure your new installation of IBM Case Manager by using the configuration tool.

Configuring IBM Case Manager after you upgrade the software

You must configure IBM Case Manager before you can use the application in a development, test, or production environment. Configuring your system prepares the Case Manager Builder application and the Case Manager Client application for deployment on the application server. After you deploy these applications, you can create, test, manage, deploy, and work with your business solutions.

About this task

Your case management system consists of a development environment for creating and initially testing solutions, a test environment for fully testing the solutions, and a production environment for working with running case management solutions. You must configure all environments.

Configuring the development environment includes configuring Case Manager Builder and Case Manager Client. Configuring the test and production environments includes configuring Case Manager Client.

You use the IBM Case Manager configuration tool to create an upgrade profile for each development environment instance and a profile for each test or production environment instance. You can create an upgrade profile in one of the following ways:

Table 17. Ways to create a profile

Upgrade method	Description
Copy properties from an existing profile	<p>The IBM Case Manager configuration tool can convert existing profiles to upgrade profiles. The conversion process retains properties from the existing configuration profile.</p> <p>The configuration tool removes tasks that are not needed for the upgrade. Check the values to ensure that they still apply for your environment. You must also provide values for the new IBM Case Manager V5.3.3 tasks.</p>
Create a new upgrade profile	<p>When you use the configuration tool to create a new profile, you provide all the values for your environment. You can provide these values from your own checklist or records. You can also import profile properties from an existing configuration profile.</p>

The information for a profile is collected in XML files in the form of properties and values that describe the associated configuration and deployment tasks. Three XML files contain information about IBM Content Navigator, WebSphere Application Server, Content Platform Engine. Each configuration task in a profile has one configuration XML file. You must provide values for the profile properties that are specific to each configuration at your site, such as the application server name.

The XML files are stored in a directory that is unique to a profile. Because the profile name is used for the directory name and for the configuration profile file name, you must provide a profile name that is a valid directory name for your

operating system. By default, the profiles are stored in the *install_path/*configure/profiles directory where *install_path* is the location where IBM Case Manager is installed. The following table shows the default path:

Table 18. Default profile directory location

Operating system	Default file path
AIX Linux Linux for System z	/opt/IBM/CaseManagement/configure/profiles
Windows	C:\Program Files\IBM\CaseManagement\configure\profiles

After you create the profile, you must specify values about your environment and then apply the settings by running configuration tasks.

“Configuring the upgraded development environment”

“Configuring the upgraded test or production environment” on page 197

Configuring the upgraded development environment

You must configure the development environment before you use IBM Case Manager to create and deploy solutions. You use the development environment to create, modify, and test solutions before moving them into a production environment.

Before you begin

Be sure to have your completed configuration checklist available.

Make sure that your profile files can be accessed from this server. If necessary, you can copy the files to a directory on the server where you are running the configuration tool.

About this task

Configuring the development environment prepares Case Manager Builder and Case Manager Client for use. You use the IBM Case Manager configuration tool to create a profile, which is a collection of configuration and deployment tasks. When you provide the required values for the tasks and run the tasks, you configure all the required settings and deployments for your development environment.

The first time that you configure the development environment after you upgrade to IBM Case Manager V5.3.3, use the configuration tool to run the configuration tasks. Later, you can rerun many of these tasks by using the administration client. For example, you can use either the administration client or configuration tool to define additional project areas or configure object stores as needed. Each object store that is to be used with V5.3.3 must be configured with the V5.3.3 configuration tool or administration client to ensure that the object store is upgraded.

The following configuration tasks are not available in the administration client:

- Configure IBM Content Manager Host Properties
- Configure IBM Business Process Manager
- Configure Business Rules
- Register the External Data Service

Procedure

To configure the development environment after you install IBM Case Manager V5.3.3:

1. Log in to the IBM Case Manager server. In a network deployment or cluster environment, you can run the configuration tasks from one of the managed nodes.
2. Start the configuration tool by running one of the following commands:

Operating system	Command
AIX	<ol style="list-style-type: none"> 1. Change to the <code>_install_path/configure</code> directory. <code>_install_path</code> is the location where IBM Case Manager is installed, for example, <code>/opt/IBM/CaseManagement</code>. 2. Run the following command: <code>./configmgr</code>
Linux	<ol style="list-style-type: none"> 1. Change to the <code>_install_path/configure</code> directory. <code>_install_path</code> is the location where IBM Case Manager is installed, for example, <code>/opt/IBM/CaseManagement</code>. 2. Run the following command: <code>./configmgr</code>
Linux for System z	<ol style="list-style-type: none"> 1. Change to the <code>_install_path/configure</code> directory. <code>_install_path</code> is the location where IBM Case Manager is installed, for example, <code>/opt/IBM/CaseManagement</code>. 2. Run the following command: <code>./configmgr</code>
Windows	<p>Perform one of the following actions:</p> <ul style="list-style-type: none"> • Click Start > All Programs > IBM Case Manager > Case Manager Configuration Tool. • Run the following command: <code>_install_path\configure\configmgr.exe</code> <code>_install_path</code> is the location where IBM Case Manager is installed, for example, one of the following directories: <ul style="list-style-type: none"> – <code>C:\Program Files\IBM\CaseManagement</code> – <code>C:\Program Files (x86)\IBM\CaseManagement</code>

Tip: The installation path in your environment might be different. If the installation program detects that a previous version of IBM Case Manager is installed, you must specify a different location.

3. Click **Create Upgrade Profile**.
4. Select the type of profile that you want to use for upgrading:

Option	Description
Create a new upgrade profile	When you create a profile, you specify all values that are required for your development environment.

Option	Description
Copy properties from an existing profile	Browse to the existing IBM Case Manager development profile that you want to convert to an upgrade profile. The profile contains the values that you specified previously for your development environment.

5. Complete the wizard steps:
 - a. Specify that the profile is a development environment profile and enter a unique profile name. If your existing system integrates with IBM Content Manager, select the check box to upgrade the integration information.
 - b. If your existing system integrates with IBM Business Process Manager and you create new object stores for V5.3.3, select the check box to upgrade the integration information.
 - c. Specify server and connection information for WebSphere Application Server.
 - d. Specify server and connection information for IBM Content Navigator.
 - e. Specify or verify the Content Platform Engine connection information. Select or review the design object store settings, depending on whether you are creating or reusing object stores. Ensure that you are pointing to a single Content Platform Engine node.

The profile files are created. The profile opens with a list of tasks that must be run to complete the upgrade configuration.

6. Optional: If you created a new upgrade profile, you can import profile properties from an existing profile:
 - a. Save any edits that you made to the profile properties.
 - b. In the configuration tool, click **File > Import Profile Properties** to run the Import Profile Properties wizard. The properties in the target profile are updated by the imported values.
7. Edit, save, and run the following required tasks. You must run the tasks in the order listed.

Table 19. Task requirements for a development environment

Task	Required
Update the Content Platform Engine Client Connector Files	Required if you did not run the Content Platform Engine installation program to upgrade the client files. If you run this task, you must restart the IBM Case Manager configuration tool.
Configure the Case Management Object Stores	Always
Define the Default Project Area	Required if you create new object stores for the development environment.
Configure the IBM Content Manager Host Properties	Required if IBM Case Manager integrates with IBM Content Manager. This task is applicable only if you use WebSphere Application Server.

Table 19. Task requirements for a development environment (continued)

Task	Required
Configure IBM Business Process Manager	<p>Required if IBM Case Manager integrates with IBM Business Process Manager and you create new object stores for the development environment.</p> <p>This task is applicable only if you use WebSphere Application Server.</p>
Deploy the IBM Business Process Manager Integration Service	Required if IBM Case Manager integrates with IBM Business Process Manager.
Register the IBM Business Automation Workflow Plug-in	<p>Required if you want to use the plug-in for IBM Business Process Manager that provides a access to your IBM Process Portal Work dashboard from your IBM Case Manager desktop. Save your changes and then run the task to apply your settings.</p> <p>This plug-in adds the Workflow > Launch Process action to the Action menu and pop-up menu in the Browse view of the IBM Case Manager desktop. You can use this action to launch an IBM BPM process from a document. You can also add the Launch Process action to the menu in the Documents view for the Case Information widget.</p> <p>Important: To use the IBM Business Automation Workflow plug-in, you must use the Hypertext Transfer Protocol Secure (HTTPS) in your IBM Content Navigator URL.</p>
Create Case Manager Applications	Always
Deploy the Case Manager API	Always.
Register the IBM Case Manager Services Plug-in	Always
Register the IBM Content Platform Engine Applets Support Plug-in	Always
Deploy Case Manager Builder	Always
Deploy and Register Widgets Package	<p>Always</p> <p>Important: If you run this task in a cluster environment, you must ensure that the plug-in is loaded on each node of the cluster. Either restart the cluster to force the plug-in to be loaded on all nodes or manually load the plug-in on each node by using the IBM Content Navigator administration client.</p>

Table 19. Task requirements for a development environment (continued)

Task	Required
Deploy the Forms Application	<p>Required if IBM Case Manager integrates with IBM Forms or IBM FileNet P8 eForms.</p> <p>If you configure IBM Forms or IBM FileNet P8 eForms on a network deployment or cluster environment, run this task in the profile that contains the other tasks. Select Network Deployment or Cluster for the deployment type, eForms and IBM Forms for the forms type, and Deployment Manager Profile for the environment type.</p> <p>If you integrate with IBM Forms 8.1 or earlier on a network deployment or cluster environment, the following additional steps are required. These additional steps are not required if you integrate with IBM Forms 8.2 or later or with only IBM FileNet P8 eForms.</p> <ol style="list-style-type: none"> 1. For the managed nodes, create a profile on each managed node that includes only this task and run this task. Select Network Deployment or Cluster for the deployment type, eForms and IBM Forms for the forms type, and Managed Profile for the environment type. 2. After all nodes are configured, the managed node or cluster must be restarted to complete the forms integration. You can restart the managed node or cluster now, or after you run all other configuration tasks.
Register the IBM Case Manager Administration Client Plug-in	Always
Configure Box Collaboration	Required if you want to enable case workers to use Box to collaborate with external users. This task configures the connection to the Box server.
Register the IBM Case Manager Box Event Listener Plug-in	Required if you want the IBM Case Manager Box event listener to monitor activity in Box collaboration folders. This task is required if you want Box events to trigger the creation of cases or work items.
Register Project Area	Always

Table 19. Task requirements for a development environment (continued)

Task	Required
Configure Business Rules	<p>Required if you use business rules in your solution.</p> <p>Tips:</p> <ul style="list-style-type: none"> • You can select only one locale in which to write the business rules for your solutions. If you need to create solutions with business rules in other locales, rerun this task to change the rule persistence locale before you create the solution. After the first rule for a solution is saved, the rule persistence locale cannot be changed. • If you rerun this task to change the location of the rules repository directory after you deploy any solutions, complete the following steps after you run the task: <ol style="list-style-type: none"> 1. Stop Content Platform Engine. 2. From the previous rules repository directory, move the res_data directory to the new location of the rules repository directory. In a cluster environment, the rules directory must be a shared directory that can be accessed by all Content Platform Engine cluster servers. 3. Restart Content Platform Engine.
Register the Case Monitor Widgets Package	<p>Required if you want to use the IBM Case Monitor Dashboard to view of business activity data that is specific to case management systems.</p>
Register the External Data Service	<p>Required for solutions that use the external data service. Rerun this task after you upgrade the solution.</p>
Deploy and Register Extensions Package	<p>Required only when you add an extensions package for a custom property editor or controller.</p> <p>Important: If you run this task in a cluster environment, you must ensure that the plug-in is loaded on each node of the cluster. Either restart the cluster to force the plug-in to be loaded on all nodes or manually load the plug-in on each node by using the IBM Content Navigator administration client.</p>
	<ol style="list-style-type: none"> 8. On a stand-alone server, restart the application server. 9. Restart the deployment manager, node agents, and application server instances. If you did not restart the application server as part of the previous task, you must restart the agents and server instances. 10. After the deployment tasks complete successfully, use the WebSphere Application Server console to bind the following deployed applications to the web server: <ul style="list-style-type: none"> • CaseClient • CaseBuilder • CaseForms, if used

- CaseManager
- ICMClient
- Any custom widgets packages and applications

“Importing profile properties”

“Verifying the IBM Case Manager applications in the development environment” on page 196

Related reference:

“Configuration checklist” on page 31

Importing profile properties

You can import property values from an existing configuration profile into a profile that is open in the IBM Case Manager configuration tool. Importing values saves time when you are reusing information across profiles.

About this task

By importing property values, you can also reuse values from an existing IBM Case Manager configuration profile. For example, you can import an existing profile into a new development or production environment profile for V5.3.3.

As an alternative to importing profile properties through the configuration tool, you can use the **Create Upgrade Profile** wizard to copy properties from an existing profile into an upgrade profile that you create for V5.3.3. If you use this approach, ensure that the target profile is an upgrade profile.

When you select a profile to import from, the values in the profile are compared with the currently open profile. If the source profile contains all default values for a specific task, then nothing is imported for that task. You can choose the customized tasks and profile settings that you want to import.

If your configuration profile was created on another server, you must have access to the directory on that server that contains the configuration profile files. If you cannot access the server, copy the files over to your current IBM Case Manager server before you import the properties.

After you import profile properties, always check the values to ensure that they are still valid for your environment. For example, if your profile was created on another server, you might need to change server and connection values after you import the properties.

Procedure

To import profile properties:

1. Start the configuration tool by running one of the following commands:

Operating system	Command
AIX	<ol style="list-style-type: none"> 1. Change to the <code>_install_path/configure</code> directory. <code>_install_path</code> is the location where IBM Case Manager is installed, for example, <code>/opt/IBM/CaseManagement</code>. 2. Run the following command: <code>./configmgr</code>

Operating system	Command
Linux	<ol style="list-style-type: none"> 1. Change to the <code>_install_path/configure</code> directory. <code>_install_path</code> is the location where IBM Case Manager is installed, for example, <code>/opt/IBM/CaseManagement</code>. 2. Run the following command: <code>./configmgr</code>
Linux for System z	<ol style="list-style-type: none"> 1. Change to the <code>_install_path/configure</code> directory. <code>_install_path</code> is the location where IBM Case Manager is installed, for example, <code>/opt/IBM/CaseManagement</code>. 2. Run the following command: <code>./configmgr</code>
Windows	<p>Perform one of the following actions:</p> <ul style="list-style-type: none"> • Click Start > All Programs > IBM Case Manager > Case Manager Configuration Tool. • Run the following command: <code>_install_path\configure\configmgr.exe</code> <code>_install_path</code> is the location where IBM Case Manager is installed, for example, one of the following directories: <ul style="list-style-type: none"> – <code>C:\Program Files\IBM\CaseManagement</code> – <code>C:\Program Files (x86)\IBM\CaseManagement</code>

2. Create or open the profile that you want to import the values to. The currently opened profile is the target profile.
3. If you edit the profile settings or any tasks in the open profile, save your changes.
4. Click **File > Import Profile Properties** to import the properties by using the wizard.
 - a. Select the existing source profile from which you want to import the profile properties.
 - b. Select the source profile settings and tasks to import. The options include settings for WebSphere Application Server, IBM Content Navigator, Content Platform Engine server, and any tasks from the source profile.
 - c. Select the target profile settings and tasks that you want to map the source profile settings and tasks to, including existing tasks or settings and new tasks.

The properties in the target profile are updated.

Verifying the IBM Case Manager applications in the development environment

After you install your IBM Case Manager software, configure your environment, and deploy the applications, you can start and verify the IBM Case Manager applications in the development environment.

Procedure

To verify the IBM Case Manager applications:

1. Verify the IBM Case Manager API deployment by accessing the following link from a browser:

Environment	Application URL
High availability	http://virtual_server_name/CaseManager/CASEREST/v1/info
Stand-alone or network deployment	http://server_name:port/CaseManager/CASEREST/v1/info

2. Log in to the IBM Case Manager administration client by accessing the following link from a browser:

Environment	Application URL
High availability	http://virtual_server_name.domain.com/navigator/?desktop=icmadmin
Stand-alone or network deployment	http://server_name:port/navigator/?desktop=icmadmin

3. Log in to the Case Manager Client by accessing the default IBM Case Manager desktop from a browser:

Environment	Application URL
High availability	http://virtual_server_name.domain.com/navigator/?desktop=icm
Stand-alone or network deployment	http://server_name:port/navigator/?desktop=icm

Verify that your specified Lightweight Directory Access Protocol (LDAP) users can log in to the Case Manager Client.

4. Click the help icon to test whether the Case Manager Client help system displays content.
5. Log in to the Case Manager Builder by accessing the following link from a browser:

Environment	Application URL
High availability	http://virtual_server_name/CaseBuilder
Stand-alone or network deployment	http://server_name:port/CaseBuilder

Verify that your specified LDAP users can log in to the Case Manager Builder.

6. Click the help icon to test whether the Case Manager Builder help system displays content.

Configuring the upgraded test or production environment

You must configure the production environment before you migrate upgraded solutions and deploy them to production. You configure the test and production environments after you configure the development environment.

Before you begin

Be sure to have your completed configuration checklist available.

If you want to import profile properties from an existing profile, make sure that your profile files can be accessed from this server. If necessary, you can copy the files to a directory on the server where you are running the configuration tool.

About this task

Configuring the production environment prepares Case Manager Client and the production object stores for use. You use the IBM Case Manager configuration tool to create a profile, which is a collection of configuration and deployment tasks. When you provide the required values for the tasks and run the tasks, you configure all the required settings and deployments for your production environment.

The first time that you configure the test or production environment after you upgrade to IBM Case Manager V5.3.3, use the configuration tool to run the configuration tasks. Later, you can rerun many these tasks by using the administration client. For example, you can use either the administration client or configuration tool to define additional target environments or configure object stores as needed. Each object store that is to be used with V5.3.3 must be configured with the V5.3.3 configuration tool or administration client to ensure that the object store is upgraded. If you reuse object stores, you must configure the target object stores and register the target environments before they can be used with V5.3.3.

The following tasks are not available in the administration client:

- Configure IBM Content Manager Host Properties
- Configure IBM Business Process Manager
- Configure Business Rules
- Register the External Data Service

Procedure

To configure the test or production environment after you install IBM Case Manager V5.3.3:

1. Log in to the IBM Case Manager server. In a network deployment or cluster environment, you can run the configuration tasks from one of the managed nodes.
2. Start the configuration tool by running one of the following commands:

Operating system	Command
AIX	<ol style="list-style-type: none">1. Change to the <code>_install_path/configure</code> directory. <code>_install_path</code> is the location where IBM Case Manager is installed, for example, <code>/opt/IBM/CaseManagement</code>.2. Run the following command: <code>./configmgr</code>
Linux	<ol style="list-style-type: none">1. Change to the <code>_install_path/configure</code> directory. <code>_install_path</code> is the location where IBM Case Manager is installed, for example, <code>/opt/IBM/CaseManagement</code>.2. Run the following command: <code>./configmgr</code>

Operating system	Command
Linux for System z	<ol style="list-style-type: none"> 1. Change to the <code>_install_path/configure</code> directory. <code>_install_path</code> is the location where IBM Case Manager is installed, for example, <code>/opt/IBM/CaseManagement</code>. 2. Run the following command: <code>./configmgr</code>
Windows	Perform one of the following actions: <ul style="list-style-type: none"> • Click Start > All Programs > IBM Case Manager > Case Manager Configuration Tool. • Run the following command: <code>_install_path\configure\configmgr.exe</code> <code>_install_path</code> is the location where IBM Case Manager is installed, for example, one of the following directories: <ul style="list-style-type: none"> – <code>C:\Program Files\IBM\CaseManagement</code> – <code>C:\Program Files (x86)\IBM\CaseManagement</code>

Tip: The installation path in your environment might be different. If the installation program detects that a previous version of IBM Case Manager is installed, you must specify a different location.

3. Click **Create Upgrade Profile**.

4. Select the type of profile that you want to use for upgrading:

Option	Description
Create a new upgrade profile	When you create a profile, you specify all values that are required for your test or production environment.
Copy properties from an existing profile	Browse to the existing production profile that you want to convert to an upgrade profile. The profile contains the values that you specified previously for your production environment.

5. Complete the wizard steps:

- a. Specify that the profile is a production environment profile and enter a unique profile name. If your existing system integrates with IBM Content Manager, select the check box to upgrade the integration information.
- b. Specify server and connection information for WebSphere Application Server.
- c. Specify server and connection information for IBM Content Navigator.
- d. Specify or verify the Content Platform Engine connection information. Ensure that you are pointing to a single Content Platform Engine node.

The profile files are created. The profile opens with a list of tasks that must be run to complete the upgrade configuration.

6. Optional: If you created a new upgrade profile, you can import profile properties from an existing profile:

- a. Save any edits that you made to the profile properties.

- b. In the configuration tool, click **File > Import Profile Properties** to run the Import Profile Properties wizard. The properties in the target profile are updated by the imported values.
7. Edit, save, and run the following required tasks. You must run the tasks in the order listed.

Table 20. Task requirements for a production environment

Task	Required
Update the Content Platform Engine Client Connector Files	Required if you did not run the Content Platform Engine installation program to install the client files. If you run this task, you must restart the IBM Case Manager configuration tool.
Configure the Case Management Object Stores	You must run the Deploy and Register Widgets Package task and the Register the IBM Case Manager Administration Client Plug-in task before you run this task. This task registers a target environment with an IBM Content Navigator desktop, creates default IBM Case Manager desktops, configures repositories for the case management design and target object stores, and adds IBM Case Manager features to the desktop. Also, this task configures the Case Operations component queue and configures the target environment's isolated region to work with solution workflows. This task is required and must be run for every target environment. Save your changes and run the task to apply your settings.
Configure the IBM Content Manager Host Properties	Required if IBM Case Manager integrates with IBM Content Manager.
Configure IBM Business Process Manager	Required if IBM Case Manager integrates with IBM Business Process Manager.
Deploy the IBM Business Process Manager Integration Service	Required if IBM Case Manager integrates with IBM Business Process Manager.
Register the IBM Business Automation Workflow Plug-in	Required if you want to use the plug-in for IBM Business Process Manager that provides a access to your IBM Process Portal Work dashboard from your IBM Case Manager desktop. Save your changes and then run the task to apply your settings. This plug-in adds the Workflow > Launch Process action to the Action menu and pop-up menu in the Browse view of the IBM Case Manager desktop. You can use this action to launch an IBM BPM process from a document. You can also add the Launch Process action to the menu in the Documents view for the Case Information widget. Important: To use the IBM Business Automation Workflow plug-in, you must use the Hypertext Transfer Protocol Secure (HTTPS) in your IBM Content Navigator URL.

Table 20. Task requirements for a production environment (continued)

Task	Required
Create Case Manager Applications	Always
Deploy the Case Manager API	Always.
Register the IBM Case Manager Services Plug-in	Always
Register the IBM Content Platform Engine Applets Support Plug-in	Always
Deploy and Register Widgets Package	Always Important: If you run this task in a cluster environment, you must ensure that the plug-in is loaded on each node of the cluster. Either restart the cluster to force the plug-in to be loaded on all nodes or manually load the plug-in on each node by using the IBM Content Navigator administration client.
Deploy the Forms Application	Required if IBM Case Manager integrates with IBM Forms or IBM FileNet P8 eForms. If you configure IBM Forms or IBM FileNet P8 eForms on a network deployment or cluster environment, run this task in the profile that contains the other tasks. Select Network Deployment or Cluster for the deployment type, eForms and IBM Forms for the forms type, and Deployment Manager Profile for the environment type. If you integrate with IBM Forms 8.1 or earlier on a network deployment or cluster environment, the following additional steps are required. These additional steps are not required if you integrate with IBM Forms 8.2 or later or with only IBM FileNet P8 eForms. 1. For the managed nodes, create a profile on each managed node that includes only this task and run this task. Select Network Deployment or Cluster for the deployment type, eForms and IBM Forms for the forms type, and Managed Profile for the environment type. 2. After all nodes are configured, the managed node or cluster must be restarted to complete the forms integration. You can restart the managed node or cluster now, or after you run all other configuration tasks.
Register the IBM Case Manager Administration Client Plug-in	Always
Configure Box Collaboration	Required if you want to enable case workers to use Box to collaborate with external users. This task configures the connection to the Box server.

Table 20. Task requirements for a production environment (continued)

Task	Required
Register the IBM Case Manager Box Event Listener Plug-in	Required if you want the IBM Case Manager Box event listener to monitor activity in Box collaboration folders. This task is required if you want Box events to trigger the creation of cases or work items.
Register Target Environment	Required to configure each target environment. After you run this task for the initial configuration, you can defer running the task again until you are ready to migrate your upgraded solutions to the target environment.
Configure Business Rules	<p>Required if you use business rules in your solution.</p> <p>Tips:</p> <ul style="list-style-type: none"> You can select only one locale in which to write the business rules for your solutions. If you need to create solutions with business rules in other locales, rerun this task to change the rule persistence locale before you create the solution. After the first rule for a solution is saved, the rule persistence locale cannot be changed. If you rerun this task to change the location of the rules repository directory after you deploy any solutions, complete the following steps after you run the task: <ol style="list-style-type: none"> Stop Content Platform Engine. From the previous rules repository directory, move the res_data directory to the new location of the rules repository directory. In a cluster environment, the rules directory must be a shared directory that can be accessed by all Content Platform Engine cluster servers. Restart Content Platform Engine.
Register the Case Monitor Widgets Package	Required if you want to use the IBM Case Monitor Dashboard to view of business activity data that is specific to case management systems.
Register the External Data Service	Required for solutions that use the external data service. Rerun this task after you upgrade the solution.
Deploy and Register Extensions Package	<p>Required only when you add an extensions package for a custom property editor or controller.</p> <p>Important: If you run this task in a cluster environment, you must ensure that the plug-in is loaded on each node of the cluster. Either restart the cluster to force the plug-in to be loaded on all nodes or manually load the plug-in on each node by using the IBM Content Navigator administration client.</p>

8. On a stand-alone server, restart the application server.
9. Restart the deployment manager, node agents, and application server instances. If you did not restart the application server as part of the previous task, you must restart the agents and server instances.
10. After the deployment tasks complete successfully, use the WebSphere Application Server console to bind the following deployed applications to the web server:
 - CaseClient
 - CaseManager
 - Any custom widgets packages and applications

“Importing profile properties”

“Configuring additional target environments in an upgraded production environment” on page 205

“Verifying the IBM Case Manager applications in the production environment” on page 205

“Configuring the LTPA timeout for Case Manager Builder” on page 206

Related reference:

“Configuration checklist” on page 31

Importing profile properties

You can import property values from an existing configuration profile into a profile that is open in the IBM Case Manager configuration tool. Importing values saves time when you are reusing information across profiles.

About this task

By importing property values, you can also reuse values from an existing IBM Case Manager configuration profile. For example, you can import an existing profile into a new development or production environment profile for V5.3.3.

As an alternative to importing profile properties through the configuration tool, you can use the **Create Upgrade Profile** wizard to copy properties from an existing profile into an upgrade profile that you create for V5.3.3. If you use this approach, ensure that the target profile is an upgrade profile.

When you select a profile to import from, the values in the profile are compared with the currently open profile. If the source profile contains all default values for a specific task, then nothing is imported for that task. You can choose the customized tasks and profile settings that you want to import.

If your configuration profile was created on another server, you must have access to the directory on that server that contains the configuration profile files. If you cannot access the server, copy the files over to your current IBM Case Manager server before you import the properties.

After you import profile properties, always check the values to ensure that they are still valid for your environment. For example, if your profile was created on another server, you might need to change server and connection values after you import the properties.

Procedure

To import profile properties:

1. Start the configuration tool by running one of the following commands:

Operating system	Command
AIX	<ol style="list-style-type: none"> 1. Change to the <code>_install_path/configure</code> directory. <code>_install_path</code> is the location where IBM Case Manager is installed, for example, <code>/opt/IBM/CaseManagement</code>. 2. Run the following command: <code>./configmgr</code>
Linux	<ol style="list-style-type: none"> 1. Change to the <code>_install_path/configure</code> directory. <code>_install_path</code> is the location where IBM Case Manager is installed, for example, <code>/opt/IBM/CaseManagement</code>. 2. Run the following command: <code>./configmgr</code>
Linux for System z	<ol style="list-style-type: none"> 1. Change to the <code>_install_path/configure</code> directory. <code>_install_path</code> is the location where IBM Case Manager is installed, for example, <code>/opt/IBM/CaseManagement</code>. 2. Run the following command: <code>./configmgr</code>
Windows	<p>Perform one of the following actions:</p> <ul style="list-style-type: none"> • Click Start > All Programs > IBM Case Manager > Case Manager Configuration Tool. • Run the following command: <code>_install_path\configure\configmgr.exe</code> <code>_install_path</code> is the location where IBM Case Manager is installed, for example, one of the following directories: <ul style="list-style-type: none"> – <code>C:\Program Files\IBM\CaseManagement</code> – <code>C:\Program Files (x86)\IBM\CaseManagement</code>

2. Create or open the profile that you want to import the values to. The currently opened profile is the target profile.
3. If you edit the profile settings or any tasks in the open profile, save your changes.
4. Click **File > Import Profile Properties** to import the properties by using the wizard.
 - a. Select the existing source profile from which you want to import the profile properties.
 - b. Select the source profile settings and tasks to import. The options include settings for WebSphere Application Server, IBM Content Navigator, Content Platform Engine server, and any tasks from the source profile.
 - c. Select the target profile settings and tasks that you want to map the source profile settings and tasks to, including existing tasks or settings and new tasks.

The properties in the target profile are updated.

Configuring additional target environments in an upgraded production environment

If you want to add object stores to your production environment, you must configure the target environment.

About this task

Configuring the target environment includes creating the target object store, creating a workflow system, defining and registering the target environment, and running additional configuration tasks. For each additional object store that your environment requires, complete the procedures for configuring a target environment.

Procedure

To configure additional target environments:

1. Review the guidelines in Setting up target environments.
2. Follow the instructions in Creating or upgrading a target object store for test or production environments. After you create the target object store, you must define and register the target environment and configure the production target object store indexes.

Verifying the IBM Case Manager applications in the production environment

After you configure your environment and deploy the applications, you can start and verify the IBM Case Manager applications in the production environment.

Procedure

To verify the IBM Case Manager applications:

1. Verify the IBM Case Manager API deployment by accessing the following link from a browser:

Environment	Application URL
High availability	http://virtual_server_name/CaseManager/CASEREST/v1/info
Stand-alone or network deployment	http://server_name:port/CaseManager/CASEREST/v1/info

2. Log in to the IBM Case Manager administration client by accessing the following link from a browser:

Environment	Application URL
High availability	http://virtual_server_name.domain.com/navigator/?desktop=icmadmin
Stand-alone or network deployment	http://server_name:port/navigator/?desktop=icmadmin

3. Log in to the Case Manager Client by accessing the default IBM Case Manager desktop from a browser:

Environment	Application URL
High availability	http:// <i>virtual_server_name.domain.com</i> /navigator/?desktop=icm
Stand-alone or network deployment	http:// <i>server_name:port</i> /navigator/?desktop=icm

Verify that your specified Lightweight Directory Access Protocol (LDAP) users can log in to the Case Manager Client.

- Click the help icon to test whether the Case Manager Client help system displays content.

Configuring the LTPA timeout for Case Manager Builder

You can set the Lightweight Third Party Authentication (LTPA) timeout value to prevent timeout issues with Case Manager Builder.

About this task

Although the configuration tools set the LTPA timeout in most cases, there might be instances where you need to configure or change the timeout for your case management environment.

Procedure

To set the LTPA timeout for Case Manager Builder:

- Start the administrative console.
- Click **Servers > Server types > WebSphere Application Servers > *my_server_name* > Java Virtual Machine > Configuration** tab.
- In the Server Infrastructure section, click **Java & Process Management > Process Definition > Java Virtual Machine > Custom Properties**.
- Create the property `com.ibm.ws.security.cacheCushionMax` and provide a value for it. For example, specify 60.
- Set the LTPA timeout to five times the value of the `com.ibm.ws.security.cacheCushionMax` property. For example, if you specified 60 for the `com.ibm.ws.security.cacheCushionMax` property, specify 300 for the LTPA timeout ($60 \times 5 = 300$).

Upgrading and converting case management solutions

After you upgrade and configure the IBM Case Manager software, you upgrade your solutions.

Before you begin

After you install IBM Case Manager V5.3.3, be sure to create any new solutions in the V5.3.3 environment.

When you design and create a solution, you must decide what the solution locale is. The solution locale refers to the locale of display names for case properties, case types, tasks, and other solution artifacts that you create with Case Manager Builder. When you deploy an upgraded solution to a target environment for the first time, you must deploy the solution under the same locale to ensure that the display names are preserved.

About this task

To upgrade solutions, you must install the IBM Case Manager V5.3.3 software, run the configuration tool to configure application settings and connections, and then open each solution in Case Manager Builder. After you click the icon to upgrade the solution, Case Manager Builder enables V5.3.3 features in the solution.

If you configure the V5.3.3 development environment to reuse object stores, the existing solutions are replaced when you upgrade them to V5.3.3.

For each solution that you upgrade, you must also specify security settings for the solution folder. Ensure that only users who have permission to view the solution folder can work with the solution in Case Manager Client.

“Upgrading solutions in Case Manager Builder”

“Setting permissions for upgraded solution folders” on page 208

Upgrading solutions in Case Manager Builder

Upgrading a solution in Case Manager Builder automatically updates the solution definition files, enables new features, and generates a web application for the solution.

About this task

Restriction: Only one user can upgrade the solution at a time. If two users attempt to upgrade the solution at the same time, or if the same user attempts to upgrade the solution in a different session before the upgrade is complete, a message states that the upgrade is in progress. A message is also displayed if any user attempts to edit the solution before the upgrade is complete.

Procedure

To upgrade a solution:

1. Start Case Manager Builder V5.3.3.





2. When you are prompted to confirm whether you want to upgrade a previously imported solution to a newer level, click the **Upgrade** button. The solution is upgraded in the background. After the upgrade process completes, a completion message is displayed in the status bar and the solution is opened in edit mode.
3. Close the upgraded solution or continue with customizing the solution. To customize the solution, you can edit the solution now or click **Edit** at another time to edit the solution later.
4. After you edit the solution, click **Commit** to commit all of your changes.
5. Test the solution in the default IBM Case Manager web application.

What to do next

In IBM Case Manager V5.3.3, changes that you make to case property values are synchronized in the in-basket. You might experience performance issues if all property updates are set to synchronize automatically. To improve performance, you might want to disable automatic synchronization for properties that are not frequently updated.

After you upgrade a solution, you can use Process Designer in Case Manager Builder to disable synchronization of case properties that you do not want to automatically synchronize. For details, see [Configuring the in-basket property synchronization settings](#).

Related tasks:

-  [Enhancing solution designs by using Process Designer](#)
-  [Adding and reusing properties](#)
-  [Designing views](#)
-  [Creating and distributing IBM Case Manager solution templates](#)

Related information:

[Cannot access Process Designer from Case Manager Builder with Google Chrome](#)

Setting permissions for upgraded solution folders

In the Security settings for the solution folder, you can specify which users have rights to the solution folder. Only users who have permission to view the solution folder can work with the solution in Case Manager Client.

About this task

After you upgrade a solution in IBM Case Manager, verify or set the appropriate security permissions on the security folder by using the IBM Case Manager administration client.

Related information:

-  [Configuring security by using the IBM Case Manager administration client wizard](#)

Removing IBM Case Manager

IBM Case Manager provides a program that can remove all files and directories that were created when you installed the application. You can use the application server administrative console to remove the applications from the application server. You can also use IBM Content Navigator to remove IBM Case Manager desktops and repositories.

“Removing the IBM Case Manager applications”

“Removing the IBM Case Manager files” on page 210

Removing the IBM Case Manager applications

Before you remove the IBM Case Manager software files, remove and uninstall the application files and components from your application server and from IBM Content Navigator.

About this task

If you do not plan to continue to use the current installation of IBM Content Navigator, you can undeploy IBM Content Navigator in the application server administrative console. If you remove IBM Content Navigator, you do not need to remove the desktops and repositories for IBM Case Manager as described in the procedure.

Procedure

To remove IBM Case Manager applications:

1. Log in to IBM Content Navigator as an administrator.
2. In the Desktops window, delete the following desktops:
 - Case Manager
 - Case Manager administration
3. In the Repositories window, remove any repositories that are associated with IBM Case Manager. This step removes the association between IBM Content Navigator and the Content Platform Engine repositories, but it does not remove the repositories from Content Platform Engine.
4. In the Plug-ins window, remove the following plug-ins:
 - IBM Case Manager API plug-in
 - IBM Case Manager administration plug-in
 - IBM Case Manager client plug-in
5. For a development environment, uninstall the Case Manager Builder application from the application server:
 - a. Log in to the WebSphere Application Server administrative console.
 - b. Navigate to **Applications > Enterprise Applications**, and select the following applications:
 - CaseBuilder
 - CaseForms
 - CaseManager
 - ICMClient

- c. Click **Stop**.
- d. With the applications still selected, click **Uninstall**.

Removing the IBM Case Manager files

IBM Case Manager provides a program that can remove all files and directories that were created when you installed the application. You can run the program interactively or silently.

Procedure

To remove IBM Case Manager:

1. Navigate to *installation_path/_uninstaller*.
2. Run the uninstallation program, either interactively or silently from the command line:

Option	Description
Interactive	<code>cm_uninstaller</code>
Silent	<code>cm_uninstaller -i silent</code>

Results

The uninstallation program removes the files and directories that were installed, but does not remove any of your configuration profiles. When the uninstallation is completed, the program displays the directories and files that remain.

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