IBM i Access Client Solutions: What are these application packages?

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This article explores the Microsoft® Windows® and Linux® application packages that are included as a part of IBM i Access Client Solutions. You can also discover what these application packages are and why they might be useful to you.

Introduction

By now, you might have heard about the new member of the IBM i Access family. You may have heard it referred to as a Java-based, platform-independent solution. Such verbiage refers to the IBM i Access Client Solutions product's core offering. Did you know that IBM i Access Client Solutions also has two other deliverables? These are the *application packages* for Windows and Linux.

At first glance, these application packages might have you left you wondering: What are they for? Who needs them? Why does it matter to me?

This article hopes to decode these mysteries.

Application packages – What are they?

In total, IBM i Access Client Solutions consists of three offerings. First off, the core offering of the product offers platform-independence through a Java™ based implementation. This portion of the product does not require a platform-centric installer. In order to use it, you can extract the file you download from IBM and start using it.

However, not all tasks are well-suited for cross-platform implementations. That's where the application packages come into play.

Figure 1: The three components of IBM i Access Client Solutions: the core offering and application packages

The application packages include a subset of the functions from IBM i Access for Windows and Linux. These functions are inherently bound to the operating system and critical for applications to work properly (hence the name *application package*). Thousands of applications rely on application programming interfaces (APIs) or data access drivers, and these interfaces are now available through these platform-specific application packages. It is important to note that these interfaces are based on the same code as what is offered in other products, and therefore, there is no need to worry about compatibility!

The application packages vary from the IBM i Access Client Solutions core offering in a number of ways. For one, the application packages use the same underlying configuration mechanisms as IBM i Access for Windows (or Linux). The core offering, alternatively, stores its configuration in a platform-independent fashion. You can, however, copy configurations from the core offering to the Windows application package and the other way round. More on that later…

Unlike the IBM i Access Client Solutions core offering, the application packages are included using install packages (similar to their predecessors). This enables them to better integrate their platform-specific functionality with the operating system. For instance, the Linux application package automatically records the appropriate Open Database Connectivity (ODBC) driver information in the odbcinst.ini configuration file, and the Windows application package's.NET provider integrates itself into the .NET framework.

The big picture

While IBM i Access Client Solutions is making it easier to access and manage your IBM i, it is not the only place where innovation is happening. In a nutshell, it offers system access and management tasks in a web-based solution, so it is available on any device with a web browser! Also for IBM i, IBM i Access for Web, is optimized for non-administrators and allows integration with your company's website. In the broader space, IBM Systems Director offers a multi-platform set of tools for managing your entire IBM infrastructure, and IBM Systems Director Server provides the systems management portion of these tools. All of these web-based products are very powerful and useful.

You will notice that as IBM line of product offerings evolve, some important trends become evident. First off, the costs associated with workstation administration are diminishing. The web-based

products require only a web browser, and the IBM i Access Client Solutions core offering can be deployed quickly and easily through a network share. Similarly, IBM's newest offerings tend to avoid being anchored to a specific client operating system. The exceptions to these trends are the new application packages, which are platform-specific by nature.

Of course, most end users today are getting their jobs done through IBM i Access for Windows. After all, I highly doubt System i Navigator (affectionately coined "iNav") or PC5250 is foreign to you! What does this changing landscape mean for them? Because the strategic direction is shifting, organizations might need to reevaluate their deployment strategies. Figure 2 shows a partial list of functions included with IBM i Access for Windows, and illustrates how these new functions are now available through newer products. As you consider modernizing or updating your software requirements, you should definitely consider IBM's latest product line!

Figure 2: The strategic direction for some functions currently offered in IBM i Access for Windows
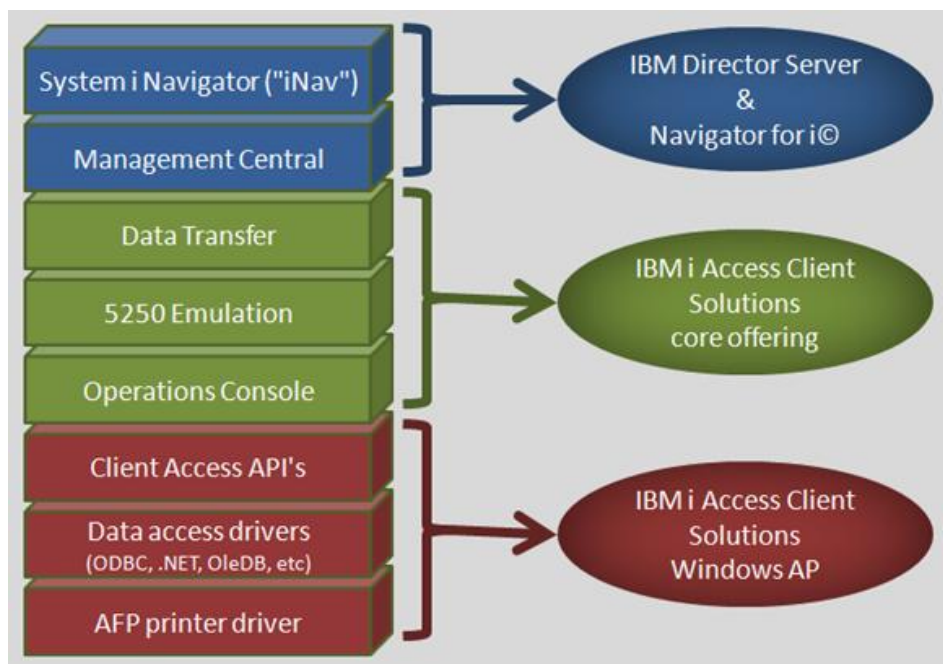
Both Navigator for i and Access for Web are continually being enhanced in order to ensure they have viable replacements for the legacy functions offered in IBM i Access for Windows. They offer a bulk of the function with lower maintenance costs and better portability. Again, I highly recommend you try these products if you haven't already done so!

This evolution also extends to the Linux world. IBM i Access for Linux users are accustomed to the Red Hat Package Manager (RPM) packages which offered a smaller-than-Windows set of functions. Now, the IBM i Access Client Solutions core offering brings a vastly improved emulator, and a large set of other functions previously unavailable on Linux! Meanwhile, the ODBC driver and Client Access APIs are included in the Linux application package.

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Figure 3: The strategic direction for some functions currently offered in IBM i Access for Linux
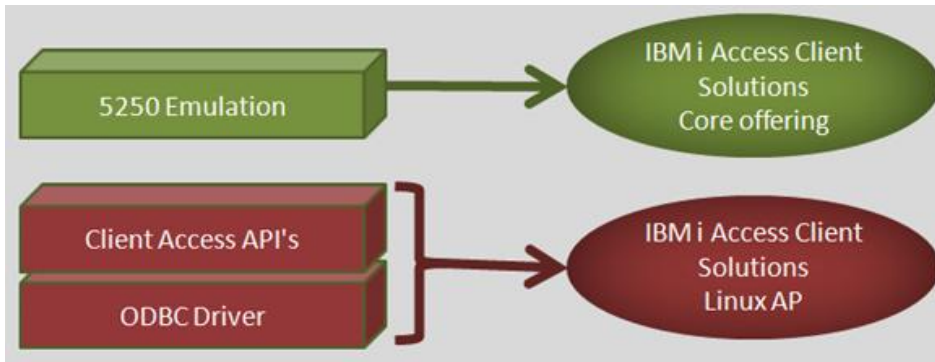
Coexistence and dependencies

By now, you know that there are three different offerings that can be deployed on your workstation:

- IBM i Access for Windows/Linux
- IBM i Access Client Solutions (core offering)
- IBM i Access Client Solutions Application Package

However, it might still not be clear which ones you can (or should) install to meet your needs while still following the strategic direction.

Let's review what we know about IBM i Access Client Solutions. We know that the core offering is Java-based. It has its own code base and its own configuration. It also does not require a platform-specific installer. Because of these reasons, it can be deployed independently without other products. That is, the core offering requires no other product, and no other product requires it. That means that you are free to use the IBM i Access Client Solutions core offering without removing or installing the Windows products.

The application packages, however, are composed of functions that are repackaged from IBM i Access for Windows/Linux. These functions share the same configuration as the legacy products, and have the same installation prerequisite. As such, they are incompatible with the legacy products. More specifically, the Windows application package cannot coexist with IBM i Access for Windows, and the Linux application package cannot coexist with IBM i Access for Linux.

How do I configure systems for the Windows application package?

Windows users likely remember that System i Navigator ("iNav") was the mechanism used for creating system configurations. After a configuration was created in iNav, the rest of IBM i Access for Windows might be able to use those settings. Yet, the IBM i Access Client Solutions Windows application package does not have iNav. Instead, there are a couple of other ways that you can create these configurations.

Technique 1: The "cwbcfg" utility

IBM i Access for Windows included a `cwbcfg` utility that can be used to manage system configurations from the command line. This same utility is included with the IBM i Access Client

Solutions Windows Application Package. From a command line, running "`cwbcfg /?`" will yield usage information on the utility, as shown in Figure 4. To add a system configuration for the system `lp11ut11` that uses Secure Sockets Layer (SSL), for instance, the command would be:

```
cwbcfg /r /host lp11ut11 /ssl 1
```

Figure 4: Help text for the "cwbcfg" utility


```
Format of command is:
  cwbcfg [/host hostname] [/ipaddr address] [/uid userid]
         [/fips switch] [/ssl switch] [/dns] [/pc5250path path] [/del] [/r] [/s]

  userid can be the actual userid or can be one of the following:
     *WINLOGON      - defaults to using Windows logon security
     *PROMPTALWAYS  - prompts at least once each time you run a program
     *KERBEROS      - use Kerberos principal name, no prompting

  switch is 0 to turn FIPS mode off, or 1 to turn it on
  switch is 0 to turn SSL mode off, or 1 to turn it on

  path can be the actual path for PC5250 files or one of the following:
     *MYAPPDATA             - within each user's Application Data folder
     *ALLUSERSAPPDATA       - within the All Users Application Data folder

  address can be the actual IP address of the host, or one of the following:
     *ALWAYS        - look up the address every time a connection is attempted
     *HOURLY        - look up the address if an hour expired since last lookup
     *DAILY         - look up the address if a day expired since last lookup
     *WEEKLY        - look up the address if a week expired since last lookup
     *STARTUP       - look up the address if Windows has been started since
                      last lookup
  Note: If the IP address is specified, the IP address lookup frequency
        will be Never, since the specified address will always be used.

  /r replaces existing configuration information
  /s configures the host only in .default (mainly for services)
  /dns enables DNS search to check if the system has a valid IP address
  /del deletes existing configuration
```
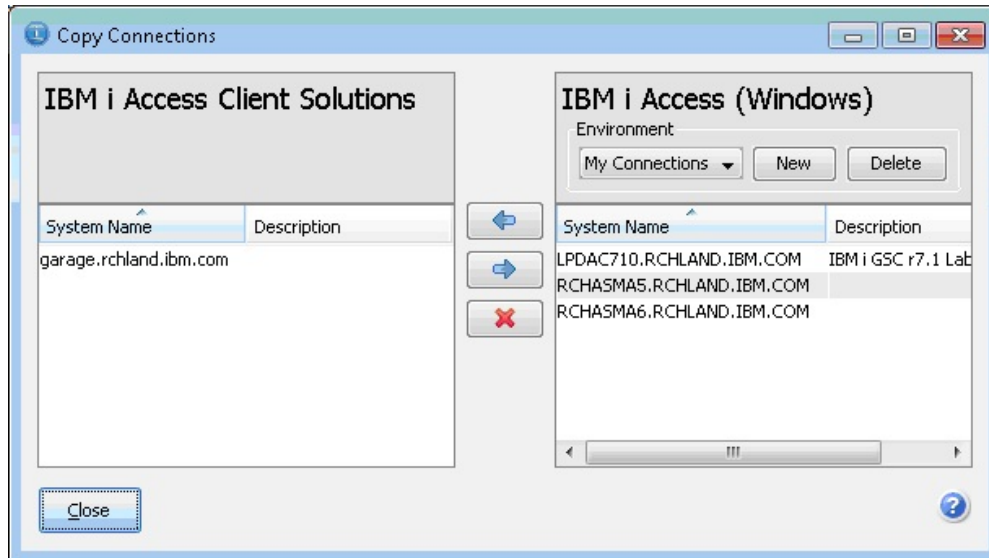
Technique 2: IBM i Access Client Solutions core offering's "Copy Connections" feature

If you need a graphical user interface (GUI), then the IBM i Access Client Solutions core offering can help. It includes a Copy Connections feature, available from the main interface through the **File** menu. This feature is very useful when migrating from IBM i Access for Windows, but it is also works to manage configurations for the Windows application package. After a system configuration is created for the IBM i Access Client Solutions core offering, it can be copied to a Windows configuration, and can be used by either IBM i Access for Windows or the Windows application package. You can also delete configurations through this interface.

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Figure 5: The "Copy Connections" feature works with the Windows application package

Why are the application packages useful?

The new IBM product line allows you to reduce administration costs. After all, the combination of the IBM i Access Client Solutions core offering and Navigator for i might likely meet most of your users' needs—without the need for workstation installations! If people need 5250 emulation and integrated file system (IFS) access, Access for Windows (or Linux) is no longer a necessity. However, some scenarios *will* require the programming interfaces, for which the application packages provide a simple solution.

Also, it is worth noting that the application packages provide installers that are easier to manage than their predecessors. If you only require programming interfaces, you no longer need special steps to prevent other features (such as Data Transfer, 5250, iNav, and so on) from being installed. Because the Windows application package contains only programming interfaces, just roll out a default installation!

On the Linux front, the application package has fewer dependencies. The IBM i Access for Linux product included a 5250 emulator that required often hard-to-obtain motif libraries. The Linux application package's lack of an emulator removes that headache! Unlike Access for Linux, the Linux application package includes installers for both RPM-based and Debian-based distributions like Ubuntu.

Conclusion

The IBM i Access Client Solutions product's three components, when coupled with the web-based products, offer a complete system management/access solution, for which the Application Packages play a key role. As they provide the programming interfaces necessary for your applications, they allow the migration to Navigator for i, Access for Web, and/or the IBM i Access Client Solutions core offering. As a result, managing your software stack is easier than ever before!

Visit the Access Client Solutions product web page for more information and to try IBM i Access Client Solutions.

Resources

- IBM i wiki
- How to get Access Client Solutions
- Access Client Solutions Migration Made Easy
- IBM Systems Director
- IBM i Access for Web

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