



IBM Software Group

IBM WebSphere Partner Gateway V6.1 Advanced and Enterprise editions

Partner migration utility



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This presentation provides an overview of the new partner migration function in WebSphere® Partner Gateway V6.1.

Agenda

- Overview of partner migration utility
- Installing the utility
- Export file schemas
- What can be migrated
- Export command
- Import command
- Limitations, hints and tips
- Summary and references

The agenda starts with an overview, installation, supported schemas, the artifacts that can be migrated followed by export and import of partner definitions.

Section

Overview

The next section covers the overview of the partner migration function.

Overview

- Partner migration is a stand-alone utility that allows selective export or import WebSphere Partner Gateway V6.1 configuration data
 - ▶ Example: Export connection configuration from a test system to a production system
- Export data is a XML file along with document definitions and maps
- Import can override existing configuration or only create new artifacts
- Partner migration utility can be called from a command line or from within a Java™ program



Partner migration is a stand-alone utility that allows selective export or import WebSphere Partner Gateway V6.1 configuration data. This will allow you to transfer the configuration data from one V6.1 system to another V6.1 system. As an example, from a test system to a production This is not a utility to migrate a prior release of WebSphere Business Integration Connect V4 or WebSphere Partner Gateway V6.0 to WebSphere Partner Gateway V6.1.

The exported file is a XML file and the set of document defintions and maps. During the import, you have a choice to override the existing configuration or only create the new artifacts from the import configuration.

The partner migration utility can be called from a command line or from within a custom Java program.

What can you export ?

- What can you not export ?
 - ▶ System administration properties
 - ▶ Users, groups and certificates
 - Partner profiles can be exported
 - But test users, groups and certificates are likely different
 - ▶ ebMS community partner agreement (CPA)
 - ▶ Reports
 - ▶ Logs
- Export system and partner configuration data

Instead of specifying what can be exported, it is easier to specify what cannot be exported. The configuration data that cannot be exported are system administration properties. The partner profiles can be exported but the test users, groups and certificates will likely to be different than in the production other system, and hence they cannot be exported. Other artifacts that cannot be exported are the ebMS community partner agreement, reports and logs.

So what can be exported is the system level and the partner configuration data. For example, at the system level, the configuration data is the document flow definitions or interactions, and at the partner level they include information like business-to-business capabilities, configurations and participant connections.

Section

Installing



The next section covers the installation of the partner migration utility.

Installation

- Partner migration utility included in archive file
 - ▶ <WPG_INSTALL_DIR>/console/support/BCGMigrationUtil.zip
 - ▶ Do not have to install or run from a WebSphere Partner Gateway system
- Requires two environment variables:
 - ▶ MIGRATION_PATH
 - {The directory you extract BCGMigrationUtil.zip} + “/bcgmigrate”
 - ▶ JAVA_HOME
 - Location of Java 5 JDK
 - {WebSphere Application Server V6.1 Install Root}/java
- Utility calls WebSphere Partner Gateway remotely
 - ▶ WebSphere Partner Gateway Console component must be running
 - Partner migration utility communicates with the console component using IIOp (default port 58809)



The migration utility is in the WebSphere Partner Gateway installation directory as specified here. The BCGMigrationUtil.zip file contains all the files to run the utility. The utility can be run on the same machine as WebSphere Partner Gateway, or can be on a separate machine by copying BCGMigrationUtil.zip. On a stand-alone machine, you will need Java 5 JDK to run the utility.

There are two environment variables needed. The first one is the MIGRATION_PATH. It points to the directory where BCGMigrationUtil.zip file is extracted. The second one is the JAVA_HOME variable pointing to the location of Java 5 JDK. On WebSphere Partner Gateway machines, this can point to the WebSphere Application Server V6.1 JDK.

The utility makes remote calls to the WebSphere Partner Gateway V6.1 Console. It uses the console's IIOp port, default port being 55809. The utility makes use of the APIs that the console is using. The IIOp port is configurable through the underlying WebSphere Application Server administration console.

Partner migration samples

- Samples for export and import are included
 - ▶ Directory <WPG_INSTALL_DIR>/samples
 - ▶ Includes sample code for calling partner migration from a Java program



WebSphere Partner Gateway V6.1 comes with Partner Migration export and import samples located in the WebSphere Partner Gateway install samples directory. It also contains the samples to call from Java programs.

Section

Schemas

The next section covers the schemas that controls what can be exported or imported.

Export options file

- You control what to export through the export options file
 - ▶ An XML file (can be zipped)
 - ▶ Conforms to schema bcgMigrationExport.xsd
 - Directory <partner migration root>/schemas
- Example:
 - ▶ Export all receiver configuration
 - ▶ Export partner profile for partner “Company ABC”

```
...  
<ReceiverInfo>all</ReceiverInfo>  
...  
<PartnerList>  
<PartnerInfo>  
<Partner>Company ABC</Partner>  
...  
</PartnerInfo>  
</PartnerList>
```

You can control what is being exported through the export options file. The options file is an XML file that conforms to the schema file, called bcgMigrationExport.xsd, located in the schemas directory of the extracted utility .zip file.

The example of how you would use the options file is shown on the page. The example shows the XML file where you want to export all the Receivers and the partner profile for partner named “Company ABC”.

Export generated files and artifacts

- XML file containing the configuration data, conforming to the schema `bcgMigrationImport.xsd`
- Validation maps in subdirectory `ValidationMaps`
- Transformation maps in subdirectory `TransformationMaps`
- EDI functional acknowledgement (FA) maps in subdirectory `FAMaps`
- `RoutingObjects.zip` in subdirectory `RoutingObjects`, contains Document Flow Definitions
 - ▶ Same as current document definitions export function in prior release of WebSphere Partner Gateway V6.1
- Output zipped in `BCMigrationMigration_Hostname.zip` file

The partner migration export generated files and artifacts are listed on this page. It export contains a XML file containing the configuration data. As indicated, it conforms to the schema XSD file, `bcgMigrationImport.xsd`.

It contains the validation maps, transformation maps and Functional acknowledgement maps in their own sub-directory. This includes the maps and the control strings for the maps.

It contains the file `RoutingObjects.zip` in its own sub-directory. This file contains the document flow definitions. This is the same as the document definition export function in the previous release of WebSphere Partner Gateway.

The export generated files and artifacts output are zipped in a file called `BCMigrationMigration_Hostname.zip`, where the host name is the machine on which the utility ran and not necessary the host name of the WebSphere Partner Gateway machine.

Custom export output files

- You can create your own export output file
 - ▶ Use an existing export output file as a template
 - ▶ Create your own XML file
 - Make sure to conform to bcgMigrationImport.xsd
- Use it as a way to configure large numbers of artifacts



Another way of updating WebSphere Partner Gateway V6.1 configuration is by manually creating your own export files and then importing them into WebSphere Partner Gateway. This can be helpful when moving configuration information from another vendor system.

To start, you can use an existing export file as a template. Or you can create your own XML file as a starting point, as long as it conforms to the bcgMigrationImport.xsd schema. This is one possible way to configure, for example, a larger number of trading partners.

Section

What can be migrated ?



The next section covers what configuration data can be migrated.

Exportable items

- Independent and dependent configuration items
 - ▶ Some configuration items can be exported independently
 - Example: envelope profiles
 - ▶ Some configuration items can only be exported in conjunction with other dependent items
 - Example: connections can only be exported if the source and target partner are exported as well



There are two kinds of exportable items, independent and dependent configuration items. Independent profiles can be exported on their own. For example, envelope profiles. Some configuration items are dependent on other items; for example, participant connections need the source and target partners to be also exported.

Independent items

- The following can be exported independently
 - ▶ Enveloper scheduling
 - ▶ Transport types
 - ▶ Destination types
 - ▶ Envelope profiles
 - ▶ Connection profiles
 - ▶ Proxy configurations
 - ▶ Validation maps
 - ▶ Transformation maps
 - ▶ EDI functional acknowledgement maps
 - ▶ Partners

The list of configuration items that can export independently are listed here. They include the Enveloper scheduling, Transport types, Destination types, Envelope profiles, Connection profiles, Proxy configurations, Validation maps, Transformation maps, EDI Functional Acknowledgement maps and Partners.

Dependent items

- The following have dependencies on either independent items or other dependent items
 - ▶ Document definitions
 - ▶ Fixed and variable workflows
 - ▶ Handlers
 - ▶ Business-to-business capabilities
 - ▶ Interactions
 - ▶ Connections
 - ▶ Receivers and destinations
 - ▶ Work flows and including user defined actions
- Check import error messages

The list of configuration items that have dependencies on other items are listed on this page. They include the document definitions, fixed and variable workflows, handlers, business-to-business capabilities, interactions, connections, receivers and destinations.

The dependency can be on other independent item or dependent item. When trying to import dependent items, you may get error message that some dependent configuration items are missing, and as a result, you cannot export them without including the dependent items. You will have to re-export configuration data and include the dependency. The error message will specify the missing dependent items.

Section

Export command

The next section discusses how to run the export command.

Invoking export from the command line

- The utility is *bcgmigrate*
 - ▶ Directory <Partner Migration Install Root>/bcgmigrate/bin
- For example

```
bcgMigrate -h localhost:58809 -a export -f D:\partnerMigration\export.xml  
-u hubadmin -p admin123 -d 5 -r d:\partnermigration\output
```



The export command is *bcgmigrate*, located in the utility installation directory, as specified here. The command takes several parameters.

An example of the command is shown here. This command is to run the utility connecting to the WebSphere Partner Gateway on localhost and port of 58809 with the action of export. The export options XML file driving the export is specified by the “-f” option. The utility logs into the console with the specified user ID of *hubadmin* and password of *admin123*. The output is in the directory called partner migration output.

Export command parameters

- **-h localhost:58809**
 - ▶ Bootstrap host and port of WebSphere Partner Gateway V6.1 console (console must be running)
- **-a export**
 - ▶ Partner Migration activity, either export or import
- **-f <Fully qualified export options XML file>**
 - ▶ Example: -f C:\PartnerMigration\export.xml
- **-u hubadmin -p admin123**
 - ▶ User ID and password to connect to WebSphere Partner Gateway
 - ▶ User should be part of the hubadmin group or Operator group with migration permission
- **-d 5**
 - ▶ Debug level 1 to 5, with 5 giving the most details
- **-r <output directory>**: writes output file and log to this directory
 - ▶ Example: -r C:\PartnerMigration\output



The export parameters are shown here.

Through the parameters, you specify the WebSphere Partner Gateway console host and IIOp port to connect to, the action of export or import, the export options file, the user ID and password for connecting to the console, debug level and finally the output file directory where all the output file and artifacts are generated.

Section

Import command

The next section discusses how to run the import command.

Invoking import from the command line

- The utility is *bcgmigrate*
 - ▶ Directory {Partner Migration Install Root}/bcgmigrate/bin
- Example:

```
bcgMigrate -h localhost:58809 -a import  
-f D:\partnerMigration\BCGMigration_localhost.zip  
-u hubadmin -p admin123  
-d 5
```

The import command is the same *bcgmigrate* command with a different *-a* parameter. An example of the import command is shown here. This command is to run the utility connecting to the WebSphere Partner Gateway on localhost port 58809 with the action of “import”. The import parameters are the location of the export output file, a user ID of *hubadmin* and a password of *admin123*. The debug level is 5 – the most debugging detail.

Input command parameters

- **-h, -u, -p, -d** are same as in the export command
- **-a import**
- **-f** <Fully qualified exported data zip file>
 - ▶ Example: -f C:\PartnerMigration\BCGMigration_localhost.zip
- **-r** <Directory where export data is stored>
 - ▶ Example: -r C:\PartnerMigration\output
 - ▶ Optional - If this parameter is not used, data is read from the -f parameter
- **-o**
 - ▶ Specifying -o means existing configuration will be overwritten by imported data
 - ▶ If you do not specify -o then only new configurations are created and existing configuration data is unchanged

The parameters for host, user ID, password and debug levels are same as the export parameters, and so are not repeated here.

The value for action parameter, “-a” is import. There are three unique import command parameters described here.

You can specify an archive file containing the export output files by using the “-f” option, or specify the directory where the export data resides by using the “-r” option. If the “-r” option is not present, the data is read from the archive file specified by the “-f” option.

You can also control where the import overrides an existing configuration within WebSphere Partner Gateway. Specifying “-o” will overwrite existing configuration if one exists. When this option is not specified, the existing configuration will remain unchanged, and new configurations in the export data will be created within WebSphere Partner Gateway.

Section

Limitations, hints and tips



The next section discusses the limitations of the utility.

Limitations

- Only partners and connections can be migrated selectively
 - ▶ You can migrate a subset of the partners on your source machine
 - ▶ You can migrate the connections between two specific partners
- All other configurations must be migrated as a whole
 - ▶ For example, receivers must be migrated as all or none
 - ▶ Consider using the `-o` parameter

Certain configuration objects can be migrated as a subset, whereas for other configuration objects, all the instances of the object need to be migrated. Only Partners and connections can be migrated selectively, where you can migrate a subset of the partners. Similarly, you can migrate a subset of the participant connections between two specific partners.

Other configuration objects need to be migrated as a whole. For example, you can choose to migrate all the receivers or none of the receivers. Including the “-o” import command parameter overrides existing configurations in the target system.

Hints and tips

- When migrating to a different operating system, modify any file system specific elements, like <targetURL>
 - ▶ For example, modify the attributes of a file directory receiver when migrating from Windows® to UNIX®
- -O is disabled for forward proxies migration
 - ▶ Verify your proxy configuration after migration
- Partner migration does not validate data values
 - ▶ If you are creating your own export output file, manually validate your data

Any differences in OS between the source and target systems for both export and import need to be taken into account. For example, the targetURL for file system is different between Windows and UNIX systems. When exporting the data from a Windows system to target a UNIX based system, you will have to change the target URL in the exported output before importing.

Second, “-o” is not available for forward proxies migration. Meaning, the proxy information will not be overwritten in the target system.

Last, the utility does not perform any validation of the data. This is specially important when you are creating manual export output files.

Invoking partner migration from a program

- Refer to
 - ▶ WebSphere Partner Gateway programmer guide
 - ▶ Samples

If you want to call the export and import from within a Java program, refer to the WebSphere Partner Gateway V6.1 programmer guide and the samples provided with the WebSphere Partner Gateway V6.1 installation.

Section

References

The next section provides a summary and references.

Summary

- WebSphere Partner Gateway V6.1 Partner Migration utility provides an important function of migration configuration data from one system to another
- This can be very helpful when moving from test to production environments
- The migration can be run from command line or from within a Java program
- This is a stand-alone utility that do not require a full install of WebSphere Partner Gateway V6.1

In summary, the new standalone WebSphere Partner Gateway V6.1 partner migration utility provides the important function of migrating configuration data from one WebSphere Partner Gateway V6.1 system to another system. You need to understand what configuration data is supported and what is not supported, as covered in this presentation. This can help move the configuration from test to production environment quickly.

The utility can be run from command line or you can call the export and import from within a Java program from the APIs provided.

Finally, the utility does not require a full installation of WebSphere Partner Gateway V6.1. You can copy the utility and run it from a non-WebSphere Partner Gateway machine.

References

- WebSphere Partner Gateway V6.1 Administrator Guide

ftp://ftp.software.ibm.com/software/websphere/integration/wspartnergateway/library/doc/wpg61/docs/admin_guide

- WebSphere Partner Gateway V6.1 Programmer Guide

ftp://ftp.software.ibm.com/software/websphere/integration/wspartnergateway/library/doc/wpg61/docs/programmer_guide/programmer_guide_en.pdf

- XSDs in <Partner Migration Root>/schemas



Here are some are references. The Information center's administration guide provides more detail about how to use the partner migration command. The programmer guide provides details on how to call export and import from a Java program. The XSD schemas for the export file is included in the partner migration utility installation directory.

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