



IBM Software Group

IBM WebSphere Partner Gateway 6.2

Partner migration



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Partner migration tool can be used for migrating the configurations from earlier versions to latest versions, or to test production systems of WebSphere® Partner Gateway 6.2.

Agenda

- Overview of Partner Migration
- Installing
- Schemas
- What can be migrated ?
- Export
- Import



Partner migration tool is an XML schema based tool. It can be used as a migration solution across databases.

For example, it can be used for migrating data from DB2® to Oracle and vice versa.

Section

Overview



In this section, you will get a brief understanding about the tool and where it can be used.

What is partner migration?

- Selectively export and import WebSphere Partner Gateway 6.2 configuration data
 - ▶ Example: Export connection configuration from a test system to a production system
 - ▶ Export data is an XML file along with document definitions and maps
 - ▶ Import can override existing configuration or only create new artifacts
 - ▶ You can call this utility from the command line or from a Java™ program



Partner migration tool is available from WebSphere Partner Gateway version 6.10 onwards.

This feature is Improved, enhanced, and extended in WebSphere Partner Gateway 6.2.

This tool will provide xml output, and user can modify these values to suit the requirements, or for configuration of large number of artifacts.

What can you export ?

- What can you not export ?
 - ▶ EDI Map data and related information
 - ▶ ebMS Community Partner Agreement (CPA)
 - ▶ Reports
 - ▶ Logs
- Export System and partner configuration data
- Can import version 6.1.0 or 6.1.1 data to 6.2 of WebSphere Partner Gateway.
- You can use LDAP credentials to run this tool



Migration tool version 6.10 and 6.11 supports migration functionality from test to production system. Whereas, version 6.2 supports migration of 6.10 or 6.11 to 6.2.

Migration tool execution using LDAP credentials support is provided from version 6.2 onwards. This functionality is not available in 6.10 or 6.11.

Installation

- Extract file BCGMigrationUtil.zip
 - ▶ {Hub Install Root}/console/support
- Set two environment variables
 - ▶ MIGRATION_PATH
 - The directory you extract BCGMigrationUtil.zip to
 - Remember to append /bcgmigrate
 - ▶ JAVA_HOME
 - Where your copy of Java 5 is
 - {WebSphere Application Server V6.1 Install Root}/java



Get the migration tool from the {Hub Install Root}/console/support location and extract it to a temporary location. Use BCGMigrationUtil.zip from the hub where you are planning to export/import data. If any version mismatch, you will get major-minor version problems or corba-iiop exceptions.

Migration path must contain the directory path to which you have extracted the BCGMigrationUtil.zip into the “bcgmigrate” folder.

WebSphere Partner Gateway recommends IBM Java version 5.

Installation (continued)

- Partner migration is a stand-alone utility
 - ▶ Calls WebSphere Partner Gateway remotely
 - ▶ You do not have to install or run from a WebSphere Partner Gateway system
 - ▶ The WebSphere Partner Gateway console component must be running
 - Partner Migration communication to the WebSphere Partner Gateway console component using IIOP
 - Connectivity is through the console component's IIOP port (58809)



Partner migration tool is an EJB client and is meant for stand-alone application. Alternatively, you can use API calls in a Java application. You can run this application from any remote machine.

Samples

- Samples for export and import are included:
 - ▶ Directory {Partner Migration Root}/samples
 - ▶ Includes sample code for calling Partner Migration from a Java program



Two types of samples exist along with executables. One set of samples for command line utility and another set of samples for the usage of exposed API from Java programs.

Use samples of the same version as the partner migration utility. Otherwise, you will get XML validation errors.

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Schemas



This section provides a brief overview about XSD schemes and their usage while exporting or importing the configurations.

Export options file

- You control what to export using the export options file:
 - ▶ An XML file (can be zipped)
 - ▶ Conforms to schema bcgMigrationExport.xsd
 - Directory {Partner Migration root}/schemas



While using this schema file, you can decide what needs to be exported.

All dependent artifacts must be exported, otherwise you will get errors at runtime.

WebSphere Partner Gateway recommends the usage of sample XML files (export.zip) provided along with the samples. You can modify this file for your requirements.

Export options file (continued)

- For example:
 - ▶ Export all receiver configuration
 - ▶ Export partner profile for partner “YourCompany”

```
<ReceiverInfo>all</ReceiverInfo>
...
<PartnerList>
<PartnerInfo>
<Partner>YourCompany</Partner>
...
</PartnerInfo>
</PartnerList>
```



You must export some of the configurations as a whole. You can also export some of them selectively.

Partner profiles, Connections, Alert configurations, certificate set configurations, and system administration properties can be exported selectively or as a whole configuration.

Provide the required information like company login name for selective export options.

Export output files

- Partner migration export generates
 - ▶ An XML file containing the configuration data
 - Conforms to schema bcgMigrationImport.xsd
 - Directory {Partner Migration root}/schemas
 - ▶ RoutingObjects.zip
 - Contains exported Document Definitions
 - This is the same as the current Document Definitions export function
 - In subdirectory RoutingObjects
 - ▶ Validation maps
 - In subdirectory ValidationMaps
 - ▶ Transformation maps
 - In subdirectory TransformationMaps
 - ▶ FA maps
 - In subdirectory FAMaps

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Export configuration operation will generate two output files, one is BcgMigration.log and another one is a compressed artifacts collection file.

Log will provide the information based on debug level.

Compressed artifacts files will contain an xml file, routing object compressed files, validation, transformation, and FA maps. This file should be used as an input for import operation.

Export output files (continued)

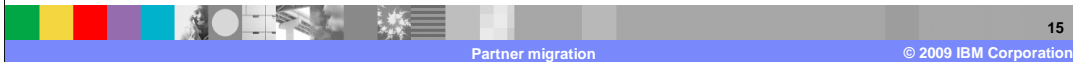
- All these files are zipped into 1 file
 - ▶ BCMigration_*Hostname*.zip



Zipped artifacts collection file names will have BcgMigration_*Hostname*.zip. For example, if the supplied host name is localhost, the output file generated will have the name BcgMigration_localhost.zip.

Export output files (continued)

- 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



You can modify or create your own export output file using available template in samples folder. While creating your own artifacts file, make sure to conform to the import schema.

You need to take care about the dependencies, if any. Otherwise you will get dependency errors. Another point to take care is the operating system dependencies like file paths.

It is highly recommended to validate the modified XML file using any XML validation tools like Rational® Application Developer instead of using bcgMigrationImport.xsd import schema.

Using this feature, you can create large number of artifacts.

Section

What can be migrated ?



Migration tool is intended for importing configurations across databases. This is not meant for importing data. In some circumstances, this can be used as an API. One such instance is the creation of large number of partners.

Exportable items

- Independent and dependent configuration items
 - ▶ Some configuration items can be exported independently
 - For example, envelope profiles
 - ▶ Some configuration items can only be exported in conjunction with other dependent items
 - For example, connections can be exported only if the source and target partner are also exported



All dependent configurations can be exported independently. For dependent configurations, you must resolve the dependencies, otherwise you will get the warning/error messages.

Independent items

- The following can be exported independently
 - ▶ Enveloper Scheduling
 - ▶ Event codes
 - ▶ Transport types
 - ▶ Destination types
 - ▶ Envelope profiles
 - ▶ Connection Profiles
 - ▶ Proxy configurations
 - ▶ Validation maps
 - ▶ Transformation maps
 - ▶ FA Maps
 - ▶ Partners
 - ▶ System Admin properties

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Be cautious about system admin properties import. These properties may destabilize the system. After successful import, some properties require the restart of the system.

For example, FTP administration properties, SFTP receiver, and SFTP destinations requires system restart.

System Admin properties import may enable LDAP authentication property. If you encounter such instances, you can reset the LDAP authentication property using the `bcgResetAuthentication.bat` that is available in database scripts.

Dependent items

- The following have dependencies on either independent items or other dependent items
 - ▶ Document definitions
 - ▶ Fixed and variable workflows
 - ▶ Handlers
 - ▶ B2B capabilities
 - ▶ Interactions
 - ▶ Connections
 - ▶ Receivers and destinations
 - ▶ User configuration
 - ▶ FTP user configuration
 - ▶ Group configuration
 - ▶ Certificates
 - ▶ Alert configuration
- Check import error messages

Be cautious about user and group configuration import, these configurations may either destabilize the system or make it inaccessible. For example, user password or permissions may get affected during import. If you encounter such instances, you can reset the hubadmin user password using the `bcgResetAuthentication.bat` that is available in database scripts.

Invoking export from the command line

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

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



Before executing the migration script, make sure all the required script files, input, output files, and directory locations have enough permissions. Temporary location of the operating system and output location directories must have read and write permissions.

Get the migration utility tool from the system where you are going to export the configurations.

Provide the proper debug level. This will help you in debugging the root cause. Here, debug level 5 is the finest level.

Make sure the WebSphere Partner Gateway console is up and running.

Input parameters

- -h localhost:58809
 - ▶ The IP address and bootstrap port for the machine where the WebSphere Partner Gateway console component is running
- -a export
 - ▶ The Partner Migration activity, either export or import
- -f D:\PartnerMigration\export.xml
 - ▶ The fully qualified name of the export options file



Default value for `-a` is export.

Export option file can be a compressed XML file.

Input parameters (continued)

- -u hubadmin -p admin123
 - ▶ ID and password to connect to WebSphere Partner Gateway
 - ▶ This user should either be a part of the hubadmin group or the Operator group with migration permission
- -d 5
 - ▶ The debug level , 0 to 5 with 5 giving the most details
- -r D:\PartnerMigration\output
 - ▶ Write output file and log to this directory



User must belong to hub operator company. Internal partner or external partner users are not allowed to execute this tool.

LDAP user credentials can be used for executing this tool.

Parameter values must be enclosed in double quotation marks (") in case values contain special characters or spaces. For example, "cn=root,o=ibm,c=us".

Debug level must be provided between 0 to 5. Tool will be continued with 0 in case the debug level is between 0 and 5. In case the debug level is greater than 5, warning message will be displayed on the command line console.

Debug messages will be appended to the bcgMigration.log file.

Existing files will be overwritten with output files.

Invoking import from the command line

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

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



For import, `-a import` option is mandatory, otherwise you will get the XML parsing errors.

Input parameters

- -f D:\PartnerMigration\BCGMigration_localhost.zip
 - ▶ The fully qualified name of the export output file
- -r D:\PartnerMigration\output
 - ▶ The root path where export data is stored
 - ▶ Optional - if this parameter is not used, data is read from the -f parameter



Alternatively, you can provide the XML file and artifacts as input. In this scenario, provide the XML file for -f and other required artifacts like routingObject.zip, transformation, validation, and FA maps at the root path location, that is, -r. If there is no root path specified, you can provide the artifacts in the same location where the XML file exists.

Limitations

- Only partners, connections, alerts, certificate sets and system administration properties can be migrated selectively
 - ▶ You can migrate a subset of the configurations on your source machine
 - ▶ You can migrate the connections, alerts or certificate sets 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



Here you can see the various limitations in using this feature.

Hints and tips

- When migrating to a different Operating System, modify any file system specific <targetURL> elements
 - ▶ For example, modify the attributes of a File Directory Receiver when migrating from Windows® to UNIX®
- -o is disabled for forward proxy 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

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Resolve the operating system dependencies from the xml file before importing into different operating system. Otherwise, this will cause an unexpected behavior.

Migration tool will create new forward proxies, but does not support the modification of existing forward proxy configurations.

Migration process is a batch process. Validation process happens at different levels, and errors or warning messages are posted in the log file. WebSphere Partner Gateway recommends manual validation process for custom export output files.

Section

References



This section provides the pointers for various guides available for partner migration.

Invoking partner migration from a program

- Refer to
 - ▶ WebSphere Partner Gateway Programming Guide
 - ▶ Samples



You can invoke the API calls from any Java program. You will get the information about how to call the API methods and what are the parameters you need to pass from the programmers guide. There are a set of samples available in samples folder.

References

- WebSphere Partner Gateway Administrator Guide
- WebSphere Partner Gateway Programmer Guide
- .xsd schemas in {Partner Migration Root}/schemas



You can get information about how to run partner migration and about the prerequisites from the Administrator and programmer guides. For creation of your own xml input files, you can refer the schemas available.

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