Integration Framework for SAP Business One

DIProxy Configuration

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1 INTRODUCTION

The SAP Business One DIProxy is used to integrate with the SAP Business One via DI-API (through Jco).

2 INSTALLATION

- o By default, the SAP Business One DIProxy will be installed together with Integration Framework Server and SAP Business One Event Sender;
- o It is possible to install the SAP Business One DIProxy in a separated server rather than the Integration Framework Server;
- o It is possible to create multiple instances of the SAP Business One DIProxy on one server;
- o The server, where the SAP Business One DIProxy will be installed, should have the correct DI-API installed.
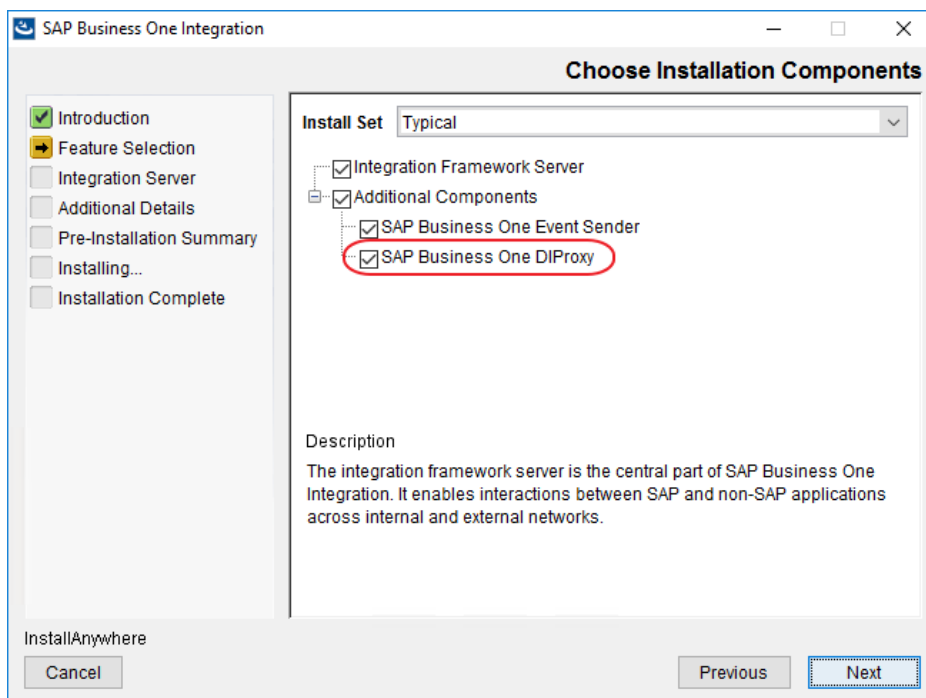
- **On Premise** configuration related to DIProxy

1. *B1 Server*: This is the database server where the SAP Business One databases are installed.
2. *Database Port*: In case of the SQL named instance used, ensure the correct port number is specified.
3. *SLD Server*: This is the server where the System Landscape Directory (SLD service) installed.
   Note: Ensure the same value (the same public/internal IP or FQDN address) as the SLD service is provided.
4. *SAP Business One DIProxy*: 32-bit/64-bit. It depends on which version of the DI-API is installed on the current server where the SAP Business One DIProxy is installed.
5. *B1DI JCO PATH*: The location of the SAP Business One DI API program file. If you previously installed SAP Business One DI API in the default location, the location is …\SAP\SAP Business One DI API\JCO\Lib
6. *B1i User Name*: It is "B1i" by default. This is a technical user which will be created in each of the SAP Business One company database.

Note: All the information above will be used in SLD > SBO-Common entry and will be copied to each company entry.

- **On Demand** configuration related to DIProxy

1. *SAP Business One DIProxy*: 32-bit/64-bit. It depends on which version of the DI-API is installed on the current server where the SAP Business One DIProxy is installed.
2. *B1DI JCO PATH*: The location of the SAP Business One DI API program file. If you previously installed SAP Business One DI API in the default location, the location is …\SAP\SAP Business One DI API\JCO\Lib.
3. *Domain User / Domain Password*: The user name and password of a database administrator account that you want to use to log onto the DIProxy service.

3 CONFIGURATION

The communication between the *Integration Framework for SAP Business One* or *SAP Business One, version for SAP HANA* needs to be verified.

3.1 Services in Service Panel

There are two services related to DIProxy:

SAP Business One DI Proxy Service	SAP Business One DI Proxy Service	Running	Automatic	Local System
SAP Business One DI Proxy Service Monitor	SAP Business One DI Proxy Service Monitor	Running	Automatic	Local System

SAP Business One DI Proxy Service: the main service which is listening on port 2099 by default for the DI-API calls.

SAP Business One DI Proxy Service Monitor: the daemon service used to restart the DI Proxy automatically when the process stopped unexpectedly.

3.2 DIProxy Configuration

The default configuration is located at *C:\Program Files (x86)\SAP\SAP Business One Integration\DIProxy\diproxyserver.properties* which can be edited by a text editor like Notepad in Microsoft Windows.

Note: The default installation settings on cloud is a bit different than the settings on premise since SAP Business One 9.3 PL01. Refer to the SAP Note 2510674 for the details.

The configuration parameters by default are as below:

- o **HTTPS_PORT**=2099
  The HTTPS-Port used for the B1i server ("*diProxyport*" in *integration framework > SLD > [company] > B1DI connection*). Specify the TCP listening port used by DI-Proxy, 1099 will be used by default if not value provided. This should be modified manually when deploying more than one DIProxy instances on the same server.

- o **JCOPATH**=C:\\Program Files\\SAP\\SAP Business One DI-API\\JCO\\LIB
  If this property exists and is not empty, it specifies the path the DIProxy uses to search for the JCO installation including in the DI-API. In this case, the value in "jcoPath" (*integration framework > SLD > [company] > B1DI connection).* Note that using '/' or '\\' instead of '\' as separator in the value of JCOPATH, otherwise an error will encounter, e.g. C:\\Program Files\\SAP\\SAP Business One DI-API\\JCO\\LIB.

- o **SINGLECOMPANY**=true
  The parameter controls access to the company databases. If the parameter exists and is set to **false**, connections to the same company database are possible. If the parameter does not exist, or is set to **true**, multiple connections to the company database are open at the same time, but only one can be used. Other connections, even with other users are rejected.

- o **MAXACCESES**=0
  This parameter is only relevant, if you use the two-phase commit protocol. Define the upper limit of simultaneous accesses that are allowed at the same time. Exceeding this limit, the adapter rejects the request. The default is 0. This means that unlimited accesses are possible. Especially, if you must shut down the DIProxy and start it again, this can take a very long time, if you have many accesses.

o **MAXCONNECTIONS**=0
To constrain the number of simultaneously open DI connections in the DI proxy, use this parameter. Exceeding the limit, the adapter closes an idle connection, if a new request comes in.

o **MAXDIERRORS**=50 (*on premise*) / 200 (*on demand*)
If this property exists and is set to a value > 0, the value depicts the count of DI-errors that may happen until the DIProxy will be restarted for the sake of potential memory leaking. The default is 0 (no restart).

o **RESTARTPERIOD**=60 (*on premise*) / 0 (*on demand*)
If this property exists and is set to a value > 0, the value depicts the time in minutes when the DI-proxy will be restarted for the sake of potential memory leaking. The default is 0 (no restart).

o **ORPHANED**=20
The value in minutes when a pending and not yet completed DI-transaction is deemed as orphaned and therefore will be cleaned out of the internal transaction-list. If this property is not specified or has not a positive value, a default of 20 is taken.

3.3 DIProxy Log Configuration

The default log configuration file for both on premise and on demand environment is *.:\Program Files (x86)\SAP\SAP Business One Integration\DIProxy\DIProxylog.properties* which can be edited by a text editor like Notepad in Microsoft Windows.

The log files will be generated *C:\Program Files (x86)\SAP\SAP Business One Integration\DIProxy\log* in by default.

The parameters are as below:
o .level = SEVERE
The log level: SEVERE / WARNING / INFO / CONFIG / FINE / FINER / FINEST. From the fewer log level to the more log level.

o java.util.logging.FileHandler.pattern = log/DIProxy_%g.log
The log file pattern and the path where to save the logs.

o java.util.logging.FileHandler.limit = 10485760
The file size for each of the log file.

o java.util.logging.FileHandler.count = 3
How many files can be created for the logs.

For a troubleshooting purpose, it can be considered to use **.level=FINER** with **java.util.logging.FileHandler.count = 10**.

3.4 How to Create Multiple Instances of DIProxy

To enable an additional instance of the DIProxy service, proceed as follows:
o The default instance of DIProxy uses port 2099, so you need to find another port which will be free/not blocked for the server on which DIProxy will be installed (by default, it should be the same as for Integration Framework service). In the example below, we are taking port 2098 to create a new instance of DIProxy.

- o To enable another configuration set for the second instance of DIProxy, copy the DIProxy folder (C:\Program Files (x86)\SAP\SAP Business One Integration\DIProxy) and paste it inside (C:\Program Files (x86)\SAP\SAP Business One Integration\). The system creates the *DIProxy - Copy* folder.

- o Rename the folder to *DIProxy2098*.
  In the ...\DIProxy2098 folder, open the service.ini file and change the following entries:
  - **ServiceName = SAPB1iDIProxy2098**
  - **DisplayName = SAP Business One DI Proxy 2098 Service**

- o In the ...\DIProxy2098 folder, open the diproxyserver.properties. Change the HTTPS_PORT parameter to 2098:
  HTTPS_PORT=2098

- o Determine whether the default instance of DIProxy is using 32 bit or 64 bit. In the ...\DIProxy2098 folder, open the service.ini file; the 32-bit "JavaPath" would be for sapjre_32 and for the 64-bit it would be sapjre_64.

- o Choose Start, right-click Command Prompt and choose Run as administrator. Type "cd ...\DIProxy2098" to go to the installation folder of DIProxy2098 and press Enter.
  - To run a 32-bit DIProxy: Run "service.exe -install".
  - To run a 64-bit DIProxy: Check SAP Note 1955107 for a detailed description of the required settings and then run "service64.exe -install".

Note: For more instances, repeat the procedure above accordingly.

About Upgrading Integration Framework:

When you create additional instances with **integration framework version 1.20.8 and lower**:

- The upgrade program does not support multiple instances of DIProxy. After the upgrade of integration framework, copy the *.jar files of the upgraded DIProxy folder to the same folders as for the other instances of DIProxy.
- To enable the changes, stop and restart the additional instances.

As of integration framework version 1.20.9 and higher:

- The upgrade still does not exchange the JAR files; however, the procedure was changed to let the DIProxy instances use only the files of the default instance (installed in the <installation folder>\DIProxy folder).
  This was achieved by changing the service.ini file: The path to *.jar files was changed, for example, from .\lib\ to ..\DIProxy\lib\.
  Thus, if you enabled additional instances with integration framework version 1.20.9 or higher, you no longer need to copy the *.jar files after an upgrade.
- However, you still have to stop and restart the additional instances.

This detail is documented in SAP Note 1975033.

3.5 Using DIProxy Groups

To use DIProxy groups, you need to have multiple instances of DIProxy. In the integration framework, you have the option to define DIProxy groups with multiple instances of DIProxy. Define the DIProxy groups and the multiple instances of DIProxy in the DI adapter global configuration.
User needs to refer to below mentioned steps:

- o Create multiple instances of DIProxy

o   Adding DIProxy Groups to the DI Adapter Global Configuration

To use DIProxy groups, you need to have multiple instances of DIProxy. In the integration framework, you have the option to define DIProxy groups with multiple instances of DIProxy. Define the DIProxy groups and the multiple instances of DIProxy in the DI adapter global configuration.
User needs to refer to below mentioned steps:

Global Adapter Configuration in Control Center

- In the integration framework, choose *Tools → Control Center → Configuration → Global Adapter Config*:

- *In* the *Global Adapter Configuration Properties* user interface, for the *B1DI* adapter, click the *Edit Global Configuration Properties* link.

- For the *diProxyGroupList* property, define the DIProxy groups in the following way:
  a. [<groupname1> <hostname1>:<port1>,<port2>][<groupname2> <hostname2>:<port1>,<port2>]
  b. <groupname1,2> are the proxy group names
  c. <hostname1,2> are the host names or IP addresses of the instances of DIProxy
  d. port1,2 are the port numbers

Global Adapter Configuration

Example

- *alpha* and *beta* are DIProxy group name.

- *abc* is server host name where the instances of DIProxy are installed.

- 2099, 2098,2097,2096,3000 are ports where the instances of DIProxy are installed on server abc.
  [alpha abc:2099,2098,2097][beta abc:2096,3000]

If the instances of DIProxy are installed on different servers then you could use below mentioned format:

- 2099 DIProxy is installed on server *abc* and 2098 is installed on server *def*.
  [alpha abc:2099 def:2098]

o   Using DIProxy Groups in Integration Framework SLD

In SLD, enter the DIProxy group definition that you want to use for a certain company database in the *diProxyhost* field of the SAP Business One company database entry in the following way, for example: [alpha] and [beta].
If you use a DIProxy group, leave the *diProxyport* field empty:

Using *alpha* DIProxy Group

Using *beta* DIProxy Group

4 BEST PRACTICE

- Use 64-bit DIProxy together with 64-bit DI-API for better performance. Refer to the SAP Note 1955107 for the details.
- You can achieve the best performance by deploying one DI Proxy instance for each company database.
- If you run a high amount of transactions for one company database, deploy multiple instances of SAP Business One DIProxy and set up a DIProxy group for the company database.
- Refer to the SAP Note 2245936 for the best practice for the DI-API communication.

For more information about performance optimization, see SAP Note 2192737.

5 TROUBLESHOOTING

- *B1DI Connection issue*

  This could be due to the configuration either on DI-API side or DIProxy side.

  In order to solve this issue, please refer to the SAP Note 2029714.

- *DI-API runtime error*

  In order to troubleshoot and log an incident for this issue, please refer to the SAP Note 2360911.

- *DI-API/DIProxy crash issue*

  In order to troubleshoot and log an incident for this issue, please refer to the SAP Note 2166563.

- *Performance issue*

  In order to solve this issue, please refer to the SAP Note 1993784 and 2192737.

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