

Adminstrating EntireX IMS Connect RPC Server

The EntireX IMS Connect RPC Server allows standard RPC clients to communicate with IMS MPP programs running on IMS version 9 and higher. The IMS Connect RPC Server transforms the RPCs from the clients into messages to IMS Connect v2.2. The IMS Connect RPC Server acts on one side as an RPC server and on the other side as a client for IMS Connect. The IMS Connect RPC Server is a Java-based component that can run on a different host to the one where IMS is running. This allows it to operate with a zero footprint of EntireX on the IMS host.

This chapter covers the following topics:

- Customizing the IMS Connect RPC Server
 - Configuring the RPC Server Side
 - Configuring the IMS Connect Side
 - Starting the IMS Connect RPC Server
 - Stopping the IMS Connect RPC Server
 - Application Identification
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Customizing the IMS Connect RPC Server

For the setup of the IMS Connect RPC Server there are

- a configuration file and
- scripts to start the IMS Connect RPC Server.

Location of the IMS Connect RPC Server

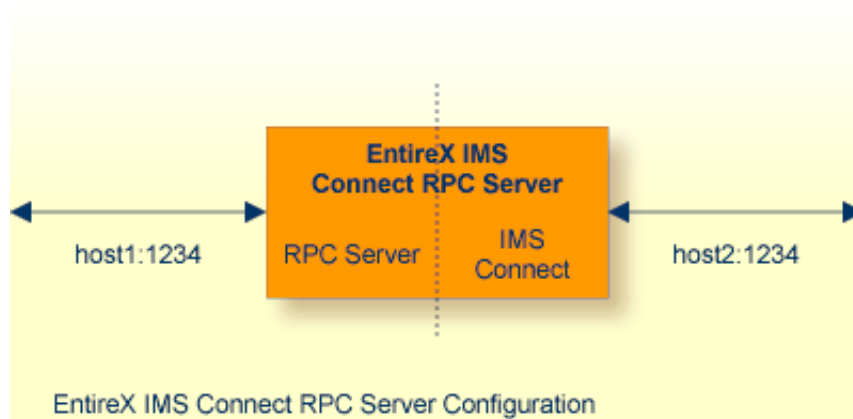
The IMS Connect RPC Server is contained in the file *entirex.jar*.

The Configuration File

The default name of the configuration file is *entirex.imsconnect.properties*. The IMS Connect RPC Server searches for this file in the current working directory.

You can set the name of the configuration file with `-Dentirex.server.properties=<your file name>` with "/" as file separator.

The configuration file contains the configuration for both parts of the IMS Connect RPC Server.



➤ To set up the IMS Connect RPC Server

1. Use the RPC server agent of the System Management Hub.
2. Add the IMS Connect RPC Server as an RPC server.

See *Administering the EntireX RPC Servers using System Management Hub* under UNIX | Windows for details.

Or:

Use the scripts to start the IMS Connect RPC Server.

Under Windows, use *imsconnectserver.bat* in the folder *bin* to start the IMS Connect RPC Server. You may customize this file.

Under UNIX, use *imsconnectserver.bsh* in the folder *bin* to start the IMS Connect RPC Server. You may customize this file.

Both scripts use the configuration file *entirex.imsconnect.properties* in the folder *etc*.

Configuring more than one IMS Connect RPC Server

If you configure more than one IMS Connect RPC Server that connect to the same EntireX Broker, the following items must be distinct:

- The trace output file (property `entirex.server.logfile`).
- The monitor port for SMH (property `entirex.server.monitorport`).
- The log for the Windows Service (property `entirex.server.serverlog`).
- The trace output file of the SMH agent for RPC servers.

Configuring the RPC Server Side

The RPC server side of the IMS Connect RPC Server is configured like the Java RPC Server. The IMS Connect RPC Server uses the properties that start with "entirex.server".

The RPC server side can adjust the number of worker threads to the number of parallel requests. Use the properties `entirex.server.fixedservers`, `entirex.server.maxservers` and `entirex.server.minservers` to configure this scalability.

- If `entirex.server.fixedservers=yes`, the number of `entirex.server.minservers` is started and the server can process this number of parallel requests.
- If `entirex.server.fixedservers=no`, the number of worker threads balances between `entirex.server.minservers` and `entirex.server.maxservers`. This is done by a so-called attach server thread. On startup, the number of worker threads is `entirex.server.minservers`.

If more than `entirex.server.minservers` are waiting for requests, a worker thread stops if its receive call times out. The timeout period is configured with `entirex.server.waitserver`.

Alternatively to the properties, you can use the command-line option. The command-line options have a higher priority than the properties set as Java system properties and these have higher priority than the properties in the configuration file.

Name	Command-line Option	Default Value	Explanation														
entirex.bridge.verbose		no	Verbose/trace mode of IMS Connect RPC Server														
entirex.server.brokerid	-broker	localhost	Broker ID														
entirex.server.serveraddress	-server	RPC/SRV1/CALLNAT	Server address.														
entirex.server.userid	-user	IMSRPCServer	The user ID for the Broker for RPC. See entirex.server.password.														
entirex.server.fixedservers		no	no Use attach server to manage worker threads. yes Run minimum number of server threads.														
entirex.server.minservers		1	Minimum number of server threads.														
entirex.server.maxservers		32	Maximum number of server threads.														
entirex.server.restartcycles	-restartcycles	15	Number of restart attempts if the Broker is not available. This can be used to keep the IMS Connect RPC Server running while the Broker is down for a short time.														
entirex.server.password	-password		The password for secured access to the Broker. The password is encrypted and written to the property <code>entirex.server.password.e</code> . To change the password, set the new password in the properties file (default is <code>entirex.imsconnect.properties</code>). To disable password encryption set <code>entirex.server.passwordencrypt=no</code> . Default for this property is "yes".														
entirex.server.properties	-propertyfile	entirex.server.properties	The file name of the property file.														
entirex.server.security	-security	no	no yes auto name of BrokerSecurity object														
entirex.server.encryptionlevel		0	Encryption level. Valid values: 0,1,2.														
entirex.server.compresslevel	-compresslevel	0	Permitted values (you can enter the text or the numeric value) <table border="0"> <tr> <td>BEST_COMPRESSION</td> <td>9</td> </tr> <tr> <td>BEST_SPEED</td> <td>1</td> </tr> <tr> <td>DEFAULT_COMPRESSION</td> <td>-1, mapped to 6</td> </tr> <tr> <td>DEFLATED</td> <td>8</td> </tr> <tr> <td>NO_COMPRESSION</td> <td>0</td> </tr> <tr> <td>N</td> <td>0</td> </tr> <tr> <td>Y</td> <td>8</td> </tr> </table>	BEST_COMPRESSION	9	BEST_SPEED	1	DEFAULT_COMPRESSION	-1, mapped to 6	DEFLATED	8	NO_COMPRESSION	0	N	0	Y	8
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Y	8																
entirex.server.waitattach		600S	Wait timeout for the attach server thread.														
entirex.server.waitserver		300S	Wait timeout for the worker threads.														
entirex.timeout		20	TCP/IP transport timeout. See <i>Setting the Transport Timeout</i> under <i>Writing Advanced Applications - EntireX Java ACL</i> .														
entirex.server.verbose	-verbose	no	Enable verbose output to the log file.														
entirex.server.logfile	-logfile		Name of the log file, the default is standard output.														
entirex.trace	-trace	0	Trace level (1,2,3).														
entirex.server.monitorport	-smhport	0	The port where the server listens for commands from the System Management Hub (SMH). If this port is 0, no port is used and management by the SMH is disabled.														

Configuring the IMS Connect Side

These properties are used to configure the connection to IMS Connect.

Alternatively, you can use the command-line option. The command-line options have a higher priority than the properties set as Java system properties and these have higher priority than the properties in the configuration file

Name	Default Value	Explanation
<code>ims.host</code>		Host name of IMS Connect. Mandatory.
<code>ims.port</code>		Port number of IMS Connect. Mandatory.
<code>ims.datastoreid</code>		Data store ID. Name of the IMS system that will receive transactions. Mandatory.
<code>entirex.bridge.targetencoding</code>	<code>cp037</code>	Specify the appropriate EBCDIC encoding used by your IMS Connect. This codepage is also used when communicating with the EntireX Broker. Note: Enable conversion in the Broker attribute file so the data can be converted correctly, typically by setting service-specific attribute <code>CONVERSION</code> to "SAGTCHA". Default "cp037" is EBCDIC codepage with full Latin-1 character set.
<code>ims.useoldexit</code>	<code>yes</code>	yes Use old IMS Connect user message exit. Name is *SAMPLE*. no Use new IMS Connect user message exit. Name is *SAMPLE1*.
<code>ims.exitname</code>	*SAMPLE* (old exit) *SAMPL1* (new exit)	Name of IMS Connect user message exit.
<code>ims.sockettimeout</code>	10000	Socket timeout for connection to IMS Connect (in milliseconds).

Name	Default Value	Explanation
ims.checkdfs	true	<p>true, Check for DFS message. yes Return an error and do not return the message if it contains a DFS error message.</p> <p>false, Do not check for DFS message. no</p>
ims.clientid		ID of the client that is used by IMS Connect. Maximum 8 bytes (optional).
ims.lterm		IMS LTERM override. Maximum 8 bytes (optional).
ims.userid		RACF user ID. Maximum 8 bytes (optional).
ims.groupid		RACF group ID. Maximum 8 bytes (optional).
ims.password		RACF password/PassTicket. Maximum 8 bytes (optional).
ims.applname		RACF application name. Maximum 8 bytes (optional).
ims.sslparams		SSL parameters (optional). Same syntax as Broker ID.
ims.mapping.folder		<p>The folder where the RPC server expects server-side mapping files (EntireX Workbench files with extension .svm). See <i>Deploying Server-side Mapping Files to the RPC Server</i> and <i>Undeploying Server-side Mapping Files to the RPC Server</i>.</p> <p>There are also client-side mapping files that do not require configuration here. See <i>Server Mapping Files for COBOL</i>.</p> <p>If <i>no</i> server requires server-side mapping, you can omit this property.</p> <p>If <i>one</i> server requires server-side mapping, this property must be specified.</p>

Name	Default Value	Explanation
<code>ims.useprogramname</code>	<code>false</code>	Automatically use the IDL program name as transaction name. If set to "true" or "yes", 10 bytes are used for the transaction name. If set to a number, this number of bytes is used for the transaction name.

Starting the IMS Connect RPC Server

> To start the IMS Connect RPC Server

- Use the script `imsconnectserver` in the folder `bin` to start the IMS Connect RPC Server. You may customize this file.

Or:

Use the RPC server agent in the System Management Hub to configure and start the IMS Connect RPC Server.

See *Administering the EntireX RPC Servers using System Management Hub* under UNIX | Windows for details.

Stopping the IMS Connect RPC Server

> To stop the IMS Connect RPC Server

- Use the RPC server agent in the SMH to stop the IMS Connect RPC Server.

Or:

Use the agent for the Broker. Use `Deregister` on the service, specified with the property `entirex.server.serveraddress`.

Application Identification

The application identification is sent from the IMS Connect RPC Server to the Broker. It is visible with Broker Command and Info Services.

The identification consists of four parts: name, node, type, and version. These four parts are sent with each Broker call and are visible in the trace information.

For the IMS Connect RPC Server, these values are:

Identification Part	Value
Application name	ANAME=IMS Connect RPC Server
Node name	ANODE=<host name>
Application type	ATYPE=Java
Version	AVERS=9.5.0.0