

## **webMethods EntireX**

### **About this Documentation**

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This document applies to webMethods EntireX Version 9.12 and all subsequent releases.

Specifications contained herein are subject to change and these changes will be reported in subsequent release notes or new editions.

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# 1 About this Documentation

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## Document Conventions

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| Convention     | Description  |
|----------------|--|
| <b>Bold</b>    | Identifies elements on a screen.   |
| Monospace font | Identifies service names and locations in the format <code>folder.subfolder.service</code> , APIs, Java classes, methods, properties.  |
| <i>Italic</i>  | Identifies:<br><br>Variables for which you must supply values specific to your own situation or environment.<br>New terms the first time they occur in the text.<br>References to other documentation sources. |
| Monospace font | Identifies:<br><br>Text you must type in.<br>Messages displayed by the system.<br>Program code.  |
| { }            | Indicates a set of choices from which you must choose one. Type only the information inside the curly braces. Do not type the { } symbols.   |
|                | Separates two mutually exclusive choices in a syntax line. Type one of these choices. Do not type the   symbol.  |
| [ ]            | Indicates one or more options. Type only the information inside the square brackets. Do not type the [ ] symbols.  |
| ...            | Indicates that you can type multiple options of the same type. Type only the information. Do not type the ellipsis (...).  |

## Online Information and Support

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- Access articles, code samples, demos, and tutorials.
- Use the online discussion forums, moderated by Software AG professionals, to ask questions, discuss best practices, and learn how other customers are using Software AG technology.
- Link to external websites that discuss open standards and web technology.

## **Data Protection**

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Software AG products provide functionality with respect to processing of personal data according to the EU General Data Protection Regulation (GDPR). Where applicable, appropriate steps are documented in the respective administration documentation.

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## 2 EntireX RPC Servers, Listeners and Bridges

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This chapter lists RPC servers, listeners and bridges; provides an overview of zero-footprint solutions; and gives links to information for administration and installation:

For Natural RPC servers, see *Setting Up a Natural RPC Environment* in your Natural documentation.

## Introduction

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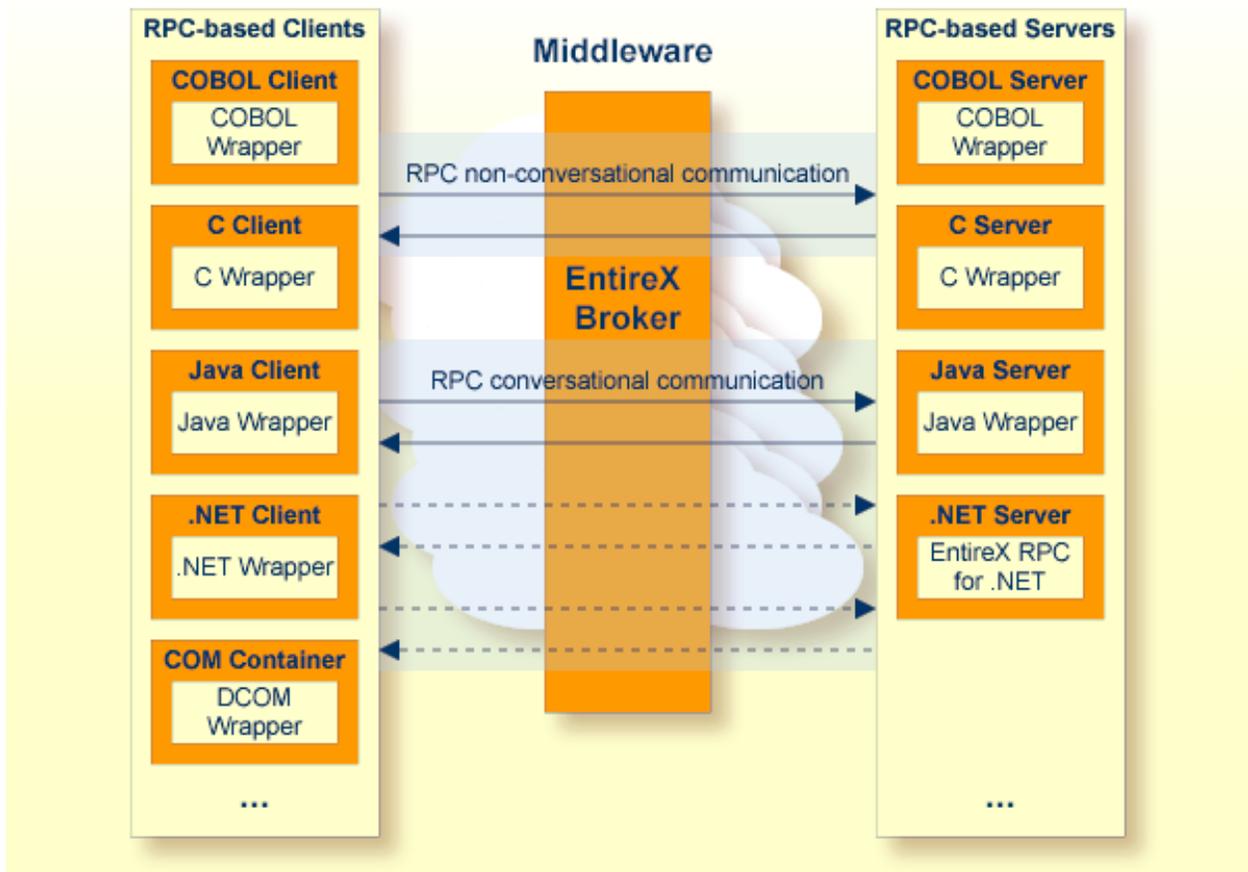
RPC servers are important components of *RPC Technology*. They receive RPC requests from RPC clients using EntireX RPC and call the requested server implementation using RPC Wrapper technology of the EntireX Workbench. The Workbench tool you choose to extract existing servers or generate them depends on your environment. For example:

- to extract existing server implementations, use an IDL Extractor ( COBOL | PL/I | webMethods Integration Server | WSDL | XML Document | XML Schema)
- to generate a new RPC-based server, use a Wrapper ( Java | COBOL | PL/I | C | XML/SOAP | .NET); you can also generate RPC-based clients

A listener can be described as follows:

- In terms of EntireX, a listener is a component listening on a port using a protocol other than RPC, for example IBM MQ or XML/SOAP. Incoming requests on the non-RPC listening port are forwarded to an RPC server, using *RPC Technology*. In this way, a listener expands the access to RPC servers to non-RPC-based clients such as IBM MQ, XML/SOAP, etc.
- In terms of the webMethods EntireX Adapter for Integration Server, listening is seen from inside IS (listening for incoming requests to IS), so a listener created with the EntireX Adapter is listening for RPC.

This section lists RPC servers, listeners and bridges, and provides links to administration and installation documentation.



## RPC Servers under z/OS

There are also RPC server, listener and bridge components available for z/OS UNIX. See *List of Components per Platform* under *Platform Coverage* in the Release Notes and [RPC Servers, Listeners and Bridges under UNIX and Windows](#) below.

- CICS RPC Server
- Batch RPC Server

- [IMS RPC Server](#)

### **CICS RPC Server**

The EntireX z/OS CICS® RPC Server allows standard RPC clients to communicate with RPC servers on the operating system z/OS under CICS. It supports the programming languages COBOL and PL/I.

- For COBOL, it works together with the COBOL Wrapper and IDL Extractor for COBOL.
- For PL/I, it works together with the PL/I Wrapper and IDL Extractor for PL/I.

### **Batch RPC Server**

The EntireX z/OS Batch RPC Server allows standard RPC clients to communicate with RPC servers on the operating system z/OS running in batch mode. It supports the programming languages COBOL, PL/I and C and works together with the COBOL Wrapper and IDL Extractor for COBOL.

- For COBOL, it works together with the COBOL Wrapper and the IDL Extractor for COBOL.
- For PL/I, it works together with the PL/I Wrapper and the IDL Extractor for PL/I.
- For C, use the C Wrapper.

### **IMS RPC Server**

The EntireX z/OS IMS RPC Server allows standard RPC clients to communicate with RPC servers on the operating system z/OS running with IMS in BMP mode. It supports the programming languages COBOL, PL/I and C and can provide IMS-specific PCB pointers for access to IMS databases if needed.

- For COBOL, it works together with the COBOL Wrapper and IDL Extractor for COBOL.
- For PL/I, it works together with the PL/I Wrapper and IDL Extractor for PL/I.
- For C, use the C Wrapper.

## **RPC Servers, Listeners and Bridges under UNIX and Windows**

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- [XML/SOAP RPC Server](#)
- [XML/SOAP Listener](#)
- [Java RPC Server](#)
- [.NET RPC Server](#)
- [C RPC Server](#)
- [Micro Focus RPC Server](#)
- [IMS Connect RPC Server](#)
- [CICS ECI RPC Server](#)

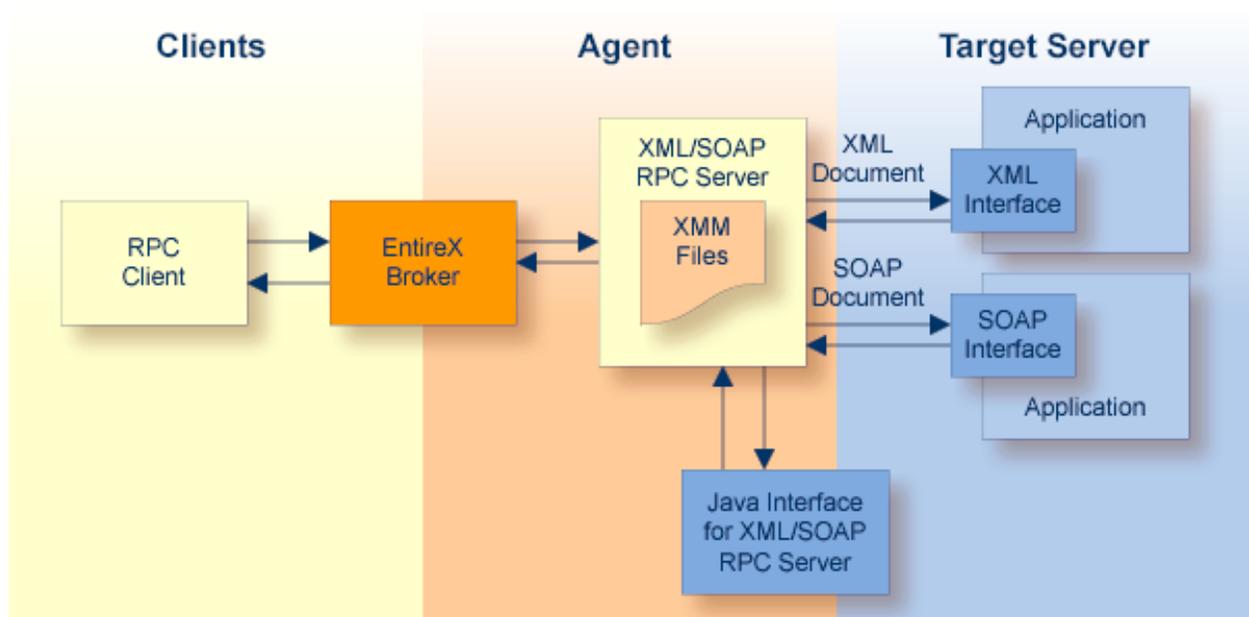
- RPC Server for IBM MQ
- Listener for IBM MQ
- RPC-ACI Bridge

Most of the RPC server, listener and bridge components are also available for a z/OS UNIX environment. See *List of Components per Platform* under *Platform Coverage* in the Release Notes.

Under Windows, an RPC server can run as a Windows Service. See *Running the RPC Server as a Windows Service*.

## XML/SOAP RPC Server

The XML/SOAP RPC Server allows RPC clients to communicate with target servers via HTTP(S). The XML/SOAP RPC Server transforms RPC client calls into XML/SOAP calls. It works together with the XML/SOAP Wrapper.



## XML/SOAP Listener

The EntireX XML/SOAP Listener runs in a servlet-enabled Web server with an installation of the Software AG Web Services Stack. It plugs the Web service's archives (EntireX Workbench file with extension .aar) into Web servers. Typically the Web service clients access the XML/SOAP Listener and send/receive XML/SOAP documents using HTTP/HTTPS. This component was formerly referred to as "XML Servlet".

### Java RPC Server

The EntireX Java RPC Server allows standard RPC clients to communicate with servers written in Java. It works together with the Java Wrapper and calls Java server interface objects. See .

### .NET RPC Server

The .NET RPC Server allows standard RPC clients to communicate with .NET server assemblies. It works together with the .NET Wrapper.

### C RPC Server

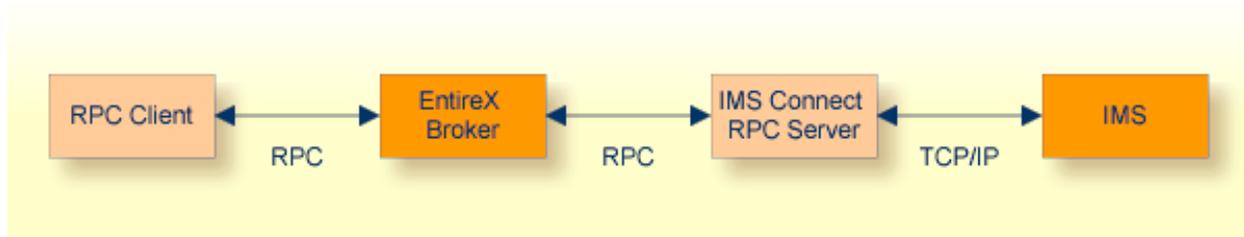
The EntireX C RPC Server allows standard RPC clients to communicate with servers written in C. It works together with the C Wrapper and calls standard libraries (Windows DLLs or UNIX shared objects/libraries).

### Micro Focus RPC Server

The EntireX Micro Focus COBOL RPC Server allows standard RPC clients to communicate with COBOL servers written with Micro Focus COBOL. It works together with the COBOL Wrapper and the IDL Extractor for COBOL.

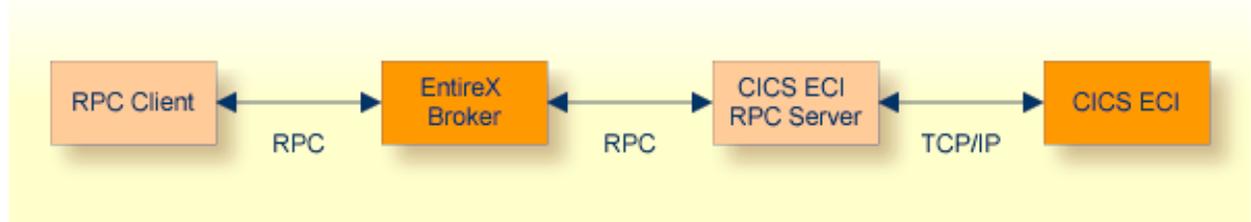
### IMS Connect RPC Server

The EntireX IMS Connect RPC Server allows standard RPC clients to communicate with IMS MPP programs. It works together with the IDL Extractor for COBOL and transforms RPC requests from clients into message to IMS, using IMS Connect.



## CICS ECI RPC Server

The EntireX CICS® ECI RPC Server allows standard RPC clients to communicate with CICS programs running on IBM CICS®. It supports the programming languages COBOL and PL/I and transforms the RPC requests from clients into messages to CICS ECI.



## RPC Server for IBM MQ

The RPC Server for IBM® MQ runs as an RPC server and processes RPC client calls. It is used to send messages to and receive messages from an IBM MQ queue. This means that existing EntireX wrappers can be used for communication with IBM MQ. .

## Listener for IBM MQ

The Listener for IBM® MQ runs as a listener on an IBM MQ queue and passes messages to an RPC server. It is used to send messages received from an IBM MQ queue to an RPC server application. This means that existing RPC servers can be used for communication with IBM MQ. .

## RPC-ACI Bridge

The EntireX RPC-ACI Bridge allows standard RPC clients to communicate with an ACI server. The RPC-ACI Bridge transforms RPC requests from clients into ACI messages. .

## RPC Servers under z/VSE

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### CICS RPC Server

The EntireX z/VSE CICS® RPC Server allows standard RPC clients to communicate with RPC servers on the operating system z/VSE under CICS. It supports the programming language COBOL.

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### Batch RPC Server

The EntireX z/VSE Batch RPC Server allows standard RPC clients to communicate with RPC servers on the operating system z/VSE under Batch. It supports the programming language COBOL and works together with the COBOL Wrapper and IDL Extractor for COBOL. .

## RPC Server under BS2000

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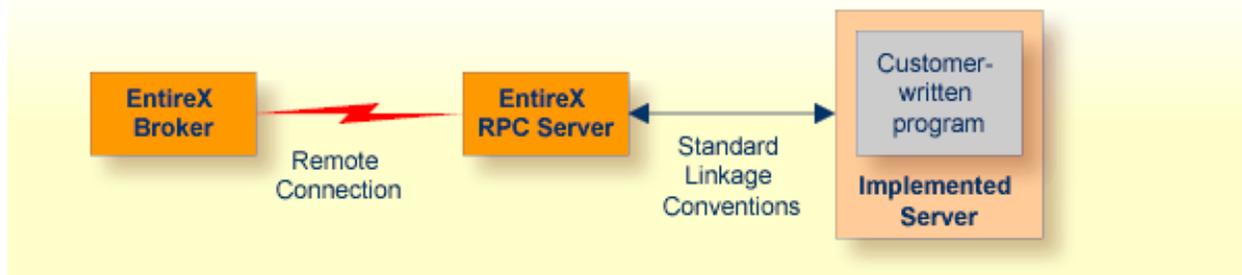
The EntireX BS2000 Batch RPC Server allows standard RPC clients to communicate with RPC servers on the operating system BS2000. It supports the programming languages COBOL and C.

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## RPC Server under IBM i

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The EntireX IBM i RPC Server enables you to call server programs written in all ILE-based languages, for example C, COBOL, RPG.



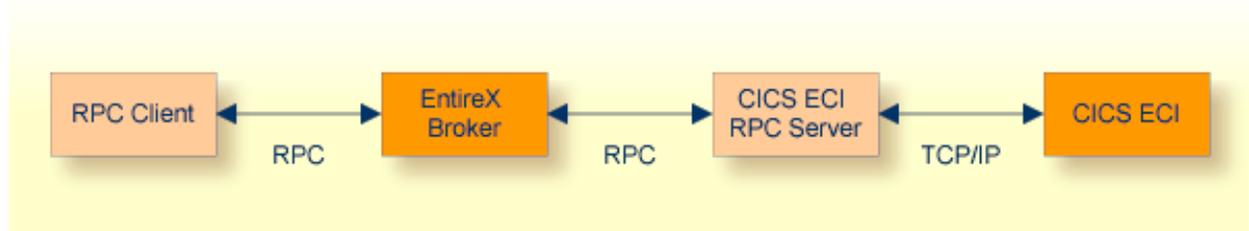
## Zero-footprint Solutions

This section lists RPC servers and listeners with which you can access the mainframe without installing any EntireX component on the mainframe.

- [CICS ECI RPC Server](#)
- [IMS Connect RPC Server](#)
- [RPC Server for IBM MQ](#)
- [Listener for IBM MQ](#)

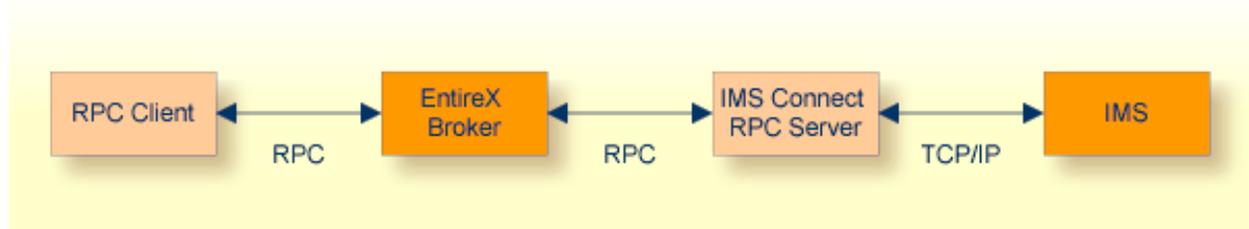
### CICS ECI RPC Server

The EntireX CICS® ECI RPC Server allows standard RPC clients to communicate with CICS programs running on IBM CICS®. It supports the programming languages COBOL and PL/I and transforms the RPC requests from clients into messages to CICS ECI.



### IMS Connect RPC Server

The EntireX IMS Connect RPC Server allows standard RPC clients to communicate with IMS MPP programs. It works together with the IDL Extractor for COBOL and transforms RPC requests from clients into message to IMS, using IMS Connect. 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.



## RPC Server for IBM MQ

The RPC Server for IBM® MQ runs as an RPC server and processes RPC client calls. It is used to send messages to and receive messages from an IBM MQ queue. This means that existing EntireX wrappers can be used for communication with IBM MQ.

## Listener for IBM MQ

The Listener for IBM® MQ runs as a listener on an IBM MQ queue and passes messages to an RPC server. It is used to send messages received from an IBM MQ queue to an RPC server application. This means that existing RPC servers can be used for communication with IBM MQ.

## Installation Information

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### z/OS

Data sets for the EntireX RPC Servers are prefixed with EXP on the installation medium. See *Contents of Mainframe Installation Medium*.

- *Installing the CICS RPC Server*
- *Installing the Batch RPC Server*
- *Installing the IMS RPC Server*
- *Verifying the z/OS Installation*

See also *Installing EntireX Java Components under z/OS UNIX*

### z/VSE

- *Installing the CICS RPC Server*
- *Installing the Batch RPC Server*
- *Verifying the Installation*

## **BS2000**

- *Installing the BS2000 Batch RPC Server*

## **IBM i**

- *Installing the EntireX RPC Server under IBM i*

