

webMethods EntireX

Release Notes

Version 10.9

April 2023

This document applies to webMethods EntireX Version 10.9 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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Document ID: EXX-RELNOTES-109-20230403

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Document Conventions

Convention	Description
Bold	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: Variables for which you must supply values specific to your own situation or environment. New terms the first time they occur in the text. References to other documentation sources.
Monospace font	Identifies: Text you must type in. Messages displayed by the system. 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

Product Documentation

You can find the product documentation on our documentation website at <https://documentation.softwareag.com>.

In addition, you can also access the cloud product documentation via <https://www.software-ag.cloud>. Navigate to the desired product and then, depending on your solution, go to “Developer Center”, “User Center” or “Documentation”.

Product Training

You can find helpful product training material on our Learning Portal at <https://knowledge.softwareag.com>.

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You can collaborate with Software AG experts on our Tech Community website at <https://tech-community.softwareag.com>. From here you can, for example:

- Browse through our vast knowledge base.
- Ask questions and find answers in our discussion forums.
- Get the latest Software AG news and announcements.
- Explore our communities.
- Go to our public GitHub and Docker repositories at <https://github.com/softwareag> and <https://hub.docker.com/publishers/softwareag> and discover additional Software AG resources.

Product Support

Support for Software AG products is provided to licensed customers via our Empower Portal at <https://empower.softwareag.com>. Many services on this portal require that you have an account. If you do not yet have one, you can request it at <https://empower.softwareag.com/register>. Once you have an account, you can, for example:

- Download products, updates and fixes.
- Search the Knowledge Center for technical information and tips.
- Subscribe to early warnings and critical alerts.
- Open and update support incidents.
- Add product feature requests.

Data Protection

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.

2 What's New

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Security Enhancements

■ Broker Administration

EntireX Broker now supports SSL-encrypted JMX communication with authentication when you use the Broker Administration client (etbsrv).

For more information see *Enabling SSL and Authentication for JMX* in the platform-specific Administration documentation.

■ APF Enhancement

APF authorization is no longer required for the EXX library under z/OS. This means that clients and servers no longer have to work with an authorized library. See also *z/OS Installation* under [Other Changes and Enhancements](#).

■ PKCS#12 Support

The SSL parameter `trust_store` specifies the file name of a PKCS#12 certificate store that needs a password for unlocking. This password is set by the new SSL parameter `trust_passwd`. See *SSL/TLS Parameters for SSL Clients* under *SSL/TLS, HTTP(S), and Certificates with EntireX* in the platform-independent Administration documentation.

■ Passphrases in CICS Scenarios

Passphrases are supported using CICS IPIC connections and CICS Socket Listener connections, see [EntireX Adapter Enhancements](#) and [EntireX RPC Server Enhancements](#) in this section.

■ Authorization Rule Enhancements

■ z/OS Support

Authorization rules are now also supported by EntireX on platform z/OS.

■ Changed Behavior

If section `DEFAULTS=AUTHORIZATION-RULES` is defined in the broker attribute file, this has precedence over other security settings:

■ z/OS

Attribute file settings take precedence over RACF and any authorization rules in RACF are ignored.

■ Linux, Windows

Attribute file settings take precedence over LDAP and any authorization rules in the LDAP repository are ignored.

■ Refresh Rules from Attribute File

With new command `REFRESH-RULES`, currently active rules are replaced by new rules from section `AUTHORIZATION-RULES` of the broker attribute file. See *ETBCMD: Executable Command Requests* in the EntireX Broker documentation.

See *Authorization Rules* in the platform-independent Administration documentation.

Increased Platform Support

EntireX now supports the following additional platforms:

- z/OS 2.6
- CICS 6.1
- Linux Red Hat 9 (Intel x86 only)
- Windows 11 and Windows Server 2022
- IMS version 15.2

REST Enhancements

- **CI/CD Scenarios - Creating or Updating Connections using the REST API**
Creating or Updating Connections using the REST API has been simplified, see [EntireX Adapter Enhancements](#) in this section. This new feature is particularly useful with regards to automation of development processes.
- **REST Inbound Scenarios - REST Clients calling COBOL or Natural**
The Designer has been enhanced to allow easier extraction of COBOL or Natural sources and modeling to REST APIs without a request body. These REST APIs use the HTTP method GET and transfer their input parameters as URL parameters. See [API Modeling with the IDL Extractor for COBOL and IDL Extractor for Natural](#).

EntireX Adapter Enhancements

- **New Connection Type CICS IPIC**
The EntireX Adapter has been enhanced with connections to CICS IPIC. This connection enables you to call CICS interface types Channel Container and DFHCOMMAREA programs without installing EntireX components on the mainframe (Zero Footprint). See [Enhanced CICS Support](#) in this section and *Connection Parameters for CICS IPIC Connections* in the EntireX Adapter documentation.

Use a *Secure Autoinstalled IPIC Connection* to check Passphrases, Passwords and PassTickets in the CICS back end.

■ **CICS Socket Listener Connections**

CICS Socket Listener connections have been enhanced to support Passphrases in the CICS back end. See *Connection Parameters for CICS Socket Listener Connections (Adapter Connections) | Creating or Updating Connections using the REST API* in the EntireX Adapter documentation.

■ **Creating or Updating Connections using the REST API**

Handling of sensitive data such as passwords/passphrases has been enhanced. We now strongly recommend using encryption inside a JSON document. This new feature is described under *Password Encryption* in the EntireX Adapter documentation.

■ **Simplified REST APIs**

A new service is provided to create/update simplified REST APIs without a payload, just using the HTTP method GET. See parameter *resourceName* under *Creating or Updating Connections using the REST API* in the EntireX Adapter documentation.

Enhanced CICS Support

■ **Calling CICS interface type Channel Container with Zero Footprint**

Programs with CICS interface type Channel Container can be called without installing EntireX components on the mainframe (Zero Footprint) using

- CICS IPIC Connections with the EntireX Adapter for Integration Server scenarios. See also [EntireX Adapter Enhancements](#).
- RPC Server for CICS IPIC for RPC client scenarios. See also [EntireX RPC Server Enhancements](#).

In addition to Channel Container, DFHCOMMAREA programs are also supported. See *Connecting COBOL* under *Common Integration Scenarios*.

■ **CICS Socket Pool for Broker Stub CICSETB**

The Socket Pool allows you to reuse TCP/IP socket connections across multiple Broker calls. Reusing sockets saves resources and speeds up Broker calls. See *CICS Socket Pool for CICSETB* under *Administering Broker Stubs* in the z/OS Administration documentation.

Command Central Enhancements

■ **c-tree Configuration of EntireX Broker Persistent Store**

You can now use Command Central to configure a persistent store of type c-tree. You can edit maximum size, page size, and path of the c-tree persistent store using the Command Central GUI or command line. See *Configuring a Broker Instance > Persistent Store* using the Command Central GUI | Command Line.

Designer Enhancements

■ API Modeling with the IDL Extractor for COBOL and IDL Extractor for Natural

The COBOL Mapping Editor and Natural Mapping Editor now support API modeling where group data items from the extracted source can be excluded in the extracted IDL (API), but the subordinated data items remain. This allows you to set IDL directions (IN, OUT) correctly, with the following advantages:

- Reduced payload, which means less traffic at runtime.
- The extracted API is simplified. For REST inbound scenarios, this means you can model the REST API more easily to simple HTTP GET methods without any input payload. With the GET method, REST clients transfer level-1 input parameters as simple URL parameters - there is no request body.

More information:

■ IDL Extractor for COBOL

See *Ungroup (Flatten) an IDL Group* for interface type DFHCOMMAREA (In same as Out, In different to Out) | Large Buffer (In same as Out, In different to Out) | Channel Container | IMS BMP | IMS Connect | COBOL Converter (In same as Out, In different to Out).

■ IDL Extractor for Natural

See *Ungroup (Flatten) an IDL Group* in the IDL Extractor for Natural documentation.

■ XML Mapping Editor

In the XML Mapping Editor, the Fault Document generation has been aligned to the SOAP 1.1 specification, that is, the default value generation for `faultActor` is removed.

■ EntireX XML Tester

The EntireX XML Tester supports EntireX parameters defined in WSDL corresponding with XMM or AAR. These parameters are added to the **EntireX Parameters** setting and can be used in a request document or as an HTTP header. The sample generation reflects this setting. See *EntireX XML Tester* in the XML/SOAP Wrapper documentation.

■ Integration Server Wrapper Wizard

With the Integration Server Wrapper Wizard you can now create a new package in the package selection area of the pages **Define Adapter Services for...** and **Define Adapter Listener for...** See *Step 4a: Create a Connection and Related Adapter Services* or *Step 4c: Create a Connection and Related Adapter Listener* in the Integration Server Wrapper documentation depending on the selected connection type.

EntireX RPC Server Enhancements

■ New RPC Server for CICS IPIC

The EntireX RPC Server for CICS® IPIC allows standard RPC clients to communicate with CICS programs running on IBM CICS® without installing EntireX components on the mainframe (Zero Footprint). The CICS interface types Channel Container and DFHCOMMAREA are supported.

See also [Enhanced CICS Support](#) in this section.

Use a *Secure Autoinstalled IPIC Connection* to check Passphrases, Passwords and PassTickets in the CICS back end.

■ RPC Server for CICS Socket Listener

The RPC Server for CICS Socket Listener has been enhanced to support Passphrases in the CICS back end. See *Administering the RPC Server for CICS Socket Listener* using Command Central (GUI | Command Line), or using Local Scripts.

EntireX Broker Enhancements

■ Load Library Enhancements

On z/OS, modules `ETBFATTR` and `USRSEC` have been moved from `EXX109.MVSLoad` to `EXB109.MVSLoad`.

Alias `BROKER31` and module `BROKERZ` are no longer needed and have been removed from `EXX109.MVSLoad`.

■ Stub Trace Enhancements

Broker stubs `NATETB23` and `NATETBZ` now support trace. See *Administering Broker Stubs* in the z/OS Administration documentation.

Other Changes and Enhancements

■ z/OS Installation

Only the EXB load library requires APF authorization. See *Step 4: Authorize and Assign the Broker STEPLIB Data Sets* in the z/OS Installation documentation.

■ Relocation of SAGTOKEN

In previous versions, the SAGTOKEN utility was delivered in the EXX load library. It is now delivered in the EXB load library. You may need to adapt your JCL scripts accordingly. See *SAGTOKEN Utility* under *Administering Broker Stubs* in the z/OS Administration documentation.

■ Relocation of Executables

In previous versions, the following executables were delivered in the EXB load library:

- BCOC, BCOS
- ETBCMD, ETBINFO
- ETBNATTR
- EXXMSG

They are now delivered in the EXX load library. You may need to adapt your JCL scripts accordingly.

■ ICU Support

EntireX Broker now supports ICU 63.2 on platforms z/OS, Linux and Windows.

■ Com-plete Stub COMETB

A member with the name DEFAULT in the EXAENV environment store may contain global variables valid for all users. See *EXAENV Environment Store* under *Administering Broker Stubs* in the z/OS Administration documentation.

■ Maximum Number of Worker Tasks Increased

For broker attributes NUM-WORKER, WORKER-MAX, WORKER-MIN, the maximum number of worker tasks has been increased from 32 to 64. The check of the attributes has been simplified. Only WORKER-MIN greater than WORKER-MAX is rejected.

■ Trace Utility under Windows

The EntireX Trace Utility is now started with `traceutility.bat` (formerly: `exxtracutil.exe`). See *Using the Tool* in the Windows Administration documentation.

3 Dropped Features

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- Features Dropped in Version 10.9 16
- Features Dropped in Version 10.8 16
- Features Dropped in Version 10.7 17
- Features Dropped in Version 10.5 18
- Features Dropped in Version 10.3 18

This chapter lists the features dropped in recent EntireX versions and indicates which features are planned to be dropped in future versions.

For features dropped in earlier EntireX versions see list of PDF files under *Related Literature*.

Features to be Dropped in Future Versions

■ CA Librarian Direct Access using the Extractor Service

Direct access to CA Librarian data sets using the *Extractor Service* will not be supported in the next version.



Note: COBOL customer programs that contain CA Librarian statements are *not* affected. The IDL Extractor for COBOL in the Software AG Designer will still support CA Librarian (-INC) statements. As a workaround, you will be able to import your COBOL sources and copybooks (with CA Librarian statements) into a local extractor environment and perform the extraction locally.

■ IDMS/DC Support

IDMS/DC will not be supported in the next version.

■ AS/400 Platform

EntireX will no longer support the AS/400 platform in a future version.

■ COBOL CICS with DFHCOMMAREA Large Buffer Interface Server Programs

The programming model CICS with DFHCOMMAREA Large Buffer Interface for COBOL CICS server will be dropped in a future version. For scenarios where CICS data is longer than 32K, use the programming model CICS with Channel Container Calling Convention (Extractor | Wrapper), an IBM CICS standard.

See also Common Integration Scenarios *Calling COBOL from Integration Server | Calling COBOL from REST*.

■ SMA-based installation

SMA-based installation will be retired in a future EntireX version. The new procedure-based installation will

- allow non-SMA procedure-level installation
- provide a new simplified installation in addition
- exploit browser-based z/OSMF workflows
- address generational change issues
- align our version numbers with the webMethods Suite release again

- **CentraSite Support**

EntireX CentraSite Integration will no longer be supported in the next version of EntireX.

- **UDDI Registry Support**

The following functionality will no longer be supported in the next version of EntireX:

- Registering a Web Service in a UDDI Registry.
- Importing from a UDDI Registry with the IDL Extractor for WSDL.

- **DCOM Wrapper**

The EntireX DCOM Wrapper will no longer be supported in the next version.

- **Broker ActiveX Control**

EntireX Broker ActiveX Control will no longer be supported in the next version.

- **Platform Consolidation - BS2000**

Adabas and Natural are consolidating and streamlining platform support. With EntireX the platform BS2000 is affected by retirements. The final version to support BS2000 will be EntireX 10.3 with the following retirement schedule:

BS2000 Version	End of Maintenance (EOM)	End of Sustained Support (EOSS)
BS2000 11.0 FTS	December 31, 2023	December 31, 2024
BS2000 10.0 FTS	March 31, 2022	March 31, 2022

- **SVM Files at Runtime in RPC Servers**

Support for server-side mapping files (SVM) in the EntireX RPC Servers for CICS ECI, IMS Connect, CICS, Batch and IMS, together with the Deployment Wizard, will be dropped in a future version. We strongly recommend using client-side server mapping files (CVM). To migrate server-side mapping files (SVM) to client-side server mapping files (CVM), see *Migrating Server Mapping Files* under *Server Mapping Files for COBOL* in the Designer documentation for prerequisites and steps.

- **Authorization Rules in LDAP Repository**

Administering Authorization Rules using an LDAP Repository will no longer be supported from the next version. Use the Broker attribute file instead. See *Authorization Rules* in the platform-independent Administration documentation and *Migrating Authorization Rules* in the General Installation documentation.

- **Microsoft Visual Studio Wizard for EntireX .NET Wrapper**

The .NET Wrapper Wizard will no longer be supported in the next version of EntireX.



Note: The .NET Wrapper is still supported in the Software AG Designer. .

■ **RPC Server for XML/SOAP in the Software AG Runtime**

Support for the EntireX RPC Server for XML/SOAP in the Software AG Runtime will be dropped in a future version.

Features Dropped in Version 10.9

■ **COBOL Server for z/VSE Batch in Software AG Designer**

The Designer tools IDL Extractor for COBOL and COBOL Wrapper no longer support z/VSE Batch Server. (The EntireX RPC Server for z/VSE Batch was dropped in version 10.7.)

■ **RUN-MODE**

Broker-specific attribute `RUN-MODE` is no longer supported.

Features Dropped in Version 10.8

■ **Persistent Store Version less than 5**

Persistent Stores with `PSTORE-VERSION` less than 5 are no longer supported.



Note: To change the value of `PSTORE-VERSION`, the persistent store must be empty (all units of work must be consumed). If the `PSTORE` is not empty, the start of the Broker with a changed `PSTORE-VERSION` may fail with error ETBE0741 or ETBM0745.

■ **EntireX RPC Server for IBM i**

As announced in EntireX Version 10.1, the EntireX RPC Server for IBM i of EntireX version 7.1.1 running under IBM i (AS/400) is no longer supported.

However, for technical reasons the RPC server is still included in the package.

■ For *inbound* scenarios to AS/400, use either the EntireX Adapter or the *EntireX RPC Server for IBM® AS/400®*. See *Connection Parameters for AS/400 Connections* in the EntireX Adapter documentation.

■ For *outbound* scenarios, continue using the respective broker stub.

■ **Building a Docker Image using Command Central**

It is no longer possible to build an EntireX Docker image using Command Central. See *Building an EntireX Docker Image* for EntireX Broker | RPC Server for Java | RPC Server for XML/SOAP for how to build a Docker image using scripts provided by EntireX.

■ **Support of AIX und Sun Solaris SPARC**

The platforms AIX and Sun Solaris SPARC are no longer supported.

- **Microsoft Visual Studio 2015**
Visual Studio 2015 is no longer supported. Use Visual Studio 2019, which is now supported in EntireX 10.8, or 2017 instead.
- **Persistent Store Version less than 5**
Persistent Stores with `PSTORE-VERSION` less than 5 are no longer supported.
- **CentOS**
CentOS is no longer supported.

Features Dropped in Version 10.7

- **Micro Focus COBOL**
EntireX no longer supports Micro Focus COBOL.
- **EntireX Broker and RPC Servers under z/VSE**
Support for the following EntireX components will end on 31 October 2020 for all EntireX versions (including version 9.6, the last released version on z/VSE):
 - **EntireX Broker under z/VSE**
We strongly recommend using EntireX Broker on a Linux or Windows platform.
 - **EntireX RPC Server for z/VSE CICS®**
We strongly recommend using the *EntireX RPC Server for CICS® Socket Listener*. See also *Connection Parameters for CICS Socket Listener Connections* in the EntireX Adapter documentation.
 - **EntireX RPC Server for z/VSE Batch**
No replacement.
- **SVM Files at Design Time in Software AG Designer**
Server-side mapping files (SVM) in the Software AG Designer are no longer supported. SVM files can no longer be created by the IDL Extractor for COBOL and by the COBOL Wrapper.

We strongly recommend using client-side server mapping files (CVM). To migrate server-side mapping files (SVM) to client-side server mapping files (CVM), see *Migrating Server Mapping Files* under *Server Mapping Files for COBOL* in the Designer documentation for prerequisites and steps.
- **Direct SSL/TLS Support for Broker under z/OS**
Direct SSL/TLS support (using GSK) inside the Broker under z/OS is no longer supported. We strongly recommend using IBM's Application Transparent Transport Layer Security (AT-TLS) instead. See the following sections in the z/OS Administration documentation:
 - *Using IBM's Application Transparent Transport Layer Security (AT-TLS)*
 - *Migration from Broker's Direct SSL/TLS Support to AT-TLS*

■ **AIX Support**

AIX version 7.1 is no longer supported. EntireX still supports AIX version 7.2.

Features Dropped in Version 10.5

■ **Micro Focus COBOL**

Software AG is discontinuing the support of Micro Focus COBOL on the platforms Windows and Linux because Micro Focus no longer supports Micro Focus Server Express and Net Express on these platforms.

Micro Focus COBOL is still supported on Solaris and AIX, and EntireX still supports Micro Focus COBOL on these platforms.

■ **HP-UX**

Software AG no longer supports HP-UX.

Features Dropped in Version 10.3

■ The EntireX RPC Server for IBM i of EntireX version 7.1.1 running under IBM i (AS/400) is no longer supported. We strongly recommend using the new *RPC Server for AS/400* or the EntireX Adapter. See also *Connection Parameters for AS/400 Connections*.

■ For EntireX Java ACI, the obsolete and deprecated methods `getEnvironment()`, `setEnvironment(String)`, `useCodePage()` and `useCodePage(Boolean)` of the Java class `BrokerService` have been removed.

4 Platform Coverage

Detailed information regarding supported operating system versions, General Availability (GA), platform retirement, End of Maintenance (EOM), and End of Sustained Support (EOSS) dates for your products can be found under *Products & Documentation > Product Version Availability* on Software AG's Empower website <https://empower.softwareag.com>.



Note: Software AG provides EntireX support for the operating/teleprocessing system versions supported by their respective manufacturers. In general, when an operating/teleprocessing system provider stops supporting a version of an operating/teleprocessing system, Software AG will stop supporting that operating/teleprocessing system version.

	z/OS	Linux	Windows (64-bit)	z/VSE	BS2000	IBM i
EntireX Broker	x ⁽³⁾	x	x		x	
Designer		x ⁽⁶⁾	x			
EntireX Adapter		x ⁽⁷⁾	x			
EntireX RPC						
RPC Server for Batch	x				x	
RPC Server for CICS	x					
RPC Server for IMS	x					
COBOL Server/Client	x			x	x	x
PL/I Server/Client	x					
RPC Server/Client for C	x ⁽⁸⁾	x	x		x ⁽⁴⁾	
RPC Server/Client for Java	x ⁽²⁾	x	x			
RPC Server/Client for XML/SOAP	x ⁽²⁾	x	x			
RPC Server for IBM MQ	x ⁽²⁾	x	x			
Listener for IBM MQ	x ⁽²⁾	x	x			
DCOM RPC Client			x ⁽⁵⁾			

	z/OS	Linux	Windows (64-bit)	z/VSE	BS2000	IBM i
RPC Server/Client for .NET			x ⁽¹⁾			
RPC-ACI Bridge	x ⁽²⁾	x	x			
RPC Server for CICS IPIC	x ⁽²⁾	x	x			
RPC Server for CICS ECI	x ⁽²⁾	x	x			
RPC Server for CICS Socket Listener	x ⁽²⁾	x	x			
RPC Server for IMS Connect	x ⁽²⁾	x	x			
RPC Server for AS/400		x	x			
EntireX ACI						
Broker Stubs	x	x	x	x	x	x
Java ACI	x	x	x			
ActiveX Control/TOR Editor			x			
Command Central		x	x			
Broker Agent	x	x	x			
Attach Manager		x	x			
Application Monitoring Data Collector		x	x			

In accordance with the license agreement you concluded with Software AG, your EntireX license includes either full functionality or specific EntireX components.

Notes:

- ⁽¹⁾ Microsoft Visual Studio Wizard for EntireX .NET Wrapper is provided for 32 and 64-bit applications on Windows 64-bit operating systems.
- ⁽²⁾ These components are included as a TAR file in the z/OS installation kit and must be copied to your z/OS UNIX environment. See *Installing EntireX Java Components under z/OS UNIX*.
- ⁽³⁾ Batch only. “Broker” here refers to the broker kernel, also known as broker nucleus. In all versions of EntireX under z/OS, the EntireX broker kernel runs in batch mode only, either as a job or a started task. It does not run under TSO, CICS, Com-plete or any other online environment.
- ⁽⁴⁾ Only servers are supported.
- ⁽⁵⁾ 32-bit application that runs on 64-bit platforms.
- ⁽⁶⁾ For list of supported Linux platforms see System Requirements for Software AG Products (Adabas and Natural, Apama, Integration & API) under Software AG Suite & Cross-Product Guides.
- ⁽⁷⁾ EntireX Adapter supports all platforms supported by the respective version of the Integration Server with the exception of the Mac OS platform.
- ⁽⁸⁾ Only clients are supported.

5 Prerequisites

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General Prerequisites

- Java 8 for all Java-based components.
- EntireX Java ACI and Java RPC clients support Java 8 and 11.
- For other Software AG products if not stated otherwise: the versions that are still supported and that were available when this version of EntireX was released.
- Software AG supports third-party technology, for example operating system versions, products or functionality, only for as long as this technology is officially supported by the third-party vendor.

z/OS Prerequisites



Note: The supported versions of CICS and IMS are listed under *IBM Supported Platforms* on the Software AG Corporate Website.

Component	Prerequisites
EntireX Broker with Transport Method NET	■ Adabas SVC version of the highest Adabas/WAL version on this platform in your environment. If in doubt, see your Adabas documentation regarding SVC compatibility.
COBOL RPC Client and Server	■ To compile the sources generated by the Designer component COBOL Wrapper: IBM Enterprise COBOL for z/OS 6.2 or 6.3.
PL/I RPC Client and Server	■ To compile the sources generated by the Designer component PL/I Wrapper: Enterprise PL/I for z/OS.
RPC Server and Listener for IBM® MQ	■ IBM® MQ 9.0 or 9.1.
Software AG Licensing	■ MLC version 1.3.6 or above. See <i>Software AG Licensing Messages</i> .

Linux Prerequisites



Note: As a general prerequisite on Linux platform Red Hat 8 (Intel and zLinux), the package `libns1` must be installed before you install EntireX. Additionally, if you want to link your own C applications with EntireX libraries, you need to install the package:`glibc-devel`.

Component	Prerequisites
RPC Server and Listener for IBM® MQ	<ul style="list-style-type: none"> ■ IBM® MQ 9.0, 9.1 or 9.2.
RPC Server for AS/400	<ul style="list-style-type: none"> ■ The IBM ToolBox for Java (JTOpen) is required and has to be downloaded from https://sourceforge.net/projects/jt400/. We recommend using one of the latest available versions. For the list of supported IBM i versions, consult the readme of the JTOpen package. See also <i>Post-installation Steps</i>.

Windows Prerequisites

Component	Prerequisites
C Wrapper	<ul style="list-style-type: none"> ■ For target platform Windows: Microsoft Visual Studio 2017 and 2019.
DCOM Wrapper	<ul style="list-style-type: none"> ■ C++ Compiler from Microsoft Visual Studio 2017 and 2019. ■ For generated interface objects: corresponding Microsoft Visual Studio .NET C/C++ runtime environment.
.NET Wrapper	<ul style="list-style-type: none"> ■ Any .NET Framework supporting .NET Common Language Runtime (CLR) version 4.
Microsoft Visual Studio Wizard for .NET Wrapper	<ul style="list-style-type: none"> ■ Microsoft Visual Studio 2017 or 2019.
RPC Server and Listener for IBM® MQ	<ul style="list-style-type: none"> ■ IBM® MQ 9.0, 9.1 or 9.2.
RPC Server for AS/400	<ul style="list-style-type: none"> ■ The IBM ToolBox for Java (JTOpen) is required and has to be downloaded from https://sourceforge.net/projects/jt400/. We recommend using one of the latest available versions. For the list of supported IBM i versions, consult the readme of the JTOpen package. See also <i>Post-installation Steps</i>.

BS2000 Prerequisites

Component/Feature	Prerequisites
COBOL Wrapper	■ To compile the sources generated by the Designer component COBOL Wrapper: the COBOL2000 compiler on BS2000.
C Wrapper	■ To compile the applications generated by the Designer component C Wrapper: any ILCS-enabled C/C++ compiler on BS2000.

z/VSE Prerequisites



Note: The supported versions of CICS are listed under *IBM Supported Platforms* on the Software AG Corporate Website.

Component	Prerequisites
COBOL Wrapper	■ To compile the sources generated by the Designer component COBOL Wrapper: IBM COBOL for VSE/ESA 1.1.1.

Application Server Prerequisites

The Web application components of EntireX (Listener for XML/SOAP, XML/SOAP Runtime) are supported on the following platforms:

- Software AG Runtime of the same version
- WebSphere Liberty Server 21 (Java 11 Extension required)
- WebSphere Liberty Server 22 (Java 11 Extension required)
- Tomcat 9.0
- Tomcat 8.5

Supported LDAP Servers

For supported LDAP servers, see the *Software AG Security eXtensions Administrator's Guide*.

EntireX Adapter Prerequisites

Supported Versions of Integration Server and Designer

The EntireX Adapter supports Integration Server version 10.11 or 10.15. For operating systems supported by the Integration Server, see <https://empower.softwareag.com/Products/Documentation/default.asp> under "webMethods Product Suite" > "Integration Server" > "System Requirements" (pdf). For design time, Software AG Designer version 10.15 must be installed.

Supported Versions of CICS and IMS

For the connection types CICS IPIC, CICS ECI, CICS Socket Listener and IMS Connect, the supported versions of CICS and IMS are listed under [IBM Supported Platforms](#) on the Software AG Corporate Website.

Prerequisite for using the AS/400 Connection Type

The IBM ToolBox for Java (JTOpen) is required and has to be downloaded from <https://sourceforge.net/projects/jt400/>. We recommend using one of the latest available versions. For the list of supported IBM i versions, consult the readme of the JTOpen package. See also *Post-installation Steps for AS/400*.

6 What was New in Version 10.8

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Security Enhancements

■ Default Password Handling

For greater security, default password handling has been enhanced for Software AG products that are installed with the SAG Installer. On the **Administrator Password** panel, enter a default product administrator password for the products you are installing, and choose whether to require the password to be changed on first product login. The password must be at least 8 characters long. The maximum number of consecutive identical characters (for example "aaa") or sequential characters (for example "123") is 3.



Notes:

1. If you are migrating from a previous install base, the password of this previous version applies, regardless of what you specify in the **Administrator Password** panel. We recommend you change this password as soon as possible.
2. If you are planning to use the deployment functionality of the Web Services Stack for EntireX Web Services in the Designer, we strongly recommend adopting the new password in the Web Services Stack preferences of the Designer. (**Window > Preferences > Software AG > Web Services Stack > Deployment**). See *Deploying Web Services*.

■ Encrypted Password for ETBINFO and ETBCMD

Security for command-line utilities ETBINFO and ETBCMD under Linux and Windows has been enhanced. Instead of specifying a cleartext password when you call a secure broker, you can now encrypt a password and store this in a file. See *Using an Encrypted Password for ETBINFO (Linux | Windows) and ETBCMD (Linux | Windows)*.

■ Encrypted Password for EntireX Monitoring Scripts

Password encryption is also available for EntireX monitoring scripts. See:

- *Using an Encrypted Password* in section *Introduction* under *EntireX Monitoring Scripts*
- *Monitoring Broker* under *EntireX Monitoring Scripts* for a sample script using an encrypted password
- Note under *Default Handling* under *EntireX Monitoring Scripts* if your default settings file was created with a previous version of EntireX that did not support password encryption.

■ PassTicket Support

PassTickets are now supported for connections to CICS ECI and IMS Connect with the EntireX Adapter and the respective RPC servers. See [CICS ECI and IMS Connect Connections Support PassTickets](#) under *EntireX Adapter Enhancements*.

See also [EntireX RPC Server Enhancements](#).

EntireX Adapter Enhancements

- **CICS ECI and IMS Connect Connections Support PassTickets**

Additional fields are provided to define an application name and a secured signon key. This means you can use a RACF PassTicket instead of a password. See:

- *Connection Parameters for Connections to IMS Connect* and
- *Connection Parameters for CICS ECI Connections* in the EntireX Adapter documentation

Enhanced CICS Support

See [EntireX Adapter Enhancements](#) above.

Command Central Enhancements

- **Administrating EntireX Mainframe Broker Monitoring**

You can now administer EntireX Mainframe Broker Monitoring in Command Central. You can enable and disable the monitoring of the real mainframe broker (z/OS and BS2000) from within Command Central running under Linux or Windows. This feature is particularly useful for major configuration changes in the mainframe environment, for example changing the user password. If you did not disable monitoring you would encounter a security error stating that the mainframe proxy is not able to log in to the real mainframe broker. See:

- *Introduction to EntireX Mainframe Broker Monitoring* in the platform-independent Administration documentation
- *Introduction to Administering EntireX Mainframe Broker Monitoring* using the Command Central GUI | Command Line

- **User Transaction ID Field for CICS Socket Listener**

User Transaction ID has been added as an additional field for CICS Socket Listener. For more information on controlling user transaction ID via Command Central, see:

- *Administering the RPC Server for CICS Socket Listener with the Command Central GUI*
- *Administering the RPC Server for CICS Socket Listener with the Command Central Command Line*

- **Location of EntireX Broker Trace File**

You can now change the directory of the EntireX Broker trace file. For more information see new parameter *Trace Location* under *Administering the EntireX Broker* using the Command Central GUI | Command Line.

Designer Enhancements

■ **New Default Interface Type for IDL Extractor for COBOL**

'CICS with Standard Linkage Calling Convention' is now the default client interface type for the IDL Extractor for COBOL. The previous default, 'CICS with DFHCOMMAREA Calling Convention' has multiple restrictions regarding API calls, for example

- maximum length 32 KB
- no unlimited unbounded array
- no long user ID/password

These restrictions do not apply to the new default.

■ **Supported Microsoft Visual Studio Versions**

C Wrapper and DCOM Wrapper now support Visual Studio 2019 in addition to 2017. Visual Studio 2015 is no longer supported.

- EntireX now supports Eclipse version 4.19 provided by the webMethods suite.

EntireX RPC Server Enhancements

■ **RPC Server for IMS Connect supports RACF PassTicket**

Additional fields are provided to define a secured signon key. With the application name and the newly provided secured signon key, you can now use a RACF PassTicket instead of password. See *Configuring an RPC Server Instance > IMS Connect* using the Command Central GUI | Command Line.

■ **RPC Server for CICS ECI supports RACF PassTicket**

Additional fields are provided to define a secured signon key. With the application name and the newly provided secured signon key, you can now use a RACF PassTicket instead of password. See *Configuring the CICS ECI Side*.

Documentation Enhancements

■ **Monitoring**

A new section introduces the various monitoring approaches provided by EntireX. It also shows common scenarios using these approaches. Links are provided to other sections of the EntireX documentation, where these approaches are described in greater detail. See *Monitoring EntireX*.

Other Changes and Enhancements

- **PSTORE-TYPE=CTREE**

c-tree is now known as FairCom DB. EntireX version 10.8 uses FairCom DB v12.0.1.

This new version is not compatible with the old version 11.6.1. This means that when you upgrade to EntireX 10.8 you will need to restart with `PSTORE=COLD`. See `PSTORE` under *Broker-specific Broker Attributes*.

- **Trace Utility**

Two additional columns **Pid** and **Tid** have been introduced. They display the process ID and the thread ID of each request to the broker.

- **ETBINFO**

New profiles are provided for command-line utility `ETBINFO`. These produce a more structured output that is easier to understand. See *Table of Options and Profiles (z/OS | Linux | Windows)*.

7 What was New in Version 10.7

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Increased Platform Support

■ Intel Linux

EntireX now supports SuSE Linux ES 15 and Red Hat 8 for Intel Linux platforms.

■ zLinux

EntireX now supports Red Hat 8 under zLinux.



Note: For Linux platform Red Hat 8 (Intel and zLinux) you need to install the package

`libns1`, which is not included in the default installation.

Additionally, if you want to link your own C applications with EntireX libraries, you need to install package `glibc-devel`.

See also [Linux Prerequisites](#).

REST Enhancements

■ Generation of Adapter Assets via REST

See [EntireX Adapter Enhancements](#) below.

■ API Enablement

Users of webMethods Integration Server version 10.7 will benefit from the following Integration Server enhancements:

■ For *outbound* mainframe REST scenarios *Calling REST from COBOL* | *Calling REST from Natural*:

- you can select operations while importing a Swagger as a consumer when you create the REST Application Descriptor
- additional AUTH support for Swagger consumers where you can now use `API_KEY`, `OAuth` etc.

■ For *inbound* mainframe REST scenarios *Calling COBOL from REST* | *Calling Natural from REST*:

- support for additional HTTP methods such as `HEAD` in the created REST resource
- support of OpenAPI 3.0 as provider when you create a REST Application Descriptor

For more information refer to your Integration Server 10.7 Release Notes and Documentation.

Enhanced CICS Support

■ CICS Socket Listener User Transaction Support

With User Transaction Support, RPC requests run in separate CICS tasks, the user transactions. This, together with a customized name of the user transaction, is useful for accounting purposes.

For more information on running CICS programs in a separate user transaction, see:

- *EntireX CICS® Socket Listener* in the *z/OS | z/VSE Installation* documentation
- *Configuring the CICS Socket Listener Side* in the *RPC Server for CICS Socket Listener* documentation
- *Connection Parameters for CICS Socket Listener Connections* in the *EntireX Adapter* documentation

EntireX Adapter Enhancements

■ Generation of Adapter Assets via REST

A REST API is now provided for the following actions:

- Creating adapter connections, adapter services, and adapter listeners
- Updating adapter connections, adapter services, and adapter listeners
- Extracting IDL
- Extracting IDL and creating a listener connection service

See *Extracting IDL using the REST API* and *Creating or Updating Connections using the REST API* in the *EntireX Adapter* documentation.

■ FIPS-140 Compliant SSL Communication

EntireX Adapter now supports FIPS-140 compliant SSL communication. See *FIPS Mode* under *Configuring Direct RPC*.

Designer Enhancements

- In the **EntireX** perspective, the deprecated **Navigator** view has been replaced by the **Project Explorer** view.

EntireX RPC Server Enhancements

- **FIPS-140 Compliant SSL Communication**

See [Security Enhancements](#) below.

Security Enhancements

- **Authentication using SSL Client Certificates**

EntireX Broker on z/OS supports authentication of participants with their SSL certificate. See *Using SSL Certificates for Authentication* in the EntireX Security documentation for z/OS. See also [SSL/TLS Changes](#) under *Other Changes and Enhancements* below.

- **FIPS-140 Compliant SSL Communication for RPC Servers**

Parameter `fips_mode` has been added to enable FIPS-140 compliant SSL communication.

Available for:

- EntireX RPC Server for CICS ECI | CICS Socket Listener | IBM MQ | IMS Connect | Java | XML/SOAP | AS/400
- RPC-ACI Bridge
- Listener for IBM MQ | Listener for XML/SOAP
- EntireX Java clients

See *SSL/TLS Parameters for SSL Clients* under *SSL/TLS, HTTP(S), and Certificates with EntireX* in the platform-independent Administration documentation.

The following EntireX RPC servers can be administered using Command Central. Here you can specify parameter `FIPS-140 mode` under Broker Configuration:

CICS Socket Listener | IBM MQ | IMS Connect | Java | XML/SOAP.

The corresponding parameter `BrokerFipsMode` is also provided if you are using the Command Central command-line interface.

- **FIPS-140 Compliant SSL Communication for EntireX Adapter**

EntireX Adapter now supports FIPS-140 compliant SSL communication. See `FIPS Mode` under *Configuring Direct RPC*.

- **FIPS-140 Compliant SSL Communication on z/OS**

All components on z/OS can be FIPS-enabled, see *Achieving FIPS Compliance* in the z/OS Administration documentation.

EntireX Broker Enhancements

■ Authentication using SSL Client Certificates

EntireX Broker on z/OS supports authentication of participants with their SSL certificate. See new attribute `CERT-AUTHENTICATION` below and *Using SSL Certificates for Authentication* in the EntireX Security documentation for z/OS.

■ New Attributes

The following new attributes can be defined:

- `CERT-AUTHENTICATION`. See also *Using SSL Certificates for Authentication* in the EntireX Security documentation for z/OS.
- `POSTPONED-QUEUE`. Enable or disable the postponed queue. See also *Postponing Units of Work* under *Using Persistence and Units of Work* in the platform-independent Administration documentation.

■ New CIS Version 12

- The new CIS interface version 12 enables you to shut down participants by using process ID (`JOB-ID` on z/OS) and host name. See field descriptions for `HOST-NAME` and `PROCESS-ID` and also `PARTICIPANT SHUTDOWN HOST-NAME` and `PROCESS-ID` under *Broker CIS Data Structures* in the ACI Programming documentation.
- New field `CREATE-TIME-CL32` replaces deprecated field `CREATE-TIME`, which can only handle timestamps up to January 2038. See `CREATE-TIME-CL32` under *Information Reply Structures*.
- New CIS Information Service field `VERIFIED-USER-ID` returns the `USER-ID` verified by the security system. Under z/OS and using SSL certificates for authentication, this is the `USER-ID` corresponding to SSL certificate of the participant. See `VERIFIED-USER-ID` under *Information Reply Structures*.



Note: `PROCESS-ID` and `THREAD-ID` are only available with Broker kernel and Broker stub of EntireX version 10.7 and above. Java clients and Java servers of EntireX version 10.7 do not support `PROCESS-ID` and `THREAD-ID`.

■ User Request Handling

With new operating commands `FREEZE` and `RUN` you can freeze and resume user request processing in Broker. See Participant-specific Commands under *Operator Commands* in the z/OS Administration documentation.

Documentation Enhancements

■ Monitoring

A new section introduces the various monitoring approaches provided by EntireX. It also shows common scenarios using these approaches. Links are provided to other sections of the EntireX documentation, where these approaches are described in greater detail. See *Monitoring EntireX*.

Other Changes and Enhancements

■ Enhanced Socket Pool Management for Broker Stubs

With new environment variables `ETB_POOLSIZE` and `ETB_POOLTIMEOUT` you can configure the size of the socket pool and define the maximum wait time for a free TCP/IP connection. See *Configuring the Socket Pool* under Linux | Windows in the platform-specific *Administering Broker Stubs* documentation.

■ Additional Special Character Support

- The following special characters are now additionally supported in IDL group and parameter names: `ø`, `Ø`, `å`, `Å`. See *Rules for Coding Group and Parameter Names* under *Software AG IDL File* in the IDL Editor documentation in the IDL Editor documentation.
- If you are extracting from a Natural RPC environment, you can additionally replace special characters `ø`, `Ø`, `å`, `Å` in Natural parameter names with underscores. See *Extracting IDL Parameter Names* in the IDL Extractor for Natural documentation.

■ SSL/TLS Changes

To make sure that each SSL participant (thread) presents a valid certificate for authentication using SSL client certificates, existing SSL functionality has changed as follows:

- The ACI function `SETSSLPARMS` no longer applies to all threads. Instead, this function needs to be performed for each thread to create an SSL connection to the broker. This is relevant only if you are using native ACI programming in combination with threads.
- When you use SSL transport, socket pooling (environment variable `ETB_SOCKETPOOL`) is ignored.



Note: These changes apply to all platforms where the broker stub directly supports SSL/TLS transport. See *Transport: Broker Stubs and APIs*.

■ Trace Utility

An additional column **Certuid** has been introduced between columns **Userid** and **Token**. It displays the user ID to which the SSL certificate is assigned. This applies only to RACF under z/OS.

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Increased Platform Support

- EntireX now supports Microsoft Windows Server 2019.
- EntireX Java ACI and Java RPC clients now support both Java 8 and Java 11.

REST Enhancements

EntireX now supports scenarios where you have a REST API and want to call this from a COBOL or Natural application:

- *Calling REST from COBOL*
- *Calling REST from Natural*

EntireX Adapter Enhancements

- Extraction of REST Consumers (introduced with Integration Server 10.5) has been added. Additional object wrapper types and default values for service input parameters are now supported. See *Integration Server Data Types to IDL Mapping* in the EntireX Adapter documentation and also [REST Enhancements](#) below.
- It is now possible to extract services with field names containing special characters such as ":" and "*". Extraction of Web Service Connectors is now supported.
- The Application Monitoring Data Collector is now available as a component running inside an Integration Server using the EntireX Adapter. See the separate Application Monitoring documentation.
- Parameters `messageID` and `correlationID` have been added for EntireX Adapter services. See *Using Adapter Services*.
- The log files created by the Adapter (`wmentirex*.log`) are now written using the character set UTF-8 (instead of the default character set).
- It is now possible to use both object wrapper types and string types with a content type in the same program. At runtime the listener inspects the input signature of the service to be called in order to determine the data type required by the Integration Server.

Application Monitoring Enhancements

- **Application Monitoring Data Collector**
The Application Monitoring Data Collector is now available as a component running inside an Integration Server using the EntireX Adapter. See *Application Monitoring*.
- **Dynamic Configuration**
Dynamic configuration of Application Monitoring is now possible while the EntireX Broker is running.
- **New KPIs**
The message ID and correlation ID of a message are now available as Application Monitoring KPIs. See *KPI Definitions for Application Monitoring*.
- **New Command and Information Services (CIS) Version 11**
 - CIS version 11 provides commands to enable/disable the Application Monitoring feature and to define the collector Broker ID for Application Monitoring. See `APPMON-OFF`, `APPMON-ON` and `SET-COLLECTOR` under *Broker Command and Information Services* in the EntireX Broker documentation.
 - The information reply structure `BROKER` was enhanced to return the current status of Application Monitoring and the collector Broker ID. See `BROKER-OBJECT (Struct INFO_BKR)`.
- **New Operator Commands for Broker**
Broker supports operator commands `DISPLAY APPMON`, `APPMON=NO|YES` and `COLLECTOR=host:port`. Currently for z/OS only.
- **Changing Data Collector Settings Dynamically**
Using Command Central you can now change Data Collector settings dynamically. The change is effective immediately; there is no need to restart the broker. See *Changing the Application Monitoring Settings Dynamically* using the Command Central GUI | Command Line.

Command Central Enhancements

- **Setting the Margins and Max. Values of Monitoring KPIs**
The setting of margins and max. values used for displaying EntireX Broker KPIs has been reworked. See *Monitoring KPIs* using the Command Central GUI | Command Line.
- **Displaying Broker Statistics**
You can now display the current statistics of a running EntireX Broker. See *Displaying the Statistics* using the Command Central GUI | Command Line.

Broker Administration Service Enhancements

The Broker Administration service (Linux and Windows) has been replaced by a more lightweight implementation. The registration, name and usage of the service remains the same.

- The new Broker Administration Service uses one port instead of a TCP and an SSL port.
 - You can specify the port during installation. Make sure the port is unique. See *Ensuring Unique Port Numbers* under *Port Numbers in EntireX* in the EntireX installation documentation.
 - Alternatively, you can change the port after installation. See *Configuring the Broker Administration Service* under Linux | Windows.
- The former executables `defaultbroker[.exe]` and `etbsrv[.exe]` have been replaced by scripts with the same name, that is, `defaultbroker[.bat]` and `etbsrv[.bat]`. The usage is unchanged.
- The broker autostart handling is now defined in the corresponding attribute file. See `AUTOSTART` under *Broker-specific Broker Attributes*.
- The ports of the default broker are now also defined in the attribute file `ETB001.atr`, and not in the config file `entirex.config` as in previous versions.

Designer Enhancements

- **IDL Extractor for Integration Server**
 - You can now extract a subset of services from the desired package. See *Step 3: Select the Integration Server Package to Extract* under *Using the IDL Extractor for Integration Server*.
 - It is now possible to extract services with field names containing special characters such as `“:”` and `“*”`. Extraction of Web Service Connectors is now supported.
- **Testing Tool for RPC Server for XML/SOAP**

A pop-up message is issued if the EntireX XML Tester is about to communicate with the RPC Server for XML/SOAP. In this case we recommend using the *EntireX IDL Tester* instead.

EntireX RPC Server Enhancements

- **Additional ping Command for RPC Servers**

An additional `ping` command is now available for all EntireX RPC servers to test the server's availability. You do not need a running Broker to execute this command. For example, see *Pinging the RPC Server* in the RPC Server for Java documentation. This is particularly useful in a high availability cluster context.



Note: The `ping` command via `ETBINFO` of earlier EntireX versions is still available.

Broker Stub Enhancements

- New broker stub `ARFETB` for exclusive use by Adabas Replication Services. This stub is zIIP-eligible.
- New broker stub `NATETBZ` for exclusive use by Natural RPC Server. This stub is zIIP-eligible.
- Broker stub `CICSETB` no longer needs module `EXAMEM`.

Documentation Enhancements

- **New Scenarios**

- *Calling REST from COBOL*
- *Calling REST from Natural*

- **Container Orchestration**

In a high availability context, container orchestration allows automated deployment, scaling and management of EntireX Brokers and EntireX RPC Servers running in Docker containers. See *High Availability with Container Orchestration* in the High Availability documentation.

Other Changes and Enhancements

- **Broker Restart Behavior with Update Manager**

If you install updates for EntireX Broker using the Software AG Update Manager, all brokers that were stopped by the Update Manager before the update will be restarted automatically; the broker's `AUTOSTART` setting is ignored in this context.



Note: In versions prior to 10.5, all brokers with `AUTOSTART=YES` were restarted, irrespective of whether they were running prior to the update or not.

- **c-tree-specific Broker Attributes** `COMPATIBILITY` and `FLUSH-DIR`

These attributes have been introduced to be compatible with c-tree behavior prior to EntireX Broker version 10.5. See `COMPATIBILITY` and `FLUSH-DIR` under *c-tree-specific Attributes*.

- **Service-specific Broker Attribute** APPLICATION-MONITORING
The default value for service-specific attribute APPLICATION-MONITORING has been changed from NO to YES.
- **Trace Utility Default Output**
The EntireX Trace Utility now uses "Full" instead of "Standard" as the default output format.
- **License Handling**
EntireX checks only the major number of the version number. This means that EntireX version 10.5 works with all 10.x license files. This applies to EntireX Broker and RPC servers at runtime and also to installation.
- **Docker Healthcheck**
A script `healthcheck.sh` is now provided for the EntireX RPC servers that support Docker technology. (This was previously available only for EntireX Broker.) Execution of this script pings the component and returns the result of the ping command. See [Healthcheck](#) for RPC Server for Java and RPC Server for XML/SOAP.
- **Unique Message ID**
Message IDs and Correlation IDs available since ACI version 11 (EntireX 10.1) can now be accessed with the following EntireX components:
 - COBOL Wrapper, see *The RPC Communication Area (Reference)* in the COBOL Wrapper documentation.
 - .NET Wrapper, see Properties under *.NET Wrapper Reference*

See *Unique Message ID* under *Broker ACI Functions*.
- **Long Broker Password Support**
You can use long Broker passwords with COBOL RPC clients built with the COBOL Wrapper. See *Copybook ERXVSTR* and *Logging on Using Long Broker Passwords (z/OS with Call Interface)* in the COBOL Wrapper documentation.
- **Long RPC User ID/Password Support**
You can now use long RPC user IDs and passwords with COBOL RPC clients built with the COBOL Wrapper. See *Copybook ERXVSTR* and *Using RPC Authentication (Natural Security, Impersonation, Integration Server)*.