MICRO FOCUS

Orbix 6.3.9

Release Notes

Micro Focus
The Lawn
22-30 Old Bath Road
Newbury, Berkshire RG14 1QN
UK

http://www.microfocus.com
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Orbix 6.3.9 Release Notes

These release notes contain information about the Orbix 6.3.9 release from Micro Focus. They contain information that might not appear elsewhere in the documentation. Read them in their entirety before you install the product.

New Features and Enhancements

Orbix 6.3.9 includes the following new features and enhancements:

- OpenSSL Toolkit Version
- Supported Cipher Suites
- Using 64-bit Orbix Services
- New Configuration Variables

OpenSSL Toolkit Version

Orbix 6.3.9 uses the OpenSSL security toolkit version 1.0.2j.

Supported Cipher Suites

Orbix 6.3.9 added support for the following cipher suites:

- TLS_RSA_WITH_AES_128_GCM_SHA256
- TLS_RSA_WITH_AES_256_GCM_SHA384
- TLS_DHE_RSA_WITH_AES_128_GCM_SHA256
- TLS_DHE_RSA_WITH_AES_256_GCM_SHA384
- TLS_DHE_DSS_WITH_AES_128_GCM_SHA256
- TLS_DHE_DSS_WITH_AES_256_GCM_SHA384
- TLS_ECDHE_ECDSA_WITH_RC4_128_SHA
- TLS_ECDHE_ECDSA_WITH_3DES_EDE_CBC_SHA
- TLS_ECDHE_ECDSA_WITH_AES_128_CBC_SHA
- TLS_ECDHE_ECDSA_WITH_AES_256_CBC_SHA
- TLS_ECDHE_RSA_WITH_RC4_128_SHA
- TLS_ECDHE_RSA_WITH_3DES_EDE_CBC_SHA
- TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA
- TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA
- TLS_ECDHE_ECDSA_WITH_AES_128_CBC_SHA256
- TLS_ECDHE_ECDSA_WITH_AES_256_CBC_SHA384
- TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA256
- TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA384
- TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256
- TLS_ECDHE_ECDSA_WITH_AES_256_GCM_SHA384
- TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256
- TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384

Using 64-bit Orbix Services

Orbix installations that support both 32-bit and 64-bit runtimes can now use 64-bit Orbix services when Orbix domains are deployed with a 64-bit JDK.

New Configuration Variables

The following new variables have been introduced in this release:

- `plugins:naming:binding_iterator_ttl` specifies how long binding iterators in the naming service can remain inactive before being destroyed. See RPI 613873 or the ***Orbix Configuration Reference*** for details.

CORBA Compliance

Orbix 6.3 complies with the following specifications:

- CORBA 2.6
- GIOP 1.2 (default), 1.1, and 1.0
- C++ Language Mapping (formal/99-07-41)
- IDL-to-Java Language Mapping (formal/99-07-53)
- Object transaction service (OTS) 1.1 and 1.2

Platforms and Compilers

Support has been added for the following new platforms:

- Windows Server 2016 with Visual Studio 2015
- Windows 10 with Visual Studio 2015
- Windows 8 with Visual Studio 2015
- Windows 7 with Visual Studio 2015
- Windows Server 2012 R2 with Visual Studio 2015
- Windows Server 2008 R2 with Visual Studio 2015
- SUSE Linux Enterprise Server 12
- AIX 7.2
- Solaris 12 x86_64 Beta

For the latest information on supported platforms and compilers, see http://supportline.microfocus.com/prodavail.aspx

Deprecated Platforms

HP PA-RISC is deprecated at Orbix 6.3.9. It is currently supported only for backwards compatibility and may not be supported in future releases.

Migration from Previous Versions

To upgrade to Orbix 6.3.9 from existing Orbix 6.3.x installations:

- Back up existing installations before you upgrade.
- Go to the Orbix 6.3.x directory and run the Orbix 6.3.9 installer. The Orbix installer overwrites the existing version.

For details on installing Orbix 6.3.x service packs, see the ***Orbix Installation Guide***. For details on migrating from earlier Orbix versions, see the migration and upgrade documentation at https://supportline.microfocus.com/productdoc.aspx.

Known Issues

Orbix 6.3.9 includes the following known issues:

- Microsoft Visual Studio 2015 compiler
- TLS 1.2 with recent JDKs
- Disk Space Checking During Installation
- Benign Warning when Launching the Windows Installer
- Messages during UNIX installation
- Oracle Solaris Studio 12.4 compiler
- Deployment problem on Windows 7 or Windows 2008 R2 VM on VMWare
- Supported platforms for Actional
- Spaces in install path and itant
- Secure CFR domain with replicated services
- Compiling 64-bit C++ applications

Microsoft Visual Studio 2015 compiler

Orbix 6.3.9 supports Microsoft Visual Studio 2015 version 14.0.25431.01 Update 3 or later versions. Support is not provided for earlier versions than Microsoft Visual Studio 2015 version 14.0.25431.01 Update 3, because of compiler issues discovered during testing.

Micro Focus advises customers to install Visual Studio 2015 using the Visual Studio 2015 Web installer (not the ISO installer) so as to avail themselves of the latest fixes available from Microsoft.

TLS 1.2 with recent JDKs

Recent JDKs might by default disable the use of certificates signed with MD5 (MD5WithRSA).

This excerpt from the TLS 1.2 specification explains why MD5 should no longer be considered a safe hashing algorithm:

> ***MD5***
>
> *MD5 [MD5] is a hashing function that converts an arbitrarily long data stream into a hash of fixed size (16 bytes). Due to significant progress in cryptanalysis, at the time of publication of this document, MD5 no longer can be considered a 'secure' hashing function.*

Micro Focus highly recommends that any certificates used in secure Orbix applications that are signed with an MD5 digest signature are regenerated to use at least a SHA-2 digest signature.

Disk Space Checking During Installation

When installing on a UNIX platform, a warning message might be issued indicating there is not enough space on the file system to install Orbix. This is due to an issue with InstallAnywhere, which may not be checking the disk space of the intended file system. Check that the file system does indeed have sufficient space to install Orbix, then set the following environment variable and re-run the installer:

```
export CHECK_DISK_SPACE=OFF
```

Benign Warning when Launching the Windows Installer

When installing Orbix 6.3.9 on Windows, the installer may issue a warning about a missing java.dll, or a registry key specifying the wrong version of Java. This is a benign warning and can be safely ignored.

This warning is issued because the installer does a thorough search across the system for a usable version of Java with which to launch the installer. When an incomplete installation is found, the warning may be issued.

Such an incomplete Java installation is typically a leftover install of Java JRE installed via the "Java Update" mechanism. In order to ensure that the installation is wiped properly, run the "Java Update" installer, and at the end of the installation, agree to uninstall previous older JRE installations.

Messages during UNIX installation

When installing on a UNIX platform, a message similar to the following may be issued:

```
microfocus_orbix_6.3.9_<platform>.bin[2827]: unzip: not found
Invalid unzip command found
```

When installing Orbix 6.3.9 with the installer in console mode, the following message may be outputted multiple times:

```
Please Wait
```

Both messages are due to known issues with InstallAnywhere. The messages can be ignored.

Oracle Solaris Studio 12.4 compiler

Oracle Solaris Studio 12.4 compiler is not supported with Orbix 6.3.9. A compiler issue was uncovered while certifying Orbix 6.3.8 with Studio 12.4. The compiler issue relates to an inconsistent behavior in mangling symbol names between Studio 12.4 and earlier compiler versions. Micro Focus is working with the compiler vendor towards a resolution of this issue.

Micro Focus advises customers to refrain from using Oracle Solaris Studio 12.4 with Orbix 6.3.9 until this issue is resolved.

Deployment problem on Windows 7 or Windows 2008 R2 VM on VMWare

You might encounter an intermittent failure to deploy services on virtual machines with only 1 CPU. This problem does not occur when the virtual machine has 2 or more CPUs.

Supported platforms for Actional

Integration with the Aurea Actional® Application Performance Monitoring system is not supported by Orbix for:

- Microsoft Windows Visual Studio 2012 (32 and 64-bit)
- Microsoft Windows Visual Studio 2013 (32 and 64-bit)
- Microsoft Windows Visual Studio 2015 (32 and 64-bit)

Spaces in install path and itant

If your Orbix installation path contains spaces, and you use the `itant` tool to build the Java demos, the following message might appear in the console output:

```
C:\Program%20Files\Micro%20Focus\Orbix\asp\6.3\demos\corba\demo
   .xml could not be found
```

This is a benign message and can be ignored. The Java demos build successfully.

Secure CFR domain with replicated services

In a secure configuration repository (CFR)-based domain with replicated Orbix services, CFR replica sets can not be automatically shrunk. This issue does not occur in an insecure CFR-based domain. If you have to remove CFR replicas in a secure CFR-based domain, please contact Orbix technical support.

Compiling 64-bit C++ applications

When compiling 64-bit applications with the C++ Sun Studio 12 Update 2 compiler on a Solaris x86 platform, there may be issues relating to compiling certain demos delivered with Orbix. The issue relates to a known compiler bug in the C++ compiler. Oracle is aware of this issue, and as a workaround suggests compiling the code with the `-O1` flag instead of using the debug `-g` flag.

Resolved Issues

The resolved issues that customers have reported are listed in this section. The numbers that follow each issue are the Reported Problem Incident number followed by the Customer Incident Numbers (in parentheses). RPIs that have numbers only (and no text) are included to confirm that the RPIs have been fixed, since no further information is required.

Issues resolved in this Service Pack

This section includes issues that are resolved for the first time in this Service Pack.

- A new variable `plugins:naming:binding_iterator_ttl` has been added. If this is specified in configuration and is set to a positive value, binding iterators in the naming service are destroyed if left inactive for the specified number of seconds. Further attempts to access such binding iterator result in an OBJECT_NOT_EXIST system exception.

  613873

- Secure domains with the IS2 (Security Service) can now be deployed with any cipher suite, including AES ciphers. Previously only ciphers up to DES and 3DES cipher suites would work.
  617003

- The idl compiler no longer dumps core if no value is supplied for backend options that require a value.
  617642

- In order to build the demos in a 64-bit environment, create a soft link `demo.mk` to point to `demo_64.mk` instead of to the default `demo_32.mk` in the `demos` directory.

  This is similar to the procedure needed for `cxx_demo.mk` in past releases.
  619281

- Fixed a problem where Orbix C++ reordered the ciphers from weaker to stronger ones.
  619299.

- On POSIX platforms, 32-bit Orbix 6 processes now stat() files with 64-bit inodes (for example, on XFS file systems) correctly.
  619318

- Temporary files generated by multiple concurrent instances of the idl compiler could use the same temporary file name, leading to intermittent failure to open the file if multiple instances tried to access it simultaneously. This no longer occurs.
  619474

- 619549.

- Fixed a potential GIOP Snoop output file naming collision when using a rolling file strategy of "size".

  The ***Orbix Configuration Reference*** has been updated to include the configuration variables for the Snoop output file.
  621119

- Corrections to product supported platforms list.
  621356, 621733

- Fixed an issue when load balancing policy is set to `round_robin` or `prefer_local`, whereby the locator selects another replica server after 55 or 22 seconds with or without set time to `policies:proxy_lb:timeout` variable. This occurs just once after connected to the replicated POA.
  622584.

- The `policies:<transport>:server_address_mode_policy:publish_hostname` configuration variables now allow for specification of fully qualified DNS domain names for publishing in IORs, in addition to IP addresses and unqualified host names.
  1101038 (2833072)

- In Orbix 6 Java, when a listen port range is configured with `policies:<transport>:server_address_mode_policy:port_range`, the range is now fully inclusive - the upper bound is included in the range.
  1105210 (2865686)

Issues resolved in previous HotFixes

This section includes issues that were fixed in HotFixes to Orbix 6.3 SP8, and are now incorporated into SP9.

- On HP-Itanium platforms only, Orbix/WS components have been updated.
  618844

- Orbix 6.3 SP8 has been upgraded to use the OpenSSL security toolkit version 1.0.2j.
  623260

- Fixed a problem (on Windows platforms only) whereby Orbix 6.3 Node Daemon failed to start a process on demand if the current directory of a registered process is specified as a symbolic link.
  1102990 (2849396)

- Orbix Java 6.3.8 now recognizes the following cipher suites:
  - TLS_RSA_WITH_NULL_SHA256
  - TLS_RSA_WITH_AES_128_CBC_SHA256
  - TLS_RSA_WITH_AES_256_CBC_SHA256
  - TLS_DHE_DSS_WITH_AES_128_CBC_SHA256
  - TLS_DHE_RSA_WITH_AES_128_CBC_SHA256
  - TLS_DHE_DSS_WITH_AES_256_CBC_SHA256
  - TLS_DHE_RSA_WITH_AES_256_CBC_SHA256

  1103582 (2853906)

Other Resources

The following additional resources are available:

- For the latest information on supported platforms and compilers, see http://supportline.microfocus.com/prodavail.aspx
- The most up-to-date versions of Orbix technical documentation are available at: https://supportline.microfocus.com/productdoc.aspx
- The Orbix Knowledge Base is a database of articles that contain practical advice on specific development issues, contributed by developers, support specialists, and customers. This is available at: http://community.microfocus.com/microfocus/corba/orbix/w/knowledge_base/
- Contact Micro Focus technical support at: http://www.microfocus.com