MICRO FOCUS

Orbix 3.3.14

Release Notes

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Contents

Orbix 3.3.14 Release Notes

Orbix 3.3.14 is a service pack release of Orbix 3.3 from Micro Focus.

These release notes contain information about the Orbix 3.3.14 release. They contain information that might not appear elsewhere in the documentation. Read them in their entirety before you install the product.

For details of the changes that were made in earlier releases of Orbix 3.3, see:

- For changes made in Orbix 3.3.13, see the ***Orbix 3.3 SP13 Release Notes***, available at http://supportline.microfocus.com/Documentation/Orbix/Orbix33sp13.htm
- For changes made in Orbix 3.3.12, see the ***Orbix 3.3 SP12 Release Notes***, available at http://supportline.microfocus.com/Documentation/Orbix/Orbix33sp12.htm
- For changes made between Orbix 3.0.1 and Orbix 3.3.11, see the ***Orbix 3.3 SP11 Release Notes***, available at http://supportline.microfocus.com/Documentation/Orbix/Orbix33sp11.htm

CORBA Compliance

Orbix 3.3.14 complies with the following specifications:

- CORBA 2.1.
- GIOP 1.1 and 1.0
- C++ Language Mapping (formal/99-07-41)
- IDL-to-Java Language Mapping (formal/99-07-53)

Interoperability with Other Products

The Java and C++ editions of Orbix 3.3 SP 14 are tested and are interoperable with each other except for those areas that are documented as Known Issues for each edition.

The Java and C++ editions of Orbix 3.3 SP 14 have also been tested and are interoperable with the following Orbix products:

- Previous Orbix 3.3 C++ and Java editions
- Orbix E2A Application Server Platform 6.0 SP3 C++ and Java
- Orbix Trader 1.2.1 Java edition (no C++ edition available)
- Orbacus 4.0.5
- Orbix 3.0.1
- OrbixWeb 3.2

Product Structure

The distinction between "Orbix Core Services" and the "Orbix Full Services" product, which was made in previous release, no longer applies from Orbix 3.3.13. Some components that formed part of the previous "Orbix Full Services" are no longer supported.

All components still supported are part of the single Orbix 3.3.14 product. Orbix 3.3.14 includes:

- Orbix 3.3.14 C++ edition
- Orbix 3.3.14 Java edition
- OrbixNames 3.3.14

The following features of previous Orbix 3 versions are **no longer supported** in Orbix 3.3.14:

- Orbix Code Generation Toolkit
- OrbixEvents
- OrbixOTS
- Orbix Wonderwall

New Features

Orbix 3.3.14 includes the following new features:

- New cipher suite values are supported in both OrbixSSL 3.3.13 C++ and OrbixSSL 3.3.13 Java.

Platforms and Compilers

Support has been added for the following platforms and compilers at Orbix 3.3 SP 14:

Platforms

- Windows Server 2016
- SUSE Linux Enterprise Server 12
- HP-UX 11.31 (Standard)
- AIX 7.2

Compilers

- Visual Studio 2015

For the latest information on supported platforms, compilers, and Java versions, see the Product Availability page.

Unsupported Platforms

The following platforms and protocols are no longer supported at Orbix 3.3.14:

- HP-UX on PA-RISC
- Java 8 32-bit on Solaris

Java 8 32-bit on Solaris

Starting with Java 8, Oracle no longer ship the 32-bit Java runtime on Solaris platforms. See “Known Issues” for details.

Migration from Previous Versions

For information on migrating from an earlier version of Orbix to Orbix 3.3 SP 14, see ***Migrating Orbix Applications to Orbix 3.3*** available with the rest of the Orbix 3.3 SP14 documentation at https://supportline.microfocus.com/productdoc.aspx.

To upgrade to Orbix 3.3.14 from existing Orbix 3.3.x installations, carry out the following procedure:

Note: The services that made up the "Orbix Full Services" product in previous releases are no longer supported, as described in "Product Structure". For customers who are upgrading from a full services installation of Orbix to Orbix 3.3.14, such as Solaris Sparc or HP-UX Itanium (32-bit), Micro Focus recommends some additional steps in the upgrade procedure, which are noted below.

- Ensure that all Orbix services are stopped.
- Back up existing installations before you upgrade to Orbix 3.3.14.
- If you are upgrading from a full services installation of Orbix to Orbix 3.3.14, such as on Solaris Sparc or HP-UX Itanium (32-bit):
  - Rename the installation folder of the Orbix 3.3.12 installation, so that it is not overwritten.
  - Install Orbix 3.3.14 to the old location of the Orbix 3.3.12 installation.
  - Overlay the **config** folder of the Orbix 3.3.12 installation to the **config** folder of the Orbix 3.3.14 installation, in order to preserve the previous configuration and databases (such as IMR, NamesRep).
- In other circumstances, simply run the Orbix 3.3.14 installer. The Orbix installer overwrites the existing version.

For details on installing Orbix 3.3.x service packs, see the ***Orbix Installation Guide***, available with the rest of the Orbix 3.3.14 documentation at:

https://supportline.microfocus.com/productdoc.aspx.

Deprecated Features Policy

When a feature is deprecated it means that:

- No support for this feature is given for the current version and for subsequent versions (we do not explain how to use it, and we do not fix any bugs in this feature).
- If you have not used this feature before, DO NOT start using it with this release.
- If you are already using this feature, you should remove it if at all possible.
- The feature may not be present in future versions of the product.

Other Resources

The following additional resources are available:

- For the latest information on supported platforms and compilers, see the Product Availability page.
- 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

Orbix 3.3.14 C++ Edition

This section describes changes made specifically to Orbix C++ Edition that are relevant to Orbix 3.3 SP 14.

New Features

There are no new features.

Deprecated Features

The following is a list of deprecated features in Orbix C++ Edition:

Feature	Description	Feature Removed	When Deprecated
_bind()	Should use other means.	No	Orbix 3.0
Transformers	Can use SSL for security.	No	Orbix 3.0
Piggy backing data with filters	Should use Service Contexts.	No	Orbix 3.0
Opaque data type		No	Orbix 3.0
Orbix network protocol (POOP)	Must use IIOP instead.	No	Orbix 3.0
IDL compiler options `-i` and `-f`		No	Orbix 3.0
IR	Replaced with the IFR.	Yes	Orbix 3.0
Locator	Can implement own load balancing solution.	Yes	Orbix 3.3
Non-native exceptions	Must use Native Exceptions	Yes	Orbix 3.3
TIE macro DEF_TIE(I,X)	Use other form	Yes	Orbix 3.3
Configuration Explorer (`ConfigurationExplorer.bat`)	Configure Orbix components without modifying the configuration files directly.	No	Orbix 3.3 SP 5
Server Manager (ServerManager.bat)	Allows you to manage the Implementation Repository.	No	Orbix 3.3 SP 5

Note: Orbix 3.0 was released February 1999 and Orbix 3.3 was released September 2000.

Known Issues

The following table summarizes known issues for Orbix 3.3.14 C++ Edition.

Incident ID	Synopsis
ORBTHREE-1	Orbix daemon memory leak.
64992	There is a known problem with foreign FDs (File Descriptors) on HPUX 11. When Orbix is asked to manage foreign FDs, there are some situations where the process hangs. It is not typical to ask Orbix to manage foreign FDs, and this problem can be avoided by not asking Orbix to manage foreign FDs.
64991	There is a known problem using C++ keywords in various situations in the IDL file. Using C++ keywords for attribute names, operations names and field names (of structures and exceptions) works. However, using C++ keywords as the type name of a module, interface, exception, or struct does not work. Customers should avoid using C++ keywords in the IDL as the type names of modules, interfaces, exceptions, and structs.
56121	The IDL compiler issues warnings if the IDL contains identifiers that are reserved keywords but not all lower case. For example, the IDL `interface Attribute{};` causes `Warning: identifier Attribute clashes with keyword` even though it is a valid interface name and is case-different from the reserved keyword `attribute`.
55600	No overloaded output-streaming operator (<<) is provided for the unsigned long long CORBA type (`CORBA::ULongLong`) in Orbix 3.3.
55599	No overloaded output-streaming operator (<<) is provided for the signed long long CORBA type (`CORBA::LongLong`) in Orbix 3.3.
55547	Orbix 3.3 generated IDL stub code on Windows NT for multi-dimensional arrays as in parameters should work around known VC6 multidimensional array const bug.
56334	When service context handlers in Orbix runtime encounter an abnormal condition, the diagnostic messages are not very informative.
-	Oracle Solaris Studio 12.4 compiler is not supported with Orbix 3.3.14. A compiler issue was uncovered while certifying Orbix 3.3.14 with Studio 12.4. The compiler issue relates to an inconsistent behavior in passing parameters on function calls 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 3.3.14 until this issue is resolved.

Compilation problems on Windows

Compilation problems on Windows may result in the following error message:

```
Warning: Orbix wants an fd_set of size 1024 or greater.
    Please include CORBA.h before winsock2.h
```

This may be resolved by defining `WIN32_LEAN_AND_MEAN` when compiling. For example:

```
CL /c ... -DWIN32_LEAN_AND_MEAN ... myFile.cpp
```

If you do not wish to use this option when compiling you may also resolve the problem by editing CORBA.h by moving line 22,

```
#include <corba/PreCORBA.h>
```

to the position immediately after line 15,

```
#define CORBA_INCLUDES
```

Actional Integration

Usage of the Actional Integration feature in conjunction with a Thread Filter will result in the Actional Integration not reporting correctly when the ThreadFilter `inRequestPreMarshal()` method implementation returns -1. This is caused by the fact that the Actional Interceptor is implemented using Filters, and returning `-1` from a ThreadFilter `inRequestPreMarshal()` method causes all subsequent Filters in the Filter to not be invoked.

On HP-UX systems, the Actional Integration feature may fail to dynamically load within single-threaded processes.

The Actional Integration feature is implemented as a shared library that is dynamically loaded by the Orbix C++ runtime. This shared library links to a multi-threaded Actional C SDK library, used to communicate with the Actional Agent service. The HP-UX dynamic loader may fail to dynamically load this multi-threaded library within a single threaded process (that is, the orbix daemon).

In order to work around this issue, the LD_PRELOAD environment variable should be set so that the `pthread` library is preloaded.

To diagnose this issue and determine the location of the `pthread` library, perform the following on HP-UX Itanium systems:

1. Set the environment variable IT_SHLIB_VERBOSE to `1`
2. Execute your single-threaded process
3. Look for the following line in the output:
   - `/usr/lib/hpux32/dld.so: Cannot dlopen load module '/usr/lib/hpux32/libpthread.so.1' because it contains thread specific data`

To resolve the issue, set LD_PRELOAD as mentioned below:

```
LD_PRELOAD=/usr/lib/hpux32/libpthread.so.1
```

IPv6 Enablement

Orbix 3.3 SP 14 has the following known issue in regarding to the use of the IPv6 enablement of the product:

- The POOP Protocol or Orbix Protocol is currently **not** supported with IPv6 communications, and IIOP should be used in its place.

Stopping double deletion of CORBA::Any when un-marshaling CORBA::Anys during DSI invocation processing

Some applications use the following pattern for memory management of `CORBA::Any`s required for DSI request processing. This is incorrect and causes a memory corruption error with this version of Orbix:

```
CORBA::NVList_ptr pArgList;
if (CORBA::Orbix.create_list(1, pArgList))
 {
    CORBA::Short value_of_n = 0;
    // create an any on heap. This is the representative
    // of the in argument.  All of the arguments (anys)
    // will be stored in an NV list
    //
    CORBA::Any* pAny = new CORBA::Any(CORBA::_tc_short,
        &value_of_n, 0);
    // populate the NV list with the heap allocated any
    // and name of "n"
    //
    pArgList->add_value("n", *pany, CORBA::DSI_ARG_IN);
    // read all the arguments (values) from the request
    // into the NV list
    //
    rSrvReq.params(pArgList);
    // do invocation processing
    // ************* NOTE *****************
    // Deleting the CORBA::Any is an error as the Orbix
    // runtime will do so.
    //
    delete pAny;  // Error!  Don't do this.
}
```

This code would not have caused problems prior to Orbix 3.3.1, because Orbix 3.3 and earlier versions did not properly delete the `Any`. Since Orbix 3.3.1, Orbix deletes the `Any`, so it is no longer necessary to do it.

Deploying an Orbix 3.3 SP 14 daemon in Orbix 3.0.1 environment

An Orbix 3.3 SP 14 daemon can launch Orbix 3.0.1 servers. For all Orbix 3.0.1 daemon utilities, your clients and servers work with the Orbix 3.3 SP 14 daemon. You need to append the library path in the environment with the Orbix 3.3 SP 14 library path.

Note: This does not apply if you are using AIX 4.3.3 and 4.3.2 because none of the Orbix binaries built on AIX 4.3.3 operate on 4.3.2 daemon utilities.

Resolved Issues

The resolved issues for Orbix C++ Edition 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.

- Orbix 3 now supports Microsoft Windows Server 2016.

  RPI 620779

- A problem where a client could crash `orbixd`, with a misconfigured multi-homed configuration, where the `IT_LOCAL_ADDR` configuration variable was not configured correctly, has been fixed.

  RPI 607058

- A problem with the catns utility failing when attempting to resolve a NamingContext in a federated NamingService (between Orbix 3 and Orbix 6) has been fixed.

  RPI 616316

- Documentation of the Orbix daemon -l option in the ***Administrator's Guide C++ Edition*** has been corrected.

  RPI 622236

- The `_non_existent()` operation now works identically on C++ and Java. It returns true if the ORB knows authoritatively that the server object does not exist; and returns false otherwise.

  RPI 623270

- When running an Orbix client against a misconfigured configuration with the multi-homed feature enabled, the Orbix C++ daemon could crash. This has been fixed.

  RPI 625831

- Changed the clean and clean_demo targets to use a Windows "for" loop. Previously these targets used a UNIX command that failed when run on a Windows machine.

  RPI 625844

- The Orbix C++ daemon was crashing when IT_LOCAL_HOST was misconfigured in a multi-homed configuration. This has been fixed.

  RPI 625899

- Documentation for Active Connection Management (ACM) has been added to the ***Administrator's Guide C++ Edition***. See the new chapter "*Active Connection Management*" in "*Part I: Orbix C++ Administration*".

  RPI 628086

- In Orbix installations on Unix, the `orbixcleanup.sh` script was missing from the `UninstallOrbix` folder. This has been fixed.

  RPI 1101926 (2835069)

- A problem with a newly-registered server failing to start has been corrected.

  1104686 (2861386)

- In the Linux (64-bit) kits, the base demo makefiles defined an unnecessary `-DIT_64` compiler flag. This has been removed as it could cause issues when compiling IDL-generated code.

  RPI 1105795 (2867444)

- Compilers on Linux platforms no longer produce warning messages when compiling the generated code.

  RPI 1106190 (2871228)

- An Orbix client application running under Linux could not extract a `struct` from an `Any` parameter. This has been corrected.

  1107887 (2881329)

- On Windows systems, when an Orbix application runs out of memory, a message box is no longer displayed. Instead, the error is logged.

  RPI 1109054 (3102261)

- The c shell sourcing scripts in an Orbix 3 installer were not correct, so the demo programs failed to build.

  RPI 1109094 (3102940)

Orbix 3.3.14 Java Edition

This section describes changes made specifically to Orbix Java Edition that are relevant to Orbix 3.3 SP 14.

New Features

Orbix 3.3 SP 14 Java Edition is binary compatible with Orbix 3.3 Java Edition. There are no new features.

Deprecated Features

The following is a list of features deprecated in Orbix Java Edition:

Feature	Description	Feature Removed	When Deprecated
_bind()	Use other means.	No	OrbixWeb 3.2
Transformers	Can use SSL for security.	No	OrbixWeb 3.2
Piggy backing data with filters	Should use Service Contexts.	No	OrbixWeb 3.2
Opaque data type		No	OrbixWeb 3.2
Orbix network protocol (POOP)	Must use IIOP instead.	No	OrbixWeb 3.2
IDL compiler options `-i` and `-f`		No	OrbixWeb 3.2
Orbix Java activator (`Orbixdj.bat`)	Java activator in graphical mode	No	Orbix 3.3 SP 5
Orbix Java utilities (such as `putitj`)	Use C++ utilities instead	No	Orbix 3.3 SP 14

Note: OrbixWeb 3.2 was released February 1999.

Known Issues

The following table summarizes known issues for Orbix 3.3.14 Java Edition.

Incident ID	Synopsis
65605	The Server Manager GUI does not update when a server is started and then stopped (affects Orbix 3.3.2 and upwards). This GUI is deprecated.
64957	Fragmentation error occurs on the client side if large chunk of data is sent in fragments from an ASP 5.*x* and higher server. The fragments received from the ASP server are malformed. This is an interoperability issue between ASP and Orbix Java 3.3 SP 5.
-	32-bit Solaris runtimes require a 64-bit JDK. From Java 8, Oracle no longer ship the 32-bit Java runtime on Solaris platforms; see http://www.oracle.com/technetwork/java/javase/8-compatibility-guide-2156366.html for details. This means that customers can no longer use Java 8 on Solaris to load any 32-bit JNI libraries. • For **Java 8** users, Micro Focus supplies 64-bit counterparts of these JNI libraries on Solaris which ensure that they will continue to work with Java 8 on Solaris. • Orbix 3.3 users using a **Java 7** who require a 64-bit JVM runtime can specify this by setting the "`-d64`" option to the Java VM executable, or by directly using the 64-bit Java process: *<JAVA_HOME>*`/bin/sparcv9/java`.
-	An exception may be thrown by the `orbixdj` utility with Java versions newer than 1.7 update 27. See "Orbixdj Security Permissions" for details.

Orbixdj Security Permissions

When using the `orbixdj` utility with Java versions newer than 1.7 update 27, the following exception may be thrown by the Java virtual machine. This is because of a security vulnerability that requires an explicit policy to be set to allow the CORBA InputStream and OutputStream to be sub-classed.

```
Exception in thread "Request Processor" java.security.AccessControlException: access
        denied ("java.io.SerializablePermission" "enableSubclassImplementation")
   at java.security.AccessControlContext.checkPermission(AccessControlContext.java:457)
   at java.security.AccessController.checkPermission(AccessController.java:884)
   at java.lang.SecurityManager.checkPermission(SecurityManager.java:553)
   at org.omg.CORBA_2_3.portable.InputStream.checkPermission(InputStream.java:67)
   at org.omg.CORBA_2_3.portable.InputStream.<init>(InputStream.java:84)
   at IE.Iona.OrbixWeb.CORBA.InputCoder.<init>(Unknown Source)
   at IE.Iona.OrbixWeb.CORBA.MarshalBuffer.create_input_stream(Unknown Source)
   at IE.Iona.OrbixWeb.CORBA.Request.create_input_stream(Unknown Source)
   at IE.Iona.OrbixWeb.Activator.DJAuthenticationFilter.inRequestPreMarshal(Unknown
        Source)
   at IE.Iona.OrbixWeb.CORBA.ServerRequest.inRequestPreMarshal(Unknown Source)
   at IE.Iona.OrbixWeb.CORBA.ServerDispatcher.dispatchSpecial(Unknown Source)
   at IE.Iona.OrbixWeb.CORBA.BOAImpl.processRequest(Unknown Source)
   at IE.Iona.OrbixWeb.CORBA.BOAImpl.processOneEvent(Unknown Source)
   at IE.Iona.OrbixWeb.CORBA.BOAImpl.processEvents(Unknown Source)
   at IE.Iona.OrbixWeb.CORBA.EventHandler.run(Unknown Source)
   at java.lang.Thread.run(Thread.java:745)
```

To resolve this problem, you must update the `java.policy` file under `<JAVA_HOME>/jre/lib/security` as follows, to allow this subclassing to continue:

```
grant {
   // ...
   permission java.io.SerializablePermission "enableSubclassImplementation"; }
```

Resolved Issues

The resolved issues for Orbix Java edition 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.

- Orbix 3 now supports Microsoft Windows Server 2016.

  RPI 620779

- The `_non_existent()` operation now works identically on C++ and Java. It returns true if the ORB knows authoritatively that the server object does not exist; and returns false otherwise.

  RPI 623270

- In Orbix installations on Unix, the `orbixcleanup.sh` script was missing from the `UninstallOrbix` folder. This has been fixed.

  RPI 1101926 (2835069)

- On Windows systems, when an Orbix application runs out of memory, a message box is no longer displayed. Instead, the error is logged.

  RPI 1109054 (3102261)

- The c shell sourcing scripts in an Orbix 3 installer were not correct, so the demo programs failed to build.

  RPI 1109094 (3102940)

OrbixNames 3.3.14

This section describes changes made specifically to the OrbixNames product that are relevant to OrbixNames 3.3 SP 14.

New Features

OrbixNames 3.3 SP 14 is binary compatible with OrbixNames 3.3. There are no new features.

Deprecated Features

The following is a list of features deprecated in OrbixNames:

Feature	Description	Feature Removed	When Deprecated
Names Service browser (`NamesBrowser.bat`)	Allow you to monitor and manage the Naming Service externally to your applications.	No	Orbix 3.3 SP5
Names java utilities (such as `lsnsj`)	Use C++ utilities instead	No	Orbix 3.3 SP14

Known Issues

The following table summarizes known issues for OrbixNames 3.3.14.

Incident ID	Synopsis
Bug ID 4276129 in JDK1.3.1	When the Naming Service is persistently launched, the Password dialog box is displayed at the same time as the missing font messages below: **`Font specified in font.properties not found [-urw-itc zapfdingbats-medium-r-normal--*-%d-*-*-p-*-sun-fontspecific]`** **`Font specified in font.properties not found [-urw-itc zapfdingbats-medium-r-normal--*-%d-*-*-p-*-sun-fontspecific]`** **`Font specified in font.properties not found [-urw-itc zapfdingbats-medium-r-normal--*-%d-*-*-p-*-sun-fontspecific]`** The fonts specified in font.properties need to be found on the host system. Otherwise these messages are displayed. Workarounds: • Customize the font.properties file for each machine. • Install the SUNIWof font packages.

Incident ID	Synopsis
Bug ID 4285197 in JDK 1.3.1	When the Naming Service is launched by semi-secure `orbixd`, `libkdmjj.so/libkdmjj.sl/kdmjj.dll` of SSL is used to supply `orbixd` with the Naming service password. The marker used to launch the Naming Service involves `-Xbootclasspath` argument to the Java interpreter. As a result of this bug, `orbixd` cannot supply the password to the KDM as the kdmjj library cannot be loaded. This results in the Naming Service asking for user input for password when it is automatically launched.

	Workarounds:
	Solaris: Copy the .so into `${JDKHOME}/jre/lib/sparc` (or set a symbolic name).
	HPUX: Copy the .sl into `${JDKHOME}/jre/lib/PA_RISC` (or set a symbolic name).
	Windows: Copy the .dll into `${JDKHOME}\jre\bin`.
	`${JDKHOME}` points to the JRE directory used in `IT_JAVA_INTERPRETER` used in `common.cfg`. This is the intended behavior.
	The remaining steps are relevant for all systems:
	All system classes only look up shared libraries in `$JAVA_HOME/bin`. If you do need to load custom libraries for the system classes, there are two choices:
	1. Install custom libraries into `$JAVA_HOME/bin`;
	2. Set the property `sun.boot.library.path` to include the user library path. The syntax is:
	`java -Dsun.boot.library.path= $JAVA_HOME/bin:$CUSTOM/bin ...`
	When an SSL-enabled Names Server NS is run persistently or automatically launched by the Orbix Daemon, it listens on the port given by configuration variable `IT_SSL_IIOP_LISTEN_PORT` in `orbixnames3.cfg`.
	Follow the steps below to automatically launch an SSL-enabled OrbixNames server by the Orbix daemon, and use the KDM utility to supply password to `orbixd`:
	1. `orbixssl.cfg` should have the following entries and values for Naming Service:
	`IT_AUTHENTICATE_CLIENTS = "TRUE";`
	`IT_SECURITY_POLICY = "SECURE";`
	`IT_DAEMON_POLICY = "SEMI_SECURE_DAEMON";`
	`IT_KDM_ENABLED = "TRUE";`
	2. `orbixnames.cfg` should have `IT_SSL IIOP_LISTEN_PORT` defined.
	3. Start `orbixd`.
	4. `putit NS -j -jdk2 -- -Xbootclasspath:[ … set of jars …] IE.Iona.OrbixWeb.CosNaming.NS -secure`
	5. Start `kdm`
	6. `Putkdm NS kdm-password`
	7. NS is the Implementation repository entry required for automatically launching the Naming Service.
	8. Use the C++ utilities with the `-s` option.

Resolved Issues

The resolved issues for OrbixNames 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.

OrbixSSL 3.3.14 C++

This section describes changes made specifically to OrbixSSL C++ that are relevant to Orbix 3.3 SP 14.

New Features

OrbixSSL 3.3 SP 14 C++ Edition is binary compatible with Orbix 3.3 C++ Edition.

OrbixSSL 3.3.14 C++ includes the following new features:

- Cipher Suite Values

Cipher Suite Values

Support for the following cipher suites has been added:

```
RSA_WITH_AES_128_GCM_SHA256
RSA_WITH_AES_256_GCM_SHA384
DHE_RSA_WITH_AES_128_GCM_SHA256
DHE_RSA_WITH_AES_256_GCM_SHA384
DHE_DSS_WITH_AES_128_GCM_SHA256
DHE_DSS_WITH_AES_256_GCM_SHA384
ECDHE_ECDSA_WITH_RC4_128_SHA
ECDHE_ECDSA_WITH_3DES_EDE_CBC_SHA
ECDHE_ECDSA_WITH_AES_128_CBC_SHA
ECDHE_ECDSA_WITH_AES_256_CBC_SHA
ECDHE_RSA_WITH_RC4_128_SHA
ECDHE_RSA_WITH_3DES_EDE_CBC_SHA
ECDHE_RSA_WITH_AES_128_CBC_SHA
ECDHE_RSA_WITH_AES_256_CBC_SHA
ECDHE_ECDSA_WITH_AES_128_CBC_SHA256
ECDHE_ECDSA_WITH_AES_256_CBC_SHA384
ECDHE_ECDSA_WITH_AES_128_GCM_SHA256
ECDHE_RSA_WITH_AES_128_CBC_SHA256
ECDHE_RSA_WITH_AES_256_CBC_SHA384
ECDHE_ECDSA_WITH_AES_256_GCM_SHA384
ECDHE_RSA_WITH_AES_128_GCM_SHA256
ECDHE_RSA_WITH_AES_256_GCM_SHA384
```

Cipher suites that contain `ECDHE_ECDSA` require a certificate with an elliptic curve private key.

Cipher suites that contain `DHE_DSS` require a certificate with a DSA private key.

When using a certificate with an elliptic curve private key or a certificate with a DSA private key, the format must be PKCS12.

The secure bank demonstration in the product installation area has been modified to use an elliptic curve cipher suite with an elliptic curve private key and certificate in PKCS12 format.

Deprecated Features

The following is a list of deprecated features in OrbixSSL C++:

Feature	Description	Feature Removed	When Deprecated
Support for the following cipher suites: • SSLV3_RSA_WITH_RC4_128_SHA • SSLV3_RSA_WITH_RC4_128_MD5 • SSLV3_RSA_WITH_3DES_EDE_CBC_SHA • SSLV3_RSA_WITH_DES_CBC_SHA • SSLV3_RSA_EXPORT_WITH_DES40_CBC_SHA • SSLV3_RSA_EXPORT_WITH_RC2_CBC_40_MD5 • SSLV3_RSA_EXPORT_WITH_RC4_40_MD5	See "Cipher Suite Values" for replacements.	No	Orbix 3.3.14

Resolved Issues

The resolved issues for OrbixSSL C++ 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.

- OrbixSSL C++ 3.3 SP13 has been upgraded to use the OpenSSL security toolkit version 1.0.2j.

  RPI 623261

OrbixSSL 3.3.14 Java

This section describes changes made specifically to OrbixSSL Java that are relevant to Orbix 3.3 SP 14.

New Features

OrbixSSL 3.3 SP 14 Java Edition is binary compatible with OrbixSSL 3.3 Java Edition.

OrbixSSL 3.3.14 Java includes the following new features:

- Cipher Suite Values
- New setPrivateKeyFromFile API Call
- Modified Demonstration

Cipher Suite Values

Support for the following cipher suites has been added:

```
RSA_WITH_AES_128_GCM_SHA256
RSA_WITH_AES_256_GCM_SHA384
DHE_RSA_WITH_AES_128_GCM_SHA256
DHE_RSA_WITH_AES_256_GCM_SHA384
DHE_DSS_WITH_AES_128_GCM_SHA256
DHE_DSS_WITH_AES_256_GCM_SHA384
ECDHE_ECDSA_WITH_RC4_128_SHA
ECDHE_ECDSA_WITH_3DES_EDE_CBC_SHA
ECDHE_ECDSA_WITH_AES_128_CBC_SHA
ECDHE_ECDSA_WITH_AES_256_CBC_SHA
ECDHE_RSA_WITH_RC4_128_SHA
ECDHE_RSA_WITH_3DES_EDE_CBC_SHA
ECDHE_RSA_WITH_AES_128_CBC_SHA
ECDHE_RSA_WITH_AES_256_CBC_SHA
ECDHE_ECDSA_WITH_AES_128_CBC_SHA256
ECDHE_ECDSA_WITH_AES_256_CBC_SHA384
ECDHE_ECDSA_WITH_AES_128_GCM_SHA256
ECDHE_RSA_WITH_AES_128_CBC_SHA256
ECDHE_RSA_WITH_AES_256_CBC_SHA384
ECDHE_ECDSA_WITH_AES_256_GCM_SHA384
ECDHE_RSA_WITH_AES_128_GCM_SHA256
ECDHE_RSA_WITH_AES_256_GCM_SHA384
```

Cipher suites that contain `ECDHE_ECDSA` require a certificate with an elliptic curve private key.

Cipher suites that contain `DHE_DSS` require a certificate with a DSA private key.

When using a certificate with an elliptic curve private key or a certificate with a DSA private key, the format must be PKCS12.

New setPrivateKeyFromFile API Call

A new API call to set an elliptic curve private key or a DSA private key has been added to class `IE.Iona.OrbixWeb.SSL.IT_SSL`:

```
public synchronized void setPrivateKeyFromFile
        (String file, IT_Format f)
        throws IT_SSLException, IOException;
```

See the ***OrbixSSL Programmer's and Administrator's Guide Java Edition*** for more details.

Modified Demonstration

The secure bank demonstration in the product installation area has been modified to use an elliptic curve cipher suite with an elliptic curve private key and certificate in PKCS12 format.

Deprecated Features

The following is a list of features deprecated in OrbixSSL Java:

Feature	Description	Feature Removed	When Deprecated
Support for the following cipher suites: • SSLV3_RSA_WITH_RC4_128_SHA • SSLV3_RSA_WITH_RC4_128_MD5 • SSLV3_RSA_WITH_3DES_EDE_CBC_SHA • SSLV3_RSA_WITH_DES_CBC_SHA • SSLV3_RSA_EXPORT_WITH_DES40_CBC_SHA • SSLV3_RSA_EXPORT_WITH_RC2_CBC_40_MD5 • SSLV3_RSA_EXPORT_WITH_RC4_40_MD5	See "Cipher Suite Values" for replacements.	No	Orbix 3.3.14

Resolved Issues

The resolved issues for OrbixSSL Java 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.

- (None)