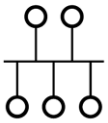

Orbix®

Release Notes

Version 6.3, June 2008

Making Software Work Together™

Updated: 30-Jul-2008

Contents

Orbix 6.3 Release Notes

In this document

This document contains the following sections:

All Orbix 6.3 Releases

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.

LDAP Support

The IONA security platform integrates with the Lightweight Directory Access Protocol (LDAP) enterprise security infrastructure by using an LDAP adapter. You can use the Orbix security service's LDAP adapter with any LDAP version 3 compatible system. If you are using LDAP version 2, IONA recommends you write a custom adapter.

For more information on LDAP support, see the Orbix Security Guide.

Migrating and Upgrading from Earlier Versions

Migrating from ASP 5.1

If you are migrating from ASP 5.1 to Orbix 6.3, see the Orbix Migrating from 5.1 to 6.3 Guide.

Migrating from Orbix 3.3

If you are migrating from Orbix 3.3 to Orbix 6.3, see the Orbix Migrating from 3.3 to 6.3 Guide.

Upgrading from Orbix 6.x

Orbix 6.3 also has in-built support for migrating configuration domains created with ASP 6.0 and Orbix 6.1. This allows you to quickly upgrade a production installation without the need to manually recreate persistent data such as registered processes, orb names, and so on. For more information, see the Orbix Deployment Guide.

In addition, changes have been made to the semantics of the `IT_Config::Configuration::get_list` and `IT_Config::Configuration::get_string` operations. For more detail, see the Orbix Programmer's Reference Guides.

Reporting Problems

Contact customer support at http://www.iona.com/support/contact/

Other Resources

- Knowledge Base articles (`http://www.iona.com/support/kb/index.jspa`) provide a database of practical advice on specific development issues, contributed by IONA developers, support specialists, and customers.
- IONA University (`http://www.iona.com/info/services/ps/training`) delivers practical and insightful courses that cover technical and product issues, as well as standards-based best practices gleaned from real-world projects.
- IONA Professional Services (`http://www.iona.com/info/services/consulting/`) IONA offers up-front support contracts with a duration ranging from one to five years for Orbix 6.3. With more customers and more systems in production than any other CORBA vendor, IONA offers the highest quality CORBA support in the industry.

  In addition, IONA's Professional Services and our Consulting Partners provide experienced developers, architects and project managers to assist with the architecture, design, development, integration, rollout, support and optimization of your Orbix 6.3 applications. No matter what your integration challenges are, IONA consultants can play any number of roles,

on both short and long-term engagements, to help you get the most out of Orbix 6.3.

- IONA security bulletins are available as part of our customer warning system. To receive these bulletins, please subscribe to the *security-alert@iona.com* mailing list.

  To subscribe send an email to listserver@iona.com. Leave the email **Subject** field blank and, in the body of the email, type:

  subscribe security-alert <your email address>

  To unsubscribe do the same, but type unsubscribe in the body of the email.

  Note: Please do not try to post queries to this email alias; it has not been set up to receive queries.

Orbix 6.3 Service Pack 3

Supported Platforms and Compilers

Orbix 6.3 Service Pack 3 includes support for the following new platforms and compilers:

- Windows:
  - Added support for Windows Vista.
  - Added Visual Studio 2005 support on Windows XP.
  - Added Java 6 (JRE or SDK) support on all Windows platforms.
- Red Hat Linux:
  - Added support for version Red Hat Linux 5.
  - Added Java 6 (JRE or SDK) support on Red Hat Linux 4 and 5.
- Sun Solaris:
  - Added Java 6 (JRE or SDK) support on Solaris 10.
- IBM AIX:
  - Added support for XL C++ 8 on AIX 5.2.
- Compaq Tru 64 UNIX 5.1B
  - Removed support.
- IRIX 6.5.25
  - Removed support.

This is the last release to support the following platforms and compilers:

- JDK 1.4.2 on Orbix 6
- Sun Solaris 8
- SuSE Linux Enterprise 9
- Red Hat Enterprise Linux 3 and 4
- Windows 2003
- XL C++ 7
- IBM AIX 5.2

For information on all the platforms and compilers that Orbix 6.3 supports, see the Supported Products and Platforms page on the IONA website.

Known Issues

To date, there are no known issues with Orbix 6.3 Service Pack 3.

Bugs Fixed

The following bugs have been fixed in Orbix 6.3 Service Pack 3:

Bugs	Description
70433	Node daemon unable to reconnect to persistent Java servers after the node daemon is restarted.
70858	The function `IT_ORB_ORBImpl::InitialRefLoader::load( const IT_FWString& identifier)` now logs a warning instead of an error when an identifier is not found.
70967	Cluster of naming service instances does not recover from network problem correctly.
71032	(Sunguard) IDL compiler in Orbix 6.3 on Windows XP does not generate correct stubs when a source IDL file on a UNIX host is accessed using UNC.
71048	Performance logger should not log exceptions.
71054	Orbix C++ can not read some PKCS#12 certificates (Windows and Solaris only).

Bugs	Description
71123	Node daemon can hang during period of heavy activity when processes are being force killed.
71125	Unable to configure Orbix 6.3 services on AIX 5.3 to start on system boot (AIX 5.3 only). **Note:** If you want Orbix services to start on system boot on AIX, use a maximum of seven characters for the domain name.
71126	Unable to configure Orbix 6.3 services on Tru64 to start on system boot (Tru64 only).
71140	`m_is_unique_server_id` should be set to `IT_TRUE` in the leasing code but is not.
71147	Running `itadmin process start` on a process registered as per-client starts the process and creates a `%o` active process and ORB.
71148	Locator eventually crashes if you start a per-client process using `itadmin` and then kill the process a few times.
71164	Client-side and server-side `LeaseCurrent` has the same name.
71182	Fragmentation and GIOP Snoop plug-in do not work (Solaris only).
71188	Memory leak in locator if registered on demand server can not be found.
71263	In certain cases, `itadmin process kill -force` may not clean up repository fully.

Bugs	Description
71325	Thread that is used to register an Orbix process with the management service might block and circumvent the server from starting up. This fix requires that you specify a timeout value for the thread in your configuration. The variable is not enabled by default. The syntax is: `plugins:it_mgmt:registration_roundtrip_timeout = "120";` `120` is only a recommended value; you should set this to the number of seconds you require. This variable should only be used if you are using the management service. For more information, see the Orbix Configuration Reference.
71326	`itconfigure -nogui -localize -host <host> -load <_dd.xml>` command does not work properly in Orbix 6.3.
71346	Locator crash due to sever activation problems in the `EndpointReplica` and activator (HP-UX, Solaris and Red Hat Linux AS 3 only).
71349	Orbix domain services (locator and node daemon) do not terminate correctly if dynamic logging is enabled (Solaris only).
71362	Passing `ORBid` into `ORB.init()` fails for CFR-based domains.
71370	Repeated calls to `ORB.init()` and `orb.destroy()` with the CSI plug-in result in a `org.omg.CORBA.NO_RESOURCES` error (Windows only).
71372	Orbix 6.3.2 `itadmin` commands hang with `ssh` session on AIX 5.3.
71375	Memory leak if TCP connections are established and closed (NIO implementation only).

Bugs	Description
71514	Crash from IFC library when Orbix is used in an active X control that creates a POA (Windows only).
71521	Server non-responsive after 31 marshalling exceptions.
71533	Orbix 6.3 memory leak when creating a secured connection.
71648	The Orbix 6.3.2 SSL server crashes on AIX 5.3 under a certain DoS attack.
71666	Bug in ART plug-in initialization procedure.
71696	`itconfigure` disables services on Vista with valid Windows license.
71737	Memory leak when server becomes unavailable.
71740	Node daemon failed to re-register with the locator, all of the persistent POAs that are under the same ORB from a Java server after restarts.
71779	`java.lang.OutOfMemoryError` occurs after some time when using the Orbix NIO implementation.
71805	Customer requires secure, oneway IIOP calls.
71808	Orbix 6.3.2 locator leaks memory when manually launched process is not running.

Bugs	Description
71822	No logging to console in Java server when using CFR-based domain. The default configuration file generated by `itconfigure` for a CFR domain contains the following line: `plugins:local_log_stream:filename = "$IT_PRODUCT_DIR/var/ORB-1148/logs/boot-orb.log"` Removing (or commenting out) this configuration variable results in the Java server logging to standard error. For more information, see the Orbix Administrator's Guide.
71828	Malicious client can cause the Orbix 6.3.2 SSL server to crash.
71843	SSL test client caused Orbix 6.3.2 SSL server to crash on AIX.
71871	`set_effective_own_gssup_credentials_info` not working in Java CSI v2 implementation.

Enhancements

The following enhancements have been made in Orbix 6.3 Service Pack 3:

- SR: 283820—Support for Orbix 6.3 SP 2 on Vista.
- 70967—Network partition recovery configuration
- 71029—Ergonomic improvements to Orbix Management Web console
- CFR Cache configuration
- Java NIO/CIO in CFR domain
- Local load balancing
- IPv6 support

70967—Network partition recovery configuration

Support has been for handling network partitions in PSS_DB based replicated services. Previously only slaves sent heartbeat messages to the master. However to recover from network partitions it is necessary to introduce two other heartbeats:

- Heartbeats sent from the master to unresponsive slaves. An unresponsive slave is detected if it has not sent a heartbeat message to the master in a while.
- Heartbeats sent from a replica to replicas in an unknown state. Once any message to a replica fails it is marked as unknown until it rejoins, is removed or a network partition is repaired.

In addition, the master demotes itself if there is the possibility that unconnected replicas can form a majority and elect a new master.

This support is controlled by the following configuration variables:

- `heartbeat_interval`, which specifies the interval in seconds between heartbeats. A value of `0` means there are no heartbeats sent. It is set be default to `10`. This variable replaces the `master_heartbeat_interval` configuration variable and takes priority if both are set.
- `heartbeat_missed_interval, which` specifies the time interval between the last heartbeat from a slave and when the master decides to send a heartbeat to the slave. A value of `0` means this heartbeat and heartbeats between unknown replicas are not sent. It is set by default to `0`.

- `allow_demotion`, which if set to `true` means the master demotes itself if unconnected replicas form a majority and elect a master. This only needs to be set if there are three or more nodes in a replcia group or if there are two replicas in the group and the `allow_minority_master` configuration variable is set to `true`. The default value for the allow_demotion configuration variable is `false`.

In addition, another configuration variable has been introduced to overcome a potential deadlock when there are duplicate masters:

- `lsn_timeout` specifies the maximum time in seconds to wait for a replication message for a particular log record. Once this time is exceeded the PSS_DB plug-in no longer waits for the log message and continues normal processing. A negative value means the PSS_DB plug-in never waits for log record. A value of `0` means the timeout is infinite. It is set by default to `10`.

For more information, see the Orbix Administrator's Guide.

71029—Ergonomic improvements to Orbix Management Web console

The Web console GUI interface for the Orbix management service is split into two panes. The leftmost of these panes displays a listing of managed entities in a tree hierarchy. The tree can be expanded to view deeper into the node structure by using the + icon, and collapsed using the – icon.

An enhancement has been added to retain the focus of the node that has been expanded or collapsed. This makes the Web console more ergonomically friendly for larger deployments.

CFR Cache configuration

The CFR can now cache all configuration data in-process. When the cache is populated, the performance of the CFR is increased.

To turn on caching, set the following entry in the CFR bootstrapping configuration file:

```
plugins:config_rep:enable_caching = "true";
```

To enable the cache to load on startup, which is the default when caching is enabled, set the following variable:

```
plugins:config_rep:populate_cache_at_startup = "true";
```

Alternatively, set this to `false` for lazy loading.

For more information, see the Orbix Configuration Reference.

Java NIO/CIO in CFR domain

When setting Java NIO or CIO in a configuration repository-based domain, you can now override `plugins:atli2_ip:ClassName` at an inner configuration scope by adding configuration at the global scope. The following configuration settings must be added to the global configuration scope:

```
plugins:atli2_ip_nio:ClassName =
    "com.iona.corba.atli2.ip.nio.ORBPlugInNIOImpl";
plugins:atli2_ip_cio:ClassName =
    "com.iona.corba.atli2.ip.cio.ORBPlugInCIOImpl";
```

To use the Java NIO implementation for `IT_IPTransport`, you need to add the following configuration at the appropriate scope for the ORB:

```
initial_references:IT_IPTransport:plugin = "atli2_ip_nio";
```

To use the Java CIO implementation, add:

```
initial_references:IT_IPTransport:plugin = "atli2_ip_cio";
```

For more information, see the Orbix Administrator's Guide and the Orbix Configuration Reference.

Local load balancing

Orbix now provides a local load balancing algorithm—in addition to the existing round robin and random load balancing algorithms.

You can use this new enhancement by passing the `prefer_local` argument to either the `itadmin poa create` or the `itadmin poa modify` command. For example:

```
$ itadmin poa modify -load_balancer prefer_local ClusterDemo
```

When this argument is specified, the locator tries to use a server whose IP address matches that of the client.

For more information, see the Orbix Administrator's Guide.

IPv6 support

You can now configure Orbix servers to listen for the following internet protocol connections:

- IPv6 and IPv4
- IPv6 only

- IPv4 only

The default behavior is for Orbix servers to listen for IPv4 connections only.

The following configuration variables set this behavior:

```
policies:network:interfaces:prefer_ipv4
policies:network:interfaces:prefer_ipv6
```

IPv6 support is available on the following platforms:

- Windows XP and Vista.
- Sun Solaris 8, 9, and 10.
- Red Hat Linux AS 3 and 4.

For more information see the Orbix Administrator's Guide and the Orbix Configuration Reference.

Orbix 6.3 Service Pack 2

Supported Platforms and Compilers

Orbix 6.3 Service Pack 2 includes support for the following new platforms and compilers:

- Windows:
  - Visual Studio 2005 support added on Windows 2003.
  - Windows 2000 no longer supported.
- HP-UX:
  - PA-RISC—ACC 3.73 C++ compiler support added.
  - Itanium—ACC 6.12 C++ compiler support added.
  - HP-UX 11.0 no longer supported.
- AIX:
  - XLC 8.0 support added on AIX 5.3.
  - Separate 32-bit and 64-bit kits. 64-bit kits include 64-bit services.
  - 64-bit JDK added for 64-bit kits.
  - XLC 7.0 support continues on AIX 5.2 and 5.3.
  - VisualAge 6.0 no longer supported.
- Solaris

- 64-bit JDK 1.5 support added on Solaris 9 and 10.

For information on all the platforms and compilers that Orbix 6.3 supports, see the Supported Products and Platforms page on the IONA website.

Known Issues

Orbix 6.3 Service Pack 2 has the following known issues.

- Occasional Timing Error Starting Services in a Secure CFR-based Domain that uses Replication
- idlgen Does Not Support vc8.0 Flag
- AIX—Cannot Update an Existing Orbix 6.3 Installation
- JDK Version on Solaris 10 x86

Occasional Timing Error Starting Services in a Secure CFR-based Domain that uses Replication

Occasionally when using the generated start scripts to run services within a secure CFR-based domain that uses replication, you will encounter a timing issue. The error reported is as follows:

```
Could not initialize ORB: IDL:omg.org/CORBA/PERSIST_STORE:1.0: minor =
   0x49540803 (IT_PSS:RESOURCE_DEADLOCK), completion status = MAYBE
```

The issue occurs when a slave service starts up before the master is fully ready. If you do encounter this issue, you need to restart the slave.

A patch will be available shortly to address this issue. The fix will also be included in the next release of Orbix.

idlgen Does Not Support vc8.0 Flag

`idlgen` does not support the `vc8.0` flag. This will be resolved in the next release of Orbix.

AIX—Cannot Update an Existing Orbix 6.3 Installation

On AIX it is not possible to update an existing 6.3 installation with Service Pack 2. Separate 32-bit and 64-bit kits are now shipped on this platform. You must install either the 32-bit or the 64-bit kit, and migrate your data manually.

JDK Version on Solaris 10 x86

The following Sun bug occurs with JDK versions 1.4.2_10, 1.4.2_11, and 1.4.2_12:

- `Select()` fails when using `DevPollSelectorProvider` on Solaris 10 (http://bugs.sun.com/bugdatabase/view_bug.do?bug_id=6322825)

The workarounds are described in the bug report. Orbix 6.3 Service Pack 2 has been tested with workaround 2, which increases the hard limit on the number of file descriptors to 8193 or higher.

This bug is fixed in JDK 1.5.0_08.

New Features

Orbix 6.3 Service Pack 2 includes the following new features:

- New API for the Client Side of a Session Management Application
- Notification Service—New Configuration Variable
- New itconfigure Option for Creating a Domain in which to Run Demos

New API for the Client Side of a Session Management Application

A new API has been defined for the client side of a session management application (previously, there was no client-side API, only configuration). The new `IT_Leasing::ClientLeaseCallback` interface enables clients to receive notification of events affecting the current session. In particular, a client can receive a notification whenever a lease is lost (for example, due to a timeout, dropped connection, and so on). This gives clients an opportunity to clean up resources associated with the lost lease.

Notification Service—New Configuration Variable

The following configuration variable has been added to enable the notification service to store all channels regardless of the `ConnectionReliability` configuration setting:

```
plugins:notify:always_persist_channel
```

By default, the persistence of a notification channel is determined by the `ConnectionReliability` configuration setting used to create the channel. Setting the `ConnectionReliability` configuration variable to `Persistent` results in a persistent channel, and setting it to `BestEffort`, which is the default, results in a non-persistent channel. In addition, the consumer and supplier admins inherit their `ConnectionReliability` settings from the channel, and proxies inherit their `ConnectionReliability` settings from the admin. Therefore, prior to the addition of the new `plugins:notify:always_persist_channel` configuration variable, there was no way to create a persistent channel without persistent admins and proxy objects.

With Orbix 6.3 Service Pack 2, if you want channels to always be persistent, regardless of the `ConnectionReliability` configuration variable setting, set:

```
plugins:notify:always_persist_channel = "true"
```

If not set, the `ConnectionReliability` configuration variable setting determines whether or not the channel is persistent.

New itconfigure Option for Creating a Domain in which to Run Demos

Orbix 6.3 Service Pack 2 includes a new option for the `itconfigure` command to let you create a domain for running the Orbix demonstrations. The syntax of the new option is:

```
itconfigure -demos_domain -range <base port>
```

Where:

`-demos_domain`	Generates a domain called `demos` using the descriptor installed at: *OrbixInstallDir*`/asp/6.3/etc/descriptors/demos_dd.xml`
`-range <base port>`	Specifies the base port to be used for the services that are deployed in `demos` domain.

You can use the generated domain to run the demos that are located in the following directories:

- *OrbixInstallDir*`/asp/6.3/demos/corba/orb`
- *OrbixInstallDir*`/asp/6.3/demos/corba/pdk`
- *OrbixInstallDir*`/asp/6.3/demos/corba/standard`
- *OrbixInstallDir*`/asp/6.3/demos/corba/tls`
- *OrbixInstallDir*`/asp/6.3/demos/corba/ts`

To generate the `demos` domain complete the following steps:

1. Change directory to: *OrbixInstallDir*`/asp/6.3/bin`
2. Run `itconfigure -demos_domain -range <base port>`.

Note: On Windows, the environment for the configuration domain is automatically set up. On UNIX, you must source *OrbixInstallDir*`/etc/bin/demos_env` to set up the environment.

Bugs Fixed

The following bugs have been fixed in Orbix 6.3 Service Pack 2:

Bugs	Description
68866	The `itconfigure` tool in ASP 6.0.3 and Orbix 6.1 always converts the hostname to lowercase.
70242	Setting certain variables to a value of `-1` under root scope causes the configuration repository not to be accessible any more.
70281	Orbix 6 C++ Server does not support the ISO-8859-15 character set.
70305	Starting Orbix services from a directory that later gets deleted, will make the Orbix service continuously log an error to its log file.
70520	On Windows after Orbix 6.3 is installed it is viewed by the OS as just `orbix`.
70573	It's not possible to create a secure IOR in Orbix 6.2.1 that contains the fully qualified hostname.
70597	Orbix 6.x IDL compiler does not generate valid `#include` inserts when passing the `-poa:-xReflection` flag.
70602	The node daemon on Linux is not reaping its child processes correctly. **Notes:** This fix also required an update to the Linux kernel. For Enterprise Linux AS 3.0, update 8 is required. For Enterprise Linux AS 4.0, update 3 is required.

Bugs	Description
70655	Interoperability problem. Orbix 6.3 Java consumer throws `org.omg.CORBA.BAD_TYPECODE` exception when receiving events from a JacORB supplier if `jacorb.compactTypecodes` is enabled. A new configuration variable, `plugins:orb:use_compact_typecodes=true`, has been added to enable the sending and receiving of compact typecodes in marshalling/unmarshalling. The default value is false.
70662	IDL compiler generates slightly different code if the include path is changed.
70707	When choosing the silent install option in 6.3/6.3 SP1 for Linux RH AS 3.0u5, product is installed in default directory /opt/iona.
70789	Orbix 6.3.1 Java cannot read PFX PKCS12 Certificates.
70807	`accept()` failed in `TCPListenerImpl::readable()` with: No buffer space available.
70860	Client attempts to send data over a closed connection if request is greater than 16KB.
70896	Caching configuration values: Unnecessary look-ups of configuration variables `plugins:gsp:enable_gssup_sso` and `policies:iiop:client_address_mode_policy:port_range` is causing problems in large CFR-based domains.
70932	Node daemon hangs when servers killed.
70945	Unhandled exception can crash node daemon.
71038	Cannot use a load balanced replicated POA with the per-client activation mode.

Enhancements

The following enhancements have been made in Orbix 6.3 Service Pack 2:

Enhancement	Description
70591	Provide a way for the notification service to shrink its data files when no events are in a persistent channel. New `itadmin` command: `itadmin nc compact <channel>`
70712	Enhancement request for logging macro to, for example, allow the customer to add an additional string argument, such as the server name, which will appear in the log.
70768	Enhancement request for the notification service to store all channels regardless of the `ConnectionReliability` property. See "Notification Service—New Configuration Variable" on page 14 for more detail.
70802	The customer would like the client-side API of the session management plug-in to be enhanced so a client process can be informed when a lease has failed to renew (thus indicating that a server process has crashed). See "New API for the Client Side of a Session Management Application" on page 14 for more detail.
70832	Orbix 6.1: need to integrate GIOP snoop diagnostics with normal diagnostics.
70833	Orbix 6.1: enhancement request for `itadmin ns` commands.
70870	Enhance `itconfigure` to be able to set logging and for this logging level to be propagated in the event of another service being added.

Orbix 6.3 Service Pack 1

Supported Platforms and Compilers

Orbix 6.3 Service Pack 1 includes support for the following new platforms:

- Red Hat Linux AS 4.0 Update 2.
- Support for Sun Solaris Zones: Orbix 6.3 SP 1 has been successfully tested in a Solaris 10 multi-zone environment.

For information on all the platforms and compilers that Orbix 6.3 supports, see the *Supported Products and Platforms* page on the IONA website:

http://www.iona.com/products/orbix/orbix_platforms.htm.

Known Issues

To date there are no known issues with Orbix 6.3 Service Pack 1.

Bugs Fixed

The following bugs have been fixed in Orbix 6.3 Service Pack 1:

Bug	Description
70135	Delegated SSO token is rejected in CSI interceptor if no SAML response is attached to service context.
70242, 70426	Setting certain variables to value of `-1` under root scope is making the configuration repository inaccessible.
70295	Orbix 6.2 multi-threaded client hangs and consumes 100% CPU on Windows if all threads sending requests at the same time.
70305	Starting Orbix services from a directory that is later deleted makes the Orbix service continuously log errors.
70324	Cannot debug Orbix 6.2.1 64-bit servers on Solaris 10. 64-bit server cannot debug with `dbx` because of unknown exception in `IT_Condition::wait`.
70332	Messages with a `BestEffort EventReliability` policy are still persisted in a notification channel.

Bug	Description
70335	Federation broken in Orbix 6.2.
70355	Passing `-ORBid` with any id to a simple Java process in Orbix 6.2.1 results in a `NO_PERMISSION` exception if running on a CFR-based domain.
70360	Underlying TCP connection closing when naming service is called under heavy load.
70367	Enabling dynamic logging causes the configuration repository and node daemon to core dump when starting the Orbix services in Orbix 6.3
70368	`TransportInterceptorKey` does not return unique hashcodes.
70391	Naming service crashes under heavy load in `IT_PSS_R::StorageObjectImpl::~StorageObjectImpl`
70409	Empty `ORBname` associated with POA `IT_NamingContextExt`.
70428	Generated deployment descriptor file `_dd.xml` contains inconsistent domain name in `<dd:location_domain>` field.
70433	Node daemon failed to re-register persistent POAs of Java servers into locator's endpoint cache after restart.
70462	Orbix 6.3 `itconfigure` disregards directory locations for data and configuration when deploying a replicated domain.
70509	Client using AMI crashes at `IT_ATLI2_IP::IPPoolImpl::execute()` when a timeout exception is thrown back from the server. Seen on the Solaris/AIX/HPUX platforms.

Enhancements

The following enhancements have been made in Orbix 6.3 Service Pack 1:

Enhancement	Description
70333	Enhancement request for a change in the behavior of the `plugins:notify:trace:retry` configuration variable. This now indicates the queue name when a retry message is logged.
70335	Enhancement request for a new `plugins:naming:check_ior_hostname` configuration variable. This check hostnames for customers that have deployed domains with identical names on different hosts.
70431	Request for a plug-in that combines connection information with GIOP request information.
280574	Support for Sun Solaris Zones: Orbix 6.3 SP 1 has been successfully tested in a Solaris 10 multi-zone environment.
	Chunked `Valuetype`s are supported for JDK 1.5.
	The openssl binary for all platforms has been updated to 0.9.8a. The main reason for this is to compile out the following patented ciphers (idea, rc5, mdc2).
	Separation of IIOP_TLS and HTTPS policies. Previously both plug-ins shared the same configuration values. In Orbix 6.3 Service Pack 1 the HTTPS plug-in policies can be distinguished with the prefix `policies:https:`

Enhancement	Description
	Improved C++ TLS logging for handshake problem diagnosis. The following parameters are logged with the TLS logging enhancement: • Protocol • Accept v2 hello messages • Ciphers suite set-up • Identity • Custom peer cert validation • Session cache • Client authentication • Max chain length • Cert constraints

Documentation Updates

The following documents have been updated for Orbix 6.3 Service Pack 1:

- CORBA Programmer's Guides
- Orbix Administrator's Guide
- Orbix Configuration Reference Guide
- Orbix Deployment Guide
- Orbix Security Guide
- Demonstration Readme Files

CORBA Programmer's Guides

The following additions and updates have been made to the CORBA Programmer's Guide C++ and Java for the Orbix 6.3 Service Pack 1 release:

- New details have been added to the documentation of the `InvocationRetryPolicyValueImpl` structure type. If an application makes use of the `InvocationRetryPolicyValueImpl` structure type, all members of this structure must be assigned an appropriate value. Any defaults documented in the programmer's guide or reference guides are only applicable if you choose to use this policy without defining this type, overriding any of the values and passing the subsequent object to the `create_policy` function.

- Details have been added of the IDL compiler switch, `-3`, which enables Orbix 3 IDL compatible parsing.
- Details of proprietary corbaloc URL protocol called `it_loc`, which resolves objects stored in the IMR's named key registry without the need to specify the locator's address:

Orbix Administrator's Guide

The following additions and updates have been made to the Orbix Administrator's Guide for the Orbix 6.3 Service Pack 1 release:

- Enhancement 70431. For C++, a new interceptor plug-in called `"request_logger"` has been provided to log one log statement for each incoming request and another log statement for each outgoing reply.
- New examples for using the GIOP snoop plug-in. GIOP snoop is a tool that allows you to trace GIOP messages as they arrive into your application.
- New `itadmin poa modify` options (`-augment_replicas` and `-remove_replicas`).
- A new dynamic logging plug-in. This is for use in a domain were the Java-based Orbix management service is not deployed and you want to dynamically change logging levels of servers by using the `itadmin` command-line tool.
- Updated section on uninstalling Windows services with passing the `-ORBname` parameter to the uninstall command, for example:
  `itotstm -ORBname iona_services.otstm.test uninstall`

Orbix Configuration Reference Guide

The following additions and updates have been made to the Orbix Configuration Reference Guide for the Orbix 6.3 Service Pack 1 release:

- Information about the following configuration variables has been added:
  - `plugins:atli2_ip:fds_to_reserve`. Solaris only feature that allows you to instruct Orbix not to use file descriptors below a certain value.
  - `plugins:local_log_stream:precision_logging`. Enhancement to provide precision logging for the event log.
  - `plugins:notify:allow_persistence_override`. Specifies whether to allow channel persistence to be overridden. Bug 70332.

- `policies:iiop:connection_attempts`. Specifies the number of connection attempts used when creating a connected socket in a Java application.
- `policies:iiop:connection_retry_delay`. Specifies the delay, in seconds, between connection attempts when using a Java application.
- The default value on Windows of `plugins:iiop:ip:reuse_addr` and `plugins:http:ip:reuse_addr` has been changed from `"true"` to `"false"`.

- The following variables are not supported in Java:
  - `tcp_listener:reincarnation_retry_delay`
  - `tcp_listener:reincarnation_retry_backoff_ratio`

Orbix Deployment Guide

The following additions and updates have been made to the Orbix Deployment Guide for the Orbix 6.3 Service Pack 1 release:

- Updates to the command-line options for localizing a preconfigured domain.
- Deploying with custom certificates in a replicated domain.
- Dynamic logging.
- Corrected version numbers in chapter on *Migrating Orbix Domains*.

Orbix Security Guide

The following updates have been made to the Orbix Security Guide for the Orbix 6.3 Service Pack 1 release:

Removed warning about authorization support for Orbix services. The Orbix services can now be fully secured (locator, node daemon, naming, configuration repository, and interface repository).

Demonstration Readme Files

A note has been added to the Orbix 6.3 demonstration `README.txt` files to indicate that `\asp\6.3\demos\demo_vc71_32.mk` should be copied to `\asp\6.3\demos\demo.mk` when building demos using VC 7.1.

Orbix 6.3

Supported Platforms and Compilers

Orbix 6.3 includes support for the following new platform and compilers:

- Red Hat Linux AS on Itanium.
- XL C/C++ 7.0 on IBM AIX.
- Sun Studio 10 on Solaris 10.
- JDK 1.3.1 support has been dropped. Most platforms now support JDK 5.0 (1.5.0).

For information on all the platforms and compilers that Orbix 6.3 supports, see the *Supported Products and Platforms* page on the IONA website:

http://www.iona.com/products/orbix/orbix_platforms.htm.

Known Issues

The following known issues exist in Orbix 6.3:

- "Chunked Valuetypes"
- "Installation on AIX"
- "C++ management agent registration plug-in"

Chunked Valuetypes

Chunked `Valuetype`s are supported in JDK 1.4.x, but are not currently supported for JDK 1.5. Chunked `Valuetype` support for JDK 1.5 will be made available in a future patch.

Installation on AIX

On AIX, installation of a runtime kit is not supported by default. In order to support the installation of a runtime kit, change the following lines in the `installer-platforms.xml` file from:

```
<platform>
  <id>aix</id>
  <os-names>AIX</os-names>
  <compilers>xlc60,xlc70</compilers>
  <widths>32,64</widths>
  <iostreams>cios,std</iostreams>
  <osarch>ppc,ppc64</osarch>
</platform>
```

to

```
<platform>
  <id>aix</id>
  <os-names>AIX</os-names>
  <compilers>xlc60</compilers>
  <widths>32</widths>
  <iostreams>cios,std</iostreams>
  <osarch>ppc,ppc64</osarch>
</platform>
```

The `installer-platforms.xml` file is located in the same directory as the installer.

C++ management agent registration plug-in

The C++ management agent registration plug-in is not functional in Orbix 6.3. Dynamic logging can not be enabled without deployment of the management service.

When running the Orbix configuration tool `(itconfigure)`, users that are prompted to enable dynamic logging should choose **No** in the popup dialog. Dynamic logging without the need for the management service is available in Orbix 6.3 Service Pack 1.

Bugs Fixed

The following bugs have been fixed in Orbix 6.3:

Bug	Description
53540	Registering observers on locator registries.
67966	Node-locked ASP licenses require a case-sensitive hostname.
68538	Orbix 2000 version 2.0 IFR bug. Registering the following IDL in the IFR causes the IFR to be uncontactable on HP-UX 11.
69198	`itconfigure` does not offer the option to configure a 64-bit environment when configuring a 64-bit architecture.

Bug	Description
69574	Allow rebasing of Orbix file descriptors to a value greater than 255.
69646	Cannot connect to the login server using `corbaloc` URLs.
69684	Allow functionality to update a replicated server by adding a replicated POA without having to redefine the whole list of existing replicated POAs.
69739	Customer wants to be able to specify multiple initial references for `ORBInitRef` from his code.
69754	Enhancement request for dynamically changing the ORB's logging without the dependency on the management service.
69856	Extend corbaname to apply to named keys.
69874	COMet Typeman reports ATLI2 warnings when exiting.
69886	Enabling millisecond timestamps for logging.
69945	Orbix Connect should allow its keystore type to be configurable.
70010	Removing of PDK headers files.
70036	Orbix 6.2.1 Java CSI plug-in leaking memory.
70045	Buffered logging typo.
70080	Client might invoke on server object using an old and invalid lease ID.
70092	`reuse_addr` is not implemented in Java (Orbix 6.1.x forward).
70134	When using external certificate stores, no `TrustManagers` are loaded.
70141	`ts2tlb` circular dependency between types/modules error.
70192	`WorkQueuePolicy` does not work on Orbix 6.x Java with either `AutomaticWorkQueue` or `ManualWorkQueue`.

Bug	Description
70202	SSO tries to reauthenticate SSO token even though the client had not sent one.
70203	Orbix 6.2 Java IDL compiler generates code that will not compile if package name and interface name are the same.
70217	corbaname does not work for `NameService` `RootContext` object when using Java ORB.
70228	Apparent memory leak when using `iiop_tls/EstablishTrustInTarget` when the target server is not running.
70252	Behavior change of `NamingContextExt::resolve_str("")` between 6.0.3 and 6.0.4. In 6.0.3, `resolve_str` with an empty string returned an `InvalidName` exception. In 6.0.4, it now returns the root context (as a fix for bug 69489).
70321	Cannot configure a slave domain to listen on a specific network address using `-listen_address_list` in Orbix 6.2.1.

Enhancements

The following enhancements have been made in Orbix 6.3:

Enhancement	Description
68705	Allow trusted principals to be accepted by ISF.
69434	Orbix 6.3 can be installed in silent mode. Refer to the *Installation Guide* for details.
69461	Orbix clients should use session timeout in SAML messages for the cache timeout.
69646	Login server corbaloc access.

Enhancement	Description

69684	Two new flags were added to the `itadmin poa modify` option:
	`-augment_replicas`
	This flag allows the user to add ORBs without having to redefine the complete list.
	`-remove_replicas`
	This flag allows the user to remove orbs without having to redefine the complete list.

69856	Previously to resolve a `myService` named key you would need a corbaloc in your configuration file as follows: `initial_references:myreference = "corbaloc::LocatorPort/myService";` A new proprietary corbaloc URL protocol named `it_loc` has been developed to resolve objects stored in the IMRs named key registry without the need to specify the locators address.
69886	To activate precision time-stamping, set the following configuration variable: `plugins:local_log_stream:precision_logging = "true"; # default is false`
70022	Implement `IT_CSI::set_received_credentials`.
70026	`itconfigure` can now process custom values for any substitution variables. These are defined in the section whose name is `substitute_vars` in the XML files which are found in `asp/6.3/etc/conf` directory of your installation.
	The Security Service now enforces client certificate constraints on incoming requests via the `policies:security_server:client_certificate_constraints` configuration variable.
	Orbix now allows trusted principals to be accepted by ISF.