



# Rocket® Orbix® 3

(formerly a Micro Focus® product)



Rocket is the world's largest provider of CORBA products. Rocket® VisiBroker 8.5\*, Rocket® Orbix 6\* and Rocket® Orbix 3\* are part of a comprehensive suite of Premier Rocket® CORBA\* products designed for distributed applications. Premier ORBs are built to enable easy integration with Rocket CORBA Modernization Add-Ons.

## Product highlights

Rocket CORBA solutions have been under continuous development and improvement for over 25 years. Rocket Orbix was the first commercial CORBA implementation on the market and underpins mission-critical systems in many of the world's largest organizations. Rocket commitment to the future of CORBA ensures organizations can continue to rely on Rocket Orbix 3 to power their enterprise CORBA applications for decades to come.

With Rocket Orbix 3, a Basic Object Adapter (BOA) based ORB, users can effortlessly develop and deploy secure interoperable distributed applications.

Rocket delivers binary compatibility for future versions of Rocket Orbix 3, enabling an easy upgrade to future Rocket CORBA technology. Rocket's continuing support for the latest operating systems and compilers enables organizations to take advantage of the latest performance improvements within modern hardware platforms.

## Quick view

Unified Java and C++ ORB implementation that shares a common configuration, developer tool set, and set of services across languages

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Basic Object Adapter (BOA) ORB

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Orbix daemon manages applications for minimal configuration, automatic activation and location discovery of services and objects

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Transport layer security — TLS / SSL

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COS Services: Naming Service, Interface Repository

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Rocket CORBA services persistence via flat file mechanism

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## Key benefits



### Modernization built-in

Rocket Orbix 3 provides backwards binary compatibility, thus ensuring that existing Rocket CORBA applications benefit from new features, improvements, and security enhancements delivered by future Rocket Orbix 3 release updates, without requiring existing Rocket CORBA applications to be rebuilt. Drop-in Rocket Orbix release upgrades minimize application maintenance and modernization costs.



### Zero administration overhead

Minimal configuration is required to deploy a functional Rocket Orbix 3 environment. Rocket Orbix 3 offers a turn-key CORBA runtime and development environment solution.



### On-the-wire interoperability

Rocket Orbix 3 includes CORBA compliant Internet Inter-ORB Protocol (IIOP) support for interoperability with standards compliant ORB implementations as well as Orbix Protocol support to enable interoperability with earlier Orbix releases. Rocket Orbix 3 transparently switches to the Orbix protocol when required.



### Multi-platform availability

Rocket Orbix is formally supported on an extensive range of platforms including Windows, multiple distributions of Linux, Solaris, HP-UX, and AIX. For each operating system, Orbix supports several processor architectures and is compatible with multiple JDK versions including Java 11. For a complete list of supported platforms see the System Requirements section within this datasheet.

## Key features



### Naming service with load balancing features

Rocket Orbix 3 includes a CORBA compliant Naming Service implementation that manages a repository of mappings between a name and a CORBA object. Orbix Names extends the CORBA Naming Service model to allow a name to map to a group of objects, instead of an individual object. An object group is a collection of object replicas that can increase or decrease in size dynamically. Each object group can be assigned either a round-robin or random selection algorithm to determine what object within the object group is resolved.



### Bidirectional GIOP support

Bidirectional GIOP allows connections from the client to the server to be reused for callbacks from the server to the client, offering a simple and efficient solution to the problem of traversing network firewalls or NATs.



### Security

Transport Layer Security provides data security for applications that communicate across networks. OrbixSSL applications communicate using IIOP layered above SSL/TLS. The SSL/TLS protocol provides connection security that has three basic properties: Authentication, Confidentiality, and Integrity.

OrbixSSL includes support for the latest TLS protocol versions and cipher suites.

In addition, OrbixSSL implements a secure server key distribution mechanism (KDM), which allows an administrator to maintain a database of servers and their associated private key pass phrases. When the Orbix daemon launches an OrbixSSL server, OrbixSSL applications automatically retrieve their certificate's pass phrase from the KDM.



### Single and multi-threaded

Rocket Orbix 3 includes both single-threaded and multi-threaded runtime libraries, enabling the construction of single-threaded or multi-threaded CORBA applications with ease. The new and improved multi-threading model offers increased performance and allows fine-tuning to tailor the ORB performance to suit specific requirements. The Orbix thread filters support a thread-pool, thread-per-request, thread-per-client, and thread-per-object model.



### Active connection management

The Orbix daemon supports a feature called Active Connection Management (ACM). When ACM is enabled, the Orbix daemon disconnects the least recently used connections when the number of active file descriptors reaches the connection limit.



### Advanced runtime features

Rocket Orbix allows applications to create filters. Filters enable the execution of additional code before or after the normal operation calls. Filters could be used to perform security checks, provide debugging traps or information, maintain an audit trail, and so on. Filters can be defined as per-process filters, which see all operation and attribute calls leaving or entering a client's or server's address space, irrespective of the target object, or per-object filters, which apply to individual objects.

Other advanced Orbix features include:

- **Smart proxies**, enable users to implement proxy classes manually, thereby enabling optimization of client interaction with remote services.
- **Loaders**, which are designed to support persistent objects and are responsible for instantiating objects in response to client requests.

## System requirements

- Windows 7, Windows 8.1, Windows 10, Windows Server 2008 R2, Windows Server 2012 R2, Windows Server 2016, Windows Server 2019 with Visual Studio 2008, 2010, 2012, 2013, 2015, 2017, and 2019
- Linux on Intel platform support including Red Hat 5, 6, 7, and 8, SUSE 10, 12 and 15, Oracle Unbreakable Linux 6, Ubuntu and CentOS
- UNIX support across a variety of platforms including AIX 6 and 7, Solaris 10 and 11 SPARC and x86\_64, and HP-UX Itanium 11iv3
- Oracle JDK 7, 8 and 11
- Open JDK 8 and 11
- HP JDK 7 and 8
- IBM® JDK 8



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