



High Availability for Mule ESB

Solution Overview and Guidelines

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Overview

High Availability for Mule ESB provides basic failover capability for Mule ESB Enterprise. When the primary Mule ESB instance becomes unavailable (e.g., because of a fatal JVM or hardware failure), a backup Mule ESB instance immediately becomes the primary node and resumes processing where the failed instance left off. After a system administrator has recovered the failed Mule ESB instance and brought it back online, it automatically becomes the backup node.

Seamless failover is made possible by a distributed memory store that shares all transient state information among clustered Mule ESB instances, such as:

- SEDA service event queues
- In-memory message queues

High Availability for Mule ESB is currently available for the following transports:

- HTTP (including CXF Web Services)
- JMS
- WebSphere MQ
- JDBC
- File
- FTP
- Clustered (replaces the local VM transport)

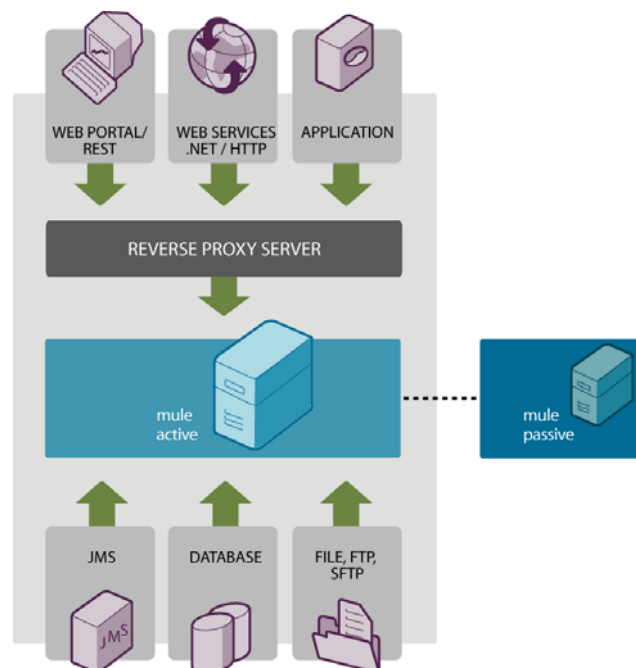


Figure 1. Logical diagram

Requirements and Limitations

- Available for Platinum subscribers of Mule ESB Enterprise version 2.2.1 or higher (note: hotfix patch required for v2.2.1 users)
- Requires two identical Mule ESB instances (one primary node and one backup) running in standalone mode. Ideally, the instances should be installed on different machines in different physical locations to avoid having a single point of failure.
- For socket-based transports (such as HTTP), an external reverse proxy server such as Apache is required to forward requests to the currently active node
- Currently supports stateless routers/components/filters; future versions will support stateful routers/components/filters
- High Availability for Mule ESB is not a replacement for transactions, where required. Message flows that are not transactional could experience lost, partial, or duplicated messages in the case of a failover. Transports that are not transactional for a single Mule instance (e.g., File, FTP, HTTP) are still not transactional with this high-availability solution
- Requires a short (3-5-day) paid service engagement for initial setup and configuration

Service Engagement Highlights

High Availability for Mule ESB requires a paid service engagement to set up and tune the application. An experienced MuleSource consultant will work with you to define your requirements, architecture, design and configuration, and will perform testing to validate the solution. The end-goal is to produce a working solution that enables your mission-critical application to meet its high-availability requirements. Specifically, the MuleSource specialist will work with you to:

- Review and refine detailed high-availability requirements
- Review system and application architecture
- Provide recommendations and best practices
- Define the deployment topology and configuration
- Install and configure High Availability for Mule ESB
- Define test scenarios and validate the solution with your team
- Transfer knowledge and best practices to your team

Installation Highlights

Installation for High Availability for Mule ESB is a straightforward process. The steps include:

- Unzip the file on top of your existing Mule ESB Enterprise installation
- Configure failover properties for primary and backup instances
- If using the Mule local VM transport, modify Mule ESB configuration file(s) to use the clustered transport instead.
- Configure network to support communication between Mule ESB instances in the cluster. The default configuration is multicast but unicast may also be configured.
- Install production HA license

More Information

For more information about High Availability for Mule ESB, or to arrange for implementation of the solution, contact your MuleSoft account representative, or email info@mulesoft.com.

About MuleSoft

MuleSoft provides enterprise-class software, support and services for the world's most popular open source application infrastructure products, Mule ESB and Apache Tomcat. With the lightweight and powerful Mule ESB and MuleSoft Tcat Server, MuleSoft is bringing simple yet powerful infrastructure to today's dynamic Web applications. Today, MuleSoft products boast more than 1.5 million downloads and over 2,000 production deployments by leading organizations such as Walmart.com, Nestlé, Honeywell and DHL, as well as 5 of the world's top 10 banks. MuleSoft is headquartered in San Francisco with offices worldwide..

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