Orchestration Server Migration Guide

Orchestration Server 8.1.4

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Table of Contents

Migrating to ORS 8.1.4

> **Important**
>
> - This guide covers migration only—not installation, not configuration or deployment. For those procedures, see the corresponding sections of the Orchestration Server 8.1.4 Deployment Guide.
> - This document concerns Orchestration Server 8.1.4 only. Consult the Genesys Migration Guide about migrating to earlier versions.

Reference Documentation

The following is a list of documentation relevant to the migration of this product. The documentation is available on the Genesys Documentation web site at www.docs.genesys.com.

- Orchestration Server 8.1.4 Deployment Guide, which contains both getting-started and deployment information specific to ORS 8.1.4.
- Orchestration Server Developer's Guide, which contains an SCXML Language Reference and descriptions of Orchestration Extensions, both used when creating SCXML-based applications executed by ORS.
- Cassandra Installation/Configuration Guide, which describes the database used for storing customer session information.
- Orchestration Server 8.1.x Release Note
- Genesys Interoperability Guide, which provides information on product availability and interoperability when you plan to add or upgrade Genesys products.
- Genesys Supported Operating Environment Reference Guide, which provides operating environments information required to run Genesys applications.
- Genesys 8.1 Security Deployment Guide, which provides information on how to configure security levels for your environment.

New in This Release

For information about earlier releases of Orchestration Server, see the section "Orchestration Server 8.x Migration" of the Genesys Migration Guide.

New Features in ORS 8.1.4

- An Orchestration/Interaction Server protocol extension enhances the mechanism of getting the appropriate interactions for processing from Interaction Server. With enhanced pulling, the pull mechanism uses the strategy name and allows different priorities to be set for different types of interactions. This enhanced pull mechanism can result in improvements in performance and reliability.
  Notes:
  - The enhanced pulling functionality requires Composer 8.1.4 and Interaction Server 8.5.1. Other eServices components can be 8.5.0.
  - ORS retrieves the SCXML-based routing application from an application server and an interaction process diagram for this SCXML-based application must be published into Configuration Server using Composer 8.1.4.
- Orchestration Server supports Submitter objects configured in Composer. Submitters supply parameters that control how Interaction Server submits multimedia interactions to Orchestration Server.
- An Orchestration Server protocol extension supports the attachment of Virtual Queue data to multimedia interactions. The attached user data can then be used by a Reporting Solution, such as Genesys Info Mart. This feature requires Universal Routing Server 8.1.4.
- Orchestration Server supports activation/deactivation of any specific routing strategy.
- Orchestration Server can now directly connect to Configuration Server and pull data. For example, when executing the `GetListItemValue` function, Orchestration Server can pull data without going through Universal Routing Server.
- Orchestration Servers configured as an High Availabilty pair can automatically synchronize voice treatment request data, thereby ensuring a smooth switchover.
- Orchestration Server can now terminate a session when the `ixn.redirect` action is successfully completed, and there is no other associated interaction attached to that session during the configured timeout. This functionality is enabled by the new Application-level option, `ixnfm-idle-session-ttl`, in the `orchestration` section.
- When upgrading/migrating the Orchestration Server Application to a newer release, you can perform a migration procedure without significant loss of data or impact to business operations. For more information, see HA ORS 8.1.4 Migration Procedure when Persistence Enabled.

Changes in Previous Releases

Read about changes to each 8.1.x release of Orchestration Server:

Orchestration Server 8.1.x Release Note

Read the sections **New in this Release** and **Document Change History** in each of these books:

- Orchestration Server 8.1.3 Deployment Guide. The New in This Release topic, Subsequent Releases section, contains new features added after the initial release of the Orchestration Server 8.1.3 Migration Guide.
- Orchestration Server 8.1.2 Deployment Guide

Component Compatibilty

An 8.1.4 Orchestration Solution is designed to work with the Genesys components listed below.

- DB Server 8.1
- Configuration Server 8.1
- Configuration Manager 8.1
- Local Control Agent 8.1.2
- Message Server 8.1
- Solution Control Server 8.1.2
- Solution Control Interface 8.0.3
- Media Control Platform 8.1.7
- SIP-Server 8.1
- Stat Server 8.5
- Orchestration Server 8.1.4
- Universal Routing Server 8.1.4
- Composer 8.1.4
- Interaction Server 8.5.1 (required if working with eServices and using enhanced pulling of multimedia interactions). Other eServices components can be 8.5.0.

Configuration Option Changes

Orchestration Server 8.1.4 option changes are summarized below.

New 8.1.4 Options

- backup-synch-max-age -- specifies the maximum buffer size, in KB, for synch messages in the primary ORS.
- backup-synch-max-buffer -- specifies the maximum age, in seconds, of data in the synch buffer.
- ixnfm-idle-session-ttl to eliminate the possibility of the scenario where an SCXML session session gets “stuck" in memory.
- mcr-queue-on-fails to eliminate the possibility of an interaction not being added to a queue if session creation for multimedia interactions fails.
- Certain Interaction Server options may be set. See Interaction Server Options in Pulling Multimedia Interactions from Interaction Queues.

Options Added After the Initial 8.1.3 Release

Options added after the *8.1.3 Orchestration Server Migration Guide* was published, which are described in the Orchestration section of the ORS 8.1.x Release Note, but which were not included in the Orchestration section of the Genesys Migration Guide, are as follows:

- functions-by-urs
- heartbeat-backup-status
- http-orphan-session-action
- max-session-create-time
- map-composer-log-levels
- new-session-on-reroute
- scxml-log-filter-level
- sessionfm-fetch-timeout
- cassandra-read-timeout
- cassandra-write-timeout
- http-enable-keepalive

- max-assembled-cache-size
- max-assembled-cached-docs
- max-assembled-cached-doc-size
- thread-synch-ipv

For detailed information on these options, see the Options section of the *Orchestration Server 8.1.4 Deployment Guide*.

Prerequisites—Migration from 8.1.2 to 8.1.4

Before preparing for migration, it is important to note that persistence for all sessions, as well as session-to-server information, will be lost during migration.

To prevent this loss from being an issue, before shutting down the current 8.1.2 ORS deployment, all sessions should be allowed to end.

- For voice, this means stopping calls from entering ORS managed route points.
- For eServices, this means stopping multimedia interactions from entering ORS managed interaction queues.

When all voice and multimedia sessions have completed, the 8.1.2 environment may be stopped, and migration to 8.1.4 with a new Cassandra deployment may be completed. When upgrading an existing component, you should not create a new Application object. Instead, use the existing Application object, keeping the original name.

Upgrade Universal Routing Server to 8.1.4.

Prerequisites—Migration from 8.1.3 to 8.1.4

Upgrade Universal Routing Server to 8.1.4.

Note: URS 8.1.3 is not compatible with ORS 8.1.4.

ORS Migration Procedure from 8.1.2 to 8.1.4

1. Export current configuration options to a configuration file.
   - In Configuration Manager, open the Properties dialog box for the ORS Application object. Starting in ORS 8.0, Genesys Administrator can also be used for configuration. Refer to the Genesys Administrator 8.1 Help for more information.
   - From the Options tab, export the current configuration options to a configuration file. This new configuration file can also be used for rollback purposes, if needed. See "Orchestration Server, Rolling Back the Installation" for more information.
2. Delete options not used.
   - Delete option `orchestration/mcr-pull-by-msn-only`.
   - Delete section `cluster` with options `name` and `super_node`.
   - Delete option `orchestration/get-list-item-by-urs`, which is replaced by `functions-by-urs`.
3. Configure High Availability as described in detail in the General Deployment section of the *Orchestration Server 8.1.4 Deployment Guide*, Redundancy section. In summary:
   - For each instance of the Primary Orchestration Server `Application`, create a Backup `Application` with the same connectivity and configuration settings as its Primary Application.
   - In the Primary Application, specify the ORS Backup with the `Warm Standby` Redundancy type.
4. Configure the ORS cluster. See the Configuring an ORS_Cluster section in the *Orchestration Server 8.1.4 Deployment Guide*.
5. Install Apache Cassandra as described in the Cassandra Installation/Configuration Guide. ORS 8.1.4 requires Apache Cassandra 1.1.x beginning with version 1.1.12.
6. Configure ORS persistence as described in the *Orchestration Server 8.1.4 Deployment Guide*.
   Note: Starting with 8.1.3 Orchestration Server, connection with Cassandra is not mandatory if you do not want to use persistence storage in your deployment.
7. Set the Cassandra configuration options in the Orchestration Server `persistence` section as described in the Orchestration Server 8.1.4 Deployment Guide. See the Configuration Options topic.
   - `cassandra-keyspace-name`: Specify the name of Cassandra keyspace.
   - `cassandra-schema-version`: Enter the Cassandra schema version.
   - `cassandra-strategy-class`: Set to SimpleStrategy if Cassandra is deployed as a single cluster. Set to `NetworkTopologyStrategy` in the case of Data Centers Cassandra cluster deployment.
   - `cassandra-strategy-options`: Set the replication factor for a given keyspace.
8. As described in the Interaction Server Options section of the eServices 8.5 Reference Manual, configure the ORS Application to work with multimedia interactions (if needed).
   - Set the `orchestration/mcr-pull-by-this-node` option to `true` if ORS should work with multimedia interactions.
   - Set the `orchestration/mcr-pull-limit` option to define the maximum number of pulled

interactions that ORS may handle at once.

9. Install Orchestration Server 8.1.4 as described in the Installation section of the *Orchestration Server 8.1.4 Deployment Guide*.

   Note: You have the option of performing a migration procedure without significant loss of data or impact to business operations. For more information, see HA ORS 8.1.4 Migration Procedure when Persistence Enabled. This applies if you have Orchestration Server 8.1.3 installed and are upgrading to a later version. It also applies when migrating from Orchestration Server 8.1.3 to 8.1.4.

10. Test your ORS deployment.

HA ORS Migration Procedure to 8.1.4 when Persistence Enabled

This procedure applies if you have Orchestration Server 8.1.3 installed and are upgrading to a later version. It also applies when migrating from Orchestration Server 8.1.3 to 8.1.4.

Note: If the **_sendSessionRecovered** parameter in an SCXML strategy is not set to `true`, a session may not be recoverable.

1. Switch over a primary ORS instance to a backup mode.
2. Stop the ORS instance that is running in backup mode.
3. Upgrade the ORS Application, as follows:
   a. Store the existing configuration option settings in a ***.cfg** file using the Export utility in Configuration Manager. Preserve this ***.cfg** file in a secure location in case you need to rollback later.
   b. Install the new ORS Application; refer to the Installation section in the *Orchestration Server 8.1.4 Deployment Guide*.
   c. Specify any new configuration options on the **Options** tab of the ORS Application, if required.
4. Start the ORS Application that you just upgraded. Refer to Starting and Stopping in the *Orchestration Server 8.1.4 Deployment Guide*.
5. Make sure that the Application started in backup mode.
6. Switch over the ORS instance currently running in primary mode to run in Backup mode. The ORS instance that you just upgraded is now running in primary mode.
7. Stop the ORS instance that is currently running in backup mode.
8. Upgrade that ORS Application using the steps in step 3.
9. Start the ORS Application that you just upgraded, and make sure it is running in backup mode.
10. Perform steps 1-9 for each of the other ORS nodes.

Rollback Procedure

> **Important**
> Use this procedure ONLY if you need to restore your previous ORS configuration.

If you experience problems upgrading ORS, you can return to your existing previous ORS configuration by doing the following:

1. In Configuration Manager, open the Properties dialog box for the ORS `Application` object.
2. On the Options tab, click the **Import from Configurations File** icon and locate the configuration file you previously exported as described in the Migration Procedure. This procedure overwrites the options on this tab with those in the configuration file.
3. If you changed settings on other tabs, return them to their previous settings.