RadiantOne v7.2 to v7.4.(+) Upgrade Guide

Contents

Getting Started

This guide applies only to upgrading from RadiantOne v7.2.47 to RadiantOne v7.4.2 (or higher).

It is best practice, and reduces risks, to have a new environment for installing v7.4, and then migrating the configuration from v7.2. Keep the v7.2 environment working as a backup until the new v7.4 environment is installed, tested and ready for production. Once the new environment is ready, switch the client load to it.

Before performing the steps in this guide, refer to the RadiantOne System Requirements to verify that your server satisfies the v7.4 requirements.

IMPORTANT NOTES - Virtual Identity Wizard has been deprecated. RadiantOne v7.2 ICS is not upgradable to RadiantOne v7.4. If you used either of these features in RadiantOne v7.2, contact your Radiant Logic Account Representative to discuss an upgrade plan.

If your v7.2 virtual views contained external joins (to other virtual views), the secondary views must be configured for persistent cache BEFORE you are able to initialize the cache on the main view. This requires you to mount the secondary views in the RadiantOne namespace and configure them for persistent cache. The join condition in the main view may need to be updated to reflect the location of the cached secondary views.

It is recommended to upgrade during off-hours to avoid interruption to service.

Backing Up Existing Configuration

The section describes the processes of backing up and exporting your RadiantOne configuration and backing up existing stores and ACIs.

IMPORTANT NOTES – Before starting the backup process, verify that traffic from any client or load balancer does not reach FID through LDAP or the persistent cache connectors.

Backing Up Configuration

From the file system, make a copy of the whole <RLI_HOME> directory and store in a safe place.

Backing Up Existing HDAP Stores

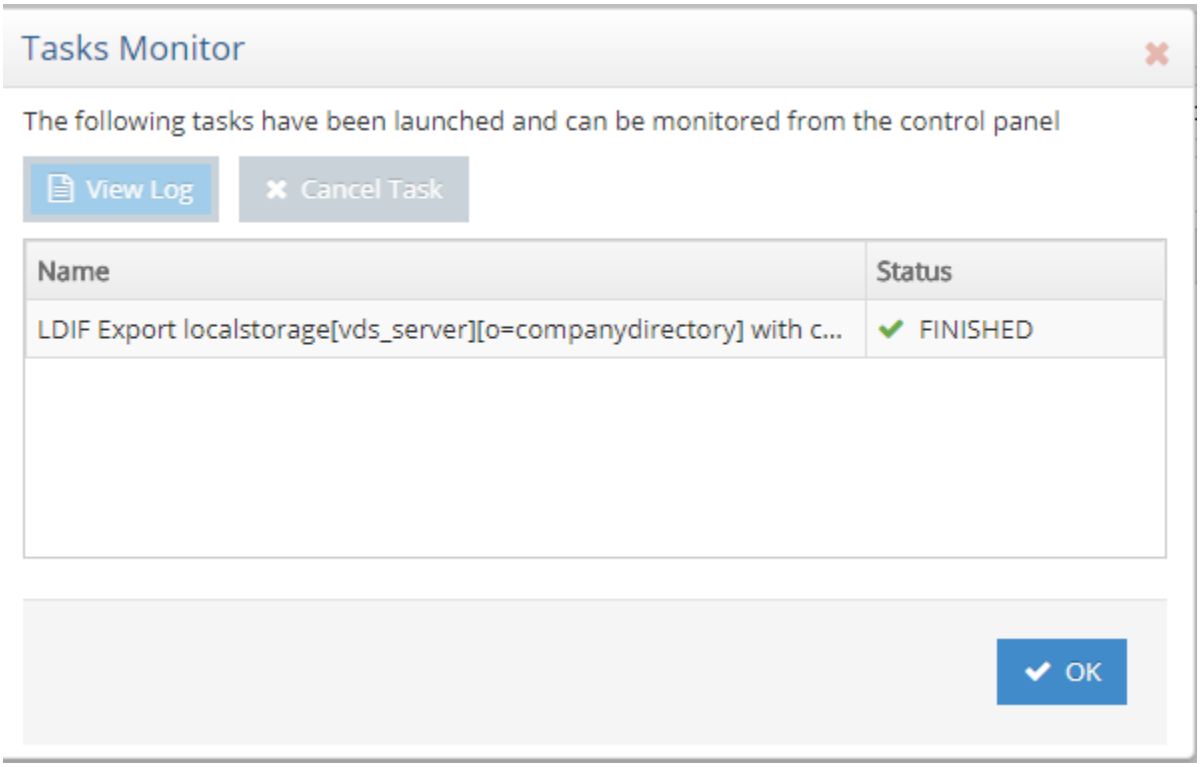
This upgrade guide assumes that you want to migrate HDAP stores from v7.2 to v7.4.

To back up naming contexts defined as HDAP stores, perform the following steps for each of your HDAP stores:

1. On the Main Control Panel, log in as directory manager.
2. On the Directory Namespace tab, select your HDAP store.

NOTE - HDAP stores are identified by this icon .

3. In the right pane, in the Properties tab, click Export. The Export box is displayed.
4. Enter an export file name.
5. Check the Export for Replication box (to ensure the UUID attribute remains with the entries).
6. Click OK. The Tasks Monitor window opens.



7. Once the export finishes, click OK to close the Tasks Monitor window. You are returned to the store's Properties tab.
8. Repeat steps 2-7 for each HDAP store.
9. Copy the LDIF files from <RLI_HOME>\vds_server\ldif\export to a safe place outside of the <RLI_HOME> location.

Backing Up Persistent Cache Stores

Persistent caches must be re-created and initialized manually after the upgrade to v7.4. The persistent cache initialization occurs in two steps. During the first step, the backend data sources are queried and an LDIF file is generated with the results. During the second step, the LDIF file is imported into the local storage. If your current persistent cache is up to date, you can export the existing cache image to an LDIF and use this file during the initialization of the cache

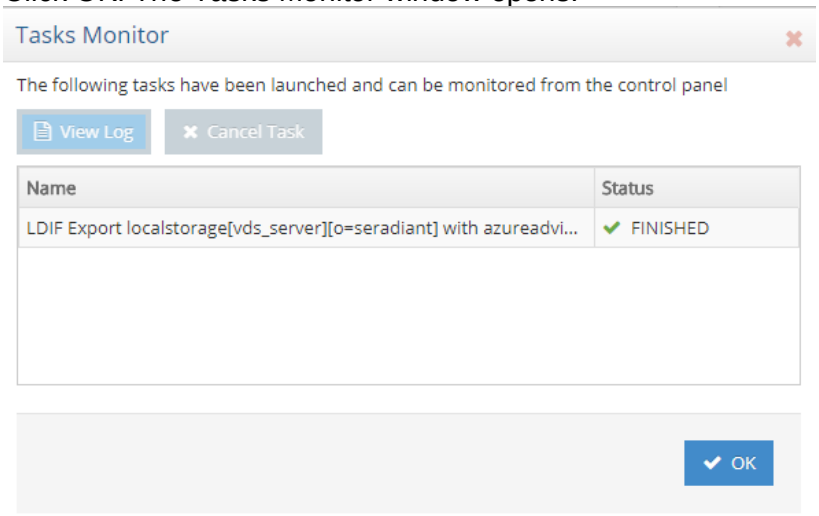
in v7.4. Otherwise, with v7.4, you can have the cache initialization process rebuild the LDIF to use for initialization. Even if you choose to re-initialize the persistent caches from scratch in v7.4, backing up the cache image from v7.2 is recommended.

To back up a persistent cache store:

1. On the Main Control Panel -> Directory Namespace tab, expand below Cache.
2. Under the Cache node in the left pane, select a cache to back up. The two types of persistent cache are listed below.

Icon	Cache Type
	Persistent cache with periodic refresh
	Persistent cache with automated refresh

3. In the right pane, in the Properties tab, click Export.
4. Enter an export file name.
5. Check the Export for Replication box (to ensure the UUID attribute remains with the entries).
6. Click OK. The Tasks Monitor window opens.



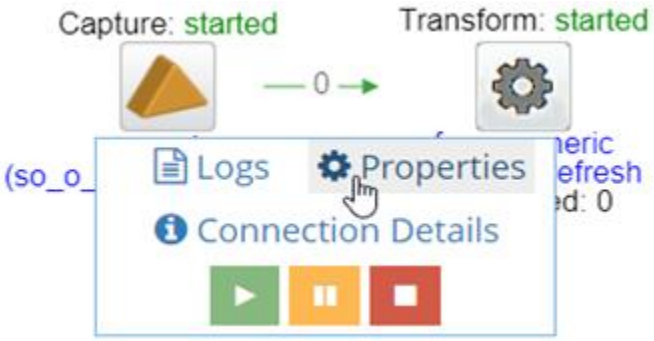
7. Once the export finishes, click OK to close the Tasks Monitor window. You are returned to the cache's Properties tab.
8. Repeat steps 2-7 for each persistent cache branch.
9. Copy the LDIF files from <RLI_HOME>/vds_server/ldif/export to a safe place outside of the <RLI_HOME> location.

Take note of persistent cache properties since they are not migrated and must be manually configured in v7.4:

1. On the Main Control Panel, click the Directory Namespace tab.
2. Expand the Cache node.
3. Select a cache.
4. On the Properties tab, record values for the cache's properties.
5. Repeat steps 1-4 for each persistent cache branch.

Take note of the persistent cache connector properties since they are not migrated and must be manually configured in v7.4:

1. On the Main Control Panel, click the Sync Monitoring tab.
2. If GlassFish is not started, click the Start Application Server button.
3. Select the persistent cache refresh from the list of topologies on the left.
4. Click the capture connector and select Properties.



5. Record the connector's configurable properties.
6. Click OK.

Backing Up ICS Connector Types and Properties

1. In the Main Control Panel -> Sync Monitoring tab, select a topology.
2. In the topology, click an object (representing a source or target connector) and choose Properties.
3. Record the connector type (e.g. Snapshot, triggers, changelog…etc.) and values of all Editable properties.
4. Click OK.
5. Repeat this process for all objects in the topology.
6. Repeat steps 1-5 for all topologies.

Backing Up Log Settings

Take note of current log settings so they can be manually configured in v7.4.

To record log settings:

1. On the Main Control Panel, click the Settings tab.
2. Click Logs --> Log Settings.
3. Select an option from the Log Settings to Configure drop-down menu.
4. Record values for Log Level, Rollover Size, How Many Files to Keep in Archive, and advanced settings.
5. Repeat steps 1-4 for all customized logs.

Backing up Custom Alerts

Most custom alerts are restored automatically in v7.4. However, the following custom alerts must be re-configured manually in v7.4.

- V7.2 ICS persistent cache alerts
- Alerts containing the node ID property (the FID node's cloud ID)

To record custom alerts:

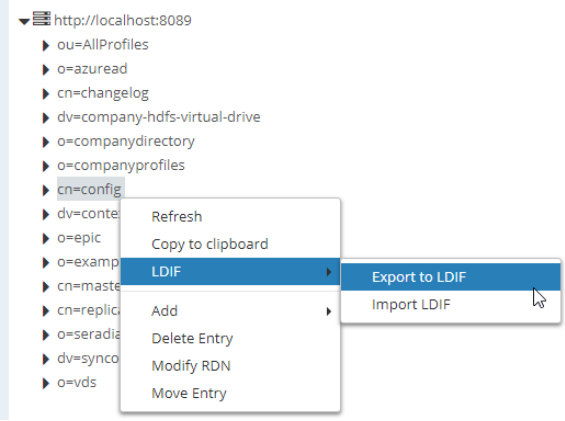
1. In the Main Control Panel, click Settings → Monitoring → Custom Alerts.
2. Select an alert and click Edit.
3. Record the alert's property names and configurable values.

   NOTE – the node ID property itself is not required for manually re-configurating.
4. Return to the main Custom Alerts page.
5. Repeat steps 2-4 for other alerts as required.

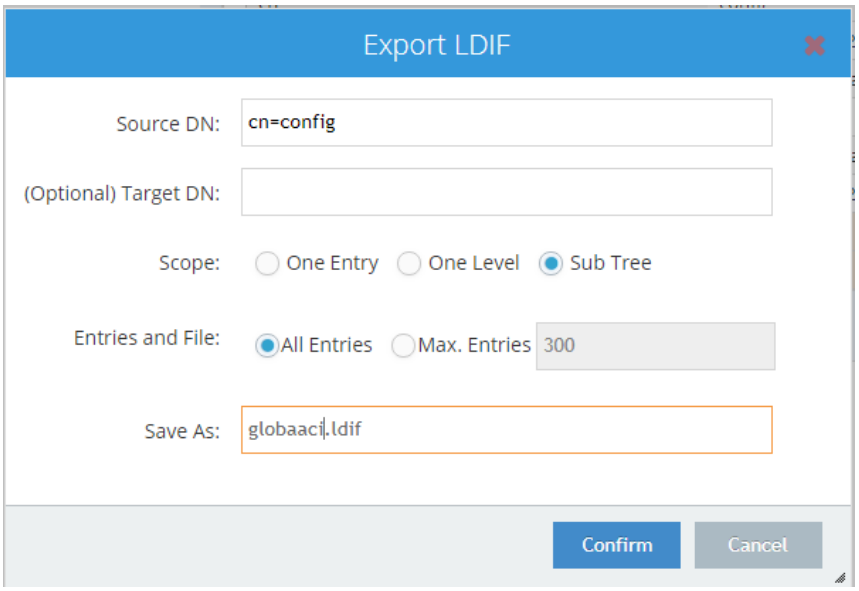
Backing Up ACI

To back up ACI:

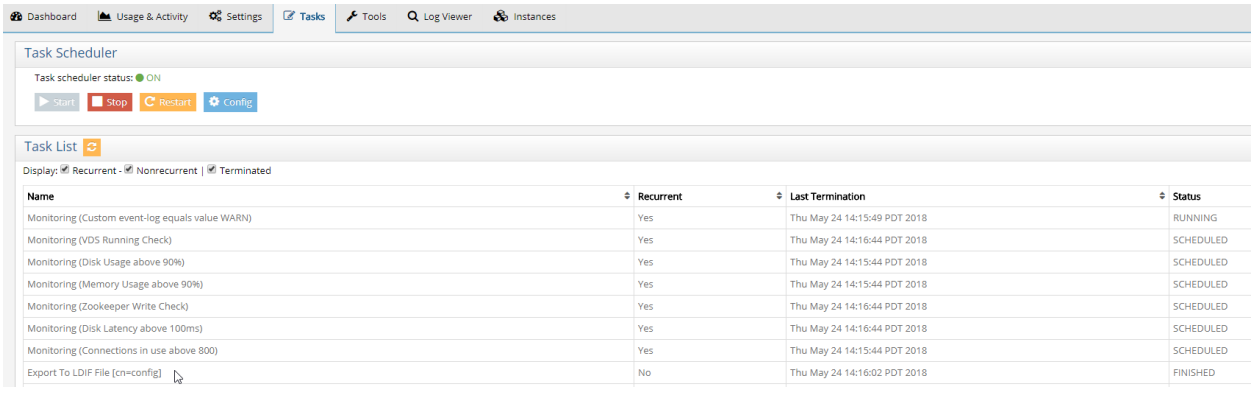
1. On the Main Control Panel -> Directory Browser tab, right-click on the cn=config node.
2. Select LDIF -> Export to LDIF.



3. Enter a file name for the LDIF file (overwrite the default *untitled*) and click Confirm.



4. An export task is launched in the background. To view the task, go to the Server Control Panel associated with the FID node you are exporting from -> Tasks tab. Check the "Terminated" option to view all tasks. Confirm the task "Export To LDIF [cn=config]" has finished successfully.



5. Copy the LDIF files from <RLI_HOME>/vds_server/ldif/export to a safe place outside of the <RLI_HOME> location.

Stopping Non-ZooKeeper Services

1. On the machine where you are exporting the configuration from, in a command prompt, navigate to <RLI_HOME>\bin\advanced and run stop_servers.bat.
2. From a command prompt, navigate to <RLI_HOME>\bin and execute RunZookeeper.bat.

Exporting Existing Configuration

Download the latest **v2.0.X** migration utility and unzip it on the source v7.2 machine (the node from where you are exporting). Download the latest **v2.1.X** migration utility from the Radiant Logic support site and unzip it on the destination machine where v7.4 is going to be installed. Both instances of the migration utility must be extracted to a different folder in the file system. Contact Support (support@radiantlogic.com) for credentials and location of the migration utilities. Use migration utility **v2.0.X** to export from v7.2 and migration utility **v2.1.X** to import into v7.4.

IMPORTANT NOTE – Do not use the migration utility installed in v7.2 to do the export. Download the latest v2.0.X migration utility (as mentioned above) and unzip it on the machine where you want to export from.

1. From a command prompt navigate to the location where you unzipped the migration utility.

   IMPORTANT NOTE - If performing the export on Windows, run the command line as Administrator (right-click on the .exe and choose Run as Administrator option).

2. Run the following command (modifying the version of the migration tool and the location of the export file to match your needs).

   C:\r1\migration\radiantone-migration-tool-2.0.26\migrate.bat export C:/tmp/export.zip > C:\tmp\export.log.

Uninstalling RadiantOne v7.2

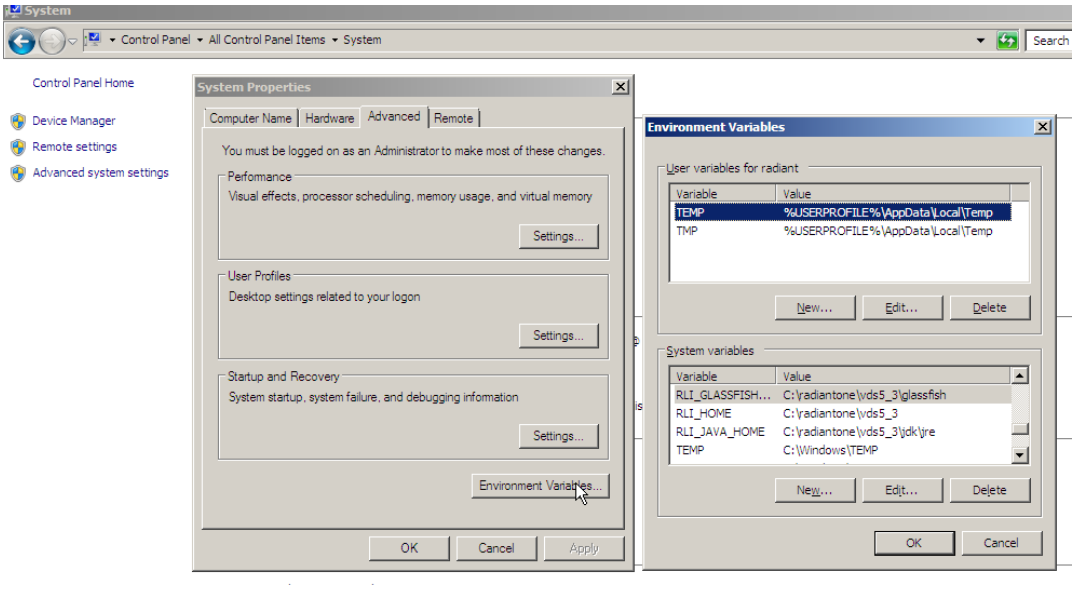
It is best practice, and reduces risks, to have a new environment for installing v7.4, and then migrating the configuration from v7.2. Keep the v7.2 environment working as a backup until the new v7.4 environment is installed, tested and ready for production. Once the new environment is ready, switch the client load to it.

If you don't have additional resources to build out a v7.4 environment, you can perform an in-place upgrade of your v7.2 environment. This section assumes you will install v7.4 on the same machine where v7.2 is currently running. If you can setup a new environment for v7.4, skip this section.

NOTE - If you plan on installing RadiantOne v7.4 on a new machine, go to the

section on [installing v7.4.2(+).]

1. Stop all RadiantOne services using <RLI_HOME>\bin\advanced\stop_servers.bat (or Linux equivalent).
2. Stop ZooKeeper using <RLI_HOME>\bin\stopZooKeeper.bat (or Linux equivalent).
3. As an administrator, run the uninstaller: <RLI_HOME>\uninstaller\uninstaller.exe (or Linux equivalent).
4. When the uninstall process is done, restart the operating system and verify that the environment variables RLI_HOME, RLI_JAVA_HOME, and RLI_GLASSFISH_HOME are gone. If they are not, remove them (follow the steps below) and restart your server again.
5. On Windows platforms, to remove the environment variables, go to "Start → Control Panel → System → Advanced system settings → Environment Variables → System Variables" and delete them.



6. On Linux, open a terminal and type "env | grep RLI" and if the command returns the variables, you will need to edit the file ~/.bash_profile and remove the following lines:
   RLI_HOME=<your_path>
   export RLI_HOME
   RLI_JAVA_HOME=<your_path>
   export RLI_JAVA_HOME
   RLI_GLASSFISH_HOME=<your_path>
   export RLI_GLASSFISH_HOME

Installing RadiantOne v7.4.2 (+)

If you are re-using the v7.2 machines for v7.4, delete any remaining files/folders found at the location of the v7.2 install. All existing configurations such as file paths, server ports, and passwords from v7.2 will be re-used for v7.4.

Run the RadiantOne v7.4 installer and follow the step-by-step instructions and then restart the computer (or log out/re-login) and then copy your license.lic file into <RLI_HOME>\vds_server. For detailed steps on the install, please see the RadiantOne Installation guide. It is recommended you install the first node in the cluster and then migrate the configuration before adding more cluster nodes.

> **Note - If installing on Windows, please run the installer as Administrator (right-click on the .exe and choose Run as Administrator option).**

Migrating the Configuration

Make sure you have downloaded the latest **v2.1.X** migration utility from the Radiant Logic support site and unzipped it on the target machine (where you plan on importing). Contact Support (support@radiantlogic.com) for credentials and location of the Migration Utility.

Run the command to import the configuration. An example is shown below. The cross-environment flag is needed because you are moving from v7.2 to v7.4.

C:\r1\migration\radiantone-migration-tool-2.1.2\migrate.bat c:\radiantone\vds\ import c:\tmp\export.zip cross-environment > C:\tmp\export.log

Migrating Custom Projects and Interception Scripts

For custom data sources, from your v7.2 backup location, copy the <RLI_HOME>\vds_server\custom\src\com\rli\scripts\customobjects folder to the v7.4 <RLI_HOME>\vds_server\custom\src\com\rli\scripts\customobjects folder and overwrite the v7.4 target.

For interception scripts, from your v7.2 backup location, copy the <RLI_HOME>\vds_server\custom\src\com\rli\scripts\intercept folder to the v7.4 <RLI_HOME>\vds_server\custom\src\com\rli\scripts\intercept folder and overwrite the v7.4 target.

Rebuild the customobjects and intercept jar files using ANT. An example is shown below:

C:\radiantone\vds\vds_server\custom>c:\radiantone\vds\ant\bin\ant.bat buildjars

```
Buildfile: build.xmlcompile:

[javac] Compiling 11 source files to C:\radiantone\vds\vds_server\custom\classes

[propertyfile] Updating property file: C:\radiantone\vds\vds_server\custom\build.txtbuildjars:

    [jar] Building jar: C:\radiantone\vds\vds_server\custom\lib\customobjects.jar

    [jar] Building jar: C:\radiantone\vds\vds_server\custom\lib\intercept.jar

    [jar] Building jar: C:\radiantone\vds\vds_server\custom\lib\fidsync.jar

    [jar] Warning: skipping jar archive C:\radiantone\vds\vds_server\custom\lib\sync.jar because no files were included.

BUILD SUCCESSFUL
```

Configure Services to Auto-Start

Configure RadiantOne FID and Management Console to run as services/daemons.

Scripts to install services on Windows are located: <RLI_HOME>\bin\windows.service

The Windows service names installed are as follows.

- RadiantOne FID = RadiantOne FID Server (rli_fid_server)
- RadiantOne Control Panel = RadiantOne FID Management Console (rli_mgmt_console)

For more details on configuring services, see the RadiantOne Deployment and Tuning Guide.

Validate your Data Sources

Check the data sources to make sure they point to the desired servers (and failover servers if applicable). For example, if you are using inter cluster replication, verify that the *replicationjournal* LDAP data source points to the correct journal. You can check your data sources from the Main Control Panel -> Settings -> Server Back End.

If you were connecting to backend data sources via SSL, make sure your certificates were migrated over successfully and that they are still valid (Main Control Panel -> Settings -> Security -> Client Certificate Truststore).

Migrate Kerberos Profiles

All Kerberos profiles are stored in <RLI_HOME>/<instance_name>/conf/krb5. Kerberos profiles are not automatically migrated. If you have Kerberos profiles, you will need to create them manually after the upgrade to v7.4.

To migrate Kerberos profiles:

1. Open a file editor, such as Notepad and navigate to your v7.2 backup location, and edit <RLI_HOME>\<instance_name>\conf\krb5
2. Copy the contents of the file.
3. On the Main Control Panel, click Settings → Server Backend –> Kerberos Profiles.
4. Click the Add button.
5. Name the profile.
6. Paste the copied Kerberos profile data into the Main Configuration field.
7. Click OK.
8. Repeat this process for all Kerberos profiles.
9. Click the Save button.

Migrate the Server Certificate

The migration utility doesn't migrate server certificates. Manually copy your RadiantOne FID server certificate and keystore (for SSL/TLS client traffic) from the backup location (<BACKUP>/vds_server/conf) and save them to <RLI_HOME>/vds_server/conf, overriding the default certificate and keystore that are created during the v7.4 install.

Migrate Client Certificates

It is generally not recommended to import client certificates into the default Java truststore (<RLI_HOME>/jdk/jre/lib/security/cacerts) since this is overwritten each time there is a RadiantOne patch that requires a Java update and requires a restart of RadiantOne FID every time you add new certificates. For these reasons, it is recommended to use the RadiantOne Client Certificate Trust Store instead (Main Control Panel -> Settings -> Security -> Client Certificate Truststore).

However, if you did have client certificates in the default Java cacerts storage in v7.2, these are not migrated by the migration utility. Therefore, you can copy the <RLI_HOME>\jdk\jre\security\cacerts file from the v7.2 backup location and overwrite the v7.4 target <RLI_HOME>\jdk\jre\security\cacerts file that is installed with v7.4.

If you have the access to the needed client certificates outside of the cacerts file, you can import them again one at a time from Main Control Panel -> Settings -> Security -> SSL. Click the Manage button next to Client Certificates and add them from here.

Configuring Persistent Cache

Configure and initialize persistent caches. When you log into the Main Control Panel, on the Directory Namespace tab, you should see the naming contexts that were cache in v7.2 under the Cache node. Configure all persistent cache branches again.

IMPORTANT NOTE – If your v7.2 virtual views contained external joins (to other virtual views), the secondary views must be configured for persistent cache BEFORE you are able to initialize the cache on the main view. This requires you to mount the secondary views in the RadiantOne namespace and configure them for persistent cache. The join condition in the main view may need to be updated to reflect the location of the cached secondary views.

Configuring Persistent Cache with Periodic Refresh

Periodic refresh for persistent cache must be re-configured in v7.4.

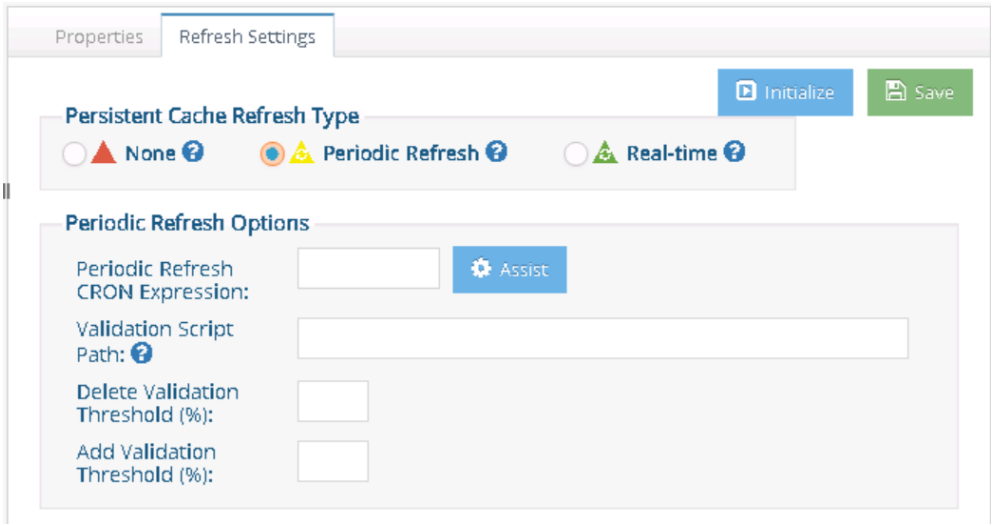
1. Navigate to the Directory Namespace tab and select the cached branch to re-configure, located below 

.
2. Uncheck the Active checkbox to deactivate the branch and click Save. Click Yes to confirm.
3. On the Refresh Settings tab, click 

.

4. Select either “Create a new LDIF file…” or “Use an existing LDIF file…” and click OK.
5. When the cache initialization finishes, click OK to close the Task Monitor.
6. On the Refresh Settings tab, select 

.
7. Configure CRON Expression.



8. Click Save.
9. Repeat steps 1-9 for all persistent cache with periodic refresh branches.

Configuring Persistent Cache with Real-time Refresh

Persistent cache with real-time refresh (known as Automated Refresh in v7.2) no longer requires GlassFish or OpenMQ. The refresh process is built into RadiantOne FID. For details on the real-time refresh process, see the RadiantOne Deployment and Tuning Guide.

IMPORTANT NOTE – if you were using the Snapshot connector type with automated refresh in v7.2, switch to detecting changes using periodic refresh since there is no snapshot connector type with real-time refresh in v7.4.

1. On the Directory Namespace tab, navigate below 

and select the cached branch to re-configure.
2. Uncheck the Active checkbox to deactivate the branch and click Save. Click Yes to confirm.
3. On the Refresh Settings tab, click. 

.
4. Select either “Create a new LDIF file…” or “Use an existing LDIF file…” and click OK.
5. When the cache initialization task finishes, click OK.

6. On the Refresh Settings tab, select 
.
7. Configure connector types if needed.

   NOTE – Configuring the connectors in v7.4 creates custom alerts for the cache. See the Configuring Custom Alerts section.
8. Click Save.
9. Connector Properties can be configured from the Main Control Panel -> PCache Monitoring tab. For details on properties, see the RadiantOne Deployment and Tuning Guide.
10. Repeat steps 1-9 for all persistent caches with real-time refresh branches.

Configuring Log Settings

Log settings must be restored manually in v7.4. This section restores values recorded in Backing up Log Settings.

To configure log settings:

1. On the Main Control Panel, click Settings → Logs.
2. Select Log Settings.
3. Select an option from the Log Settings to Configure drop-down menu.
4. Set values for Log Level, Rollover Size, How Many Files to Keep in Archive, and advanced settings.
5. When all log settings have been configured, click Save.
6. Click Access Logs.
7. Set access log settings as required.
8. Click Save.

Configuring Custom Alerts

Most custom alerts are restored automatically in v7.4. However, the following custom alerts must be re-configured manually in v7.4.

- V7.2 ICS persistent cache alerts
- Alerts containing the node ID property (the FID node's cloud ID)

To configure persistent cache alerts:

NOTE – Periodic refresh persistent caches do not generate custom alerts.

1. On the Main Control Panel, click Settings → Custom Alerts.
2. Select a persistent cache custom alert and click Edit.

3. Enter the custom alert's settings as recorded in Backing up Custom Alerts.
4. Click Save.
5. Repeat steps 2-4 as needed.

To configure custom alerts containing the node ID property:

1. On the Main Control Panel, click Settings → Custom Alerts.
2. Select an alert containing the Node ID property that was migrated from v7.2 and click Delete.
3. Click Yes to confirm the deletion.
4. Click the Add button.
5. Enter the custom alert's settings as recorded in Backing up Custom Alerts.

   NOTE – For alerts containing the node ID property, the current value for this property is automatically entered when creating a new custom alert.

6. Click Save.
7. Repeat steps 1-6 as needed.

Verify SCIM Configuration

Many improvements to the SCIMv2 interface for RadiantOne have been made in v7.4. The migration process attempts to translate v7.2 SCIM configuration into v7.4. However, you must verify that the SCIM schemas, resource types and mappings are configured properly in v7.4. Verify your configuration from Main Control Panel -> Settings -> Server Front End -> SCIM.

Upgrading Cluster Deployments

Stop all RadiantOne services on all cluster nodes.

Uninstall v7.2 on one node. Install v7.4 and import the configuration from v7.2 as outlined in this upgrade guide. Perform other manual steps like reconfigure and initialize persistent caches…etc. (as outlined in this upgrade guide).

IMPORTANT NOTE - When RadiantOne v7.4 is installed on the first node, the cluster name is established. If you have inter-cluster replication deployed (across clusters/data centers), you must keep the same cluster name that was used in your v7.2 configuration.

Uninstall v7.2 on the second node. Install v7.4 and have it join the cluster established in Step 2.

Uninstall v7.2 on the third node. Install v7.4 and have it join the cluster established in Step 2.

Starting Components as Services

For details on starting components as a service, refer to chapter 6 of the Deployment & Tuning Guide.

Known Issues

Using a computed expression on the userCertificate attribute leveraging any of the following classes and functions must be updated to leverage new ScriptHelper functions instead.

com.rli.security.CertificateUtils.getSubjectAlternativeNames
com.rli.tools.ldap.browser.security.util.CertUtil.loadX509Certificate
com.rli.tools.ldap.browser.util.CBSecurity.convertFromPEMCertificate

For example, the following computed expression used in v7.2:

has(userCertificate)?com.rli.security.CertificateUtils.getSubjectAlternativeNames(com.rli.tools.ldap.browser.security.util.CertUtil.loadX509Certificate(com.rli.tools.ldap.browser.util.CBSecurity.convertFromPEMCertificate(com.rli.util.djava.ScriptHelper.decodeFromBase64(userCertAppended).getBytes())),0).toString().replace("[","").replace("]",""):null

Should be changed into the following in v7.4:

has(userCertificate)?ScriptHelper.getSubjectAlternativeNames(ScriptHelper.loadX509Certificate(ScriptHelper.convertFromPEMCertificate(ScriptHelper.decodeFromBase64(userCertAppended).getBytes())),0).toString().replace("[","").replace("]",""):null

How to Report Problems and Provide Feedback

Feedback and problems can be reported from the Support Center/Knowledge Base accessible from:

http://www.radiantlogic.com/support/knowledge-database/

If you do not have a user ID and password to access the site, please contact support@radiantlogic.com.