TIBCO DataSynapse GridServer® Manager

Upgrade Guide

Version 7.1.0
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Contents

Upgrading GridServer

This section explains how to upgrade GridServer components. It contains a GridServer Upgrade Checklist, which explains what to do before, during, and after your new GridServer installation to ensure carrying over old values to the new installation, when possible.

Requirements Changes

See the system requirements in the TIBCO GridServer® readme file to ensure that your software and hardware meet the minimum system requirements. Ensure to review the full list of requirements.

GridServer 7.1.0 Upgrade Checklist

You can migrate settings from your previous version of GridServer to your new version of a GridServer installation, but it's important to not install on top of your previous installation. Instead, shut down your old Manager, and rename the old installation directory. You can then install the new version of GridServer in the same location. Later in the install, you supply a path to the renamed old installation so settings can be copied. An `upgrade.log` file is generated that lists all changed configuration values, as well as settings that could not be migrated to the new installation.

The only direct upgrade supported on GridServer version 7.1.0 is from GridServer versions 7.0.x and 6.3.1. To upgrade from any other earlier version to GridServer 7.1.0, you must first upgrade to GridServer version 6.3.1.

Note:
Authenticating all Grid Components is an additional security option provided in GridServer. For more information, see "Authentication of Grid Components" topic in the *TIBCO GridServer® Installation*.

Prior to Upgrade

- If you have any UNIX Engines that share a common installation directory, you must migrate those installations to a local directory. A shared install point is no longer supported.
- To enable programmatic version control, ensure that `gridLibraryStrictVersioning` is set to `false`.
- If you have a Linux64 Engine, for upgrade from all versions earlier than 7.0.0_hotfix08, you must perform the following steps:
  a. Stop the server.
  b. As a best practice, take a backup of the existing `engine.sh` file.
  c. Replace the `engine.sh` file from the `engineScriptUpdate` folder to `datasynapse/manager/webapps/livecluster/engineUpdate/linux64/` and `datasynapse/manager-data/engineUpdate/linux64/` folder.
  d. Start the server.
  e. Let the Engines log in and then restart the Engine Daemon.
  f. Stop the server.
  g. Upgrade the server.

Note: In case of Grid Architecture, perform the steps from step a to step g on the Primary Director.

- Check the list of changes in the release notes for any other issues that might affect you.

After Stopping the Manager

- When running GridServer as a Windows service, remove the service prior to upgrading.

The following steps are necessary only if you set up the system by using an external database:

- Copy the corresponding database properties file from old `DS_MANAGER/webapps/livecluster/WEB-INF/etc/db/` directory to the current installation. This is used when you run the database upgrade script.
- Upgrade your external reporting database schema using the `upgradedb.sh` or `upgradedb.bat` script located in `DS_MANAGER/webapps/livecluster/WEB-INF/etc/db`.

During Installation

- For **Installation Type**, choose **Custom, Manager Upgrade**.
- For **Previous Data Directory**, enter the pathname of your previous base directory.

After Installation

If Using System Classloader for Engines

If you are using the system classloader in your Engine configuration and deployed the `DSEngine.jar` file to Engines, deploy the new `DSEngine.jar` to Engines after upgrade. This is now deployed in `DS_MANAGER/webapps/livecluster/engineUpdate/shared`. If `DSEngine.jar` was deployed in the default resources directory, it has already been removed. If it was deployed to any Grid Libraries, you must remove it from them.

External Database JDBC Drivers

If you are using an external database, copy the required JDBC driver JAR archive from `DS_MANAGER/webapps/livecluster/WEB-INF/lib` in the old installation to `DS_MANAGER/webapps/livecluster/WEB-INF/lib/` in the new installation.

LDAP Upgrade

As of GridServer 6.0, Driver profiles are no longer supported. The `allowedBrokers` property has been replaced by the value of **Manager List** in the security role assigned to the Driver user. Also, users are now allowed to execute Services based on the “Execute Services” permission rather than by virtue of having a profile.

During upgrade, a new role is created for each Driver profile. This role has execute permission, and maps the “Allowed Brokers” field to “Manager List.” That role is added to each user who has the corresponding profile.

You are not required to maintain these converted profiles; you might choose to reorganize and remap these roles as you see fit.

If you use LDAP authentication and you prefer to assign roles via LDAP groups, you must add those groups to your users in LDAP, and remove the locally assigned roles.

Users and roles are logged during the upgrade to the file `DS_DATA/logs/newRoles.txt`, so that you have a list of groups to add the user’s LDAP entries. It is a flat file with the following format:

```
[user]\t[role1,role2,...]
```

For example:

```
joe driver_developers,driver_boston
tom driver_testing,driver_london
```

Engine Upgrade

- For UNIX Engines, `bin/invokeRA` cannot be automatically upgraded. After upgrading, you must manually copy the new `bin/invokeRA` to the upgraded Engine, and follow the instructions in “Using Run-As” in the *TIBCO GridServer® Administration*.

Driver Upgrade

- Download the new version of the GridServer SDK in the GridServer Administration Tool.
- Make sure that all Drivers are upgraded. This simply involves replacing the libraries or executables with the new version.
- If you have existing CPPDriver applications, relink them with the new libraries included in the SDK.
- On the Driver side, link your code with the `dsUtil` library. Link Engine-side Service code with the `dsUtil` library if it uses any exception classes.

Note:
After the server is upgraded, you can secure the `Internal.script` and passwords stored in the `installation.properties` file at `DS_DATA\conf`. For more information, see Securing Passwords and Internal.script in the *TIBCO GridServer® Manager Installation Guide*.

Mixed-Version Deployments

Mixed-version deployments are grids that consist of GridServer Manager versions 7.1.0, 7.0.x, and 6.3.1. This is an allowed configuration, as a convenience for large Grids that cannot upgrade all Brokers at once. You must address the following issues when running mixed-version deployments:

- The Directors must be upgraded first to the latest version of GridServer Manager 7.1.0.
- All Brokers must be on the latest service pack and hotfix of the minor version.
- You must disable client version checking for Engines, Drivers, and Brokers at **Admin > System Admin > Manager Configuration > Admin**.
- Hard-partitioning of Engines is required. That is, Engines must not be allowed on all the three GridServer Manager versions 7.1.0, 7.0.x and 6.3.1 Brokers. This is done with the balancer configuration.
- You must deploy all versions of the C++ Bridge Grid Libraries via the Primary Director. If you upgraded the Director, the older bridges might already be there, but if the Director is a new installation you must copy them from your old Managers. The Engines automatically choose the proper library based on the Broker version. Because both versions of the C++ Bridges are used, Grid Libraries must also be used on an older Broker if the code is native, rather than using the standard resource deployment.

Mixed-Version Driver Compatibility

GridServer Manager 7.1.0 has backward compatibility with GridServer Manager 7.0.x and 6.3.1 Drivers.

Rolling Upgrades

Use the following procedures to install an update to a large grid (a grid with a large number of Engines and several Brokers) in situations where you cannot permit grid-wide Engine restarts and interruptions in Service availability. These instructions enable Services already deployed on components using a previous version of GridServer Manager to continue running as other components on the grid are updated.

Prerequisite Actions

For all Managers:

1. Bring all Managers up to the required hotfix level.
2. Confirm that all GridServer Managers are at that level. On the Primary Director, you can get the versions of all Brokers on the **Grid Components > Brokers > Broker Admin** page. To find the version of the Directors, click the **About** link at the top of the Administration Tool.
3. In each Engine Configuration, confirm that **Log off Engines on Daemon Logoff** is set to false (the default setting). This prevents unnecessary Engine restarts when the Director is restarted.
4. On each Broker, go to **Admin > System Admin > Manager Configuration > Admin** and set **Daemon Upgrade From Broker** to false; then go to **Admin > System Admin > Manager Configuration > Resource Deployment > Broker Settings** and set **Synchronize Resources From Director** to false. This prevents all Daemons from restarting to upgrade when the Primary Director is upgraded.
5. On each Director, go to **Admin > System Admin > Manager Configuration > Admin**. Confirm that **Daemon Upgrade From Director** is false. (This is the default and would rarely be true.)
6. To assist in the event of any issues, set the logging levels on all Managers and Engines to Fine.

Upgrading a Grid

Note that each Manager upgrade procedure does not make any modifications to the previous installation. If required, you can use this directory to roll back the upgrade.

Primary Director Upgrade

1. Shut down the Primary Director. The Engine Daemons move to the Secondary Director and the Engine Instances (which might be running tasks) continue without interruption.
2. Upgrade the Primary Director.
3. Start the Primary Director.
4. Verify the the following Director and Broker mismatch controls are True: **Admin > System Admin > Manager Configuration > Admin > Version Management >Allow Director Version Mismatch** and **Admin > System Admin > Manager Configuration > Admin > Version Management >Allow Broker Version Mismatch**.
5. Check that all the Brokers are logged in to it at **Grid Components > Brokers > Broker Admin**. The Engine Daemons will move to the Primary Director. The Engine Instances will not restart.

Secondary Director Upgrade

Follow the above procedure for the Primary Director. Shut down the Secondary Director and upgrade.

Broker Upgrades

Failover Brokers must be upgraded after regular Brokers.

For each Broker:

Procedure

1. Shut down the Broker. Within a few minutes Engines and Drivers migrate to a Failover Broker.
2. Upgrade the Broker.
3. Start the Broker. Verify that it logs in to the Directors.

4. Verify that **Admin > System Admin > Manager Configuration > Admin > Version Management > Allow Driver Version Mismatch** is True.
5. Within a few minutes Engines and Drivers migrate back.

Upgrade the Engine Daemons

At this point, the Grid has been updated, but Engine Daemons are still at the previous version. Daemon upgrades result in Engine restarts, so do the following on each Broker when the time is appropriate:

- On each Broker, go to **Admin > System Admin > Manager Configuration > Admin**. Set **Daemon Upgrade From Broker** to true.

Note The above step needs to be done as soon as possible.

Installing Hotfixes

To install or uninstall a hotfix, refer to the installation instructions in the readme file distributed with the hotfix.

TIBCO Documentation and Support Services

For information about this product, you can read the documentation, contact TIBCO Support, and join TIBCO Community.

How to Access TIBCO Documentation

Documentation for TIBCO products is available on the TIBCO Product Documentation website, mainly in HTML and PDF formats.

The TIBCO Product Documentation website is updated frequently and is more current than any other documentation included with the product.

Product-Specific Documentation

Documentation for TIBCO GridServer® is available on the TIBCO GridServer® Product Documentation page.

The following documents for this product can be found in the TIBCO Documentation site:

- TIBCO GridServer® Release Notes
- TIBCO GridServer® Installation
- TIBCO GridServer® Introducing TIBCO GridServer®
- TIBCO GridServer® Administration
- TIBCO GridServer® Developer's Guide
- TIBCO GridServer® Upgrade
- TIBCO GridServer® Security
- TIBCO GridServer® COM Integration Tutorial
- TIBCO GridServer® PDriver Tutorial
- TIBCO GridServer® Speedlink
- TIBCO GridServer® Service-Oriented Integration Tutorial

How to Contact TIBCO Support

Get an overview of TIBCO Support. You can contact TIBCO Support in the following ways:

- For accessing the Support Knowledge Base and getting personalized content about products you are interested in, visit the TIBCO Support website.
- For creating a Support case, you must have a valid maintenance or support contract with TIBCO. You also need a user name and password to log in to TIBCO Support website. If you do not have a user name, you can request one by clicking **Register** on the website.

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This software may be available on multiple operating systems. However, not all operating system platforms for a specific software version are released at the same time. See the readme file for the availability of this software version on a specific operating system platform.