

Doc Type	Tech Notes
Doc Id	TN10475
Last Modified Date	06/18/2020

Galaxy Repository Flex and Non-Flex Licensing in System Platform 2020

SUMMARY

AVEVA has introduced a new commercial and licensing model called **Flex Credits**. The Flex Credits model allows customers to exchange Credits for licenses and to acquire licenses on a usage basis. Some products are Flex aware and behave differently when in Flex mode. One such product is the Galaxy Repository.

In Flex mode the Galaxy Repository is licensed per Platform and each Platform can host either a single Application Engine or unlimited Application Engines. Platforms with no Application Engines require no license. In Non-Flex mode a Galaxy Repository behaves as it did in versions pre-2020 and is licensed based on IO count.

NOTE: For System Platform 2020 it is recommended that users do not mix Flex and Non-Flex licenses on the same license server. This avoids licensing the Galaxy Repository server incorrectly.

The following license types are available with System Platform 2020. They support Flex and Non-Flex requirements.

- **Licenses with Flex entitlements only:** Puts the Galaxy Repository into **Flex (Engine-based) licensing mode**. The following three features are present:
 - Application Server Flex Runtime
 - Application Server Flex Platform Single App Engine
 - Application Server Flex Platform Unlimited App Engines
- **Licenses without Flex entitlements:** Puts the Galaxy Repository into Non-Flex (IO-based) licensing mode. The following feature is present:
 - Application Server ### IO (where ### represents IO count)

License types

For production Galaxy Repositories, you can choose either a Flex license model or a Non-Flex license model and will receive the relevant license. In addition to the production license, you can use an Advanced Dev Studio consignment licenses to license a Galaxy Repository.

NOTE: Very early during the 2020 release certain consignment licenses were shipped with both Flex and Non-Flex entitlements. If both are present, Synchronise the license using the License manager. This will remove the Flex feature. Contact AVEVA Technical Support for assistance.

The following Advanced Dev Studio consignment licenses are available for System Platform 2020:

- **30-day demo licenses:** Available in two types:
 - The **30-day Flex Demo Consignment** license contains **Flex** (Engine-based) entitlements for the Galaxy Repository.
 - The **30-day Non-Flex Demo Consignment** license contains **Non-Flex** (IO-based entitlements) entitlements for the Galaxy Repository.
- **1-year SI Advanced Dev Studio Unlimited consignment license:** Available in two types:
 - The **1-year Flex Consignment license** contains ONLY **Flex** (Engine based) entitlements for the Galaxy Repository.
 - The **1-year Non-Flex Consignment license** contains ONLY **Non-Flex** (IO-based entitlements) entitlements for the Galaxy Repository.
- The regular perpetual **Advanced Dev Studio** license on the price list **does not** have Flex (Engine based) entitlements. This license puts the Galaxy Repository in **Non-Flex** (IO-based) licensing mode.
- The **Subscription Access Advanced Dev Studio** licenses on the Subscription Access Configurator **does not** have Flex (Engine-based) entitlements. It puts the Galaxy Repository in **Non-Flex** (IO-based) licensing mode.
- The **Flex Advanced Dev Studio** licenses acquired with Flex Credits has ONLY **Flex** (Engine-based) entitlements and **does NOT** support Non-Flex (IO-based) entitlements. It puts the Galaxy Repository into **Flex** mode.

ACTION

Using a Galaxy Repository in Flex mode

If a Galaxy Repository is licensed in Flex mode, and after the Galaxy creation and optional import completes, all Application Engines show errors

(Figure 1 below).

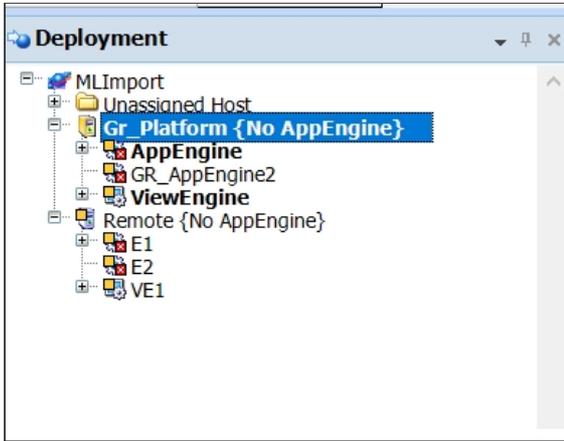


Figure 1: Application Engines in an error state

To examine the error, right-click the Engine, click **Properties** and click the **Errors/Warnings** tab.

You see the following message (Figure 2 below).



Figure 2: Engine Errors/Warnings tab

If you attempt to deploy these Application Engines they will fail to deploy (Figure 3 below).

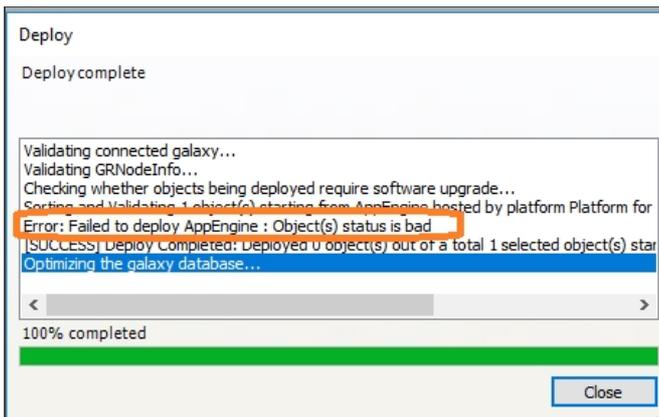


Figure 3: Deployment fails

This happens because the Flex licensing mode requires a license for Platforms that host Application Engines.

To see how many Platform licenses of each type are available, open the **Flex** pane by clicking the appropriate menu item, pressing **CTRL+SHIFT+F**, or by clicking any Platform in the Deployment Pane.

If additional licenses are activated or released by other Galaxy Repositories, click the **Refresh** button to update the license counts (Figure 4 below).

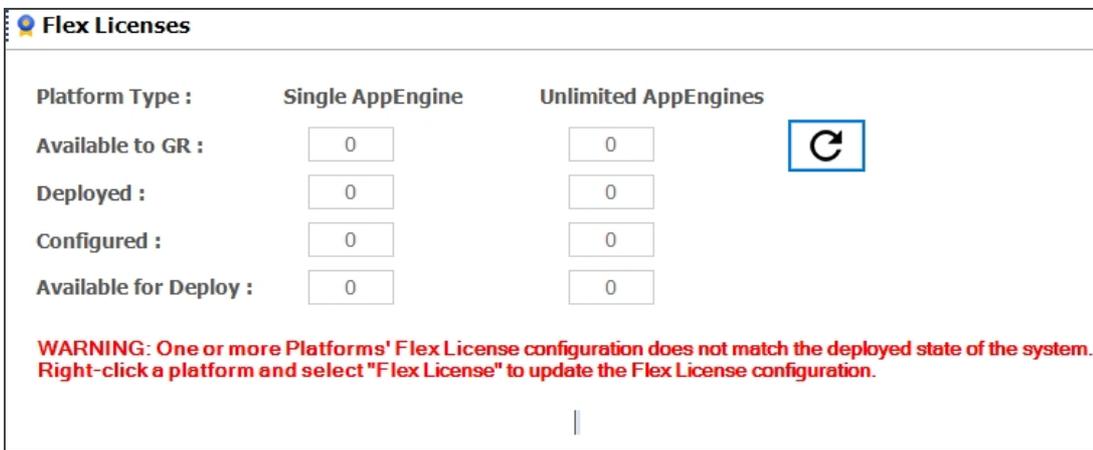


Figure 4: Flex Pane

To use a Galaxy Repository in Flex (Engine based) mode, you must assign a Platform type to each Platform that will run Application Engines (Single or Unlimited).

To assign a Platform license to a Platform, complete the following steps:

1. Right-click the Platform.
2. Select **Flex Licensing**.
3. Select the correct Platform type:

- **No AppEngine:** The Platform will not host any primary Application Engines.
- **Single AppEngine:** The Platform will host only one Application Engine.
- **Unlimited AppEngines:** The Platform will host more than one Application Engine

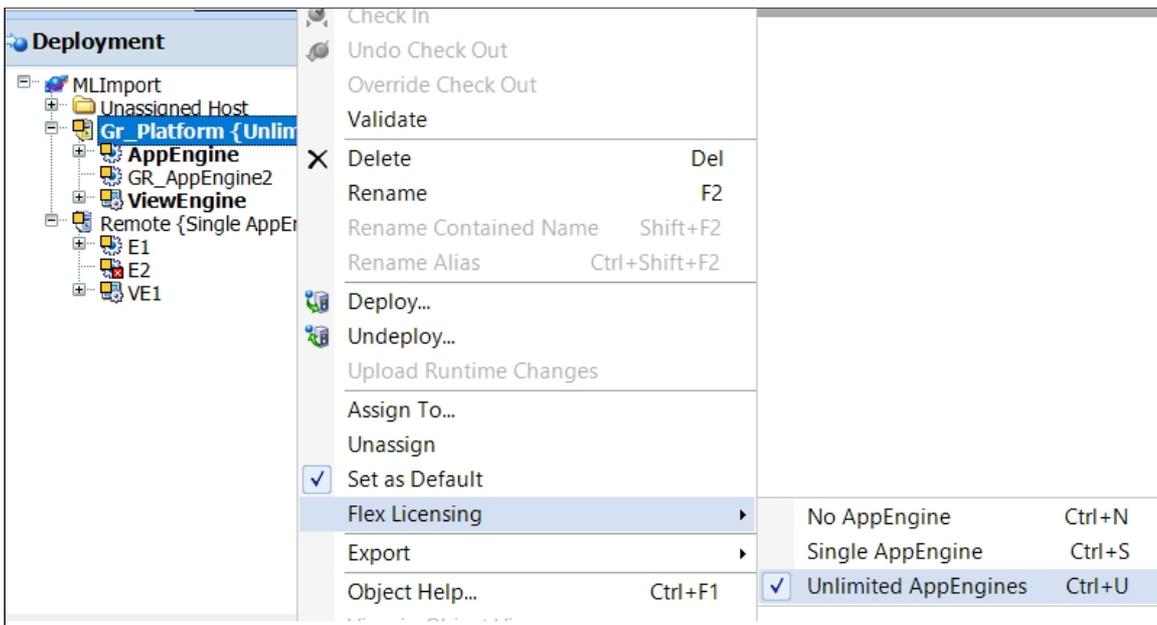


Figure 5: Flex Licensing Engine based mode

After you select the Platform type, the Configuration error on the Engine disappears and the Engine can now be deployed. The Flex panel updates the counts to reflect the current configuration (Figure 6 below).



Figure 6: Updated license counts

NOTE: In some cases, the warning on the Flex Licenses panel does not disappear until the panel is closed. Please Contact AVEVA Customer Support to obtain the hotfix for the issue: **CR#L00158311**.

Selecting a different licensing model

When you need to change the Galaxy Repository mode, deactivate any license(s) with the Flex features.

1. Open License Manager.
2. Select the License Server.
3. Deactivate the Flex Licenses (Figure 7 below).

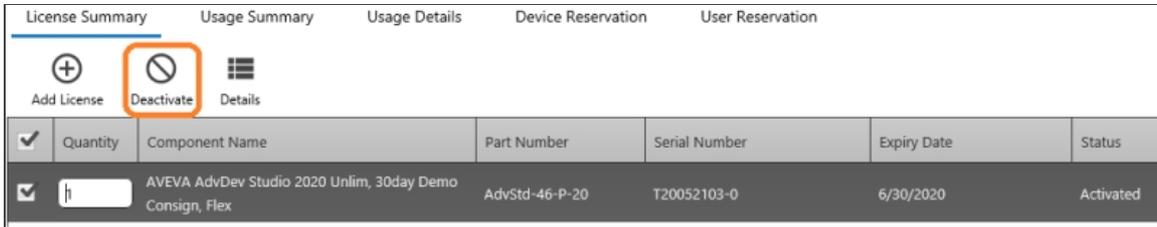


Figure 7: Deactivate the Flex Licenses

When the appropriate licenses are activated on the License Server, you need to restart the Galaxy Repository Service, or restart the computer (Figure 8 below).

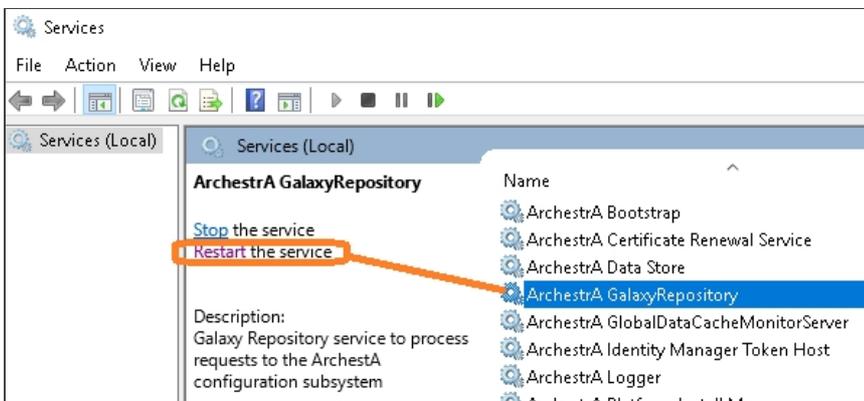


Figure 8: Restart of the Galaxy Repository service

If Flex licensed Galaxy Repositories are required on the same site, it is recommended to create a second License server to host the Flex licenses and point the relevant servers to this License server using the Configurator.

Flex and Non-Flex licenses co-existence

Though AVEVA does not recommend activating both Flex and Non-Flex licenses on the same server, activating both might be required in some scenarios. In this case, the **Flex** licenses take precedence. In other words, when a Galaxy Repository starts up, it first attempts to find a valid, activated Flex license before it attempts finding a valid, activated Non-Flex license.

Therefore, when the license server has both License types activated, the Galaxy Repository will start up in Flex mode.

If you want to force a Galaxy Repository to start up in **Non-Flex** mode (even though a valid activated Flex license is available), you must reserve the Flex licenses for server names other than the name of the target Galaxy Repository server, even if such servers do not exist.

This prevents the target server from acquiring the Flex license(s) and it will acquire the Non-Flex one instead.

Complete the following steps:

1. Open License Manager.
2. Select the License server.
3. Ensure that the **Application Server ### IO** feature is available in one of the activated licenses – this is the Non-Flex feature that will put the Galaxy Repository into Non-Flex mode (Figure 9 below).

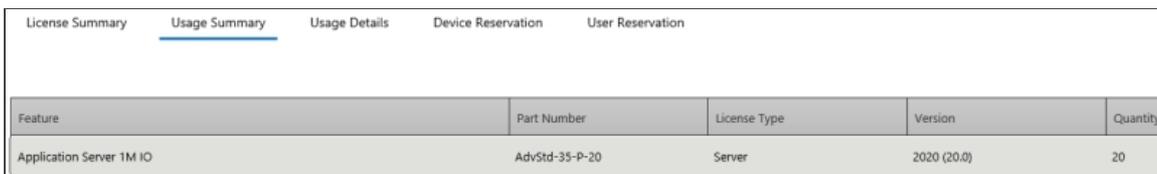


Figure 9: Non-Flex feature

4. Select **Device Reservation**.
5. Click **Add Device** (Figure 10 below).

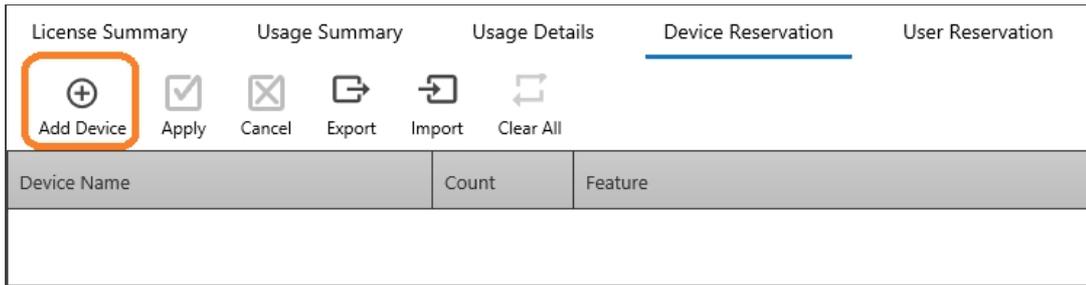


Figure 10: Device Reservation Tab

6. Type a fictional name for **Device name**.
7. Find all the **Application Server Flex Runtime** features.
8. Note the number listed in the **Total Available** column for each of these features.
9. Select the entry and type the number in the **Total Available** column.

In this example 30 Flex licenses are available. You need to reserve them all so the GR will acquire a perpetual license instead.

10. Click **Add** (Figure 11 below).

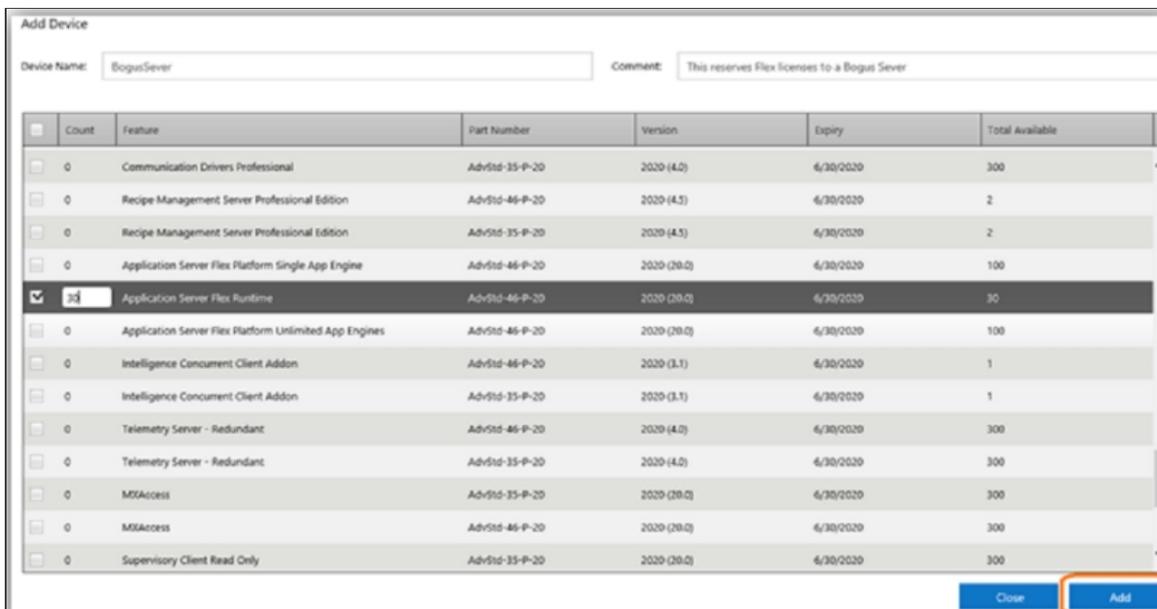


Figure 11: Device Reservation Application Server Flex Runtime features

11. Click **Apply** (Figure 12 below).

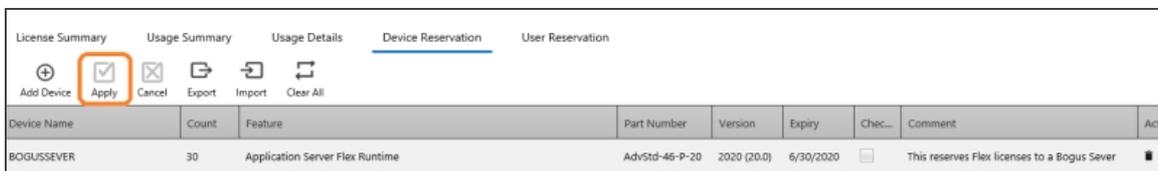


Figure 12: Apply Device Reservation Application Server Flex Runtime features

12. Restart the **Archestra GalaxyRepository** service or restart the machine (Figure 13 below).

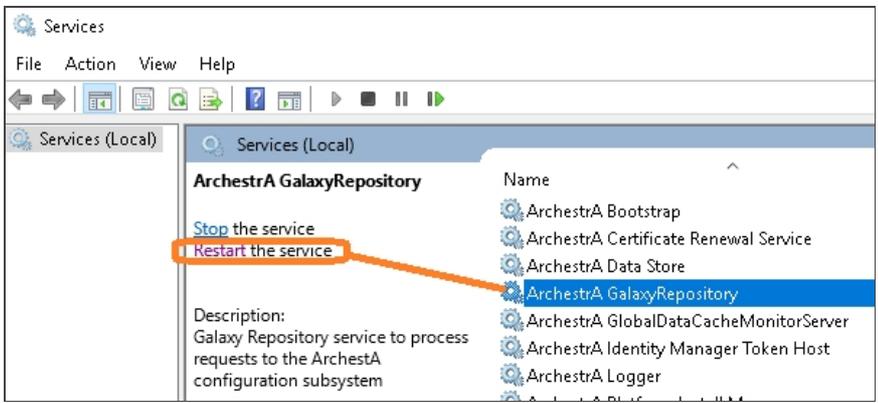


Figure 12: Restart the ArchestrA GalaxyRepository service