Lifecycle Management in SAP Analytics Cloud

2020 Q1 Release
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Lifecycle management in SAP Analytics Cloud is a bit different than in traditional on-premise systems, because SAP is responsible for software, hardware, and infrastructure updates. Read this guide to start planning your deployment. It helps you choose the number and type of test systems in your landscape, provides a detailed lifecycle management workflow, and explains how to integrate SAP Business Content into your solution.

PLANNING YOUR LANDSCAPE

Multiple systems

We recommend adding at least two SAP Analytics Cloud systems (also known as tenants) to your landscape. You can use one system for developing and testing content, and then promote that content to a separate production system where your users can do their work.

There are several advantages to this type of landscape:

- Your test content is fully separate from the production data and content. Content creators won’t have access to sensitive production data, for example.
- Lifecycle management is easier. You can use import and export features to promote content, and your production system will only contain fully tested content.
- Performance can be improved, because you won’t need to use your production data sources for testing and development tasks.

You may want to add more non-productive systems so that your SAP Analytics Cloud landscape matches the structure of your data source systems. For example, if you have development, test, and production SAP S/4HANA systems, you can set up development, test, and production SAP Analytics Cloud systems. Then, you connect each one to the corresponding S/4HANA system.

If you plan to use business content from the Content Network, we recommend a separate system to try out the different content packages, and then figure out which packages you want to import to your test system. See the Lifecycle Management for SAP Business Content section for details.

Single system

A landscape with a single system could be appropriate for very small deployments, or for the initial phase of your SAP Analytics Cloud rollout. This landscape won’t support reliable lifecycle management, however. You can store test and production content in different folders, but updating content can be time consuming and error prone. Problems can happen when updating models and importing new versions of business content, for example.

CHOOSING TEST SYSTEMS

You’ll need a paid license for a non-productive SAP Analytics Cloud system, to cover the costs of cloud software infrastructure and operation. There are two types of test systems.

Private test tenants

Private means that this tenant uses a dedicated underlying SAP HANA system that isn’t shared with other tenants or customers. This HANA system is only used by the SAP Analytics Cloud software and isn’t exposed to users for general purpose use.

This tenant supports up to 50 named users. It is licensed by the tenant, not by the user. Since it’s a separate tenant, it will have a separate login URL and content will need to be exported to your production tenant.

Customers can have any number of private test tenants. Three sizes of test tenant are offered: 64 GB, 128 GB, and 256 GB.
This tenant is licensed only for non-productive use.

Public tenants
This type of tenant shares its underlying HANA system with other customers and tenants. You can request a separate tenant for any number of users or concurrent sessions using the standard SAP Analytics Cloud public edition licensing model.

If you don’t need a dedicated private HANA system supporting SAP Analytics Cloud and you just need a few non-productive users, a public tenant can be a good option with a lower licensing cost.

Customers can have any number of tenants. Public tenants share a HANA system with other customers, so there’s no way to directly control the amount of memory or storage dedicated to one tenant. If you need explicit control over the amount of memory or storage, you should license a dedicated private test tenant instead.

This tenant can be used for productive or non-productive use.

SETTING UP SECURITY
Once your SAP Analytics Cloud systems are in place, you can get your deployment started by setting up roles, users, and teams in your test system.

Take a look at the Security Concepts and Best Practice blog post before you get started – it provides lots of helpful tips.

Note: For objects that you want to export to production, you’ll usually want to keep the same name across different systems. For example, it’s easier to use a name like “ConnectionBW” than “TestConnectionBW”.

1. Set up Roles

Each SAP Analytics Cloud system comes with standard roles such as Admin, Content Creator, and Viewer. These are a good starting point, but we recommend creating your own custom roles in your test system for more control.

You can assign multiple roles to each user or team. They’ll get the combined permissions from all their roles (that is, the union of the roles).

2. Create test and development users

You can set up users manually in your test system, or upload a CSV file with the user data. Or manage your users and teams programmatically with the User and Team Provisioning API.

Don’t create your business users in the test system, since it has limited user licenses. See the Choosing Test Systems section for more info.

3. Set up SSO

If you want to let your users log in with single-sign on (SSO), you’ll need to set it up on each system. (We also recommend setting up SSO for connections to live data sources.)
4. Create teams

Teams let you share files and assign roles to groups of users, instead of individual users. For example, you can create two separate teams for each project, one for content creators and one for viewers.

Follow these instructions to set teams up manually, or use the API.

Tips:

- Include the team name in the description field to make sharing easier.
- With SSO enabled, you can automatically assign users to teams based on SAML attributes.
- Avoid using team folders for lifecycle management, because you can’t export content in these folders.

5. Create folders and set permissions

Folder structures help you organize your content and restrict access to it. For example, you can create content in the private My Files folder on your test system, and then save it to a folder within the Public folder before exporting it. You can use sharing settings to restrict access to this folder and any files saved within it, which is quicker than managing access to individual files.

Tips:

- Keep your folder structure simple to make navigation quicker and easier for your business users. For example, create one folder for each project or line of business.
- To apply folder-level permissions to your models, save them in their project folders instead of saving them all together in the Models folder.
- Check out more best practices here.

When you export a file, its folder structure will be added to the export automatically. Depending on how you export it, you may need to set up sharing settings again.

CREATING CONTENT

You’re ready to start creating content in your test system now.

1. Create connections

Create your connections to data sources in the test system. You can connect to test data, and then change the connections after you import them to the production system.

There are two types of connections: live data connections and import data connections. Connections aren’t saved in the folder system, so you’ll need to set up security on the connection itself.

We recommend setting up SSO for live connections. This way, the authorizations from the data source are applied in SAP Analytics Cloud. For import data connections, share them with the users who need to create models based on them.

For more info about connections, see the SAP Analytics Cloud Connection Guide.
2. **Create models**

Build your models in the test system within the My Files folder, and then save them to a restricted folder in the Public folder.

Then, set up security for models using sharing settings.

You might also need to set up security for the data within the model. For models based on live data connections, you can let the source system determine each user’s access level. For import data models, you can use model privacy to grant access by role to all model data, or to segments of it. You can also use Data Access Control on one or more dimensions to grant read and write access to individual users or teams. If you use both Data Access Control and model privacy, users will need to meet both conditions to view data.

For more details, see Model and Version Security.

3. **Create stories, story templates, planning processes, analytic applications, Digital Boardroom presentations, and any other content**

Now you can get started on the rest of your content. As with models, save files in the My Files area first, and then to a folder in the Public area when you’re ready to export them.

To get started with a basic story, check out Creating Your First Story.

As well as your prebuilt stories, it’s a good idea to create a few story templates, too. Your users can create their own stories based on these templates to keep a consistent look and feel. To learn how, see here.

After the stories are ready, you can assemble story pages to create Digital Boardroom presentations. To see a complete presentation, users will need to have permissions for the story pages as well as the presentation itself.

**EXPORTING CONTENT**

When you’re ready to start promoting content to your production system, you can choose whether to use local .tgz files or the Content Network. To keep your content organized, available, and secured by appropriate permissions, we recommend using the Content Network.

To get an overview of both tools, see Importing and Exporting Content. For detailed steps to export to the Content Network, see Sharing Content with Other Systems. For steps to export to a .tgz file, see Exporting Content to a .tgz File.

Either way, the workflow is the same.

Note:

- Sharing settings are included with .tgz exports, but not with Content Network exports.
- You’ll need Maintain and Share access for the Lifecycle permission to access the Content Network and export packages from it. You’ll need Read access to export and import .tgz files. See Permissions for more information.
By default, each SAP Analytics Cloud system can share up to 300 MB on the Content Network.
To import from the Content Network, your system should be on the same version of SAP Analytics Cloud as the exporting system, or later.
.tgz files are only compatible with the same version of SAP Analytics Cloud, or with the subsequent release, so don’t wait too long before importing your content.

1. Export your roles

Start by exporting a package with your custom roles.

2. Export your connections

If you prefer, you can create the connections again in your production system instead.

3. Export the remaining content

Start by adding business user content such as stories and Digital Boardroom presentations to your exports. Dependent content such as folders, models, and dimensions will be included as well.

If you’re using the Content Network, you can choose whether to include data for an import data model. If the model has a lot of data, you can exclude it to speed up the import process and save storage space.

If you’re exporting to a file, we recommend leaving the data out and refreshing it in the production system to keep the file size down. To do this, deselect the Include Data checkbox.

SETTING UP YOUR PRODUCTION SYSTEM

Now you can start importing content in your production system. To get familiar with the process for importing from the Content Network, see Importing from the Content Network, or watch the video. Make sure that you look in the My Content area to see privately shared content. To learn about importing from .tgz files, see here.

1. Set up your system to receive imports from the Content Network

If you’re using the Content Network, go there (Main Menu > Browse > Content Network) and open the My Content area. Select the Settings icon and make sure that your system can accept exports from the test system.
2. **Create users**

Like in your test system, you can create users manually, upload a CSV file with the user data, or add users and teams programmatically.

If your production users are similar to your users in the test system, you can get started on the CSV file by exporting user data from the test system.

3. **Set up SSO**

If you want to use SSO you can set it up in your production system like you did in the test system.

4. **Create your teams**

You’ll need to set up teams separately in your production system, since they can’t be exported. Use the same names for the production teams. You can also do this with the User and Team Provisioning API.

5. **Import roles**

Import the package with your custom roles, or create the roles manually and assign teams.

6. **Import your connections**

Import the connections. If you need to change the connections so that they point to production data sources, you can do that now. You can also just create the connections manually in your production system using the same names.

For import data connections, share the connections with any teams or users who need to access them.

7. **Import your content**

Now you’re ready to add the content. Import the models, stories, presentations, apps, and processes that you need.

If you’re importing with .tgz files, you can import the content a second time to include the sharing settings for your content. During the second import, select **Update Existing Objects** and leave the other options off.

8. **Check permissions**

If you’re using the Content Network, you’ll need to set up the sharing settings for your folders again, as well as for any individual files with specific sharing settings.
If you used .tgz exports, check that the sharing settings are correct after the second import.

9. **Point models to production data**

Now that your connections are updated and your models are imported, you can connect the models to the production data.

- If the connection name for a live data model changed, you can point the model to a different connection.
- For import data models, you can import data from the production data source. You may also want to schedule regular data imports.

Once you’re finished this step, your content is ready for productive use.

**UPDATING YOUR CONTENT**

When you’re ready to create new content or make updates, work in the test system first. Then, import the content to the production system. If the connections already exist in the production system, you can leave those out of the export.

When importing updated content, note that two versions of the same object can’t exist on an SAP Analytics Cloud system. The Content Network import workflow will identify any overlapping content. You can choose not to import the overlapping content, or you can overwrite the existing version of the content. For more details on the overwrite options, see these pages:

- Content Network
- .tgz files

Finally, you can use collaboration features to inform users about the new version.

**LIFECYCLE MANAGEMENT FOR SAP BUSINESS CONTENT**

To get a quicker start on your analytics and planning scenarios, you can import business content packages from the Content Network. There are packages from SAP and SAP partners, and each one is tailored to a specific industry or line of business. Content packages include predefined stories, presentations, and models that are tailored to existing SAP data sources. Some planning content also includes processes like data actions and structured allocations.
If you plan on importing business content, it’s best to set up three SAP Analytics Cloud systems:

**Explore Phase**

We recommend using a separate system to import business content and find out if it meets your needs. You can try the content with sample data, or connect live data models to your data sources. If the content works for you, choose the objects that you want to promote to the test system for further development.

**Development Phase**

During this phase, you import the business content to your test system and connect it to your data source. Now you can change the models, stories, processes, and presentations to meet your needs.

*Note:* Objects in SAP Analytics Cloud have a unique identifier that remains the same when content is imported to a new system. When you import an object with a conflicting ID, you’ll need to discard one of the versions of the object.

If your test system already has an earlier version of business content, you’ll see a warning during the import process. You can choose whether to overwrite the existing objects, or discard the conflicting objects from the import. See Importing from the Content Network for details on overwrite settings.

You might want to copy the existing content before overwriting it to make sure that you don’t lose any data or work. For a detailed explanation and steps, see section three of the Content Documentation.

If you need to, you can use another system in this phase to test your changes to the business content.

**Production Phase**

When the content is ready, you can include it in your main lifecycle management workflow: import the content to production, set up permissions, and connect it to your production data sources.