



SAS Viya[®] Platform: Inventory

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Inventory: Overview

Note: If the environment on which you are running the inventory collector scan was deployed by the SAS Viya Platform Deployment operator, then note the following:

- The SAS Viya Platform Deployment Operator does not participate in the inventory scan.
 - The inventory scan should be performed manually without changing the custom resource (CR) file used by the SAS Viya Platform Deployment Operator.
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SAS Viya 4 provides the SAS Viya 4 inventory report and SAS Viya 4 inventory comparison report that you can use to help validate a SAS Viya 4 target environment after any major change that you make to the system, such as an update, restore or migration. These reports are accessible for SAS Administrators from SAS Environment Manager. To use the reports, you must first generate additional required data by running the inventory collector CronJob.

Using the inventory collector CronJob, you can easily create an instance of an inventory collector job. Use environment variables to run the job in scan mode or comparison mode:

- scan mode

When you scan content using an inventory collector job, the job collects data from the SAS Viya 4 environment that you can use to inventory the current environment or use later to help validate the SAS Viya target environment. The data that is collected is available in the SAS Viya Inventory Report that is available in SAS Environment Manager.

- comparison mode

When you compare content using an inventory collector job, the job collects data from the SAS Viya 4 target environment and renames the tables from the SAS Viya 4 source environment so that you can compare them. The data that is collected is available in the SAS Inventory Comparison report that is available in SAS Environment Manager.

Before you make any major change to your SAS Viya 4 environment (such as an update, migration, or configuration change), you should scan the content on the source environment using an inventory collector job. Then after you have completed making the change, you should scan the content again on your target environment using an inventory collector job. You can use the resulting SAS Viya Inventory report to validate the target environment. Also, you can compare the content between the source and target environments using an inventory collector job. Use the resulting SAS Viya Comparison report as another tool to help validate the target environment.

Inventory: How To

Note: As a best practice, in the following steps name the inventory job accordingly when you are running it to generate a comparison report. For example, you might name the job *sas-inventory-comparison-job*. Also, name the inventory job accordingly when you are running the job simply to produce an inventory scan without generating a comparison report. For example, you might name the job *sas-inventory-collector-job*.

Scan Content Using an Inventory Collector Job

Note: As a best practice, unset the COMPARISON environment variable before you scan content using an inventory collector job.

See [“Inventory Workflow and Scenarios” on page 5](#) for more information about scanning content using an inventory collector job.

When to Run

Scan content using the inventory collector job without generating a comparison report before and after making any major change, such as in the following scenarios:

- before performing an ad hoc backup
- on the source environment before performing an update
- on the source environment before a migration
- on the target environment after performing a restore to the same machine
- on the target environment after a migration.

Scan Content

- 1 Unset the COMPARISON environment variable (do not generate comparison report).

```
kubectl -n name-of-namespace set env cronjob/sas-inventory-collector COMPARISON-
```

- 2 Delete the prior inventory collector job if you are reusing the same name for the job instance.

```
kubectl -n name-of-namespace delete job sas-inventory-collector-job
```

- 3 Run the inventory collector CronJob.

```
kubectl -n name-of-namespace create job --from=cronjob/sas-inventory-collector sas-inventory-collector-job
```

- 4 To view the log for the job, use the following command:

```
kubectl -n name-of-namespace logs -l job-name=sas-inventory-collector-job
```

- 5 To view the status of the job, use the following command:

```
kubectl -n name-of-namespace get pods -l job-name=sas-inventory-collector-job
```

Compare Content Using an Inventory Collector Job

Note: When you compare content using an inventory collector job, you must set the COMPARISON environment variable to **true** to generate the comparison report.

See [“Inventory Workflow and Scenarios” on page 5](#) for more information about comparing content with an inventory collector job.

When to Run

Compare content using an inventory collector job only when an inventory collector job has already been run to scan content on the source and target environments. For example, you might run an

inventory collector job to compare content and generate a comparison report on the target environment after completing a major change, such as in the following scenarios:

- after performing an update
- after performing a restore to the same machine
- after a migration.

Compare Content

- 1 If you have not already, scan the content on the target environment using an inventory collector job. See [“Scan Content Using an Inventory Collector Job” on page 2.](#)

Note: An inventory collector job must already have been run on the source environment to scan content for the comparison to work. If the source environment is SAS Viya 3.X, the initial inventory scan is performed in the SAS Viya 3.x source environment using an Ansible playbook.

- 2 Set the COMPARISON environment variable to **true** to generate the comparison report.

```
kubectl -n name-of-namespace set env cronjob/sas-inventory-collector COMPARISON=true
```

Note: As of the 2023.01 release of SAS Viya 4, set the COMPARISON environment variable to **migration** if you need to regenerate the comparison report after a SAS Viya 3 to SAS Viya 4 migration. In 2022.01 and prior releases of SAS Viya 4, you set the COMPARISON environment variable to **true** to generate the comparison report after a SAS Viya 3 to SAS Viya 4 migration. This will still work, but only for the first inventory scan after the migration.

- 3 Delete the prior inventory collector job if it exists.

```
kubectl -n name-of-namespace delete job sas-inventory-comparison-job
```

- 4 Run the inventory CronJob to create a comparison report.

```
kubectl -n name-of-namespace create job --from=cronjob/sas-inventory-collector sas-inventory-comparison-job
```

- 5 To view the log for the job, use the following command:

```
kubectl -n name-of-namespace logs -l job-name=sas-inventory-comparison-job
```

- 6 To view the status of the job, use the following command:

```
kubectl -n name-of-namespace get pods -l job-name=sas-inventory-comparison-job
```

View Results

The following reports are published in the SAS Viya 4 environment:

SAS Viya 4 Inventory report	Contains information about the current SAS Viya 4 environment.
-----------------------------	--

SAS Viya 4 Comparison report Compares the source environment and the target SAS Viya 4 environment.

See [“Access Predefined Reports” in SAS Environment Manager: User’s Guide](#) for more information.

Schedule the Inventory Collector CronJob

For information about scheduling the inventory collector CronJob, see one of the following files:

File Format	Path
Markdown	<code>\$deploy/sas-bases/examples/sas-inventory-collector/README.md</code>
HTML	<code>\$deploy/sas-bases/docs/using_the_inventory_collector.htm</code>

Note: If any manifest that is in the `$deploy` directory is reapplied after the schedule is changed, then you must rerun the command to schedule the inventory collector CronJob. Reapplying the manifest resets the schedule to the default schedule.

Inventory: Reference

Inventory Workflow and Scenarios

See the following table to understand the prerequisites of each inventory collector job scenario as well as what CAS data is saved:

Table 1 *Inventory Collector Job Scan and Compare Scenarios*

Scenario	Prerequisite	COMPARISON ¹	TENANT ¹	SYSTEMDATA Caslib Tables
Create a SAS Viya 4 Inventory report.	None	Not set.	Not set.	SASVIYAINVENTORY4 ² SASVIYAINVENTORY4_CASSVRDETAILS ² SASVIYAINVENTORY4_PRIOR ³
Create a SAS Viya 4 Inventory	An inventory report exists for the	Set to <code>true</code> .	Not set.	SASVIYAINVENTORY4 and SASVIYAINVENTORY4_PRIOR ⁴

Scenario	Prerequisite	COMPARISON ¹	TENANT ¹	SYSTEMDATA Caslib Tables
Comparison report.	source and target deployments. The target deployment introduces a major change to the environment (such as an update or migration) that was not present in the source environment.			SASVIYAINVENTORY4_CASSVRDETAILS ⁴

¹ This is the name of an environment variable.

² This table is created after running the initial inventory scan and updated by subsequent inventory scans.

³ This table is created automatically by saving off the prior table before updating the contents of the current table (SASVIYAINVENTORY4 or SASVIYAINVENTORY4_CASSVRDETAILS).

⁴ All of these tables are required for the comparison to be successful.

Inventory: Troubleshooting

General Troubleshooting Strategies

For general information about how to approach issues, see [Troubleshooting Strategies](#).

Inventory Reports Fail to Open

Problem

An error such as the following results when opening the SAS Viya 4 Inventory or SAS Viya 4 Inventory Comparison reports:

```
An error was encountered loading the data SASVIYAINVENTORY4_CASSVRDETAILS.
Cannot find the requested data source.
```

Explanation

The SASVIYATYPES table might be missing or unloaded.

Resolution

Rerun the sas-admin-content-loader job by restarting the associated pod. Depending on which release of SAS Viya 4 that you are running, do one of the following:

- SAS Viya 4 releases 2023.12 - *current_release*
 - 1 Rerun the sas-admin-content-loader job by restarting the sas-geography pod. See [“Managing a Specific Server or Service” in SAS Viya Platform Operations: Servers and Services](#).
 - 2 Check the logs for the following:
 - Messages containing sas-geography and sas-admin-content-loader
 - sas-launcher
 - container = sas-admin-content-loader
 - logsource = sas-admin-content-loader
- SAS Viya 4 releases 2022.1.3 - 2023.11
 - 1 Rerun the sas-admin-content-loader job by restarting the sas-web-data-access pod. See [“Managing a Specific Server or Service” in SAS Viya Platform Operations: Servers and Services](#).
 - 2 Check the logs for the following:
 - sas-web-data-access
 - logsource = sas-admin-content-loader