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IBM Cognos Analytics  
Report output and the Content Store maintenance  
Version 11.1.3

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Prepared by: IBM Cognos Analytics Advocates Team  
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## About this document

### Purpose

IBM Cognos Analytics provides the capability to save report outputs. If no external object repository is configured, report output will be stored in the Content Store database as binary large objects (BLOBs). Disk attached to database systems is often high-performance tier.

Application administrators are often under pressure to reduce the size of the Content Store, as database administrators struggle with allocation of high-performance disk resources. In addition, backup and maintenance tasks at both the database layer and Cognos Analytics administration level can be difficult to manage due to excessive file size.

Administrators of IBM Cognos Analytics need to be aware of available methods to control the size of the Content Store database by managing the report output that is being stored within as BLOBs.

### Disclaimer

This document was compiled by the IBM Cognos Advocates team and is based on their field experiences. It is intended for sharing field knowledge only and does not necessarily represent the views or any formal promises of the IBM Product Management team.

Information within this document is taken from a simple installation of Cognos Analytics version 11.1.3. With newer releases, functionality may be changed, use this document as a point in time indicator and check back for updates in documentation.

## Overview

IBM Cognos Analytics allows for report output to be saved for review at future dates. Depending on the importance of the individual report, the enterprise may require report output to be saved for many iterations. This may be for comparative or even regulatory purposes.

Storing report output for future use is a valuable function, however (generally) a database is not designed to store large single files and application administrators must be aware of how to control the size of the Content Store database whilst being able to service the enterprise requirements for report retention.

Very large Content Store databases can be difficult to manage, as export deployments and backups can become hard to store and move due to large file sizes.

IBM Cognos Analytics administrators can use content maintenance tasks to manage the number of report outputs stored in the Content Store. Retention rules, Content Removal, and Content Archival are all methods that should be in use on every system in order to keep the Content Store database at an optimal size.

## Report Output Versions

Every report object has a property to control the number of occurrences that will be displayed to end users within the Cognos Analytics portal. In the example below, this has been set to show five (5) report output versions:

### Daily metric exceptions



Owner

Created: 5/7/2007, 1:31 PM  
Modified: 10/8/2019, 7:41 PM  
Type: Report

General **Report** Schedule Permissions

Source Audit

#### Prompt values

Prompt for values

Current values [Set values >](#)

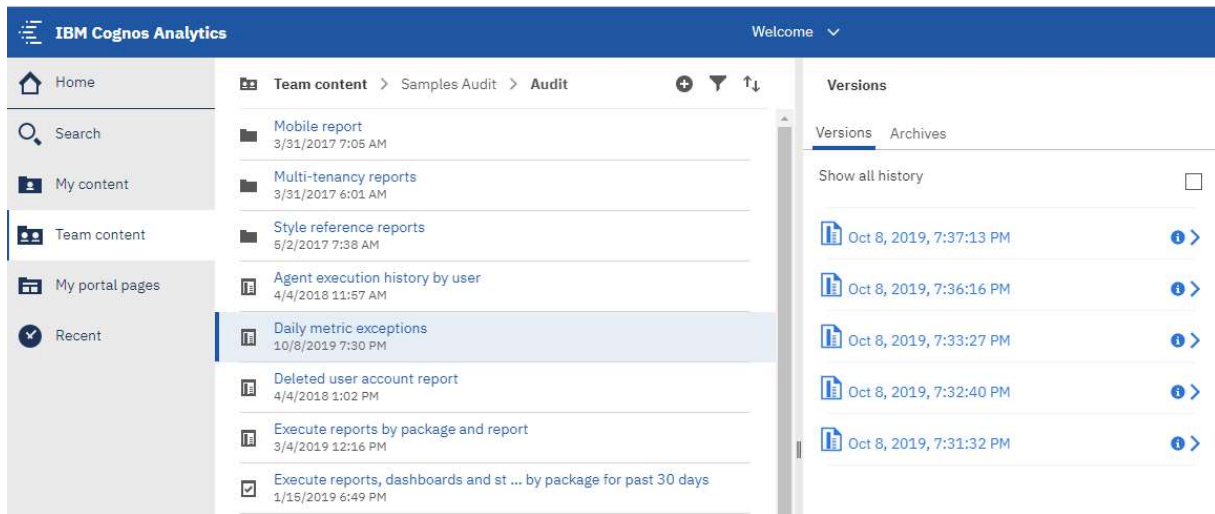
#### Report options v

#### Advanced ^

Run History 5 Occurrences ▼

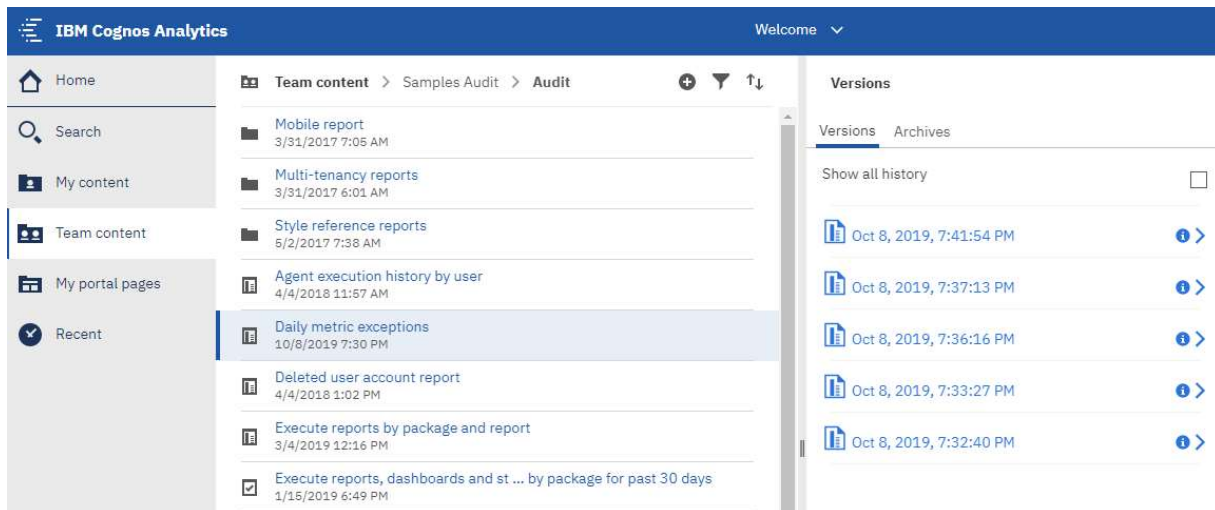
Report output versions 5 Occurrences ▼

With “Report output versions” set to five (5), users will only see the five most recent report outputs available:



The screenshot shows the IBM Cognos Analytics interface. The top navigation bar includes the IBM Cognos Analytics logo and a 'Welcome' dropdown. The left sidebar contains navigation options: Home, Search, My content, Team content, My portal pages, and Recent. The main content area displays a list of reports under the path 'Team content > Samples Audit > Audit'. The reports listed are: Mobile report (3/31/2017 7:05 AM), Multi-tenancy reports (3/31/2017 6:01 AM), Style reference reports (5/2/2017 7:38 AM), Agent execution history by user (4/4/2018 11:57 AM), Daily metric exceptions (10/8/2019 7:30 PM), Deleted user account report (4/4/2018 1:02 PM), Execute reports by package and report (3/4/2019 12:16 PM), and Execute reports, dashboards and st ... by package for past 30 days (1/15/2019 6:49 PM). The 'Daily metric exceptions' report is selected. On the right, the 'Versions' panel shows a list of report versions for the selected report, with a 'Show all history' checkbox and a list of versions with timestamps and information icons.

If a new version is run, the oldest version will not be displayed to the end user:

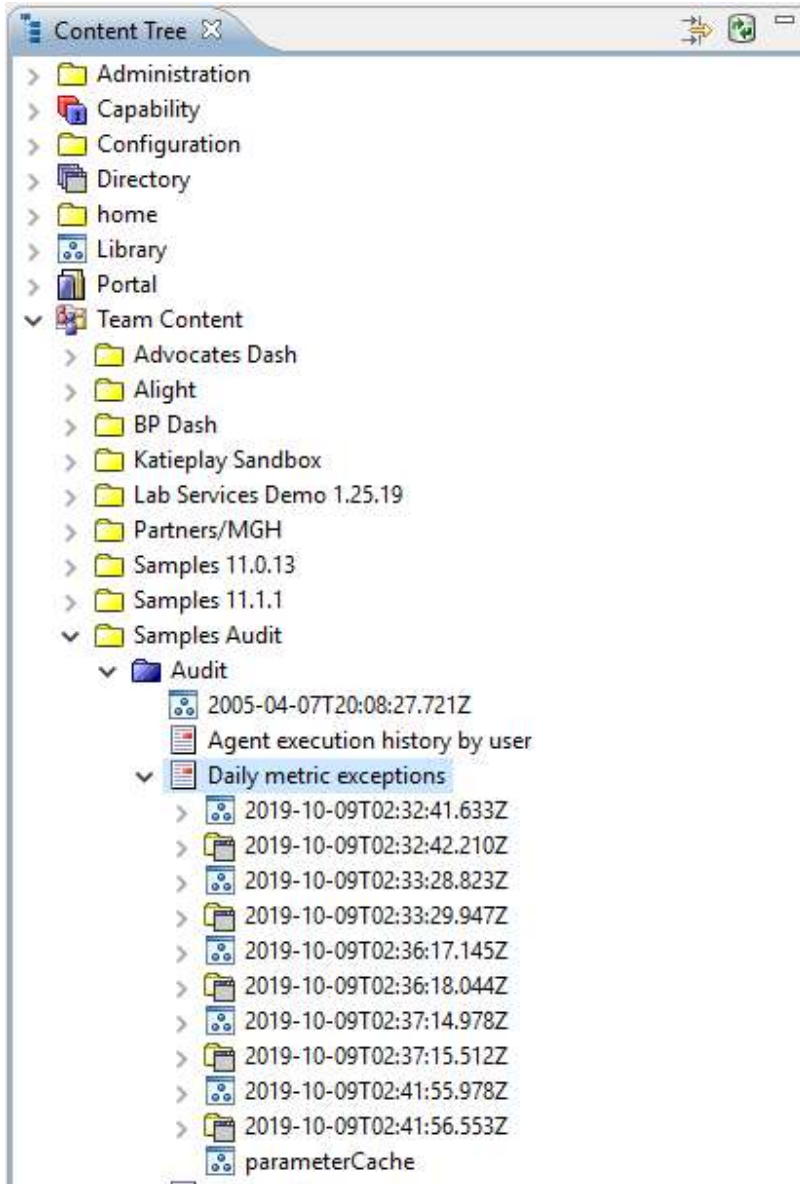


This screenshot is identical to the one above, showing the same report list and version history. The 'Daily metric exceptions' report is selected, and the version history on the right shows five versions from October 8, 2019, at various times: 7:41:54 PM, 7:37:13 PM, 7:36:16 PM, 7:33:27 PM, and 7:32:40 PM.

(Users with write access to the report will be able to change the number of occurrences to any number.)

It is important to note that this Report output versions property only controls the versions list displayed to the end user in the portal and not what is stored in the Content Store.

With the report above set to five occurrences, there are still many instances in the content store:



To highlight how this property works, we can change the occurrences to one (1) for this report:

### Daily metric exceptions

Owner Created: 5/7/2007, 1:31 PM  
Modified: 10/8/2019, 7:41 PM  
Type: Report

General **Report** Schedule Permissions

Source Audit

#### Prompt values

Prompt for values

Current values [Set values >](#)

**Report options** ▼

**Advanced** ▲

Run History	5	Occurrences ▼
<b>Report output versions</b>	<b>1</b>	Occurrences ▼

IBM Cognos Analytics Welcome ▾

Home Search My content Team content My portal pages Recent

Team content > Samples Audit > Audit

- Mobile report 3/31/2017 7:05 AM
- Multi-tenancy reports 3/31/2017 6:01 AM
- Style reference reports 5/2/2017 7:38 AM
- Agent execution history by user 4/4/2018 11:57 AM
- Daily metric exceptions 10/8/2019 8:02 PM**
- Deleted user account report 4/4/2018 1:02 PM
- Execute reports by package and report 3/4/2019 12:16 PM

**Versions**

Versions Archives

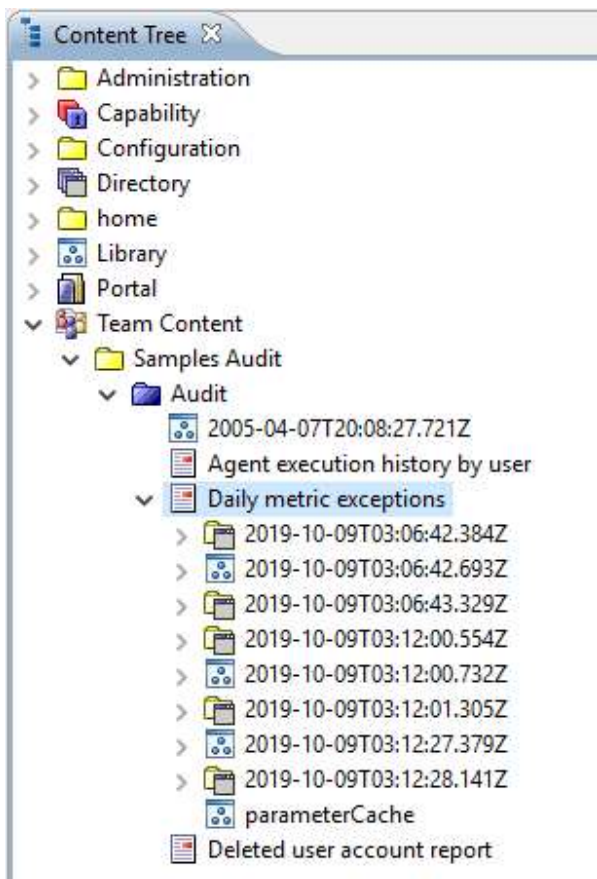
Show all history

Oct 8, 2019, 7:41:54 PM ▶



Altering the occurrences changes the number of versions displayed to the end user in the portal. Output versions older than the allowed number of occurrences or days are marked for archive and will not be able to be shown in the portal again. However, this does NOT remove the versions from the content store. All versions are still in the content store database until such time as an administrator removes or archives the saved report output.

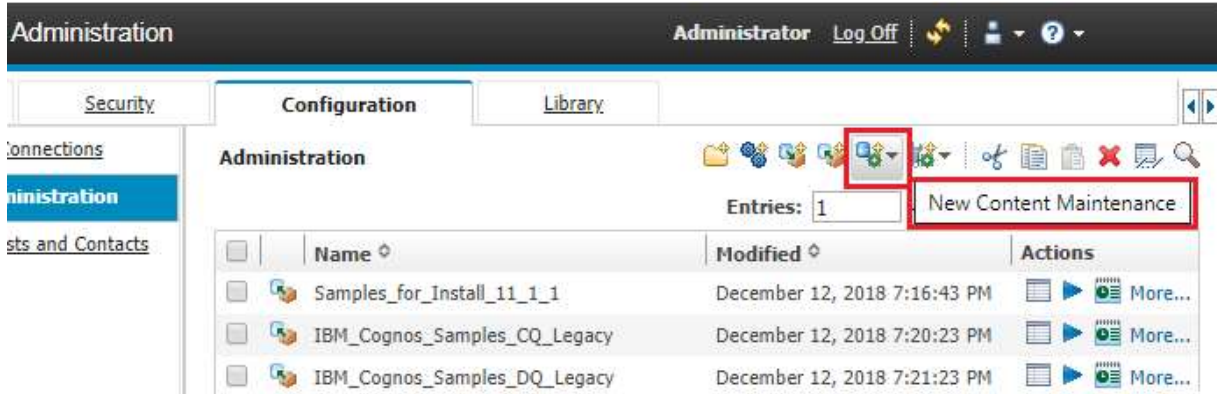
As we can see from the CM browser, there are many outputs for this report, although only one will be shown to the users viewing versions from the Cognos Analytics portal.



## Content Maintenance Tasks

Optimise the performance of the IBM Cognos Analytics application by keeping the Content Store streamlined. Facilitate regulatory or enterprise requirements by keeping output in a regulated environment. Gain control of content deployments and reduce the time required for database maintenance. IBM Cognos Analytics Administration provides a number of Content Maintenance Tasks to allow application administrators control over content.

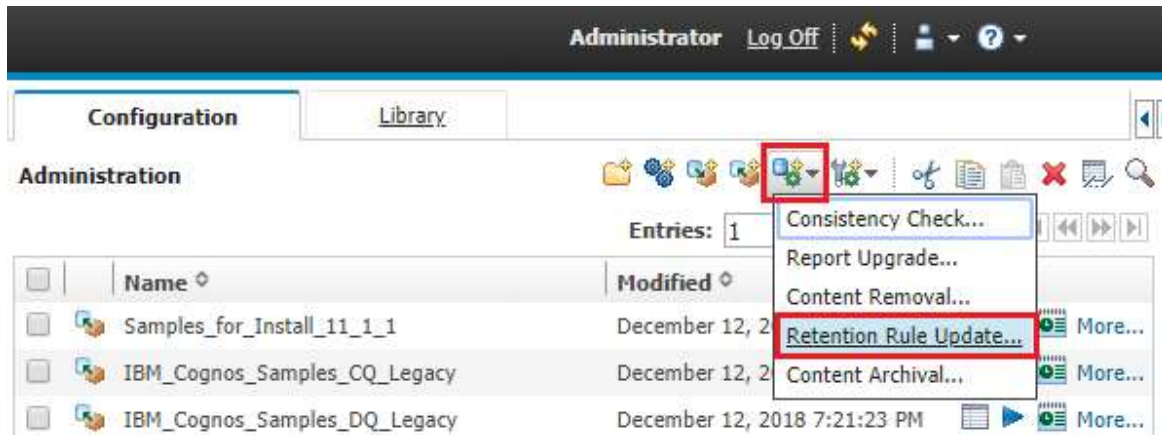
In the Administration portal, select the Configuration tab and select the New Content Maintenance icon.



## Retention Rule update

Users with write control to a report have the capability to alter the number of report output versions to show in the portal. Reports that are shown in the portal cannot be archived.

Administrators have the ability to set a Report Output retention rule on any object or set of objects, it can even be set globally at the public folders level.



**Select the options - New Content Maintenance Task wizard: Retention Rule Update**  
 Select the options to use for this entry.

**Included content**

<input type="checkbox"/>	...> Name
<input type="checkbox"/>	Team Content

**Retention settings**  
 Setting the number of occurrences to zero (0) saves an unlimited number of occurrences.

**Run history:**

Number of occurrences:   
 Duration:  Day(s)

**Output versions:**

Number of occurrences:   
 Duration:  Day(s)

This function can help administrators archive content that would otherwise not yet be available for the archive function.

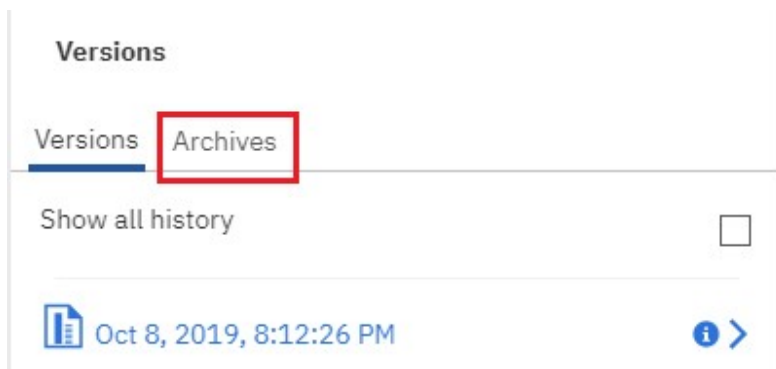
### Option – Archive report output

Your enterprise may have an external repository (disk) configured to hold older report versions. The option to archive report output will move all versions that are not displayed in the portal to a predefined external repository. In most cases this can be lower level disk, saving high-performance disk for business critical database activities. Archiving report output allows for the output to remain secured according to the security of the reporting object.

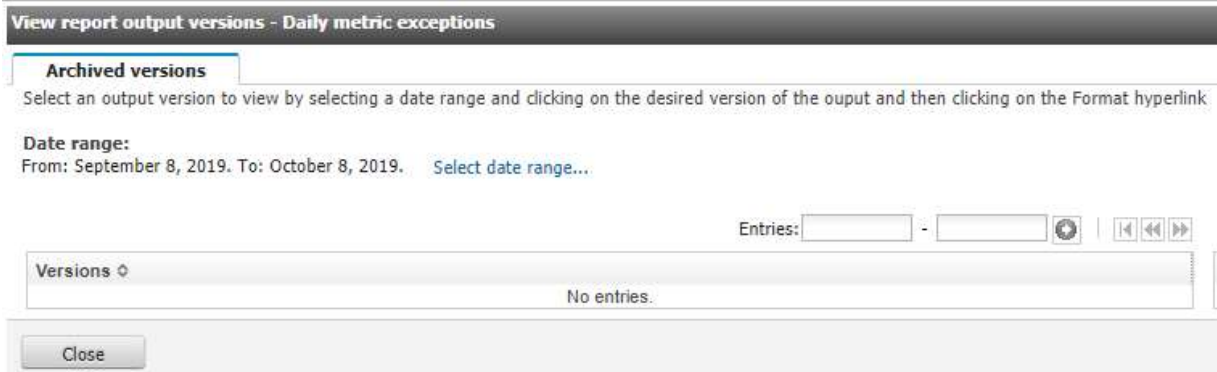
In order to archive, an 'Alias Root' must first be created. This is the specification of the file system to where report output will be moved:

[https://www.ibm.com/support/knowledgecenter/en/SSEP7J\\_11.1.0/com.ibm.swg.ba.cognos.in.st.cr.winux.doc/t\\_ecm\\_aliasroot.html](https://www.ibm.com/support/knowledgecenter/en/SSEP7J_11.1.0/com.ibm.swg.ba.cognos.in.st.cr.winux.doc/t_ecm_aliasroot.html)

After the report archival task has been run, end users will be able to retrieve these archived versions by selecting the 'Archives' tab when selecting report versions:

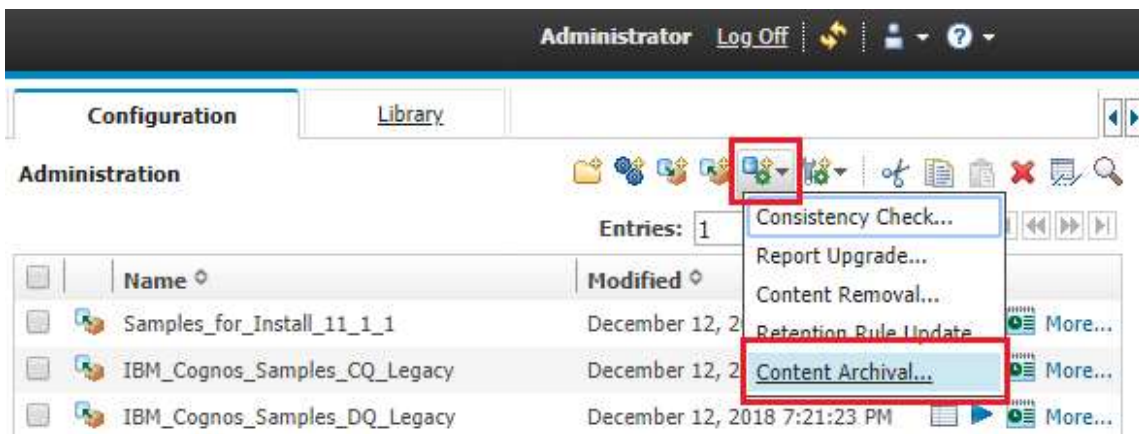


As of this version (11.1.3) the archived reports will show in a new tab:



More information on creating a content archival task:

[https://www.ibm.com/support/knowledgecenter/en/SSEP7J\\_11.1.0/com.ibm.swg.ba.cognos.ug\\_cra.doc/t\\_creat\\_cntnt\\_arch\\_tsk.html](https://www.ibm.com/support/knowledgecenter/en/SSEP7J_11.1.0/com.ibm.swg.ba.cognos.ug_cra.doc/t_creat_cntnt_arch_tsk.html)

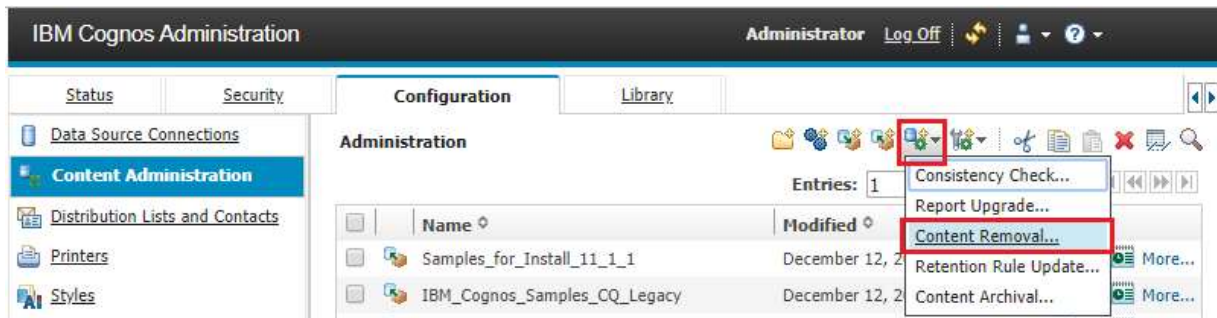


Administrators can schedule archival for ease of maintenance.

## Option 2 – Remove all versions

An administrator may also choose to remove report output all together. This deletes the report output from the content store.

[https://www.ibm.com/support/knowledgecenter/en/SSEP7J\\_11.1.0/com.ibm.swg.ba.cognos.ug\\_cra.doc/t\\_creat\\_cntnt\\_rem\\_tsk.html](https://www.ibm.com/support/knowledgecenter/en/SSEP7J_11.1.0/com.ibm.swg.ba.cognos.ug_cra.doc/t_creat_cntnt_rem_tsk.html)



Be careful running this option as it will permanently delete all output versions that have not yet been archived.

## Review and best practice

Regardless of the output retention rule set on the properties of any report, report output versions will never be deleted from the content store unless an administrator performs content maintenance tasks.

Over time, your Content Store database will grow until such time as Deployment tasks fail, database filesystems become full, or backup tasks take a long time and become unmanageable.

If you have an enterprise or regulatory compliance requirement, content can be Archived and moved to a less critical disk infrastructure. Report output is still secured under the object security set within the Cognos portal.

If you have no requirement to store output, you can simply remove old content by running a Content Removal task.

All tasks in the administration portal can be scheduled.

An example of how an administrator might apply best practice in a production environment:

1. Create a Retention Rule Update to set the properties of every report to retain only the last five occurrences.
2. Schedule this retention rule update task to run every day.
3. Create a Content Archival task to move any report output other than the five occurrences to the configured alias root location.
4. Schedule this Content Archival task to run every day.