How to migrate Tivoli Common Reporting v3.1.* to Cognos v.11x

(revision 1.1 June 2021)

Tivoli Common Reporting v3.1.* is using Cognos v10. which is no longer supported by IBM Cognos.
This document describes the steps and scenario how it's possible to migrate a running Tivoli Common Reporting v3.1.* to Cognos v11.x. For example, IBM Tivoli Monitoring OS reports can migrate to the new Cognos version, as well Cognos V11 supports newer OS releases.
This document describes how I have test it.

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Prerequisites and Environment

In the current test scenario i used:

a) Tivoli Common Reporting v3.1.* using a remote Cognos ContentStore using DB2 v.10,1 Cognos v10.2.2 FP10
b) Linux Redhat 7.6 and DB2 v11.1.4FP4a for Cognos v11.0.13

Hardware requirements for Cognos v11

About the IBM Cognos Analytics on Premises 11.1.x: Supported Software Environments. Please have a look at the technote https://www.ibm.com/support/pages/node/735235

I tested it on a RedHat (RHEL) 7.6 64bit 10 GB RAM (memory) and 80 GB HDD (disc space)

Software packages

a) IBM Cognos Analytics Server Limited Use 11.0.13 Linux x86 Multilingual (CNV2UML)
ca_server_var_linuxi38664_11.0.13.bin

b) IBM® DB2® Enterprise Server Edition - Restricted Use - Activation 11.1 for Linux®, UNIX and Windows® (CNB25ML)
v11.1.4fp4a_linuxx64_server_t.tar.gz
db2ese_o.lic / sam41.lic

The packages are available on Passport Advantage.

Software requirements for Linux Redhat

1) Redhat library packages need

glibc-2.17-55.el7 or later (both i686 and x86_64 packages)
libstdc++-4.8.2-16.el7 or later (both i686 and x86_64 packages)
nspr-4.10.2-4.el7 or later (both i686 and x86_64 packages)
nss-3.15.4-6.el7 or later (both i686 and x86_64 packages)
motif-2.3.4-7.el7 or later (both i686 and x86_64 packages)

you can use the yum command to apply the required packages like:

yum install motif-2.3.4-7.el7.i686 motif-2.3.4-7.el7.i686.x86_64
yum install nss-3.36.0-7.1.el7.i686

yum install nspr-4.10.2-4.el7.i686 nspr-4.10.2-4.el7.x86_64
yum install libstdc++-4.8.2-16.el7.i686 libstdc++-4.8.2-16.el7.x86_64
yum install glibc-2.17-55.el7.i686 glibc-2.17-55.el7.x86_64

2) set the ulimits

modify the ***/etc/security/limits.conf*** and check or add the following:

```
*               soft    nproc   unlimited
*               hard    nproc   unlimited
*               soft    nofile  8192
*               hard    nofile  8192
*               soft    stack   unlimited
*               hard            stack   unlimited
```

the pic shows the setting after

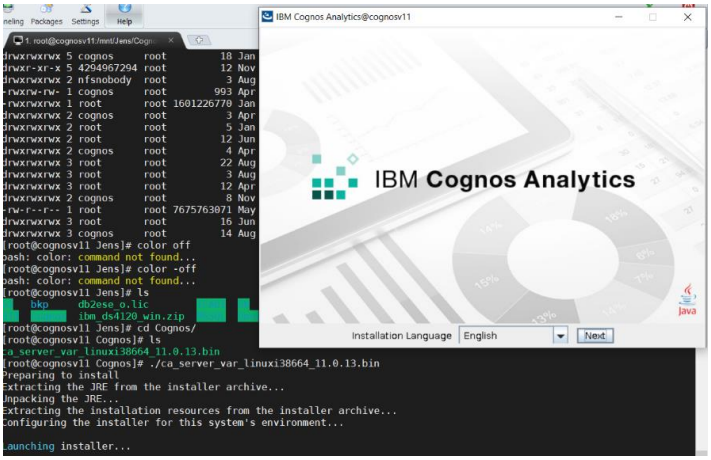
```
55 #@student        hard    nproc           20
56 #@faculty        soft    nproc           20
57 #@faculty        hard    nproc           50
58 #ftp             hard    nproc           0
59 #@student        -       maxlogins       4
60
61 #added by Jens for Cognos v11 prereq and installation
62 *                 soft     nproc        unlimited
63 *                 hard     nproc        unlimited
64 *                 soft     nofile       8192
65 *                 hard     nofile       8192
66 *                 soft     stack        unlimited
67 *                 hard     stack        unlimited
68
69
```

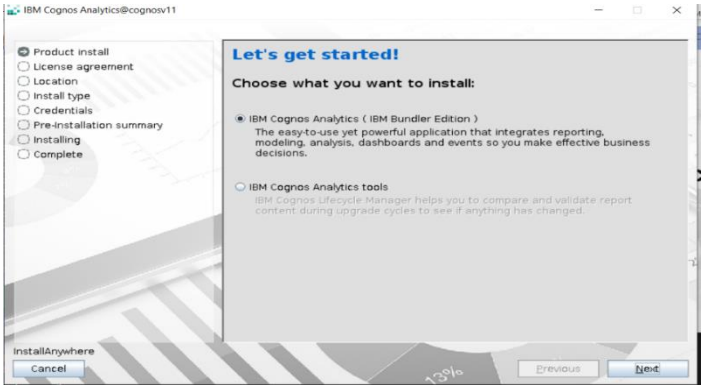
save the ***/etc/security/limits.conf*** file and then reboot your machine:

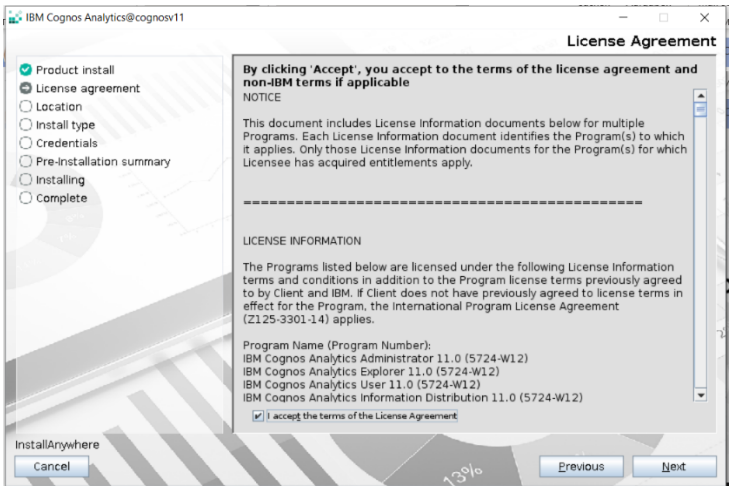
Installation of Cognos v11

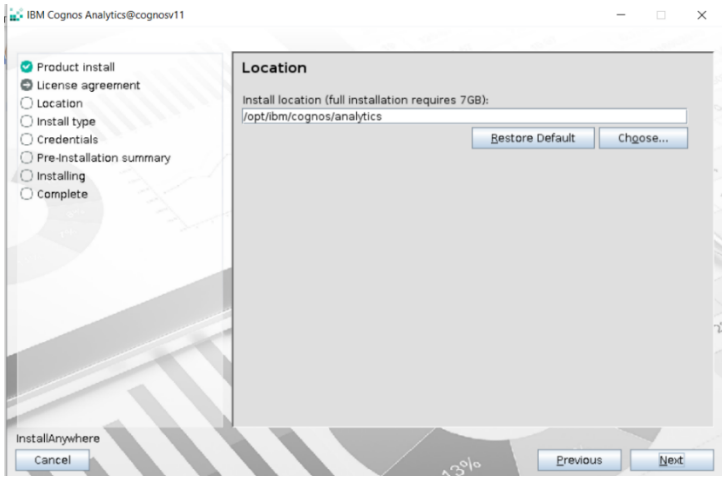
Follow the installation instructions from the IBM KnowledgeCenter
https://www.ibm.com/support/knowledgecenter/SSEP7J_11.0.0/com.ibm.swg.ba.cognos.inst_cr_winux.doc/t_instsrvrunix.html#instsrvrUNIX

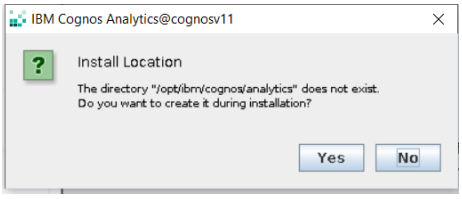
[root@cognosv11 Cognos]# **./ca_server_var_linuxi38664_11.0.13.bin**

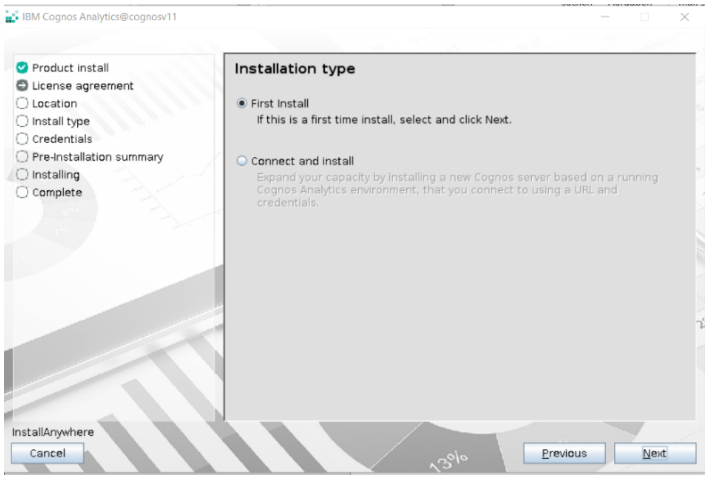

IBM Cognos Analytics@cognosv11
IBM Cognos Analytics
Installation Language
English
Next
[root@cognosv11 Jens]# color off
bash: color: command not found...
[root@cognosv11 Jens]# color -off
bash: color: command not found...
[root@cognosv11 Jens]# ls
[root@cognosv11 Jens]# cd Cognos/
[root@cognosv11 Cognos]# ls
ca_server_var_linuxi38664_11.0.13.bin
[root@cognosv11 Cognos]# ./ca_server_var_linuxi38664_11.0.13.bin
Preparing to install
Extracting the JRE from the installer archive...
Unpacking the JRE...
Extracting the installation resources from the installer archive...
Configuring the installer for this system's environment...
Launching installer...

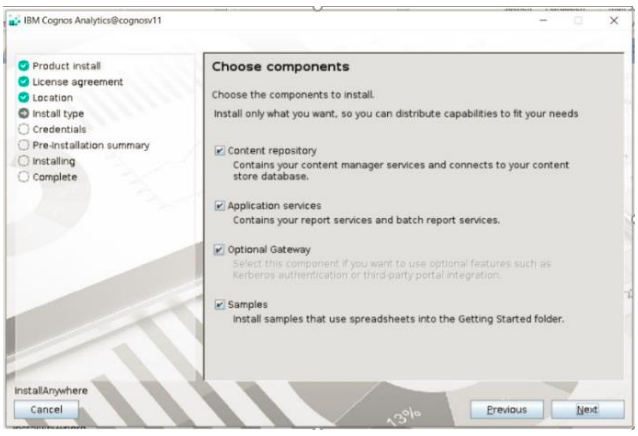

IBM Cognos Analytics@cognosv11
Product install
License agreement
Location
Install type
Credentials
Pre-installation summary
Installing
Complete
Let's get started!
Choose what you want to install:
IBM Cognos Analytics (IBM Bundler Edition)
The easy-to-use yet powerful application that integrates reporting, modeling, analysis, dashboards and events so you make effective business decisions.
IBM Cognos Analytics tools
IBM Cognos Lifecycle Manager helps you to compare and validate report content during upgrade cycles to see if anything has changed.
InstallAnywhere
Cancel
Previous
Next

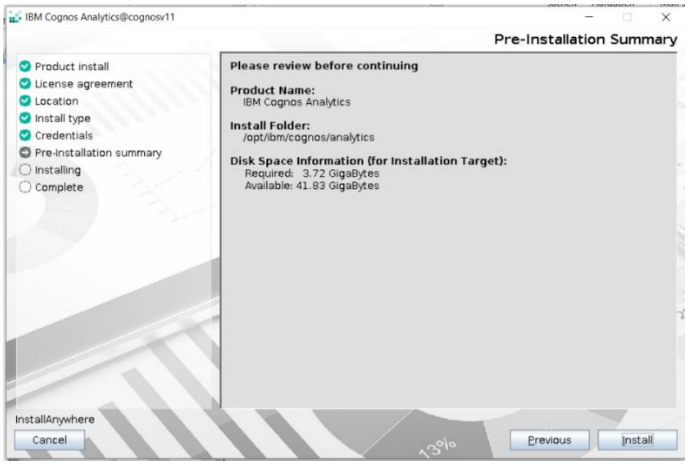

IBM Cognos Analytics@cognosv11
License Agreement
Product install
License agreement
Location
Install type
Credentials
Pre-Installation summary
Installing
Complete
By clicking 'Accept', you accept to the terms of the license agreement and non-IBM terms if applicable
NOTICE
This document includes License Information documents below for multiple Programs. Each License Information document identifies the Program(s) to which it applies. Only those License Information documents for the Program(s) for which Licensee has acquired entitlements apply.
LICENSE INFORMATION
The Programs listed below are licensed under the following License Information terms and conditions in addition to the Program license terms previously agreed to by Client and IBM. If Client does not have previously agreed to license terms in effect for the Program, the International Program License Agreement (Z125-3301-14) applies.
Program Name (Program Number):
IBM Cognos Analytics Administrator 11.0 (5724-W12)
IBM Cognos Analytics Explorer 11.0 (5724-W12)
IBM Cognos Analytics User 11.0 (5724-W12)
IBM Cognos Analytics Information Distribution 11.0 (5724-W12)
I accept the terms of the License Agreement
InstallAnywhere
Cancel
Previous
Next

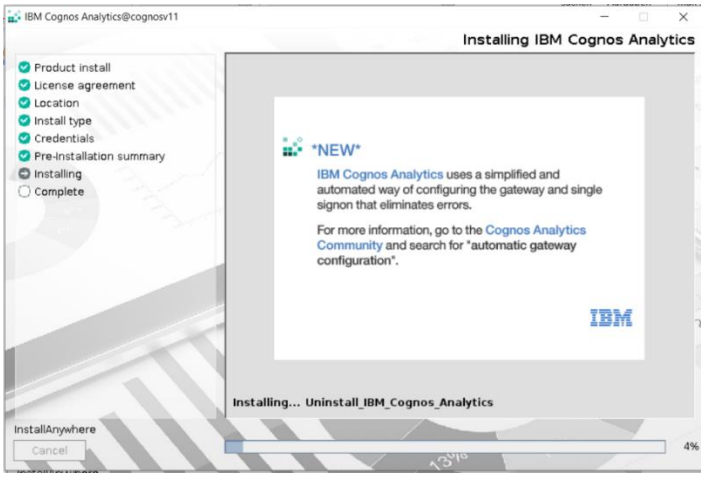

IBM Cognos Analytics@cognosv11
Product install
License agreement
Location
Install type
Credentials
Pre-installation summary
Installing
Complete
Location
Install location (full installation requires 7GB):
/opt/ibm/cognos/analytics
Restore Default
Choose...
InstallAnywhere
Cancel
Previous
Next

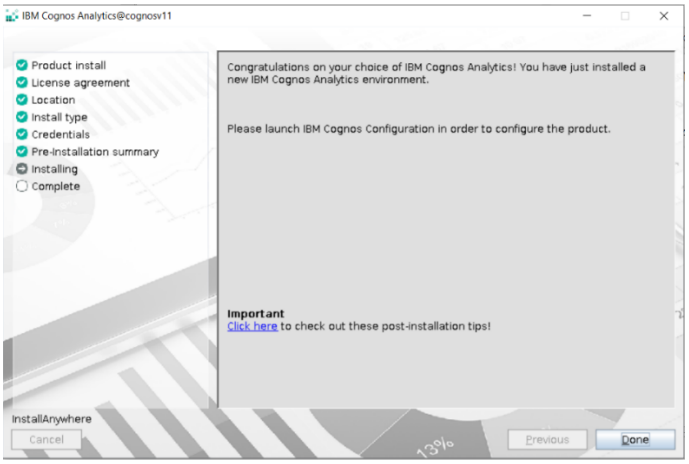

IBM Cognos Analytics@cognosv11
Install Location
The directory "/opt/ibm/cognos/analytics" does not exist.
Do you want to create it during installation?
Yes
No


IBM Cognos Analytics@cognosv11
Product install
License agreement
Location
Install type
Credentials
Pre-installation summary
Installing
Complete
Installation type
First Install
If this is a first time install, select and click Next.
Connect and install
Expand your capacity by installing a new Cognos server based on a running Cognos Analytics environment, that you connect to using a URL and credentials.
InstallAnywhere
Cancel
Previous
Next


IBM Cognos Analytics@cognosv11
Product install
License agreement
Location
Install type
Credentials
Pre-installation summary
Installing
Complete
Choose components
Choose the components to install.
Install only what you want, so you can distribute capabilities to fit your needs
Content repository
Contains your content manager services and connects to your content store database.
Application services
Contains your report services and batch report services.
Optional Gateway
Select this component if you want to use optional features such as Kerberos authentication or third-party portal integration.
Samples
Install samples that use spreadsheets into the Getting Started folder.
InstallAnywhere
Cancel
Previous
Next


IBM Cognos Analytics@cognosv11
Pre-Installation Summary
Product install
License agreement
Location
Install type
Credentials
Pre-Installation summary
Installing
Complete
Please review before continuing
Product Name:
IBM Cognos Analytics
Install Folder:
/opt/ibm/cognos/analytics
Disk Space Information (for Installation Target):
Required: 3.72 GigaBytes
Available: 41.83 GigaBytes
InstallAnywhere
Cancel
Previous
Install


IBM Cognos Analytics@cognosv11
Installing IBM Cognos Analytics
Product install
License agreement
Location
Install type
Credentials
Pre-Installation summary
Installing
Complete
NEW
IBM Cognos Analytics uses a simplified and automated way of configuring the gateway and single signon that eliminates errors.
For more information, go to the Cognos Analytics Community and search for "automatic gateway configuration".
IBM
Installing... Uninstall_IBM_Cognos_Analytics
InstallAnywhere
Cancel
4%

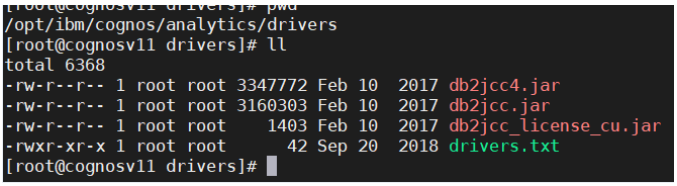

IBM Cognos Analytics@cognosv11
Product install
License agreement
Location
Install type
Credentials
Pre-Installation summary
Installing
Complete
Congratulations on your choice of IBM Cognos Analytics! You have just installed a new IBM Cognos Analytics environment.
Please launch IBM Cognos Configuration in order to configure the product.
Important
Click here to check out these post-installation tips!
InstallAnywhere
Cancel
Previous
Done

Installing the DB2 ContentStore

Follow the installation instructions from the IBM KnowledgeCenter
https://www.ibm.com/support/knowledgecenter/SSEPGG_11.1.0/com.ibm.db2.luw.admin.cmd.doc/doc/r0008889.html

After a successful installation of DB2, copy the DB2 driver into the Cognos path:

1. Copy **db2jcc.jar**, **db2jcc4.jar**, and **db2jcc_license_cu.jar** to -> ***/opt/ibm/cognos/analytics/drivers***



2. when you use a DB2 Warehouse database, you need to copy the **libdb2.so** as well

[root@cognosv11 /]# find ./ -name **libdb2.so**

./opt/ibm/cognos/analytics/bin64/libdb2.so
./opt/ibm/cognos/analytics/drivers/libdb2.so
./opt/ibm/db2/V11.1/lib32/libdb2.so
./opt/ibm/db2/V11.1/lib64/libdb2.so

3. when your DB2 Warehouse database is on a remote system, you must catalog the remote Warehouse database.

[db2inst1@cognosv11 ~]$ ***db2 "catalog tcpip node WAREHOUS remote ITM630HUBJ server 50000"***
DB20000I The CATALOG TCPIP NODE command completed successfully.
DB21056W Directory changes may not be effective until the directory cache is refreshed.

[db2inst1@cognosv11 ~]$ ***db2 "catalog db WAREHOUS at node WAREHOUS"***
DB20000I The CATALOG DATABASE command completed successfully.
DB21056W Directory changes may not be effective until the directory cache is refreshed.
[db2inst1@cognosv11 ~]$ ***db2 list db directory***

System Database Directory
Number of entries in the directory = 2

Database 1 entry:

Database alias = WAREHOUS

Database name	= WAREHOUS
Node name	= WAREHOUS
Database release level	= 14.00
Comment	=
Directory entry type	= Remote
Catalog database partition number	= -1
Alternate server hostname	=
Alternate server port number	=

For sure you can still use your old ITM Warehouse Database.
More DB2 catalog command syntax can be found at:
https://www.ibm.com/support/knowledgecenter/SSEPGG_11.1.0/com.ibm.db2.luw.admin.cmd.doc/doc/r0001944.html
https://www.ibm.com/support/knowledgecenter/SSEPGG_11.1.0/com.ibm.db2.luw.admin.cmd.doc/doc/r0001936.html

Create the DB2 ContentStore Database

Use the scripts from the ITCR_3.1.*.0_FOR_LINUX.tar.gz package
ITCR_3.1.*.0_FOR_LINUX\TCRCognos\ContentStoreDatabase\TCR_generate_content_store_db2_definition.sh

./TCR_generate_content_store_db2_definition.sh CSV11DB db2inst1

CSV11DB = new ContentStoreDB
DB2inst1 = DB2 instance user

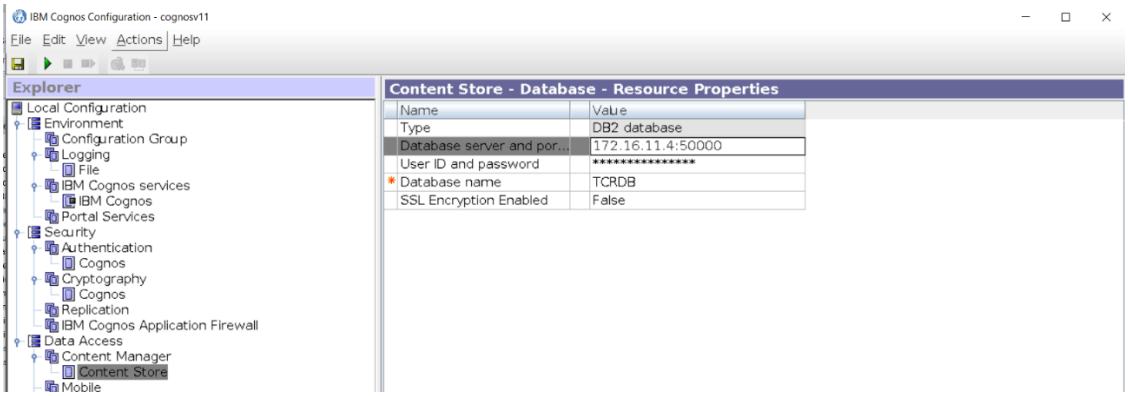
```
[root@cognosv11 Cognos]# ls
ca_server_var_linuxi38664_11.0.13.bin  db2ese_o.lic  sam41.lic  server_t  TCR_generate_content_store_db2_definition.sh
[root@cognosv11 Cognos]# ./TCR_generate_content_store_db2_definition.sh CSV11DB db2inst1
The tcr_create_db2_cs.sql script was created
```

su - db2inst1
[db2inst1@cognosv11 Cognos]$ **db2 -vtf tcr_create_db2_cs.sql**

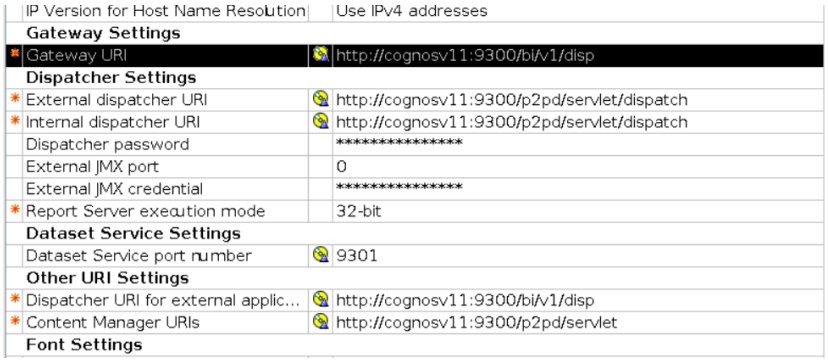
Add the ContentStore Database to the Cognos Configuration

open the Cognos configuration, to add the ContentStore settings and modify the Dispatcher URI's

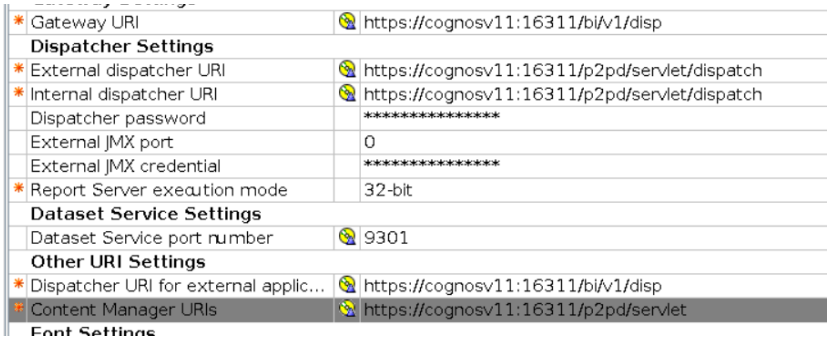
1) [root@cognosv11 bin64]# **cd /opt/ibm/cognos/analytics/bin64**
[root@cognosv11 bin64]# **./cogconfig.sh**
Using ../jre/bin/java



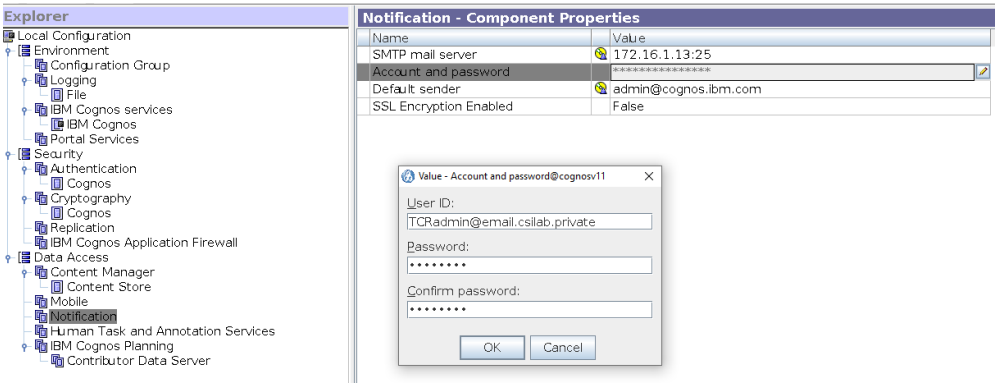
2) change the Dispatcher URI's **FROM**:



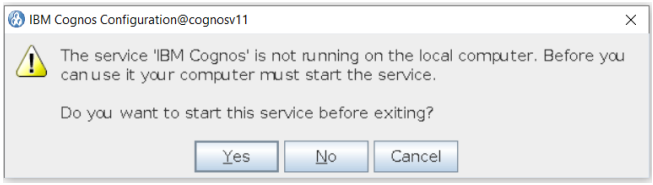
TO the protocol **HTTPS** and port **16311**



3) Optional, you can set a SMTP server for email notification as well

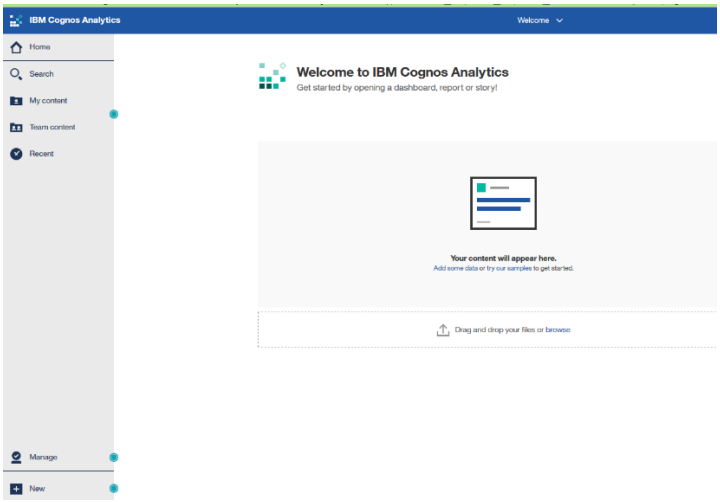


4) SAVE and EXIT the Cognos Configuration



Open the Cognos Console

To open the Cognos Console in your Webbrowser use the URL
https://<CognosServerIP-or-hostname>:16311/bi/



Create a start script

Unfortunately, there is a problem to load the db2 driver to get the DB2 Datasource successful to connect. Therefore, I created an own start script, which is loading the necessary driver and starting Cognos Server.

1) created an own script called **cogstart.sh** with the following content:

---------- script begin ----------

```
#!/bin/bash
# Cognos Start script
# Jens 23/09/2019
COGNOS_HOME=/opt/ibm/cognos/analytics/
PATH=$PATH:$COGNOS_HOME/bin64:$COGNOS_HOME/bin
LD_LIBRARY_PATH=$COGNOS_HOME/bin64:$COGNOS_HOME/bin:$DB2_HOME/lib32:$COGNOS_HOME/bin64:$COGNOS_HOME/bin

DB2_HOME=/home/db2inst1/sqllib
DB2INSTANCE=db2inst1
DB2LIB=$DB2_HOME/lib

JAVA_HOME=$COGNOS_HOME/jre
LANG=en_US.UTF-8

export DB2_HOME DB2INSTANCE DB2LIB COGNOS_HOME PATH LD_LIBRARY_PATH JAVA_HOME LANG

cd $COGNOS_HOME/bin64
./cogconfig.sh -s
```

---------- script end ----------

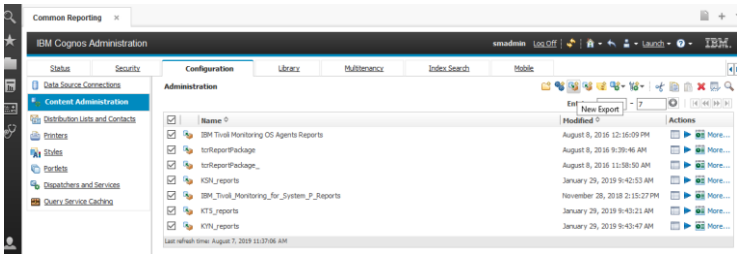
2) Start Cognos now with ./**cogstart.sh**
   Stop Cognos with **./cogconfig.sh -stop**

When you want to start Cognos normal, use "**./cogconfig.sh -s**", but this will not load the DB2 driver!

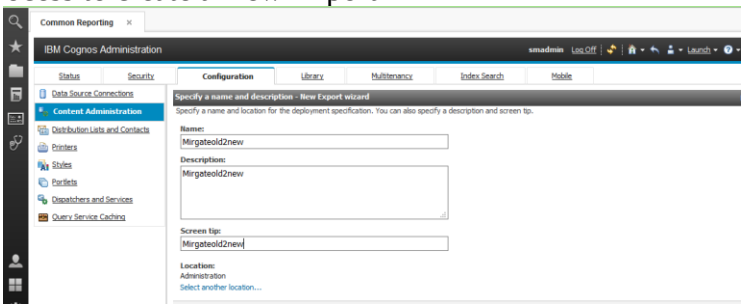
Backup old ContentStore and Restore into Cognos v11

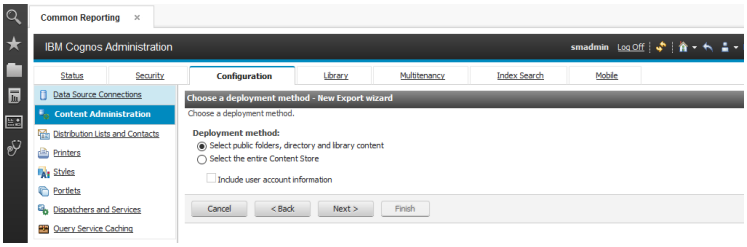
Backup Tivoli Common Reporting 3.1.* Content Store

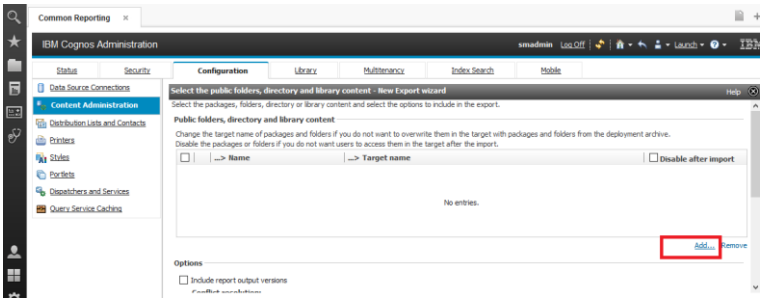
In the DASH open the Cognos Administration, and run a “New Export” from the Configuration tab -> Content Administration

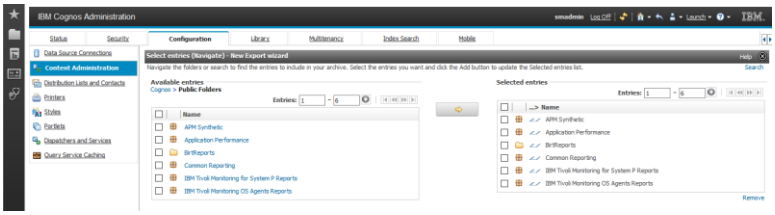


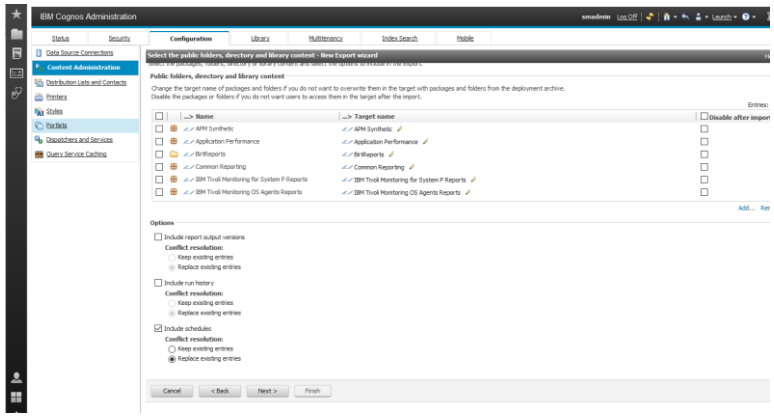
Now follow the process to create a New Export

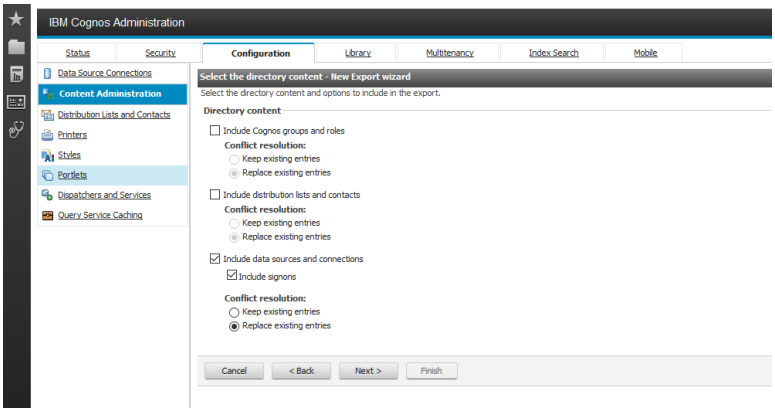


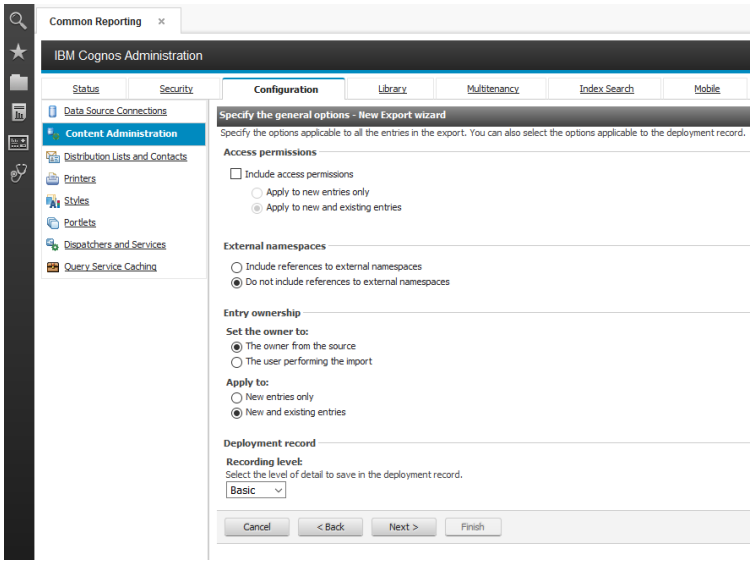


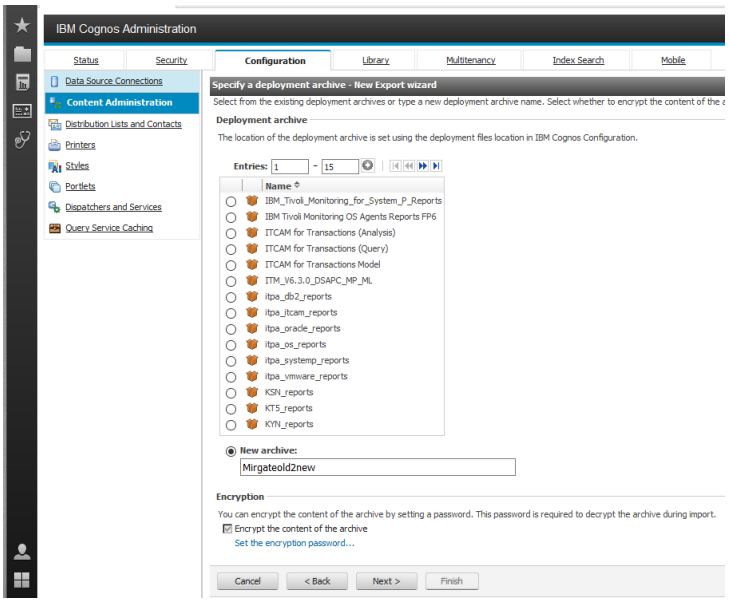


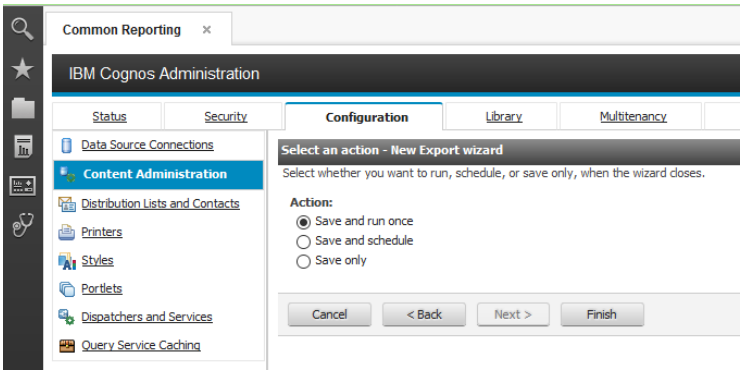

IBM Cognos Administration
Status
Security
Configuration
Library
Multitenancy
Index Search
Mobile
Data Source Connections
Content Administration
Distribution Lists and Contacts
Printers
Styles
Portlets
Dispatchers and Services
Query Service Caching
Select entries (Navigate) - New Export wizard
Available entries
Selected entries
Name
APM Synthetic
Application Performance
BirtReports
Common Reporting
IBM Tivoli Monitoring for System P Reports
IBM Tivoli Monitoring OS Agents Reports

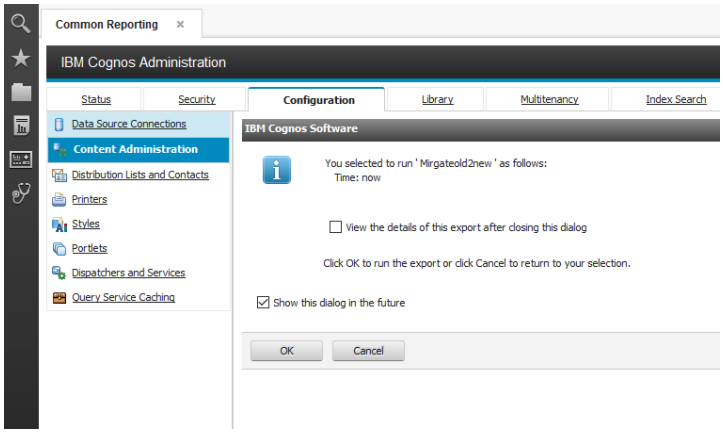

IBM Cognos Administration
Status
Security
Configuration
Library
Multitenancy
Index Search
Mobile
Data Source Connections
Content Administration
Distribution Lists and Contacts
Printers
Styles
Portlets
Dispatchers and Services
Query Service Caching
Select the public folders, directory and library content - New Export wizard
Public folders, directory and library content
Name
Target name
Disable after import
Options
Include report output versions
Conflict resolution:
Keep existing entries
Replace existing entries
Include run history
Include schedules
Cancel
< Back
Next >
Finish


IBM Cognos Administration
Status
Security
Configuration
Library
Multitenancy
Index Search
Mobile
Data Source Connections
Content Administration
Distribution Lists and Contacts
Printers
Styles
Portlets
Dispatchers and Services
Query Service Caching
Select the directory content - New Export wizard
Select the directory content and options to include in the export.
Directory content
Include Cognos groups and roles
Conflict resolution:
Keep existing entries
Replace existing entries
Include distribution lists and contacts
Include data sources and connections
Include signons
Cancel
< Back
Next >
Finish


Common Reporting
IBM Cognos Administration
Status
Security
Configuration
Library
Multitenancy
Index Search
Mobile
Data Source Connections
Content Administration
Distribution Lists and Contacts
Printers
Styles
Portlets
Dispatchers and Services
Query Service Caching
Specify the general options - New Export wizard
Specify the options applicable to all the entries in the export. You can also select the options applicable to the deployment record.
Access permissions
Include access permissions
Apply to new entries only
Apply to new and existing entries
External namespaces
Include references to external namespaces
Do not include references to external namespaces
Entry ownership
Set the owner to:
The owner from the source
The user performing the import
Apply to:
New entries only
New and existing entries
Deployment record
Recording level:
Select the level of detail to save in the deployment record.
Basic
Cancel
< Back
Next >
Finish







The Export of the ContentStore is stored on the TCR System under:
/opt/IBM/JazzSM/reporting/cognos/deployment

```
[root@JazzSMJ cognos]# cd deployment/
[root@JazzSMJ deployment]# ll
total 778024
-rw-rwxr-- 1 root root   3526563 Feb 21  2013 IBM_Tivoli_Monitoring_for_System_P_Reports.zip
-rw-rwxr-- 1 root root  10003975 Dec  1  2015 IBM Tivoli Monitoring OS Agents Reports FP6.zip
-rw-rwxr-- 1 root root    904226 Jul 20  2016 ITCAM for Transactions (Analysis).zip
-rw-rwxr-- 1 root root   1012339 Jul 16  2015 ITCAM for Transactions Model.zip
-rw-rwxr-- 1 root root   1073566 Jul 16  2015 ITCAM for Transactions (Query).zip
-rwxrwxr-- 1 root root 709903885 Jan 29  2019 ITM_V6.3.0_DSAPC_MP_ML.zip
-rw-rwxr-- 1 root root    366408 Aug 13  2013 itpa_db2_reports.zip
-rw-rwxr-- 1 root root    346341 Aug 13  2013 itpa_itcam_reports.zip
-rw-rwxr-- 1 root root    402886 Aug 13  2013 itpa_oracle_reports.zip
-rw-rwxr-- 1 root root    517000 Aug 13  2013 itpa_os_reports.zip
-rw-rwxr-- 1 root root    404175 Aug 13  2013 itpa_systemp_reports.zip
-rw-rwxr-- 1 root root    328314 Aug 13  2013 itpa_vmware_reports.zip
-rwxrwxr-- 1 root root    177074 Jan 29  2019 KSN_reports.zip
-rwxrwxr-- 1 root root    176651 Jan 29  2019 KT5_reports.zip
-rwxrwxr-- 1 root root   4379899 Jan 29  2019 KYN_reports.zip
-rw-r--r-- 1 root root  62549397 Aug  7 11:49 Mirgateold2new.zip
-rw-rwxr-- 1 root root    353206 Mar  7  2013 tbsm61-reports.zip
-rw-rwxr-- 1 root root    183219 Mar  7  2013 TBSM_History_Agent.zip
-rw-rwxr-- 1 root root     42415 Nov 24  2018 tcrReportPackage.zip
[root@JazzSMJ deployment]#
```

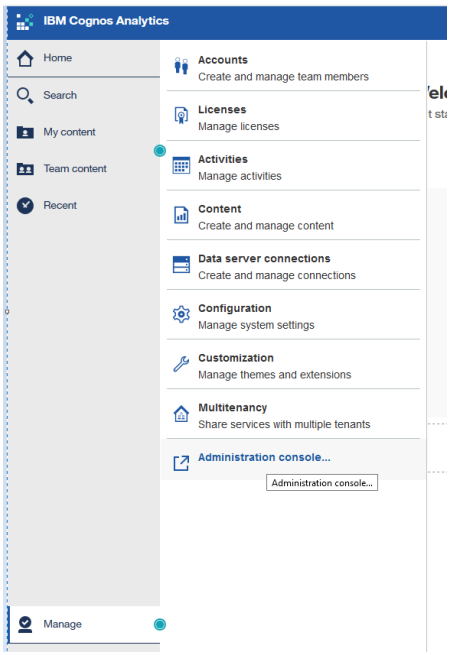
Restore the ContentStore into Cognos V11

1) copy the “old” ContentStore export to the new Cognos V11 system and save it under the Cognos v11 deployment folder:

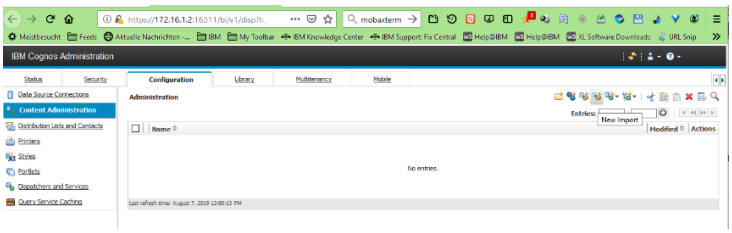
[root@cognosv11 deployment]# **cp /mnt/Jens/Cognos/Mirgateold2new.zip /opt/ibm/cognos/analytics/deployment**

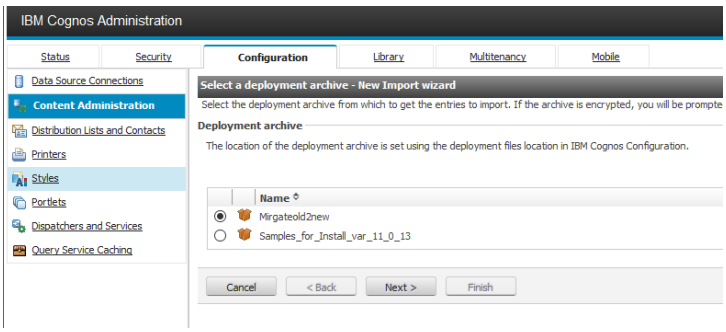
```
[root@cognosv11 deployment]# cp /mnt/Jens/Cognos/Mirgateold2new.zip  /opt/ibm/cognos/analytics/deployment
[root@cognosv11 deployment]# ll
total 125204
-rw-r--r-- 1 root root 62549397 Aug  7 11:58 Mirgateold2new.zip
-rw-rw-r-- 1 root root 65658253 Sep 21  2018 Samples_for_Install_var_11_0_13.zip
[root@cognosv11 deployment]#
```

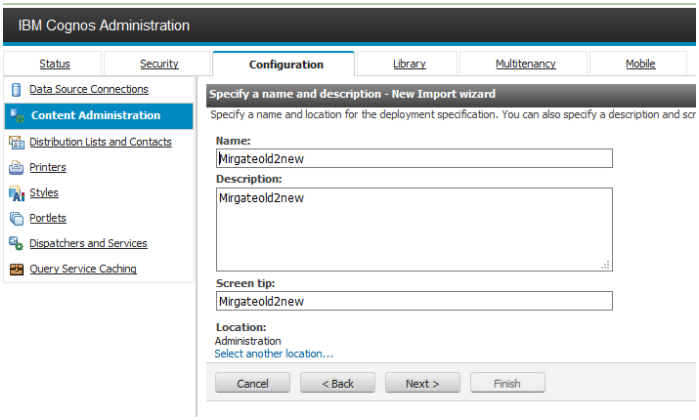
2) access your Cognos BI using the Webbrowser URL and open the Cognos Administration under Cognos V11



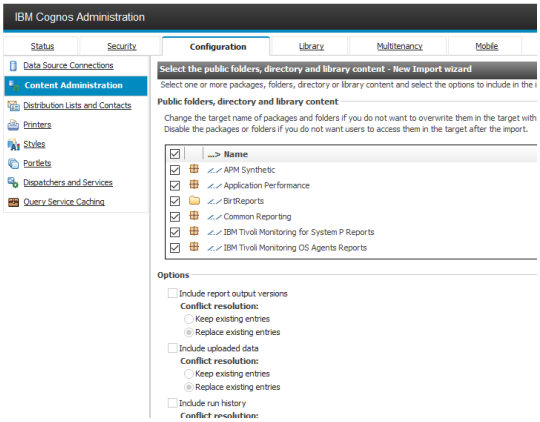
The Cognos Administration V11 looks like Cognos V10, so run from the Cognos Administration, a “New Import” from the Configuration tab -> Content Administration, and select your ContentStore from your exported package

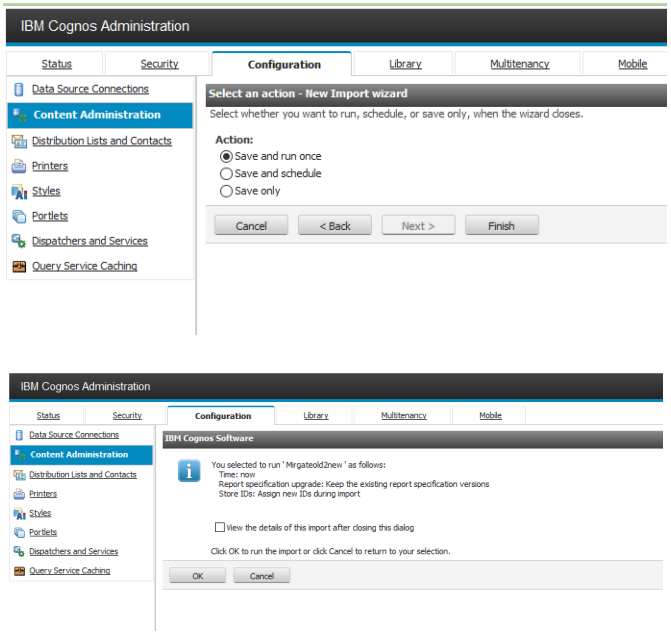






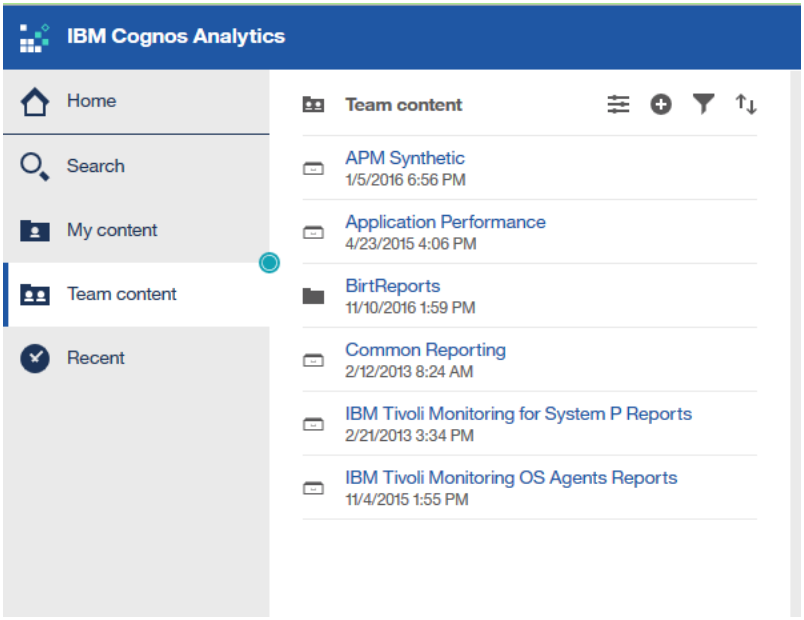
3) Select what you want to Import





The Import has now finished. Depending on your import selection you should see the "old" reports and Datasource settings. Please verify if the Datasource connection is successful. You can test the Datasource connection like under TCR v3.1.*

4) open your Cognos BI console from the Webbrowser. The Team Content should now list all your reports from the previous Tivoli Common Reporting v3.1.*



Questions and Answers

Q1) ***I have problems to install Cognos V11 or run into trouble with Cognos V11. Who can help me?***
A1) Please open an IBM Saleforce case and report a Cognos issue. The IBM Cognos support will help.

Q2) ***Can I use my old ContentStore from TCR 3.1.*?***
A2) I tried to use my old Cognos V10 ContentStore and ran into trouble. So my recommendation is to setup a new ContentStore for Cognos V11.
The advantage of this, you can use and run your reports on both environments, TCR v3.1.* and Cognos V11. After a test phase, you can shut down the old environment.

Q3) ***During the migration can I also migrate my ContentStore Database from DB2 to Oracle?***
A3) The technote How to migrate a Cognos ContentStore Database to Oracle describes the scenario under Tivoli Common Reporting V3.1.* and should work for Cognos V11, too. Please have a look at the supported ContentStore databases under Cognos V11.

About supported databases please have a look:
Cognos 11 Supported Software Environments

Q4) ***Can I install / upgrade my running Tivoli Common Reporting V3.1.* with the new Cognos V11?***
A4) No, you can not. Cognos V11 is a standalone application and does not use Jazz for Service Management.

Q5***) If you tested on Cognos V11.0.13, can you use or upgrade to Cognos IBM Cognos Analytics 11.1.5.? Then, will your reports still work?***
A5) On my tests, I updated to IBM Cognos Analytics 11.1.5.0, and my reports are still working

Q6) ***With Cognos V11 is there a Cognos Frameworkmanager available?***
A6) Yes there is, contact the IBM Cognos Team about support. can you provide a link to Cognos Frameworkmanager?

Q7) ***Can I install in the same folder as a 10.2.2 (or earlier) version of Cognos BI?***
A7) No. You must install IBM Cognos Analytics in a separate folder which does not contain a prior version of Cognos 10 Business Intelligence.
You can, however install over top of an 11.0.x Cognos Analytics installation.

Limitations

Note: TCR features which wont work on Cognos V11.x:
1. Single sign on from “Dashboard Application Services Hub” (DASH) to Cognos V11.x
2. Command line interface commands
3. Birt reports

References

Downloading IBM Cognos Analytics 11.0.3.0
https://www.ibm.com/support/pages/downloading-ibm-cognos-analytics-11030

Downloading IBM Cognos Analytics 11.1.5.0
https://www.ibm.com/support/pages/downloading-ibm-cognos-analytics-11150

Cognos Analytics on the IBM KnowledgeCenter
https://www.ibm.com/support/knowledgecenter/SSEP7J

IBM Cognos Analytics 11.0.0 Supported Software Environments
https://www.ibm.com/support/pages/ibm-cognos-analytics-1100-supported-software-environments

IBM® Db2 Version 11.1 Knowledge Center
https://www.ibm.com/support/knowledgecenter/SSEPGG_11.1.0/com.ibm.db2.luw.welcome.doc/doc/welcome.html