



# **Simplify Your SAP BusinessObjects Upgrade Migration Execution**

# Today's Session

## *Key Topics*

- **Introductions**
- **BI Upgrade Stages**
- **Upgrade Execution**
  - **Moving Content**
  - **Simplify & Optimize**
  - **Secure & Protect**
  - **Test Plan**
- **Q&A** – see webinar console



## Today's Presenters



**JAY MURDOCH**

*Business Development Manager*  
APOS



**FRED WALTHER**

*Senior Solution Consultant*  
APOS

## Who is APOS?

- Formed in 1992
- Enabling BI platform management, administration, migration, governance and compliance
- Simplifying, automating, extending SAP BusinessObjects and SAP Analytics Cloud
- Strategic SDK development and consulting
- Hundreds of customers globally



# APOS



**SAP  
BusinessObjects**



**Hybrid BI**



**SAP  
Analytics Cloud**



## HOUSEKEEPING



You will have access to the **slides** via email



You will get the **recording** within 24 hours



Tell us how we did in the **survey**

# APOS Upgrade BI S<sup>3</sup>



- **Upgrade Smart**

- Build deep system knowledge

- **Upgrade Strong**

- Automate bulk administrative operation
- Implement a strong system content management strategy

- **Upgrade Safe**

- Mitigate risk
- Optimize security
- Validate content



# APOS Solutions for SAP BusinessObjects



## APOS Insight

### BI System Auditing

- System Inventory
- Security Analysis
- System Usage Analysis
- Report Impact Analysis

### BI Report Testing

- Automated Report Testing
- Regression Testing
- Validation of Report Data
- Report Performance Testing

### BI System Monitoring

- Advanced System Monitoring
- Operating Environment Monitoring
- Database Monitoring
- Process Monitoring

### BI Query Surveillance

- Real-time BI Query Monitoring
- Query Performance Alerting & Auditing
- Query Intervention; Remote Cancelling
- Sensitive Data Audit



## APOS Administrator

### Object Management

- Bulk Security Management
- Bulk Settings Management
- System Objects Promotion
- Connections Maintenance

### Schedule Management

- High-volume schedule management
- Multiple schedule properties editing
- Grid scheduling interface
- Repeatable scheduling templates

### Instance Management

- Manage entire instance inventory
- Granular instance search
- Stop, pause, release, reschedule
- Rapid recovery to failed schedules

### Web Intelligence Migration

- Bulk conversion of Universes from UNV to UNX
- High-Volume Repoint Web Intelligence reports
- Success validation
- Controlled, project-based workflow

## APOS Storage Center



- System Backup
- Content Archiving
- Content Versioning
- Selective Restoration
- Automated System Clean Up

## APOS Publisher

- Systematic Content Delivery
- Advanced Document Bursting
- Enhanced Content Distribution
- Security and Encryption
- Statement Generation



# APOS Upgrade Stages



## SAP BusinessObjects Upgrade - Three Stage Timeline



# APOS Upgrade Stages



## SAP BusinessObjects Upgrade - Three Stage Timeline





**Fred Walther**  
*Senior Solution Consultant*  
APOS

# Recap





## Upgrade Smart, Strong & Safe - Preparation

- **System Audit** – Leave existing problems behind; don't propagate them in the new system
- **System Backup** – Protect your assets; governance, operations & legal obligations
- **System Optimization** – Take the opportunity to build a lean, effective & efficient system
- **Test Plan** - Review and compare benchmarked information with Migrated System



## Upgrade Smart, Strong & Safe - Preparation

- **System Audit** – Leave existing problems behind; don't propagate them in the new system
- **System Backup** – Protect your assets; governance, operations & legal obligations
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- **Test Plan** - Review and compare benchmarked information with Migrated System

# APOS Upgrade Stages



## SAP BusinessObjects Upgrade - Three Stage Timeline





# Upgrade Smart, Strong & Safe - Execution

- **Moving Content**– Options for moving
- **Simplify & Optimize** – consolidate/rationalize
- **Secure & Protect** – work in bulk to implement your security plan
- **Test Plan** – Create Validation Projects

# APOS Solutions for SAP BusinessObjects



**APOS Insight**

**APOS Administrator**



**APOS Storage Center**





# Move Content

- **Moving content - a few choices**
  - Life Cycle Management (LCM)
  - Upgrade Management Tool (UMT)
  - Promotion Management Wizard
  - APOS Storage Center



# Move Content



- **Life Cycle Management (LCM)**
  - CMC based
  - Limited number of Objects
- **Upgrade Management Tool (UMT)**
  - Only for migration from pre BI 4.x systems
  - Unable to select particular versions of objects
- **Promotion Management Wizard**
  - Full Client UI available in 4.2 SP5+
  - Unable to select particular versions of objects

The screenshot displays the Central Management Console interface. At the top, there is a 'Promotion Management' dropdown menu. Below it, the 'Promotion Jobs' section is visible, featuring a toolbar with options like 'Organize', 'Properties', 'History', 'Settings', and 'Override Settings'. A table lists promotion jobs, with one entry for 'APOS IDAC Reports and Universe' showing a 'Success' status and a creation time of 'Nov 26, 2019 11:43 AM'. Overlaid on this are two windows: the 'Upgrade Management Tool' and the 'Promotion Management Wizard'. The UMT window prompts the user to specify a complete or incremental upgrade and offers a language selection dropdown set to 'English'. The Promotion Management Wizard window shows a 'Scenario Step' with a breadcrumb trail: 'Welcome > Scenario > Objects > Dependencies > Summary > Finish'. It lists three scenarios: 'Export (Live CMS to lcbiar file)', 'Promote (Live CMS to Live CMS)', and 'Import (lcbiar file to Live CMS)', each with a brief description of the process.

# Move Content



## APOS Storage Center

- Powerful full client
- Select any version of Objects
- Historical Instances can be handled selectively
- Recurring Schedules can be handled selectively



# Move Content – APOS Storage Center – Promoting



The screenshot displays the BusinessObjects Enterprise interface. The main window shows a tree view of folders under 'BI42SP6FW'. Overlaid on this are two dialog boxes:

- Promotion Settings:** A dialog box titled 'Promotion Settings' with the question 'Where would you like to promote to?'. It features a 'Promote to CMS:' dropdown menu set to '< New >'. Below this are radio buttons for 'Original Location', 'New Location', and 'Root Level', with 'LCMBIAR' selected. There are also checkboxes for 'Promote Original ID (Crystal not supported)', 'Promote Original CUID', 'Promote Folder Structure', 'Include Sub-Folders', 'Folder Security', 'Include Security', 'Apply Existing Backup Rules', 'Backup to Offline', 'Backup Using Both Methods', and 'Rollback (LCM)'.
- CMS Login:** A dialog box titled 'CMS Login' with the prompt 'Enter a Valid User Name and Password for this System'. It contains fields for 'Logon Using:' (set to 'secEnterprise'), 'User Name:' (set to 'Admiistrator'), 'Password:' (masked with asterisks), and 'CMS:' (set to 'BI42SP6FW').

# Move Content – Report example – copy from backup



The screenshot displays a software interface with a tree view on the left and a main content area on the right. The tree view shows a hierarchy of folders, with 'ValMan Target' selected. The main content area shows a table of 'Object Backups' with columns for Name, Last Modified, Versions, and Last Backup. A context menu is open over the table, showing 'Restore' and 'Restore Schedules' options. A smaller window titled 'Object Backups - Versions' is also visible, showing a detailed view of the backup versions.

Name	Last Modified	Versions	Last Backup
Sales for Selected States	2019-11-12 13:57:01	2	2019-11-12 14:12:20

Name	Date	Last Modified	Submitter	Action
Sales for Selected States	2019-07-19 00:14:35	2019-07-18 15:50:46	Administrator - 12	Restore
Sales for Selected States	2019-11-12 14:12:20	2019-11-12 13:57:01	Administrator - 12	Restore Schedules
Sales for Selected Store	2019-07-19 00:14:47	2019-07-18 15:52:57	Administrator - 12	
Sales for Selected Store	2019-11-12 14:12:31	2019-11-12 13:57:37	Administrator - 12	
Sales for Selected Year	2019-07-18 00:14:29	2019-07-17 11:35:05	Administrator - 12	
Sales for Selected Year	2019-11-12 14:12:09	2019-11-12 13:58:04	Administrator - 12	

Records: 6 | Scan Time: 00:00:00 | 11/12/2019 | 15:28:5

# Move Content – Universe example



The screenshot displays a software interface with three main components:

- Left Panel:** A tree view showing a file structure under 'C:\APOS\_Storage\Appl...'. The 'Universes' folder is expanded, showing sub-items like 'AdventureWorks', 'APOS Insight', 'Fred', 'Xtreme\_Cust', 'Xtreme\_Orde', 'IDAC\_FW', 'Monitoring Trend', 'Report Conversi', 'ReportSource', and 'Samples'.
- Top Window: 'Application Object Backups - Versions'**

Name	Backup Date	Last Modified	Submitter	Archive
Xtreme_Customers	2019-11-08 00:13:13	2019-11-07 15:02:06	Administrator - 12	Archive

Below the table, it shows 'No Source Selected', 'Records: 1', 'Scan Time: 00:00:00', '11/28/2019', and '16:45:35 PM'.
- Bottom Window: 'Restore Object Settings'**

Where would you like to restore to?

Restore to CMS:

Original Location  Restore original ID (Crystal not supported)  Restore original CUID

New Location

Root Level  Restore Folder Structure  Include Sub Folders  Include Folder Security

Restore LCMBIAR  Include Security  Rollback

Universe Options

Restore Connections  Restore Overloads (UNV)

A red arrow points to the 'Restore original CUID' checkbox.

# Move Content – Universe example



The screenshot displays a software interface with three main components:

- File Explorer:** Shows a tree view of folders under 'C:\APOS\_Storage\Appl...'. The 'Universes' folder is expanded, showing sub-folders like 'AdventureWorks', 'APOS Insight', 'Fred', 'Xtreme\_Cust...', 'Xtreme\_Orde...', 'IDAC\_FW', 'Monitoring Trend...', 'Report Conversio...', 'ReportSource', and 'Samples'. A red arrow points to the 'Xtreme\_Cust...' folder.
- Application Object Backups - Versions:** A table with columns: Name, Backup Date, Last Modified, Submitter, and Archive. It contains one row: Xtreme\_Customers, 2019-11-08 00:13:13, 2019-11-07 15:02:06, Administrator - 12, Archive.
- Restore Object Settings:** A dialog box with the following options:
  - Restore to CMS: Current (BI42SP6FW - Administrator)
  - Original Location:  (Selected)
  - New Location:  (with a 'Browse' button)
  - Root Level:
  - Restore LCMBIAR:
  - Restore original ID (Crystal not supported):
  - Restore original CUID:
  - Restore Folder Structure:
  - Include Sub Folders:
  - Include Folder Security:
  - Include Security:
  - Rollback:
  - Universe Options:
    - Restore Connections:
    - Restore Overloads (UNV):

# Move Content - Instances



Trying to push historical instances through the Built-in SAP migration tools can result in a slow migration.

Using Storage Center, you are able to selectively restore instances, even if they were created on a previous version.

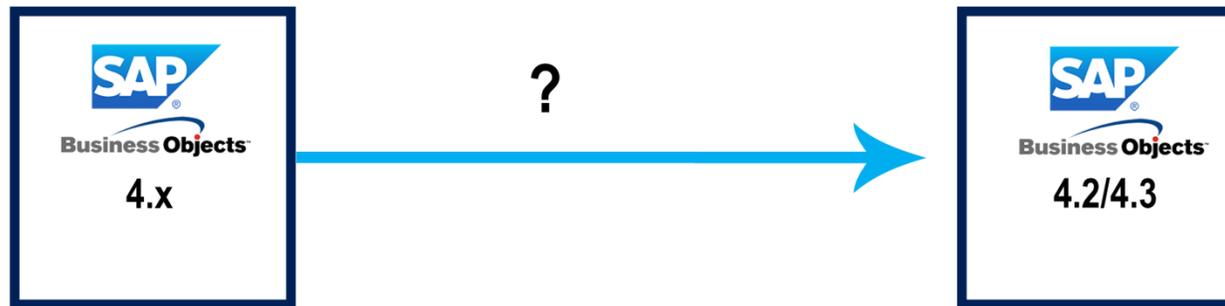
The screenshot displays the SAP Storage Center v. 14.0.0.64 interface. The main window is titled "Instance List - Offline Archive" and shows a table of instance data. The table has columns for Status, Report Name, Instance Type, Exported Type, Last Archived, and Start Year. The data is filtered to show "Offline" instances. The status bar at the bottom indicates "C:\APOS\_Storage\Instances" with 67 records, a scan time of 00:00:00, and a timestamp of 11/28/2019 09:48:03 AM.

Status	Report Name	Instance Type	Exported Type	Last Archived	Start Year
Offline	Orders for California	Report	PDF	2019-11-27 17:12:12	2019
Offline	Xtreme Sales By Country	Report	PDF	2019-11-27 17:12:00	2019
Offline	Sales By Year	Webi	PDF	2019-11-27 17:11:47	2019
Offline	Sales By Year	Excel		2019-11-27 17:11:29	2019
Offline	Show Schedules with Record and Gr...	PDF		2019-11-27 17:11:17	2019
Offline	List Customers by City	Report	PDF	2019-11-27 17:16:38	2019
Offline	List Customers by City	Report	PDF	2019-11-27 17:16:26	2019
Offline	Sales By State	Report	PDF	2019-11-27 17:16:13	2019
Offline	World Sales Report	PDF		2019-11-27 17:07:01	2019
Offline	Drilldown	Report	PDF	2019-11-27 17:06:48	2019
Offline	Sales for Selected States	Webi	PDF	2019-11-27 17:13:58	2019

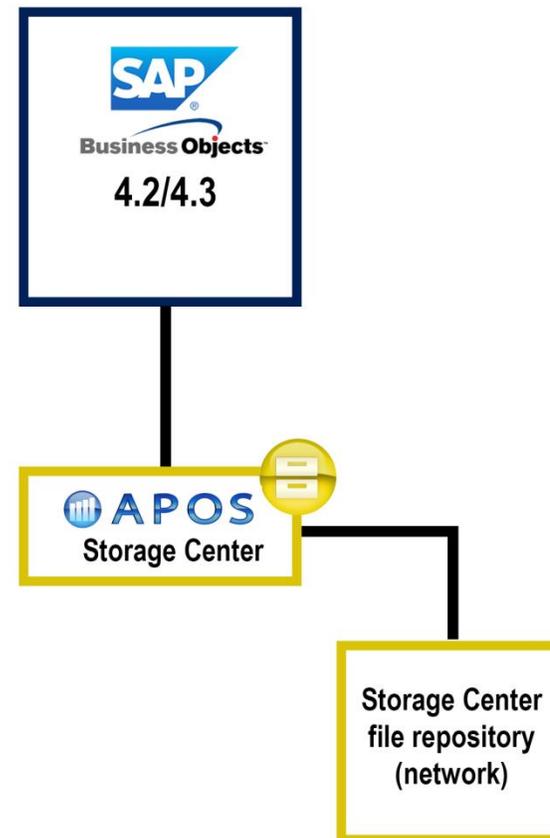
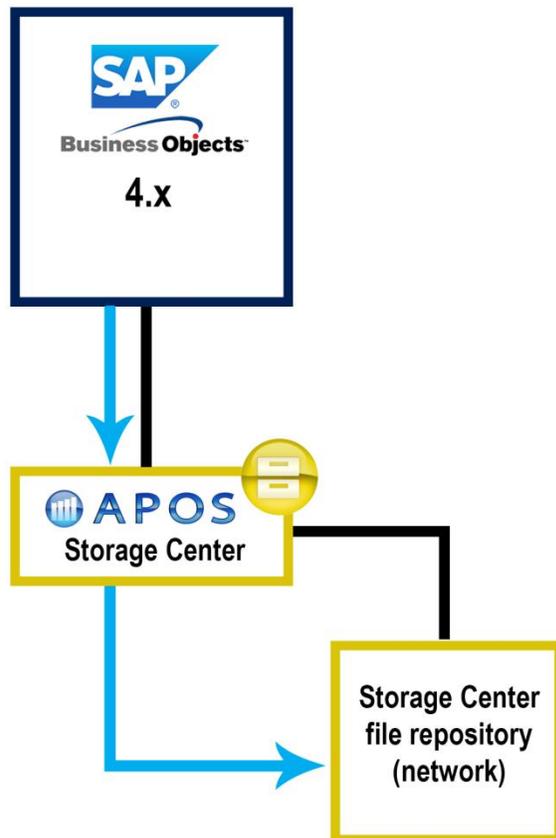
# Storage Center - Architecture



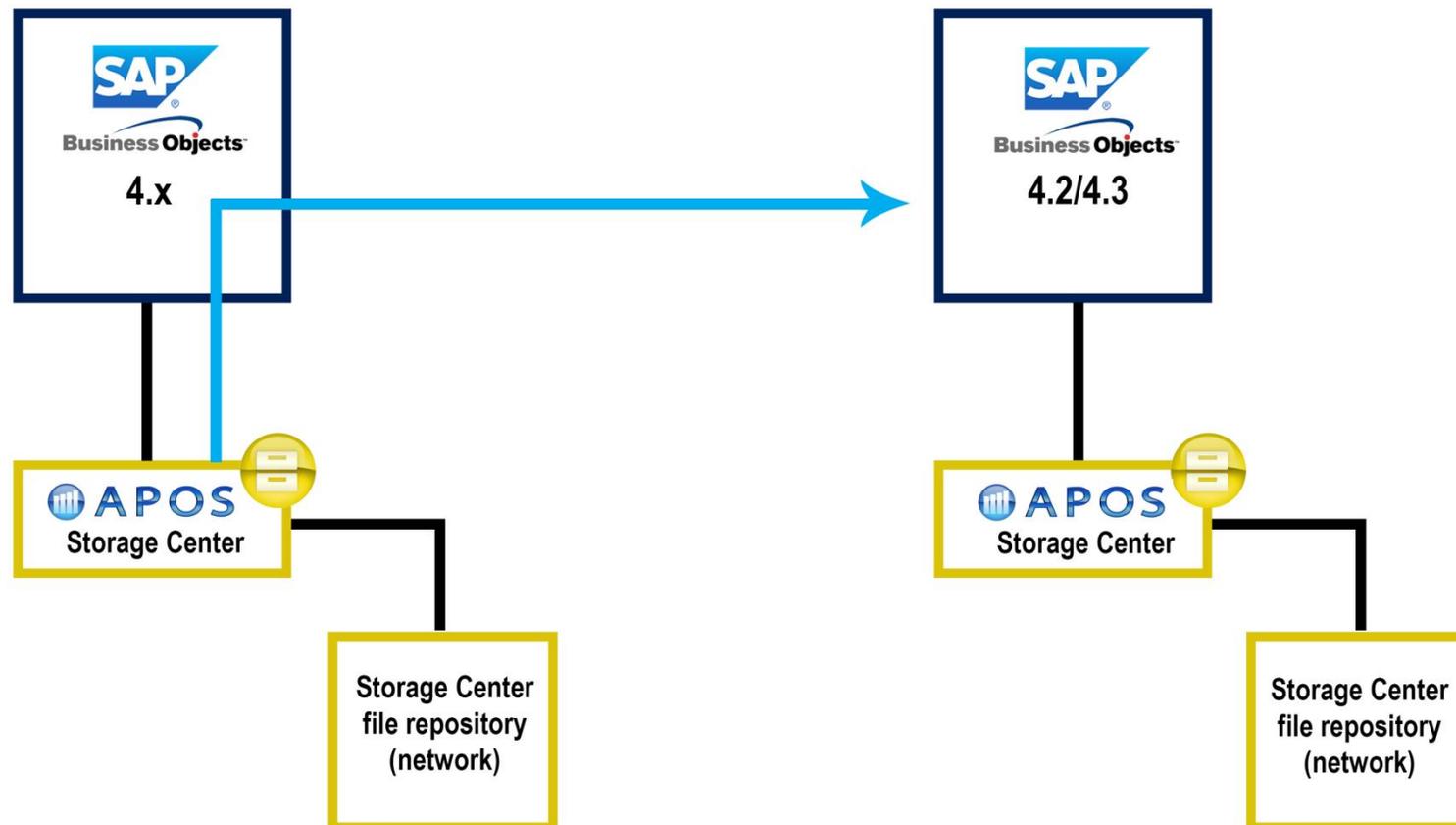
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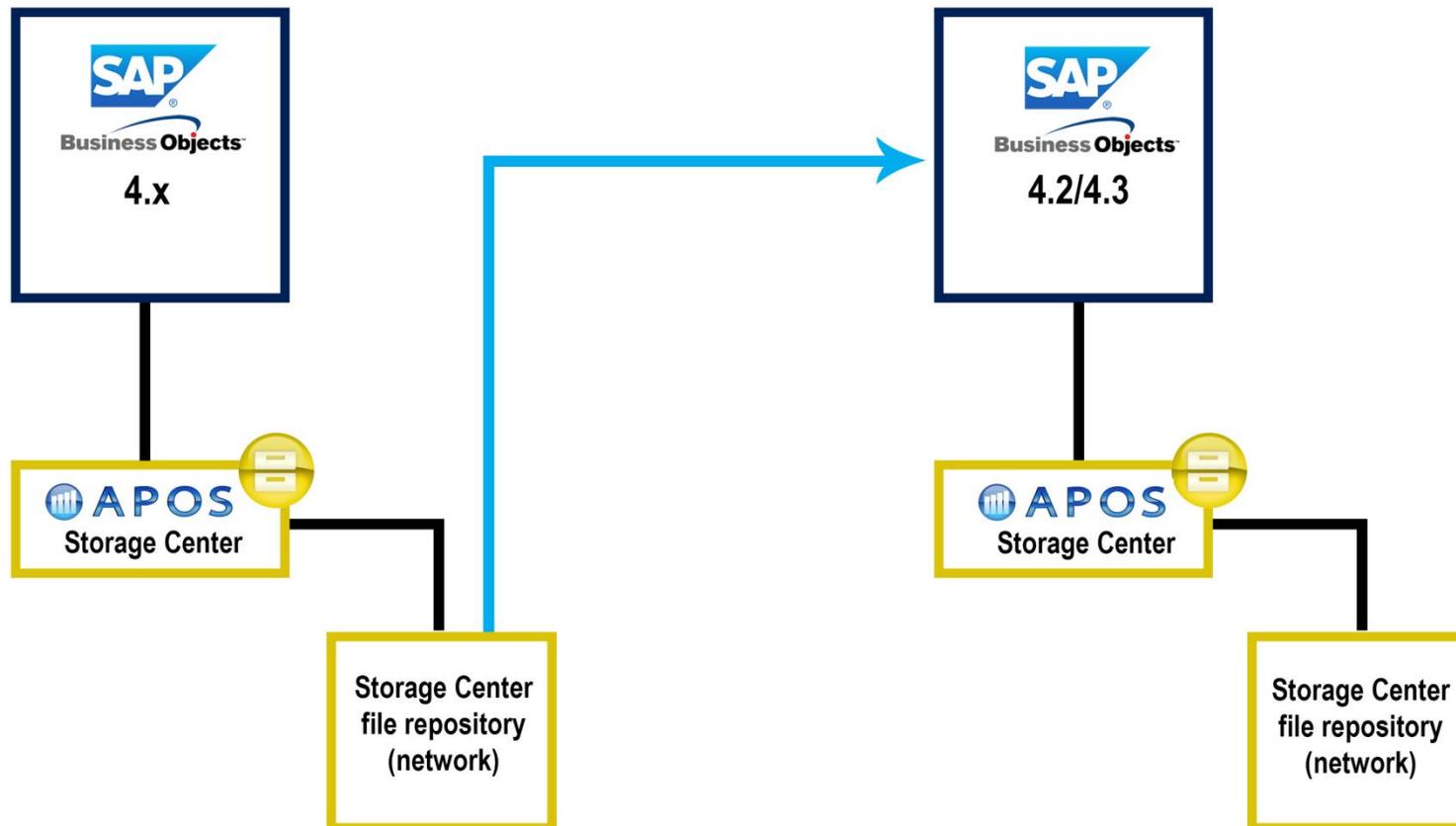
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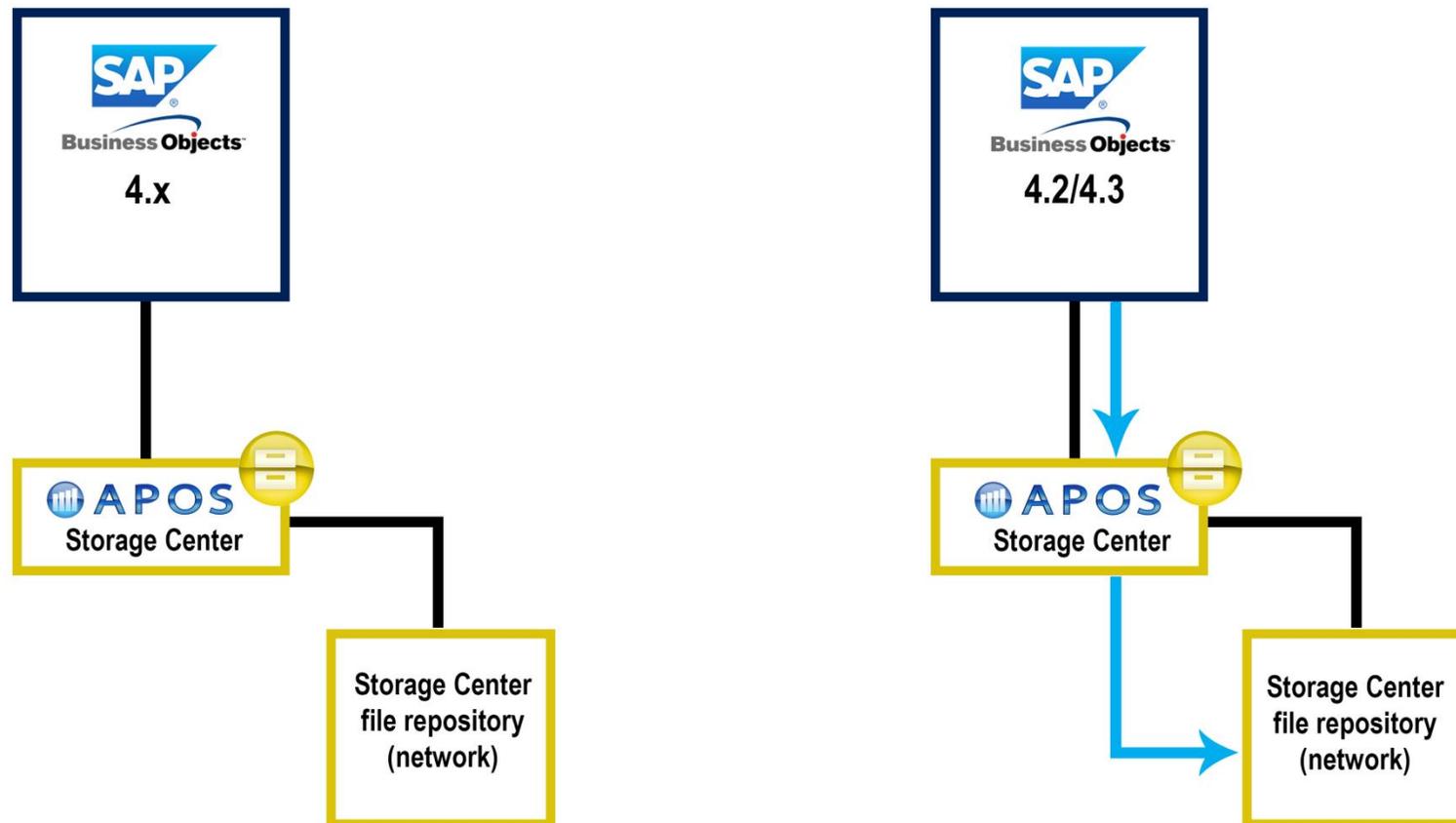
# Storage Center - Architecture



# Storage Center - Architecture



# Storage Center - Architecture



# Simplify/Optimize



## Using the information gathered in the Planning phase

- Exclude unused reports from the migration
  - Also, set rules to auto delete objects after a defined period of non-use
- Combine similar reports into one
- Simplify universe classes to contain only objects that are used
- Adjust your BI licensing model to reflect actual usage
  - Consider shifting some licenses to SAP Analytics Cloud



APOS Insight  
Unused Objects in Date Range

Unused Reports from: 1/1/2019 12:00:00 AM to 11/5/2019 12:00:00 AM

System Name: BI41SP6FW      Insight User to Ignore: APOS\_Insight\_User

/2016-12-07

Product Sales by Country

Si ID	Owner	Create Date	Last Update Date	Last Activity Date	Latest Activity	Latest Activity User
821305	Fred	12/7/2016	5/1/2017 9:08:42 AM	10/9/2019 7:37:02 PM	View	APOS_Insight_User

Product Sales by Country-Prompted

Si ID	Owner	Create Date	Last Update Date	Last Activity Date	Latest Activity	Latest Activity User
821307	Fred	12/7/2016	12/7/2016 8:54:49 AM	10/9/2019 7:37:05 PM	View	APOS_Insight_User

# Simplify/Optimize

- Look for duplication in your system



**APOS Insight**  
**Webi Impact Analysis**

Searched for Table: All Tables  
Searched for Column: AP\_Name;AP\_OBJECT\_NAME;AP\_ObjectName

Folder: /APOS Insight Reports/Oracle

Report Name	Universe Name	Table Name	Column Name
Audit - Objects Scheduled by U	Insight4 - Oracle	"Audit_Report_Events"	AP_OBJECTNAME
Audit - Reports Refreshed by U	Insight4 - Oracle	"Audit Object Events"	AP_OBJECTNAME
Crystal - Search for Fields Use	Insight4 - Oracle	"Crystal Elements"	AP_NAME

Universe Content - Looking for Duplicates

Filter by Table: All Tables  
Filter by Column: Quantity  
Filter by Universe: All Universes

System Name: BI42SP4FW

Universe Name: Universes/Maintenance Area/FredXtremeVersion2  
Universe ID: 841272      Universe Size: 47665  
Universe Type: UNV      Universe Owner: Administrator

Table Name	Column Name	Data Type
FredsView	Quantity	Numeric
Inventory	Quantity	Numeric
InventoryTransaction	Quantity	Numeric
OrdersDetail	Quantity	Numeric
PurchaseDetail	Quantity	Numeric
SalesReturnDetail	Quantity	Numeric

## Multiple Copies of a Report Name in System

### Audit - Objects Scheduled by User

Report Type	Folder Location
Crystal	/APOS Insight Reports/Oracle/
Webi	/APOS Insight Reports/Oracle/
Crystal	/APOS Insight Reports/SQL Server/
Webi	/APOS Insight Reports/SQL Server/
<b>4</b>	<b>Audit - Objects Scheduled by User</b>



# Simplify/Optimize – Convert to UNX Universes

Webi Name	ID	Processed	Committed	Last Status	*Data Type	*Value	*Errors	Last Updated	CUID	Sc
Orders By Country	3058945	<input type="checkbox"/>	<input type="checkbox"/>	Unmodified			0	12/3/2019 2:49:57 PM	AcSn1pK.U...	/V



# Simplify/Optimize – Convert to UNX Universes

Conversion List

Source Universe	Source ID	Source Path	Target Universe	Target ID	Target Path
<input checked="" type="checkbox"/> Xtreme_UNV	3058938	/Fred/Xtreme_UNV	Xtreme_UNV	3058938	/Fred/Xtreme_UNV

Updating Universe On Reports ...

Processing Webi Documents ...

Cancel

Clear Target

Target Universe | Copy Settings | Consolidation & Tolerance | Misc.

Change Universe Project - Copy Location

Target Web Intelligence Location:  [Add to Location](#)

Target Web Intelligence Name:  [Add to Name](#)

Webi Migration Log

Webi Migration Details

Successfully copied Webi - Source ID: 3058945 - New ID: 3058976  
- Source Path: /Webi Migrator Test/Orders By Country  
- Target Path: /Webi Migrator Test/Convert/Orders By Country

1 Webi Documents Copied

Processing Webi Documents ...

Original Universe: /Fred/Xtreme\_UNV : 3058938  
Target Universe: /Fred/Xtreme\_UNV : 3058938

Update Status:  
- Webi ID: 3058976 - Orders By Country - Success - Duration: 7797

Total Webis Processed: 1  
Successful: 1  
Failed: 0  
Skipped: 0



## Secure Content

- **Set Folder Security by User Group**
  - Avoid setting security at the object level
  - Avoid setting security for individual users
  - Configure security using Custom Access Levels to ensure consistency and re-usability
- **Employ a Content Backup/Restore Strategy**
  - Back up only objects that have changed since last backup i.e. incremental
  - Back up selected content on a customized schedule that matches system needs
  - Back up recurring schedules
  - Back up security settings on content
  - Disaster Recovery is simplified





## Secure Content – Folder Security

- Use Custom Access Levels to better manage security.

Central Management Console

Access Levels

Manage Actions Org

Hide Navigation

Properties  
User Security  
Included Rights

Add or Remove Rights

Common Filter Settings:  
Assigned Rights

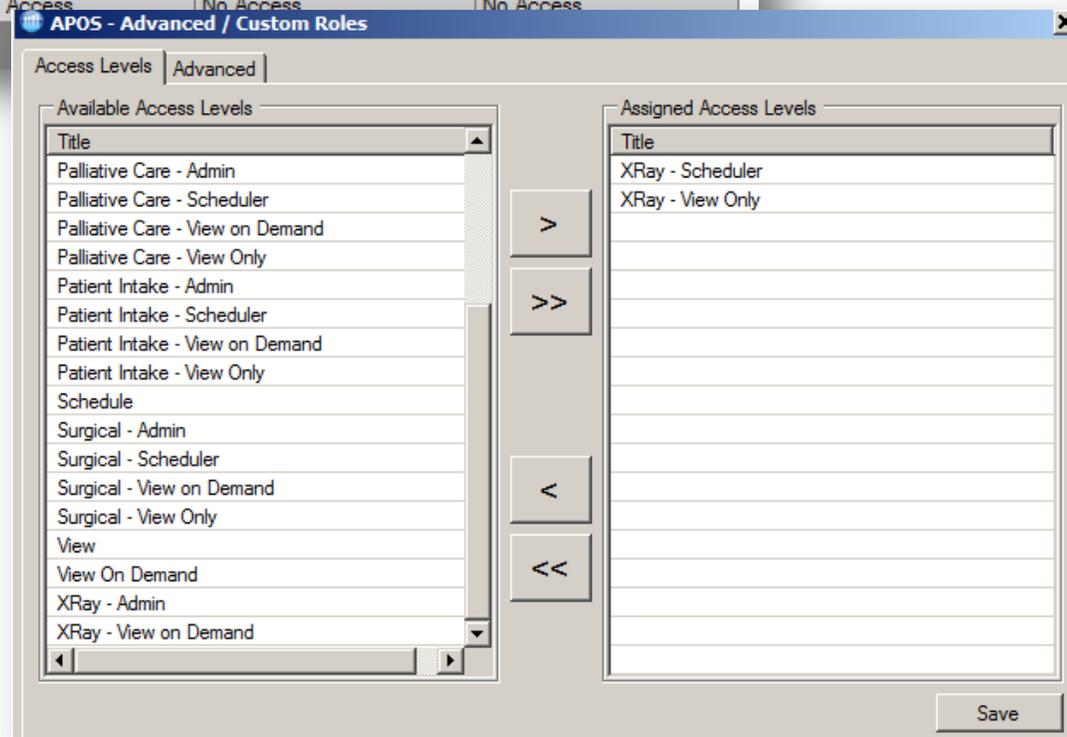
Collection	Type	Right Name
General	General	Copy objects that the user owns to another f
General	General	Copy objects to another folder
General	General	Define server groups to process jobs
General	General	Delete instances
General	General	Download files associated with the object
General	General	Pause and Resume document instances
General	General	Reschedule instances
General	General	Schedule document to run
General	General	Schedule on behalf of other users
General	General	Schedule to destinations
General	General	Schedule to File System



# Secure Content – Folder Security

File	Edit	Action						
			G - Critical Care - Sched	G - Critical Care - View	G - Imaging - Sched	G - Imaging - View	G - Palliative Care - Sched	G - Palliative Care - View
/Hospital X/Critical Care - Folder			Critical Care - Scheduler...	Critical Care - View Onl...	No Access	No Access	No Access	No Access
/Hospital X/Imaging - Folder			No Access	No Access	XRay - Scheduler, View	XRay - View Only	No Access	No Access
/Hospital X/Palliative Care - Folder			No Access	No Access	No Access	No Access	View, Palliative Care - Sche...	Palliative Care - View Onl...
/Hospital X/Patient Intake - Folder			No Access	No Access	No Access	No Access	No Access	No Access
/Hospital X/Surgical - Folder			No Access	No Access	No Access	No Access	No Access	No Access

- Select Folders and Groups
- Set security at the intersection points in the matrix
- Use built-in or Custom Roles



# Secure Content – Security Analysis



APOS Insight Security by Type					
<b>Feature Samples</b>					
Location: /Report Samples/Feature Samples					
Scan Date: Jan 1, 2000					
	Role	Delete Rights	Edit Rights	Modify Rights	Schedule Rights
Administrator	Full Control	G	G	G	G
Administrators	Full Control	G	G	G	G
APOS Distribution Server	Full Control	G	G	G	G
Bob	Full Control	G	G	G	G
Doug	Schedule	D	G	G	G
Fred1	Full Control	G	G	G	G
<b>Financial</b>					
Location: /Report Samples/Financial					
Scan Date: Jan 1, 2000					
	Role	Delete Rights	Edit Rights	Modify Rights	Schedule Rights
Administrator	Full Control	G	G	G	G
Administrators	Full Control	G	G	G	G



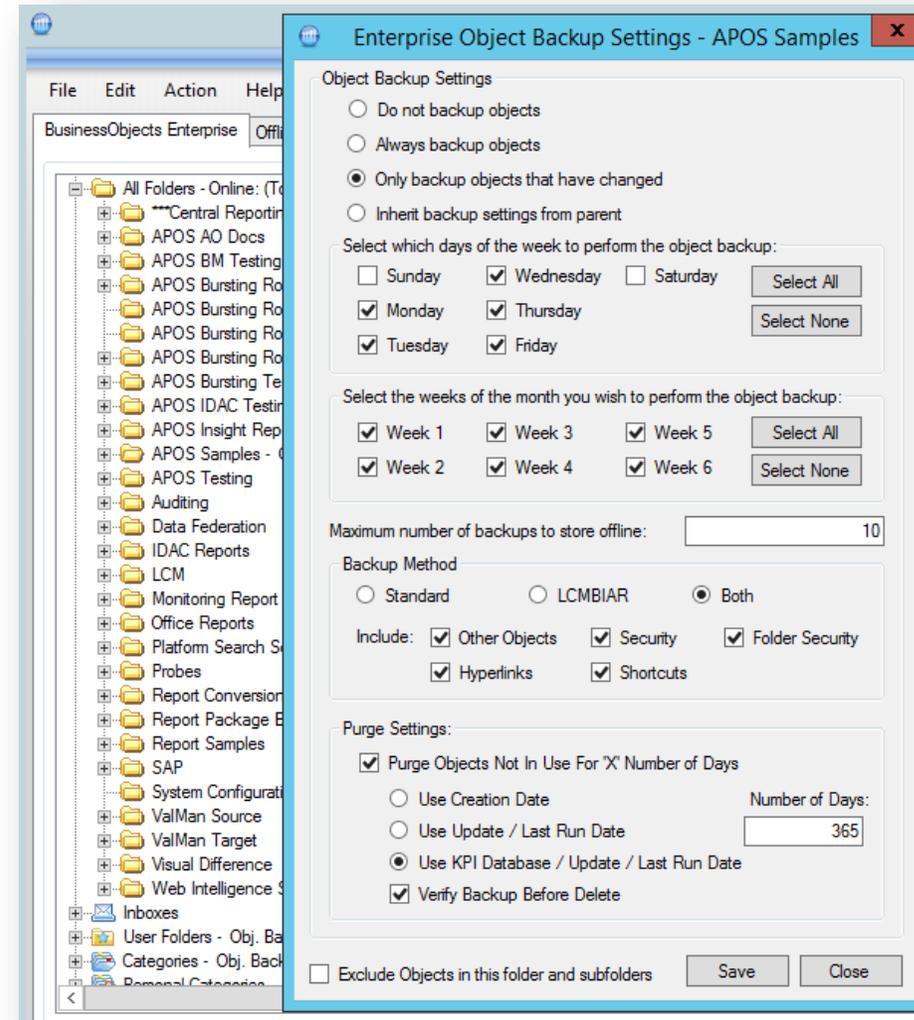
# Secure Content – Backup Strategy

## Create a System Content Management Strategy

Configure the following:

- How backups should occur
- When backups should occur
- How many versions of objects to keep
- Method of backup to use
- Automate purge of unused objects

Allow these capabilities to be set globally, and have the ability to over-ride at any folder for unique needs





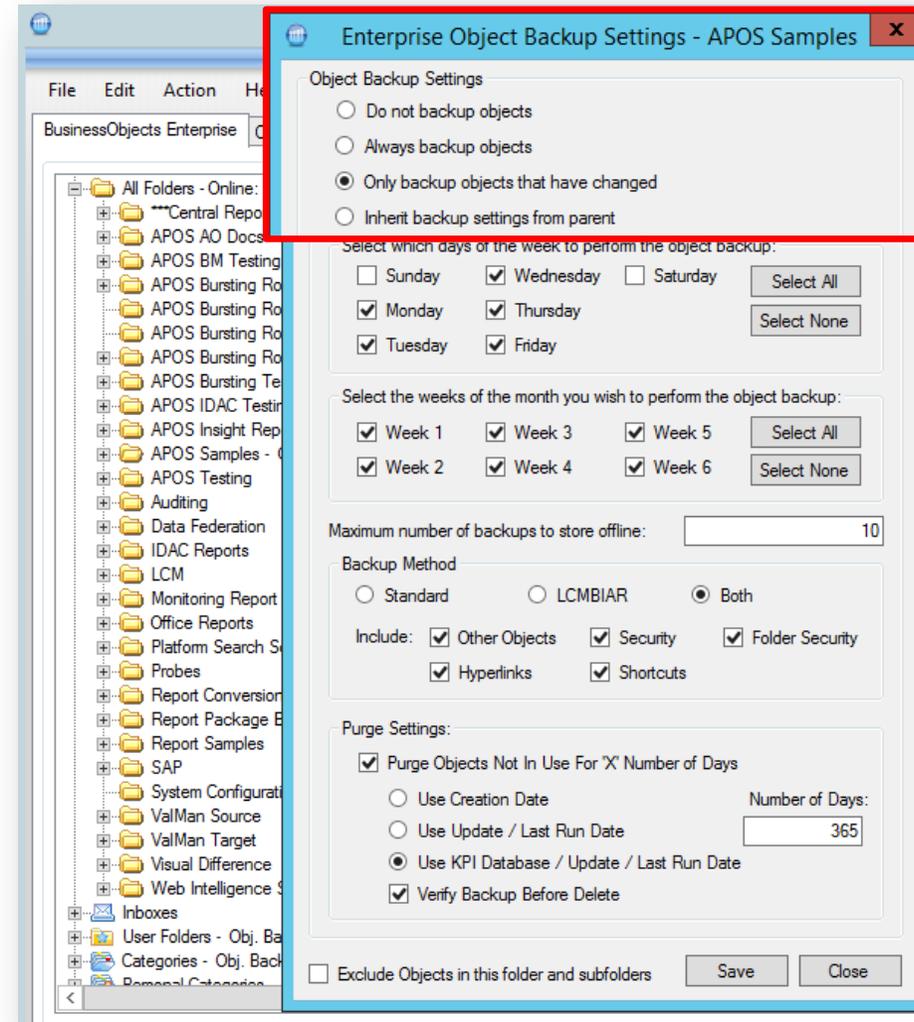
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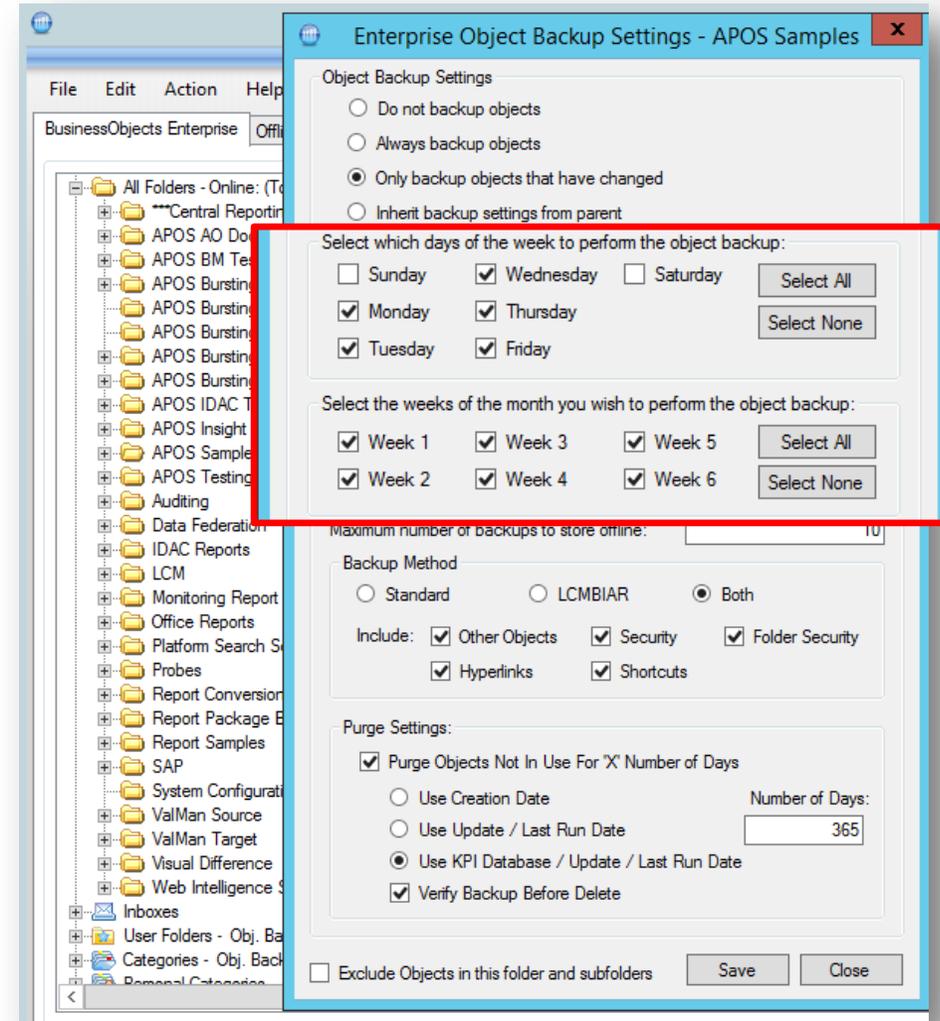
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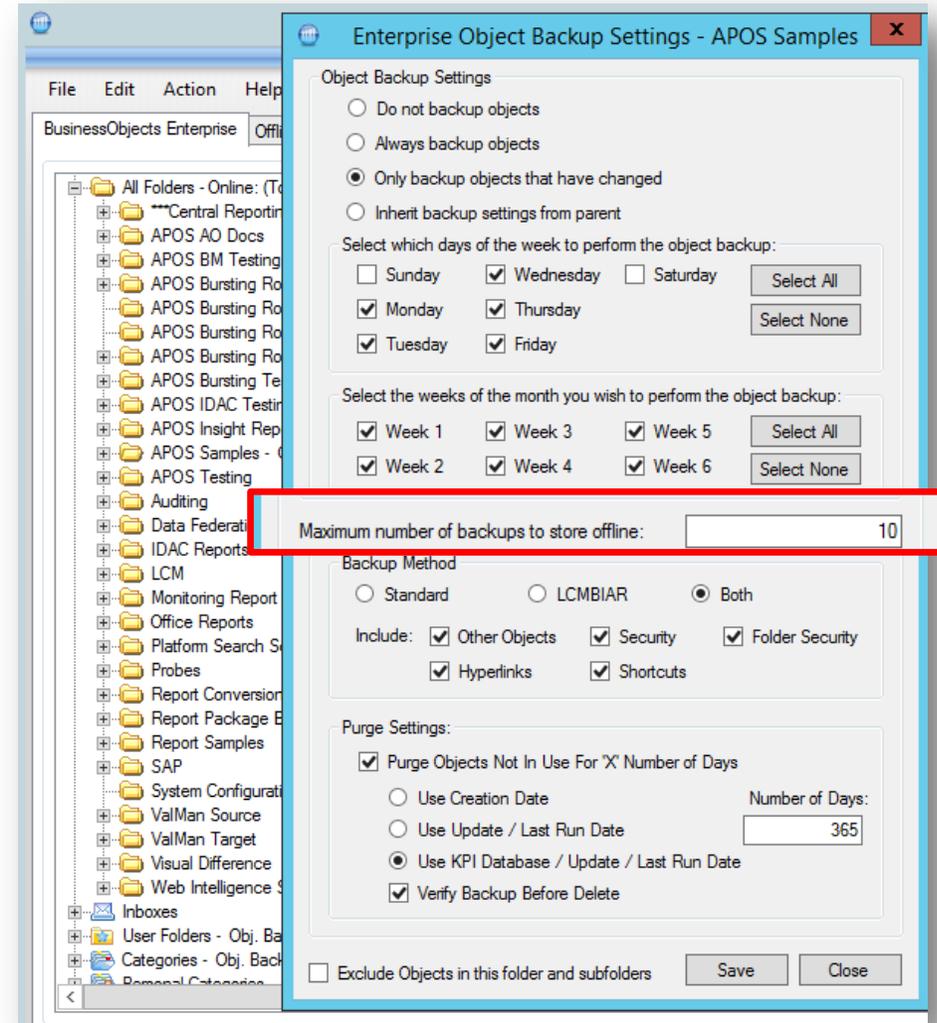
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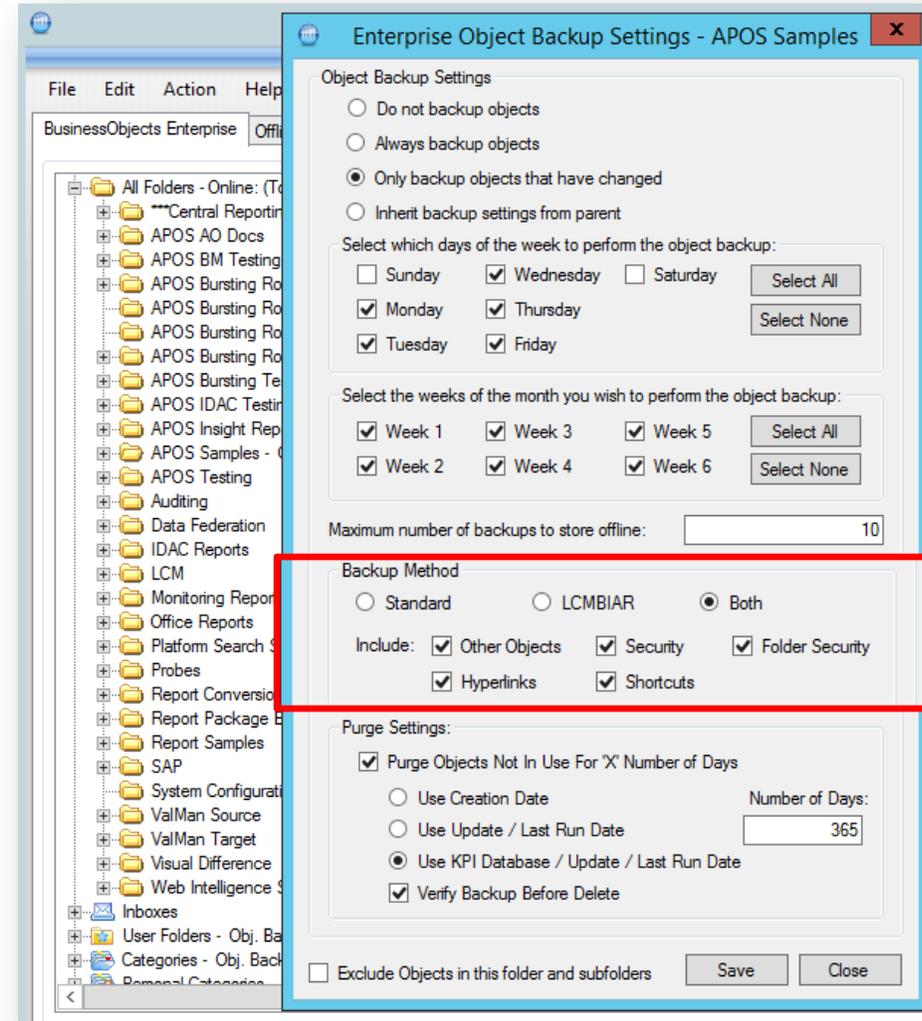
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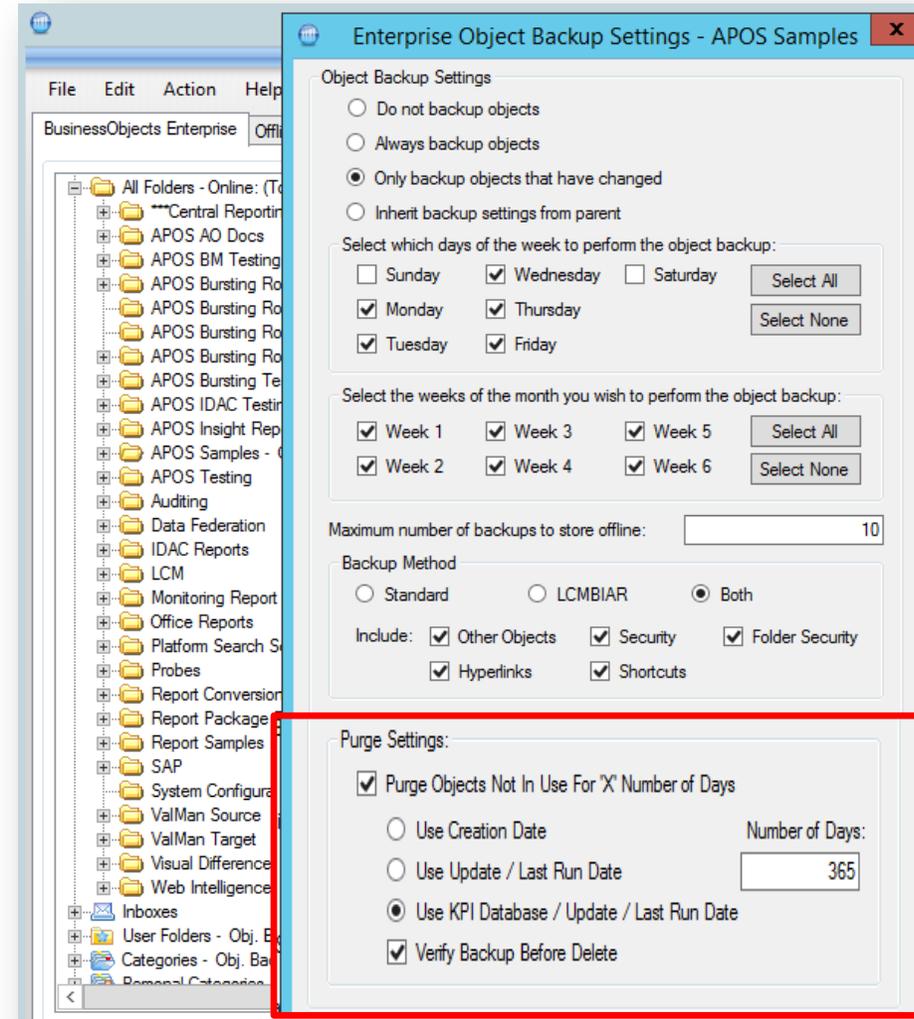
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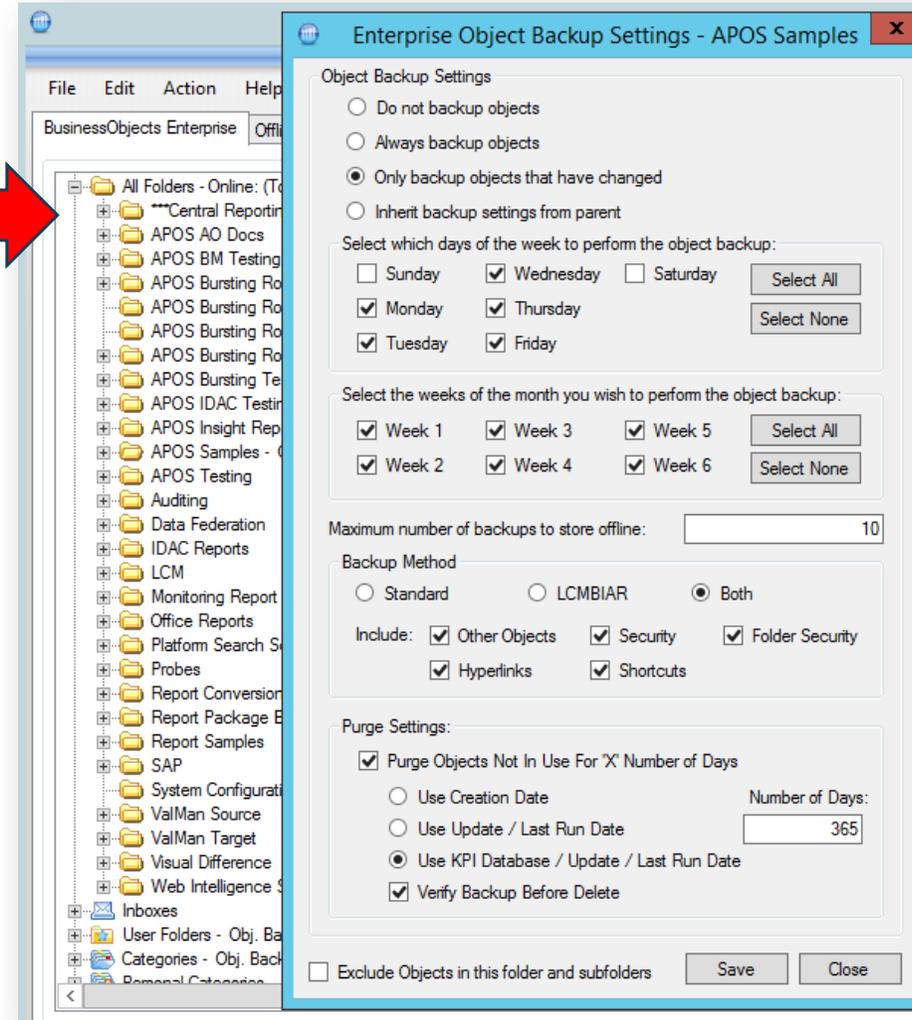
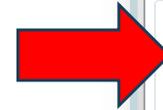
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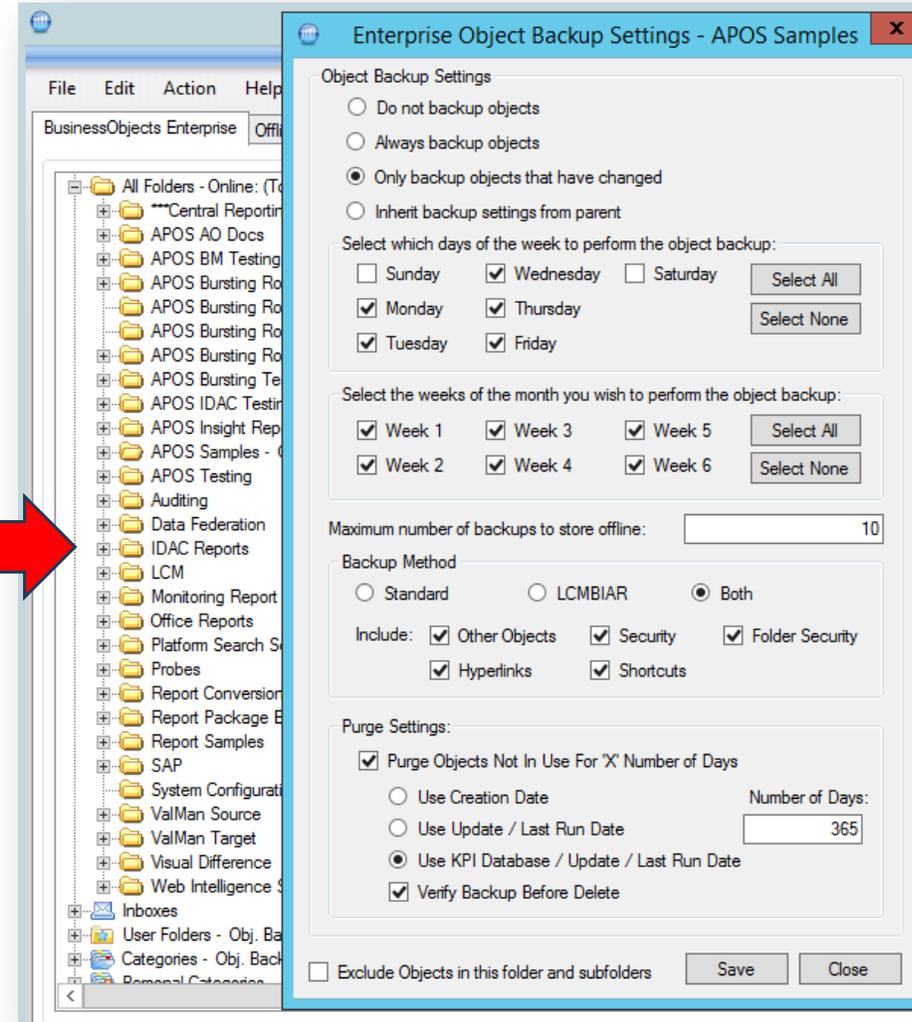
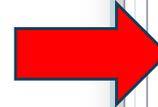
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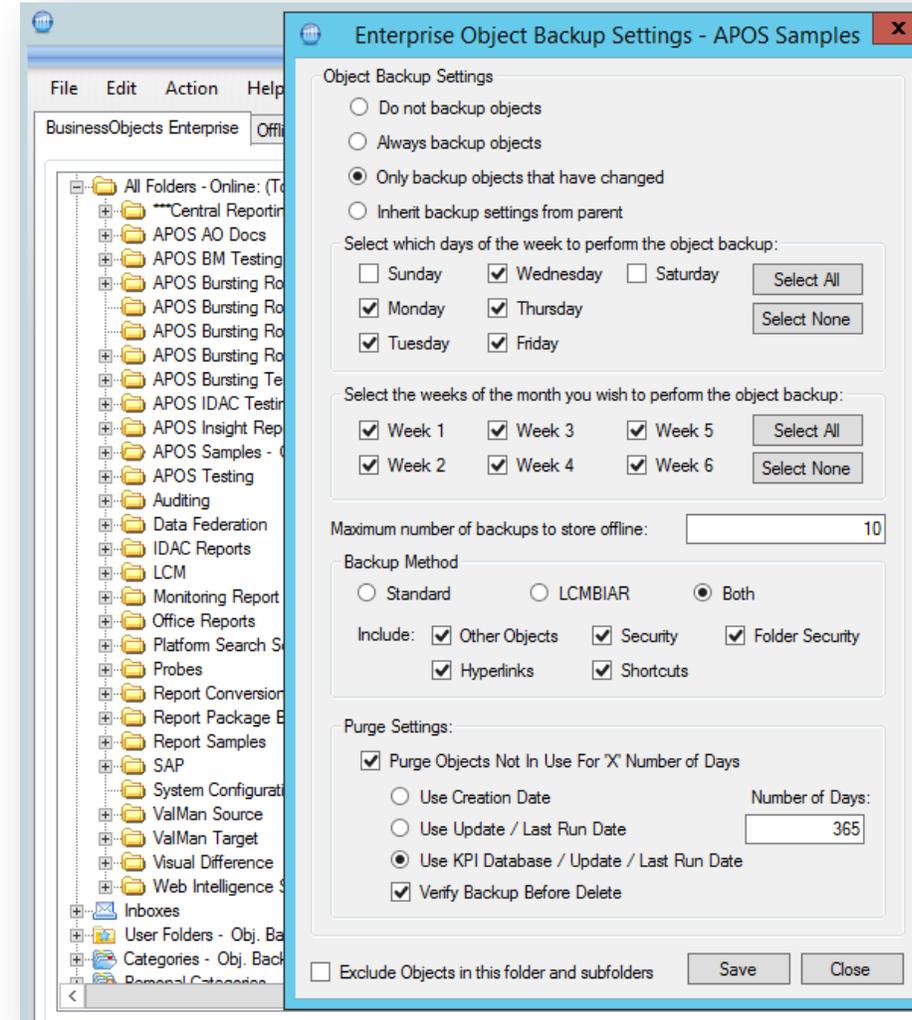




# Secure Content – Backup Strategy

With a solid Content Backup strategy in place, you will be ready for nearly any eventuality

- Disaster Recovery
- System Replication
- Content Audit
- Etc.





## Secure Content – Instance Retention

- An Instance retention policy needs to be in place to match Regulatory Requirements and internal governance.
- Instances can be set to be archived On-Line or Offline. (or a combination of both)
- Instances can also be set to be backed up without being deleted from the system.
- In addition, Instances can be sent to a Content Management System

Enterprise Instance Archiving Settings - All Folders|•|RootFolder

Instance Archiving | Instance Delete | Plug-ins

Set Business Rules For Online Archiving

Maximum Instances: 10  Maximum Instances Per Group: 0  
 Maximum Days: 0  Maximum Instances Per User: 0  
 Maximum Instances By Specific Group:  Edit  
 Maximum Instances By Specific User:  Edit

**WARNING!** Instances will only be backed up once! For example: if the instance backup has already backed up a specific instance then offline archive will NOT archive the instance to the offline folder a second time.

Set Business Rules For Offline Archiving

Archive Method:  Standard  LCMBIAR  Both  Include Security  Include Other Instances

Maximum Instances: 20  Maximum Instances Per Group: 0  
 Maximum Days: 0  Maximum Instances Per User: 0  
 Maximum Instances By Specific Group:  Edit  
 Maximum Instances By Specific User:  Edit

Convert Crystal Reports to Format: PDF  Include Original When Converting  
 Convert Web Intelligence to Format: PDF  Include Original When Converting  
 Zip Instance

Set Business Rules For Backing Up Instances

Do Not Backup Instances  Backup Instances Older Than 0 Days

Backup Method:  Standard  LCMBIAR  Both  Include Security  Include Other Instances

Maximum Instances By Specific Group:  Edit  
 Maximum Instances By Specific User:  Edit

Convert Crystal Reports to Format: PDF  Include Original When Converting  
 Convert Web Intelligence to Format: PDF  Include Original When Converting  
 Zip Instance

Exclude Instances in this folder and subfolders

Save Close



# Secure Content – Instance Retention

## Online archival is a unique method

- When rules are met, Instances are hidden from the system, yet remain on the Output FRS
- Retrieval is simply a matter of making them visible again
- Rules can be a combination of count, or number of days old
- Rules can be applied to Groups or Users

Enterprise Instance Archiving Settings - All Folders|RootFolder

Instance Archiving Instance Delete Plug-ins

Set Business Rules For Online Archiving

Maximum Instances: 10  Maximum Instances Per Group: 0

Maximum Days: 0  Maximum Instances Per User: 0

Maximum Instances By Specific Group: [dropdown] Edit

Maximum Instances By Specific User: [dropdown] Edit

**WARNING!** Instances will only be backed up once! For example: if the instance backup has already backed up a specific instance then offline archive will NOT archive the instance to the offline folder a second time.

Set Business Rules For Offline Archiving

Archive Method:  Standard  LCMBIAR  Both  Include Security  Include Other Instances

Maximum Instances: 20  Maximum Instances Per Group: 0

Maximum Days: 0  Maximum Instances Per User: 0

Maximum Instances By Specific Group: [dropdown] Edit

Maximum Instances By Specific User: [dropdown] Edit

Convert Crystal Reports to Format: PDF  Include Original When Converting

Convert Web Intelligence to Format: PDF  Include Original When Converting

Zip Instance

Set Business Rules For Backing Up Instances

Do Not Backup Instances  Backup Instances Older Than 0 Days

Backup Method:  Standard  LCMBIAR  Both  Include Security  Include Other Instances

Maximum Instances By Specific Group: [dropdown] Edit

Maximum Instances By Specific User: [dropdown] Edit

Convert Crystal Reports to Format: PDF  Include Original When Converting

Convert Web Intelligence to Format: PDF  Include Original When Converting

Zip Instance

Exclude Instances in this folder and subfolders

Save Close



# Secure Content – Instance Retention

## Offline archival is the more traditional method

- When rules are met, Instances are copied to a safe network location, and then removed
- Native instances can be exported to a neutral format while being copied
- The archive can be in native format, LCMBIAR, or both
- Rules can be a combination of count, or number of days old
- Rules can be applied to Groups or Users

The screenshot shows the 'Enterprise Instance Archiving Settings' dialog box for 'All Folders|RootFolder'. It has three tabs: 'Instance Archiving', 'Instance Delete', and 'Plug-ins'. The 'Instance Archiving' tab is active and contains three sections:

- Set Business Rules For Online Archiving:** Includes checkboxes for 'Maximum Instances' (set to 10), 'Maximum Days' (set to 0), 'Maximum Instances By Specific Group', and 'Maximum Instances By Specific User'. There are also checkboxes for 'Maximum Instances Per Group' and 'Maximum Instances Per User', both set to 0. 'Edit' buttons are provided for the specific group and user rules.
- WARNING!** Instances will only be backed up once! For example, if the instance backup has already backed up a specific
- Set Business Rules For Offline Archiving:** This section is highlighted with a red border. It includes an 'Archive Method' section with radio buttons for 'Standard', 'LCMBIAR', and 'Both' (selected). There are checkboxes for 'Include Security' and 'Include Other Instances'. Below are checkboxes for 'Maximum Instances' (set to 20), 'Maximum Days' (set to 0), 'Maximum Instances By Specific Group', and 'Maximum Instances By Specific User'. There are also checkboxes for 'Convert Crystal Reports to Format' (set to PDF), 'Convert Web Intelligence to Format' (set to PDF), and 'Zip Instance'. 'Include Original When Converting' checkboxes are checked for both Crystal Reports and Web Intelligence.
- Set Business Rules For Backing Up Instances:** Includes radio buttons for 'Do Not Backup Instances' and 'Backup Instances Older Than' (set to 0 Days). It also has an 'Archive Method' section with radio buttons for 'Standard', 'LCMBIAR', and 'Both' (selected). There are checkboxes for 'Include Security' and 'Include Other Instances'. Below are checkboxes for 'Maximum Instances By Specific Group', 'Maximum Instances By Specific User', 'Convert Crystal Reports to Format' (set to PDF), 'Convert Web Intelligence to Format' (set to PDF), and 'Zip Instance'. 'Include Original When Converting' checkboxes are checked for both Crystal Reports and Web Intelligence.

At the bottom, there is a checkbox for 'Exclude Instances in this folder and subfolders' and 'Save' and 'Close' buttons.



# Secure Content – Instance Retention

**Instances are backed up to the safe network location, but are not removed from the BOE system**

- Native instances can be exported to a neutral format while being copied
- The storage can be in native format, LCMBIAR, or both
- Instances can be zipped to save space

Enterprise Instance Archiving Settings - All Folders|RootFolder

Instance Archiving | Instance Delete | Plug-ins

Set Business Rules For Online Archiving

Maximum Instances: 10  Maximum Instances Per Group: 0  
 Maximum Days: 0  Maximum Instances Per User: 0  
 Maximum Instances By Specific Group: [dropdown] Edit  
 Maximum Instances By Specific User: [dropdown] Edit

**WARNING!** Instances will only be backed up once! For example: if the instance backup has already backed up a specific instance then offline archive will NOT archive the instance to the offline folder a second time.

Set Business Rules For Offline Archiving

Archive Method:  Standard  LCMBIAR  Both  Include Security  Include Other Instances

Maximum Instances: 20  Maximum Instances Per Group: 0  
 Maximum Days: 0  Maximum Instances Per User: 0  
 Maximum Instances By Specific Group: [dropdown] Edit  
 Maximum Instances By Specific User: [dropdown] Edit  
 Convert Crystal Reports to Format: PDF  Include Original When Converting  
 Convert Web Intelligence to Format: PDF  Include Original When Converting  
 Zip Instance

Set Business Rules For Backing Up Instances

Do Not Backup Instances  Backup Instances Older Than 0 Days  
Backup Method:  Standard  LCMBIAR  Both  Include Security  Include Other Instances

Maximum Instances By Specific Group: [dropdown] Edit  
 Maximum Instances By Specific User: [dropdown] Edit  
 Convert Crystal Reports to Format: PDF  Include Original When Converting  
 Convert Web Intelligence to Format: PDF  Include Original When Converting  
 Zip Instance



## Secure Content – Instance Retention

### Instances can selectively be archived while deleting unwanted ones

- E.g. if an instance was not created using a specific Business Calendar, or if it was not scheduled by a member of particular group
- Instances that are older than a specified number of days can automatically be deleted from the archive

Enterprise Instance Archiving Settings - All Folders|•|RootFolder

Instance Archiving Instance Delete Plug-ins

Set Business Rule For Deleting Active Instances

Do Not Delete Any Instances

Delete all instances not run under the specified calendar: Paydays

Delete all instance not run by a user/group:

Delete all instances not run under the specified group:

Delete all instances not run under the specified user:

Delete All Instances Older than X Days:

Number of Days: 3650



## Secure Content – Instance Retention

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Delete all instances not run under the specified user:

Delete All Instances Older than X Days:

Number of Days: 3650



## Secure Content – Instance Retention

### Instances can selectively be archived while deleting unwanted ones

- E.g. if an instance was not created using a specific Business Calendar, or if it was not scheduled by a member of particular group
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Enterprise Instance Archiving Settings - All Folders|•|RootFolder

Instance Archiving Instance Delete Plug-ins

Set Business Rule For Deleting Active Instances

Do Not Delete Any Instances

Delete all instances not run under the specified calendar: Paydays

Delete all instance not run by a user/group:

Delete all instances not run under the specified group:

Delete all instances not run under the specified user:

Delete All Instances Older than X Days:

Number of Days: 3650



## Secure Content – Instance Retention

Instances can also be archived to a Content Management System like SharePoint, OpenText, or others

Enterprise Instance Archiving Settings - All Folders|•|RootFolder

Instance Archiving | Instance Delete | Plug-ins

Set Rules For Plug-in Destinations

Available Plug-ins:  Add

Selected Plug-ins:

Plug-in	Target Path	Crystal	WebI	Zip

Remove

Settings for Selected Plug-in

Target Path:

Override Folder Defined in Plug-in Global Settings (creates path in root)

Include BusinessObjects Parent Folder Structure

Include Current Selected Folder

Convert Crystal to Format:

Convert WebI to Format:

Zip Instance



## Secure Content– Instance Restoration

- Instances that have been archived can be restored to any location on a system, or to any other system
- You may wish to archive ALL instances before migrating, and then selectively restore them to the new system – even if it's a different version

Status	Name	Report	Exported Type	Last Archived	Start
Offline			PDF	2015-10-16 11:05:53	2015
Offline			PDF	2015-10-16 11:05:42	2015
Offline			PDF	2015-10-16 11:05:31	2015
Offline			PDF	2015-10-16 11:04:36	2015
Offline			PDF	2015-10-16 11:04:26	2015
Offline			PDF	2015-10-16 11:04:14	2015
Offline			PDF	2015-10-16 11:04:03	2015
Offline	Xtreme SalesByCountry	Report	PDF	2015-10-16 11:03:52	2015
Offline	Xtreme SalesByCountry-MandatoryPar...	Report	PDF	2015-10-16 11:08:18	2015
Offline	Xtreme SalesByCountry-MandatoryPar...	Report	PDF	2015-10-16 11:08:06	2015
Offline	Xtreme SalesByCountry-MandatoryPar...	Report	PDF	2015-10-16 11:07:54	2015
Offline	Xtreme SalesByCountry-MandatoryPar...	Report	PDF	2015-10-16 11:07:07	2015
Offline	Xtreme SalesByCountry-MandatoryPar...	Report	PDF	2015-10-16 11:06:54	2015
Offline	Xtreme SalesByCountry-MandatoryPar...	Report	PDF	2015-10-16 11:06:39	2015
Offline	Xtreme SalesByCountry-MandatoryPar...	Report	PDF	2015-10-16 11:06:27	2015
Offline	Xtreme SalesByCountry-MandatoryPar...	Report	PDF	2015-10-16 11:06:15	2015
Offline	Comparative Income Statement	Report	PDF	2015-10-16 10:44:09	2015



# Test Plan

- The final step in preparing for the migration is to develop a test plan
- By using all of the information gathered in the previous steps you can validate that the migrated system meets or exceeds all of the critical operational values
  - Are report run-times within tolerances?
  - Are BI or other critical services consuming the appropriate amount of system resources?
  - Has the appropriate Content Backup strategy been implemented?
  - Can backed up objects and archived report instances be restored on an as-needed basis?
  - Has group membership been verified and compared against security settings on the BI folder structure?
  - Are data connections validated?
  - Has report output been validated between original and migrated system?





# Test– BI Service Resource Usage Baselines

- Understand the OS resources being used
  - Helps to determine sizing for the BI system
  - Highlights any anomalies in resource usage

<i>OS Resource Usage by Service</i>		Average
CMS - PID# 4112	AP_WorkingSet64 (bytes)	330,766,277
	AP_NonpagedSystemMemorySize64 (bytes)	745,826
	AP_PeakVirtualMemorySize64 (bytes)	676,643,401
	AP_PagedMemorySize64 (bytes)	403,342,014
	AP_PrivilegedProcessorTime (ms)	68,445
	AP_ThreadsCount	143
	AP_ProcessorUsagePercent	1.3
crcache - PID# 5096	AP_WorkingSet64 (bytes)	205,865,662
	AP_NonpagedSystemMemorySize64 (bytes)	63,017
	AP_PeakVirtualMemorySize64 (bytes)	3,066,994,688
	AP_PagedMemorySize64 (bytes)	341,927,526
	AP_PrivilegedProcessorTime (ms)	8,106
	AP_ThreadsCount	114
	AP_ProcessorUsagePercent	0.1
crproc - PID# 4300	AP_WorkingSet64 (bytes)	28,433,730
	AP_NonpagedSystemMemorySize64 (bytes)	36,964
	AP_PeakVirtualMemorySize64 (bytes)	139,958,565
	AP_PagedMemorySize64 (bytes)	17,155,043
	AP_PrivilegedProcessorTime (ms)	2,950
	AP_ThreadsCount	33
	AP_ProcessorUsagePercent	0.1



# Test – Report Runtime Baselines

- Understand the average run-time for report instances
  - Helps to determine resource requirements
  - Aids in determining report run-time windows

APOS Insight  
Historical Instances by Format & Destination

92 Reports scheduled.

Format: Excel

Destination	Instances	Latest Instance Date	Avg. Runtime (secs.)
Repository	1	1/9/2018 1:56:46 PM	15
<b>Total</b>	<b>1</b>	<b>1/9/2018 1:56:46 PM</b>	<b>15</b>

Format: Pdf

Destination	Instances	Latest Instance Date	Avg. Runtime (secs.)
Inbox (Shortcut)	14	6/9/2017 9:41:50 AM	8.14
<b>Total</b>	<b>14</b>	<b>6/9/2017 9:41:50 AM</b>	<b>8.14</b>

Format: Program

Destination	Instances	Latest Instance Date	Avg. Runtime (secs.)
Repository	1	11/21/2017 3:26:26 PM	7
<b>Total</b>	<b>1</b>	<b>11/21/2017 3:26:26 PM</b>	<b>7</b>

Format: Report

Destination	Instances	Latest Instance Date	Avg. Runtime (secs.)
Inbox (Copy)	2	11/1/2017 3:48:14 PM	10.5
Inbox (Shortcut)	4	11/21/2017 3:26:33 PM	4.67
Repository	40	2/5/2018 10:43:48 AM	6.75
SMTP (Includes 1 Attachment)	9	1/26/2018 11:24:41 AM	2



# Test Plan– Report Validation

- Automate the testing of Report Content between the original system and the migrated system
- Find and add the content that you wish to validate

**APOS Validation Manager**

File Edit Action View Help

Search Project - Mon Sept 18.avp

Search By: Location - Exact 225097 Add To List

Object Type: Name Location Object Ids Location - Hierarchy Location - Exact Clear List

Date Criteria: All

Object Type	Owner	Location	Owner	Created	Modified	Description
Webi	Owner Id	/APOS_Validation Testing/L...	Administrator	2016/02/24 11:24:39	2017/08/21 13:07:08	
Webi	Universe Name	/APOS_Validation Testing/L...	Administrator	2016/02/24 11:18:15	2017/08/21 13:07:08	
Webi	Universe Id	/APOS_Validation Testing/L...	Administrator	2016/02/24 11:18:15	2017/08/21 13:07:08	
Webi	Orders - 1 Multi Value Prompt	/APOS_Validation Testing/Or...	Administrator	2016/02/24 11:27:41	2017/08/21 13:07:07	
Webi	Orders by State - No Prompt	/APOS_Validation Testing/Or...	Administrator	2016/02/24 11:32:06	2017/08/21 13:07:07	
Crystal Report	Sales By Country	/APOS_Validation Testing/S...	APOS_Insight_U...	2017/08/21 13:05:49	2017/08/21 13:05:49	
Webi	Sales By State - No Promot	/APOS_Validation Testing/S...	Administrator	2016/02/24 11:29:18	2017/08/21 13:07:07	



# Test Plan– Report Validation

- Match the content on the Source system to the content on the Target system

Search Project - 2016-2-19-9-41-10-203.avp

BI Connection Info  
Source: Validation Manager@bi41sp5dvn Change Target: Administrator@sql2008r2dvn Change

Filters  
 Show Not Attempted  Show Successful  Show Successful With Warnings  Show Failed Check All Uncheck All

Webi Objects

UID	Source Parameters	Schedules	Instances	Target Name	Target Path	Target CUID	Target Parameters
vZZII...	Enter value(s) for Ope...	0	0	efashion - 1 datetime 1 bool...	/Testing/Webi Migrator/efa...	AW4gH2wZZII...	Enter value(s) for Ope...
nedLn...	Enter value(s) for City,...	0	0	efashion - 2 prompts default ...	/Testing/Webi Migrator/efa...	Ac0G_x_fnedLn...	Enter value(s) for City,...
uHVFI...	Enter value(s) for City,...	0	0	efashion - 2 string op prompt	/Testing/Webi Migrator/efa...	AS..kUwduHVFI...	Enter value(s) for City,...
tcQhF...		0	0	efashion - Purged	/Testing/Webi Migrator/efa...	AUTJCdNtcQhF...	
Y99Gi...		0	0	efashion - Refresh on Open	/Testing/Webi Migrator/efa...	AXiLXuSAY99Gi...	
dg9V...	Enter value(s) for Ope...	0	0	Webi - 2 UNV - 1 date prom...	/Testing/Webi Migrator/We...	ASQnPm9dg9V...	Enter value(s) for Ope...
_Jck2...	Enter value(s) for Ope...	0	0	Webi - 2 UNV - 1 date prom...	/Testing/Webi Migrator/We...	Adsk_jk.q_Jck2...	Enter value(s) for Ope...

Legend  
Object Not Found In BI System Value Doesn't Match BI System Value Doesn't Match Source Value Doesn't Match Source or BI System

# Test Plan– Report Validation



- Compare the results of the validation looking at Data Types, Data Values, and Process Time

The screenshot shows a software interface titled "View Instance Details". On the left, a list of "Selected Instances" includes "/LastYearSales - One Single Value". The main area is divided into three sections:

- Scheduling Details:** Shows a "Source" instance with ID 3223698, CUID ASpsJv9kanlFnGTfxwa0g00, and Status Successful. It was created on Wednesday, September 13, 2017 at 13:48:35. The path is /APOS \_Validation Testing/LastYearSales - One Single Value. The error message field is empty.
- Target:** Shows a "Target" instance with ID 3225287, CUID AVuz2j3BndDgCEcnMGLx4Y, and Status Successful. It was created on Monday, September 18, 2017 at 11:28:47. The path is /APOS \_Validation Testing/LastYearSales - One Single Value. The error message field is empty.
- Validation Details:** Shows the "Last Validated" time as Monday, September 18, 2017 at 11:29:16, with a Status of Warning. The "Validation Log" contains the text: "Validation Succeeded with warnings: Warning: Runtime tolerance exceeded (Source system is faster): Tolerance: 5 seconds Actual: 14 seconds". The "Trace Log" field is empty.

# APOS Upgrade Stages



**SAP BusinessObjects Upgrade - Three Stage Timeline**



# Success in Upgrading SAP BI



-  Smart
-  Strong
-  Safe

# Success in Upgrading SAP BI



## *APOS Upgrade S<sup>3</sup> Bundle*

- Bundle of key upgrade and migration focused technologies from APOS
  - Effective automation for all stages of upgrade - Preparation, Execution, Validation
- Licensed for use during the migration process stages
  - Streamline, speed, and stabilize your upgrade
  - Upgrade-focused pricing; excellent value



# APOS Solutions for SAP Analytics Cloud



## APOS Live Data Gateway

- Live Connectivity from SAC to wide range of data sources



## APOS Semantic Layer Migration

- Automated translation of SAP BI Modelling to HANA and Live Data Gateway



## APOS Publisher for Cloud

- Bursting and Distribution of SAC content



## APOS Insight for Cloud

- Enhanced Monitoring, Auditing and Validation of SAP Analytics Cloud



# APOS Solutions for SAP BusinessObjects



## APOS Insight

### BI System Auditing

- System Inventory
- Security Analysis
- System Usage Analysis
- Report Impact Analysis

### BI Report Testing

- Automated Report Testing
- Regression Testing
- Validation of Report Data
- Report Performance Testing

### BI System Monitoring

- Advanced System Monitoring
- Operating Environment Monitoring
- Database Monitoring
- Process Monitoring

### BI Query Surveillance

- Real-time BI Query Monitoring
- Query Performance Alerting & Auditing
- Query Intervention; Remote Cancelling
- Sensitive Data Audit

## APOS Administrator



### Object Management

- Bulk Security Management
- Bulk Settings Management
- System Objects Promotion
- Connections Maintenance

### Schedule Management

- High-volume schedule management
- Multiple schedule properties editing
- Grid scheduling interface
- Repeatable scheduling templates

### Instance Management

- Manage entire instance inventory
- Granular instance search
- Stop, pause, release, reschedule
- Rapid recovery to failed schedules

### Web Intelligence Migration

- Bulk conversion of Universes from UNV to UNX
- High-Volume Repoint Web Intelligence reports
- Success validation
- Controlled, project-based workflow

## APOS Storage Center



- System Backup
- Content Archiving
- Content Versioning
- Selective Restoration
- Automated System Clean Up

## APOS Publisher



- Systematic Content Delivery
- Advanced Document Bursting
- Enhanced Content Distribution
- Security and Encryption
- Statement Generation

# Upcoming Events



## Extend Analytics Content - Conditional & Secure SAC Publishing- *Webinar*

April 29, 2021 –11 am EDT

In previous webinars, we've looked extending SAP Analytics content access through data-driven bursting, and distribution of tailored content. Now let's look at how you can further extend analytics content access with:

- Conditional Bursting – automatically alert users when business conditions change
- Securing and Protecting Content – distribute sensitive information securely
- Archival of Instances for Governance – meet internal audit and regulatory requirements for information distribution



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# QUESTIONS?

Please enter your questions in the Q&A panel.



# Thank You!

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