



**MOVE IT OR LOSE IT !**

**Automating Your Upgrade to UNIX Universes**



# Today's Session

## *Key Topics*

### **Automating UNX Adoption**

- SAP BusinessObjects Roadmap
- UNX Timelines
- UNX Adoption Challenges
- APOS Automation
- Upgrade Process Steps
- Process Controls
- Customer Scenarios
  
- Q&A – see webinar console

## Today's Presenters



**PETER WARREN**

*Senior Account 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

# Updated Statement of Direction – SAP BI & Analytics



**SAP ANALYTICS**  
**Business Intelligence**  
**Statement of Direction**

**Public – June 2022**

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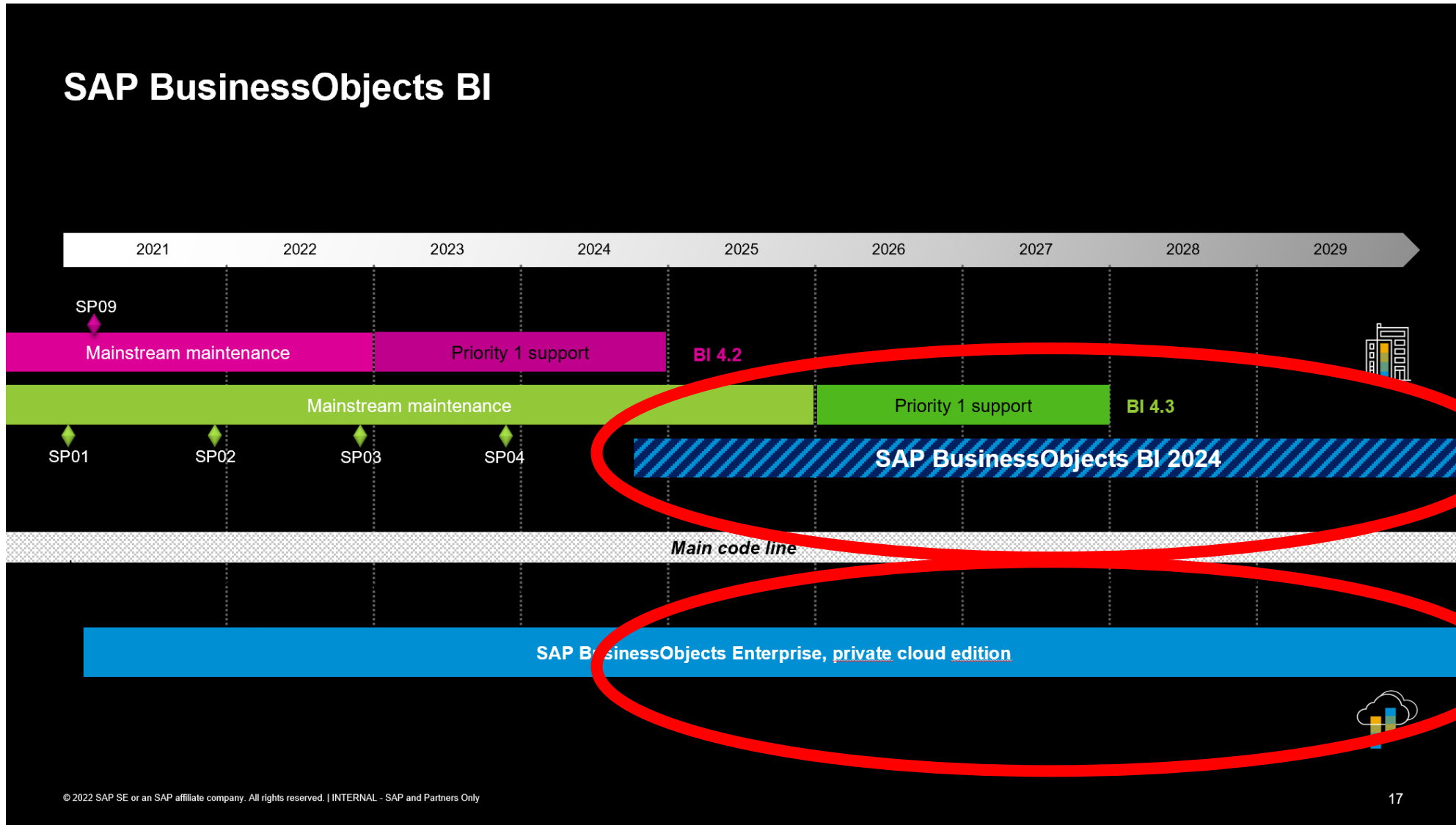
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**EXECUTIVE SUMMARY**

This document provides guidance to our SAP BusinessObjects customers on the product directions of

# Updated Statement of Direction – SAP BI & Analytics



# Updated Statement of Direction – SAP BI & Analytics



The future for SAP BusinessObjects is STRONG!!!

- SAP BusinessObjects BI 2024
  - A new On-Premise edition/version to be released next year
  - Based on BI 4.3 main code line - full compatibility
  - No stated end of support – long term support
- SAP BusinessObjects, Private Cloud Edition:
  - No stated end of support
- SAP BusinessObjects 4.3
  - Mainstream support/maintenance, end of 2025
  - Priority 1 support, end of 2027

Organizations are recommitting to SAP BusinessObjects and planning for continued use of the platform well into the future.



# Updated Statement of Direction – SAP BI & Analytics



To focus on the most current and most adopted technologies, there are specific SAP BusinessObjects components that will not be supported beyond version 4.3 or into SAP BI 2024.

## Component to be Deprecated

## Go to solution

Lumira

SAP Analytics Cloud

Crystal Reports for Enterprise

Web Intelligence or Crystal Reports

Analysis for OLAP

SAP Analytics Cloud

Live Office

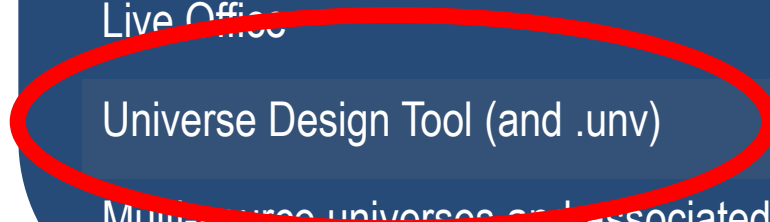
Web Intelligence Document OData Access (4.3 SP2)

Universe Design Tool (and .unv)

Information Design Tool (and .unx)

Multi-source universes and associated connectivity

Data blending in Web Intelligence or at the DB level

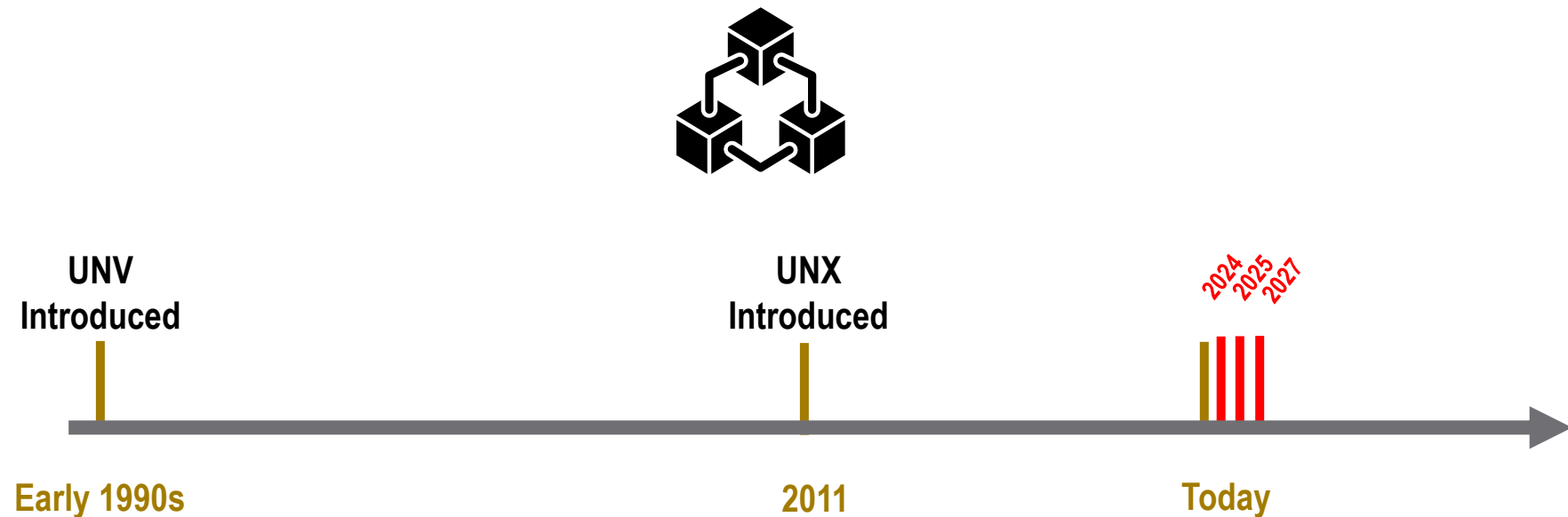


# SAP BusinessObjects Universe



## Universe Format Timelines

- UNV Universe introduced in early versions of BusinessObjects in the 1990s
- UNX Universe introduced as UNV replacement in 2011 with SAP BI 4.0



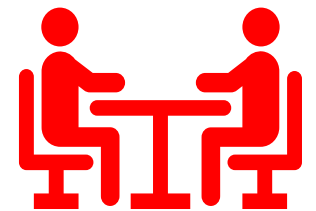
# UNX Universe Adoption Considerations



## UNX Adoption Challenges

- Not enough budget
  - Upgrading all universes and reports is a massive project
  - Many organizations have thousands, tens of thousands, or hundreds of thousands of reports
- Not enough time
  - BI Team and BI User department resources are all too busy right now
  - Lack of resources and competing projects
- Too hard to coordinate BI User departments
  - BI User departments are all on different schedules, timelines, priorities
  - Many organizations have extensive list of BI User departments to coordinate
- Introduces system risk
  - Upgrading all these objects introduces system change risks and manual error risks

“Let’s just wait until next year...”



# UNX Universe Adoption Considerations



## UNX Upgrade Steps

- Manual conversion of universes from UNV to UNX format
- Publish new UNX universe
- Manual repointing of Web Intelligence report to new UNX format universe
- Verify and validate the repointed Web Intelligence report results
- Publish the repointed Web Intelligence report

# UNX Universe Adoption Considerations



## Manual Upgrade Time Estimates

- Manual conversion of universes from UNV to UNX format
  - 5 minutes per universe
- Publish new UNX universe
  - 2 minutes per universe
- Manual repointing of Web Intelligence report to new UNX format universe
  - 10-15 minutes per report
- Verify and validate the repointed Web Intelligence report results
  - 8-10 minutes per report
- Publish the repointed Web Intelligence report
  - 2 minutes per report

# UNIX Universe Adoption Considerations

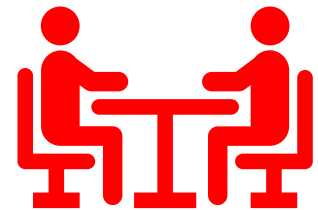


## Example Manual Upgrade Estimate

### Example Scenario:

- 50 Universes
- 5000 Web Intelligence reports
  
- 50 Universes @ 7 minutes/Universe = 350 minutes
- 5000 Reports @ 20 - 27 minutes/Report = 100,000 – 135,000 minutes  
= ~1700 - 2250 hours  
(212 – 281 days)
  
- Total time of 1700 – 2250 hours @ \$/€ per hour = BIG number \$/€
  - @ \$/€ 40 per hour = 68K – 90K raw project personnel cost
  
- What are the costs if you have a larger deployment??

“We don’t have the budget for that project.”



# UNIX Universe Adoption Considerations

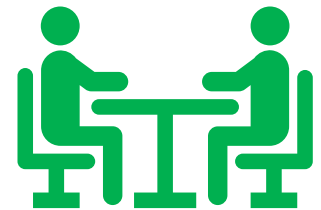


What is the answer for upgrading to UNIX??

**Automate the upgrade process!!**

- Massive time savings
- Dramatically reduced costs
- Minimize the use of and distraction of precious team resources
- Control system change risks, remove manual error risks
- Simplify coordination of BI Team and User departments
- Execute a controlled, manageable, successful upgrade project

“ We can do this!! ”





# APOS Web Intelligence Migrator



**EXTEND**  
SAP ANALYTICS




# APOS Web Intelligence Migrator




**SAP** Community

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Product Information



Laura VEGA 

February 10, 2023 | 3 minute read

## Automating UNX Adoption – Overview

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### Introduction

In my recent post, [UNV is dead, long live UNX](#), I made the point that the Universe Design Tool (UDT) and the UNV universe will not be supported after 2027. That may sound like a long time, but it is not, especially if you want to make an orderly and efficient transition to UNX.

In my post, I mentioned that an SAP partner solution could help make that transition easier and more orderly. A few days later, I had a conversation with the people from our long-time partner [APOS](#), who offer

[Blog Link:  
Automating  
UNX Adoption](#)



**Fred Walther**  
Senior Solution Consultant  
APOS

# APOS Web Intelligence Migrator



**(Web1 Migrator) - A migration solution focused on automating time and labor-intensive activities of upgrading to the UNX universe within SAP BusinessObjects.**

- Time savings
- Timely project execution
- Accurate project execution
- Project controls



# Key Upgrade Process Steps



Scan System and Inventory Content

Bulk Conversion of Universes

Bulk Repointing of Reports

Bulk Validation of Upgrade Success

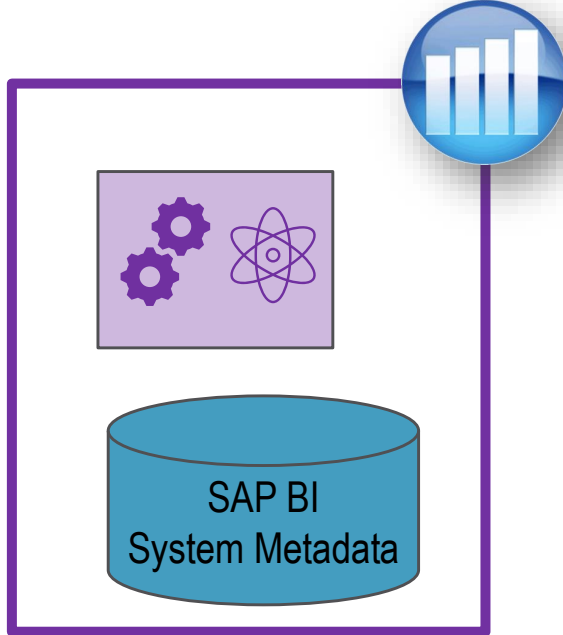
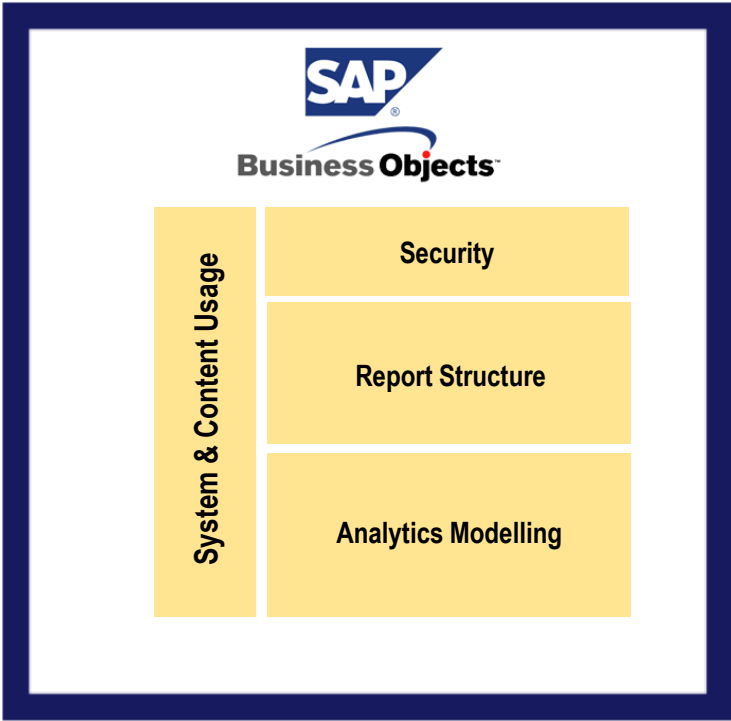
# Scan System and Inventory Content



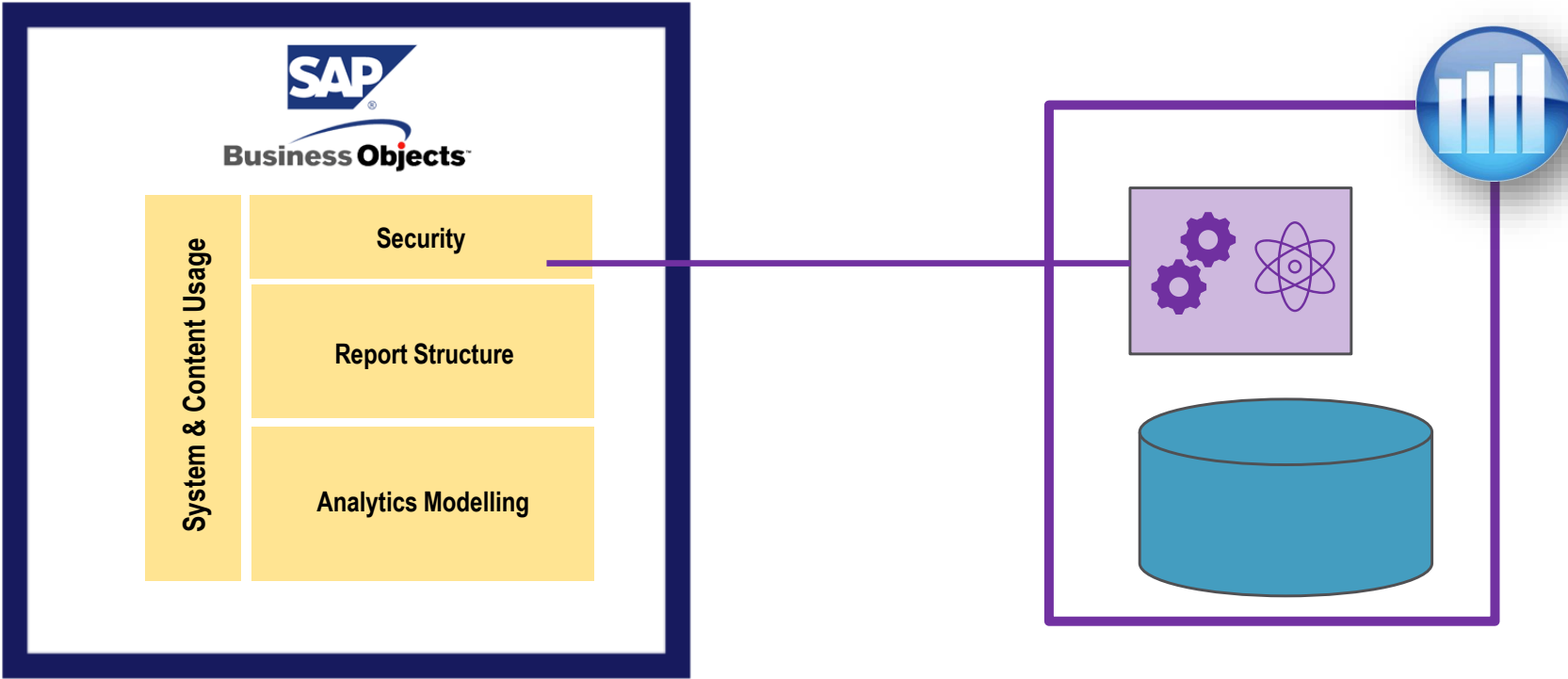
## Why scan system and inventory its content?

- Get a clear understanding of what content is in your system
- Identify what content can be excluded from the upgrade
- Capture detailed report structure metadata for reference later in process

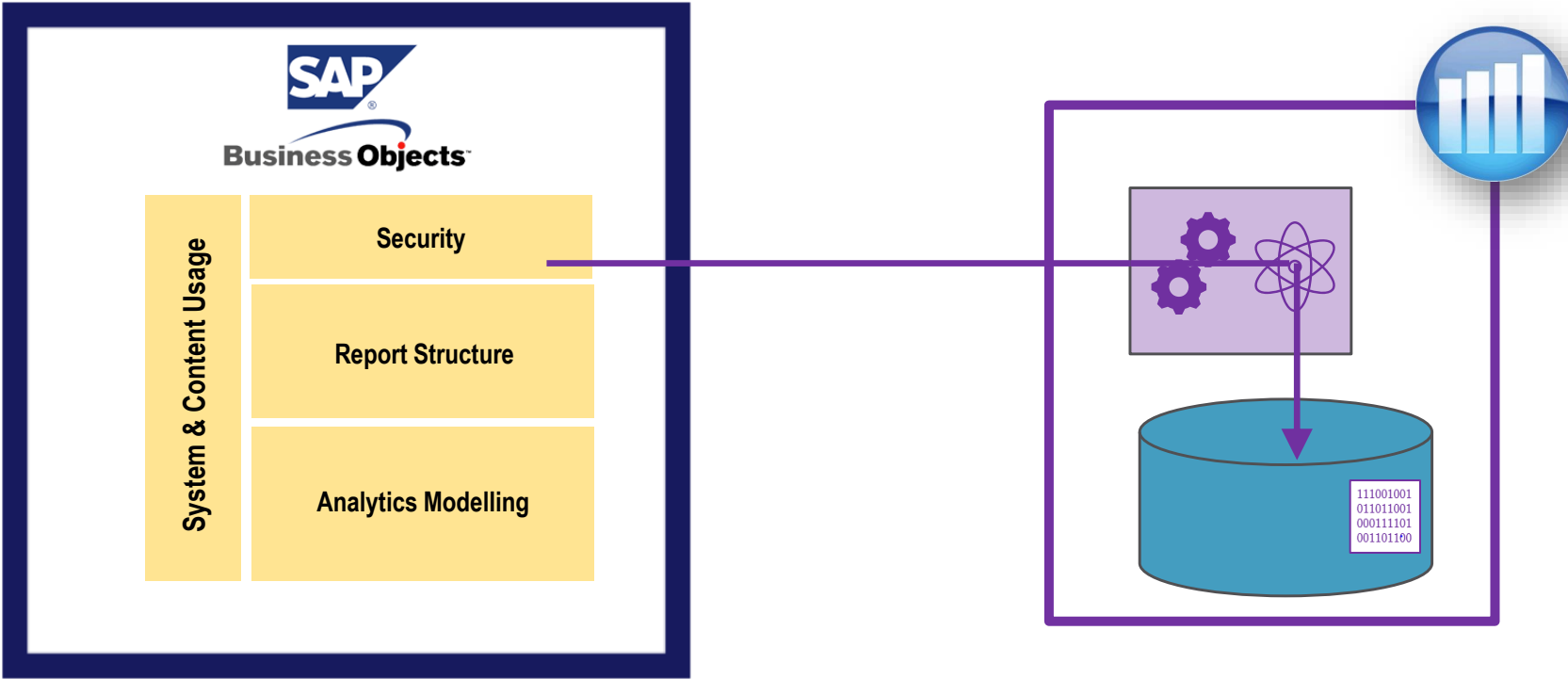
# Capture System + Content Metadata



# Capture System + Content Metadata

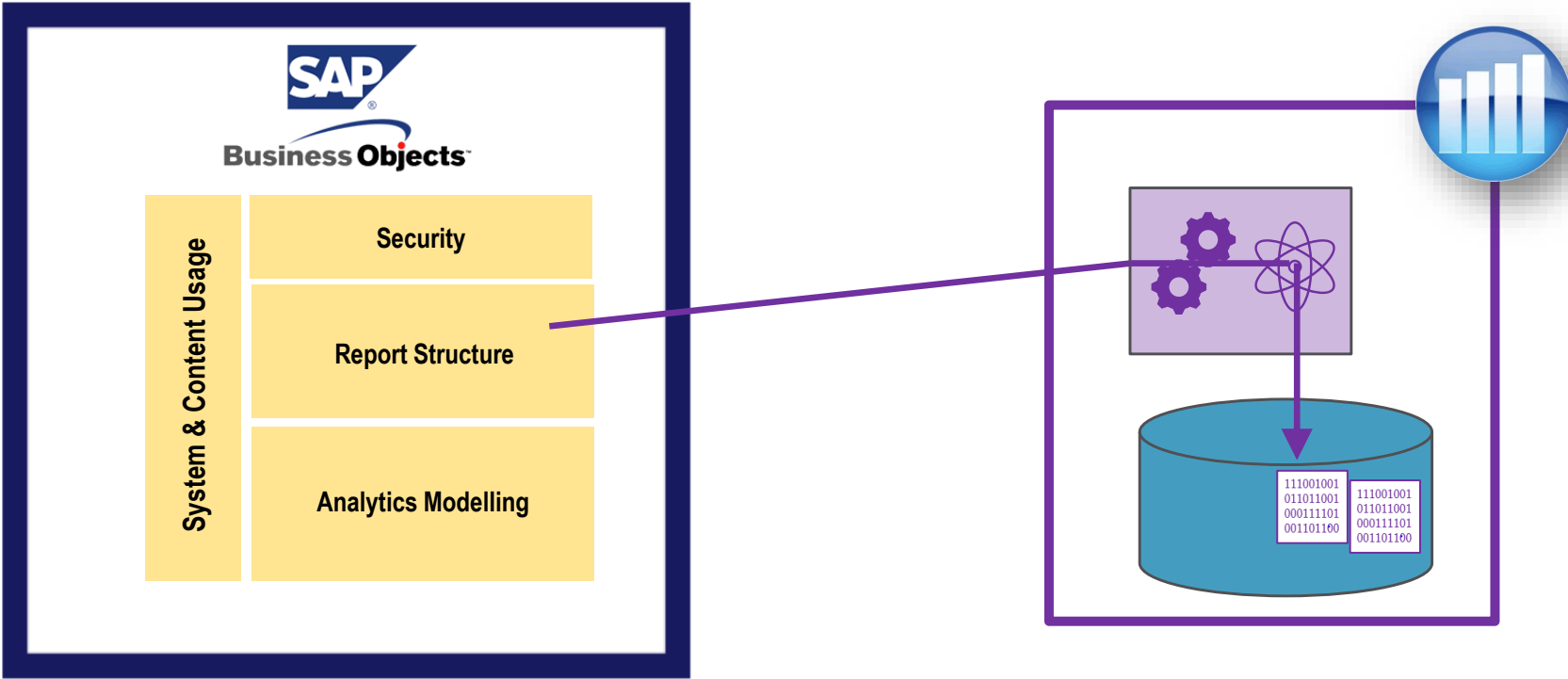


# Capture System + Content Metadata

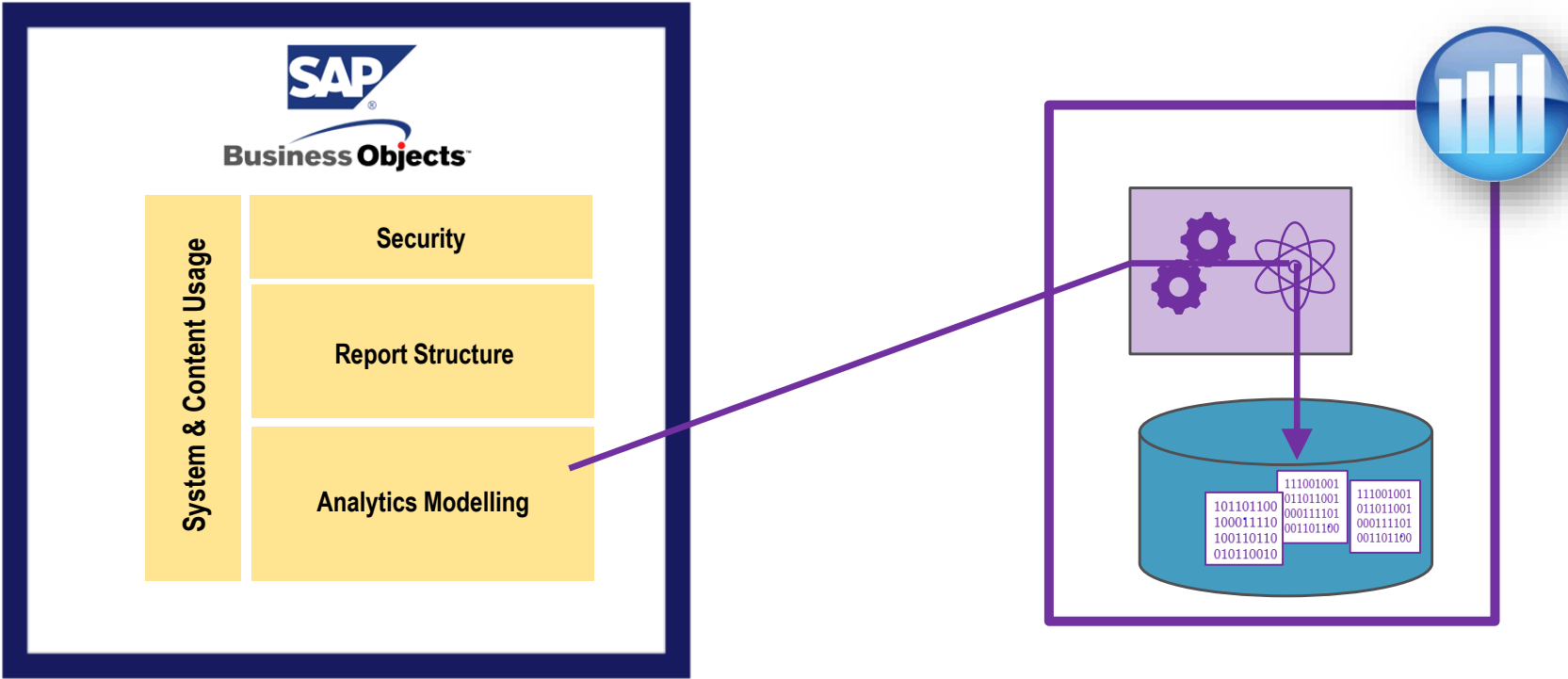




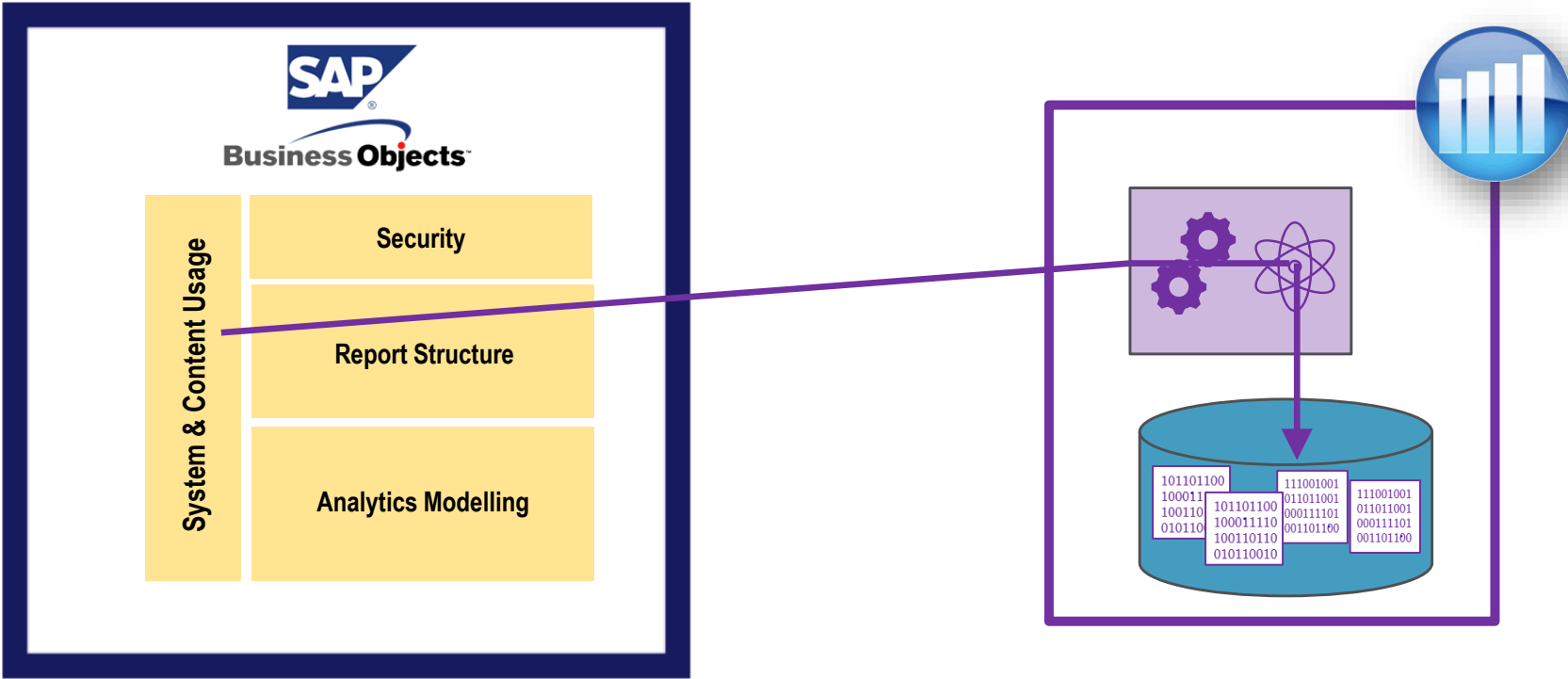
# Capture System + Content Metadata



# Capture System + Content Metadata



# Capture System + Content Metadata



# Analyze System + Content Metadata



**APOS Insight**  
List Objects by Type for System: PRODUCTION

Object Type	Number of Objects	Object Type	Folder	SI Name
ClientAdmin	488	AdminConsole	[/apps/insight/6400/Application/Folder/Root/Folder/99]	4404 BI Administration Console
View	126	AdminTool	[/apps/insight/6400/Application/Folder/Administrative/Tools]	696 Security Query Export
Report	125	AdminTool	[/apps/insight/6400/Application/Folder/Administrative/Tools]	822 Update Authentication Group Membership
Folder	84	AdminTool	[/apps/insight/6400/Application/Folder/Administrative/Tools]	631 Update Authentication Group Membership and User Names
ClientCertificate	66	AdminTool	[/apps/insight/6400/Application/Folder/Administrative/Tools]	4853 Principal File Import
ClientCertificate	59	AdminTool	[/apps/insight/6400/Application/Folder/Root/Folder/99]	
MON ManagementEntity	28	AlertingApp	[/apps/insight/6400/Application/Folder/Root/Folder/99]	534 Alerting
CCSI DataConnection	15	AD Plugin	[/apps/insight/6400/Application/Folder/Root/Folder/99]	4360 Analysis Office
PlatformSearchContentEntity	11	AppJavafanction	[/apps/insight/6400/Application/Folder/Root/Folder/99]	4408 BI workspaces
TextTemplate	9	AutomationFramework	[/apps/insight/6400/Application/Folder/Root/Folder/99]	4451 Automation Framework
MON Probe	9	BEX BEI/web	[/apps/insight/6400/Application/Folder/Root/Folder/99]	4382 BEX BEI/web
DLL MetadataFile	8	BCCommentaryApplication	[/apps/insight/6400/Application/Folder/Root/Folder/99]	4919 Commentary Application
PlatformSearchQueue	6	Event	[/apps/insight/6400/Application/Folder/Root/Folder/99]	4323 BI Administration Cockpit
WorkflowTemplate	6			
LCHData	7			
PlatformSearchQueue	5			
FavoritesFolder	5			
...	...			

**APOS Insight**  
Schedules - Inactive Report

877 Reports not scheduled in the last 365 days

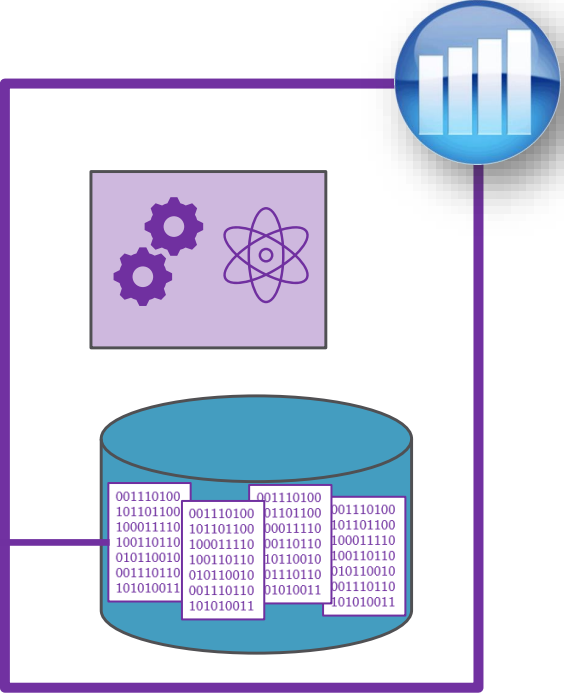
Report Name	Type	Create Date	Owner	Data Source	Last Updated
Folder: /BI-Management					
Manufacturing Report 1	Report	2014-12-17 20:58:46	Administrator	Original: [http://resources.businessobjects.com/sampledata/sampledata/customer_data/iborders.cdm.h]	2014-12-18 13:23:46
Folder: /BI-Sales					
Manufacturing Report 1	Report	2014-12-17 20:58:51	Administrator	Original: [http://resources.businessobjects.com/sampledata/sampledata/customer_data/iborders.cdm.h]	2014-12-18 13:23:46
Folder: /BI-Support					
Manufacturing Report 1	Report	2014-12-17 20:59:04	Administrator	Original: [http://resources.businessobjects.com/sampledata/sampledata/customer_data/iborders.cdm.h]	2014-12-18 13:23:46
Manufacturing Report 1	Report	2015-01-15 11:43:43	Administrator	Original: [http://resources.businessobjects.com/sampledata/sampledata/customer_data/iborders.cdm.h]	2015-01-16 11:43:43
Folder: /BI-Resonance Industries Reports					
CDI/BI Report 1	Report	2014-12-17 21:25:32	Administrator	Custom: [C:\Program Files (x86)\MSRP Business Objects\MSRP Business Objects Enterprise (1.4.2)\samples\CDI]	2015-02-08 11:21:15

**BI Report** **APOS**

Retrieve the maximum number of concurrent sessions that we saw and then display the max number of sessions per day.

Universes/APOS insight/insight4 - SQL Server

Report Folder / Location	Report Name	Report Owner	Report File Size
APOS Insight Reports/SQL Server	Audit - All Report Activity	Administrator	121
APOS Insight Reports/SQL Server	Audit - Objects Scheduled by User	Administrator	102615
APOS Insight Reports/SQL Server	Audit - Reports Refreshed by User	Administrator	104473
APOS Insight Reports/SQL Server	Audit - Unused Objects in Date Range	Administrator	89226
APOS Insight Reports/SQL Server	Audit - User Login Activity	Administrator	94653
APOS Insight Reports/SQL Server	Audit - User Logout Activity	Administrator	191620
APOS Insight Reports/SQL Server	Crystal - Search for Fields Used in Reports	Administrator	103027
APOS Insight Reports/SQL Server	Crystal - Search for Tables Used in Reports	Administrator	100312
APOS Insight Reports/SQL Server	Crystal - Structure	Administrator	100885
APOS Insight Reports/SQL Server	Crystal - Summary	Administrator	144865
APOS Insight Reports/SQL Server	Instances - Detail	Administrator	103961
APOS Insight Reports/SQL Server	Instances - Historical	Administrator	107384
APOS Insight Reports/SQL Server	Instances - Status	Administrator	88266
APOS Insight Reports/SQL Server	Object Containing Content Types and Folders	Administrator	81423



# Analyze System + Content Metadata



**APOS Insight**  
Unused Objects in Date Range

Unused Reports from: 01/01/2023 00:00:00 to 08/03/2023 00:00:00

Insight User to Ignore: APOS\_Insight\_User

**/Report Samples/Demonstration**  
Comparative Income Statement

Si ID	Owner	Create Date	Last Update Date	Last Activity Date	Latest Activity	Latest Activity User
11919	Administrator	30/07/2015	13/05/2020 08:32:28	01/02/2023 19:10:35	View	APOS_Insight_User

- Find unused reports
- Understand report content

**APOS Insight**  
Webi Impact Analysis

Searched for Table: AP\_UsersAndGroups;AP\_USERSANDGROUPS  
Searched for Column: All Columns

System: BI41SP6FW  
Folder: /APOS Insight Reports/Oracle

Report Name	Universe Name	UniType	TableName	ColumnName
Objects - Group Listing with Users	Insight4 - Oracle	UNV	AP_USERSANDGRO UPS	AP_TYPE
Objects - Group Listing with Users	Insight4 - Oracle	UNV	AP_USERSANDGRO UPS	SI_CHANGEPASS WORD
Objects - Group Listing with Users	Insight4 - Oracle	UNV	AP_USERSANDGRO UPS	SI_NAME

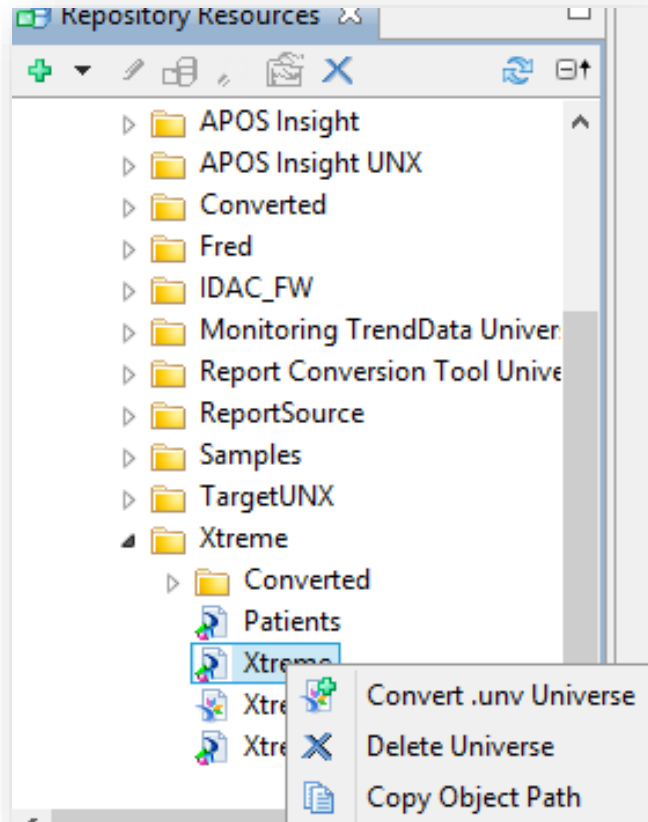
# Bulk Conversion of Universes



## Key Considerations

- Understand which universes need to be converted
- Understand which universes can be ignored due to non-usage
- Convert UNV to UNX quickly and easily

# Bulk Conversion of Universes



- Convert 1 by 1 in the IDT

# Bulk Conversion of Universes



Convert Universe to UNX Format

Target Folder for Converted UNX

Universes/  [Browse...](#)

Overwrite Existing Universes

Object Type	Name	Path	Count	User	Created	Last Modified
Universe	XtremeSourceUNV					
Universe	Xtreme_Orders					
Universe	Xtreme					
Universe	Patients					
Universe	Monitoring TrendData Ur					
Universe	Insight4 - Oracle	/APOS Insight/Insight4 - Oracle	274	Administrator	2019/10/29 13:54:29	2019/10/29 13:54:29
Universe	Report Conversion Tool Audit ...	/Report Conversion Tool Univ...	12	Administrator	2008/03/12 06:16:39	2019/05/29 10:10:10
Universe	eFashion	/Samples/eFashion	130	Administrator	2021/11/11 12:57:25	2021/11/11 12:57:25

Copy Object Path

- Convert 1 by 1 in the IDT
- **Convert in bulk in Webi Migrator**



# Bulk Conversion of Universes



Repository Resources

- APOS Insight
- APOS Insight UNX
- Converted

Search By: Name

Object Type: Universe

Date C

### Change Universe on Web Intelligence

Conversion List

Object	Source Universe	Source ID	Source Path	Target Universe	Target ID	Target Path	Status	Supported?
Univers	eFashion	4607249	/Samples/eFashion	< Convert to UNX >		%FULL_PATH%/eFashion.unx		Yes
Univers	Xtreme	5071829	/Xtreme/Xtreme	< Convert to UNX >		%FULL_PATH%/Xtreme.unx		Yes
Univers								
Univers								
Univers								
Univers								
Univers								
Univers								
Univers								

Clear Target

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

Select Target Universe: < Convert to UNX > [Set]

Filter List... Clear Filter

UNIX Target Location: %FULL\_PATH% [Add] Full Path

- Convert 1 by 1 in the IDT
- Convert in bulk in Webi Migrator
- **Convert on the fly while repointing Webis**

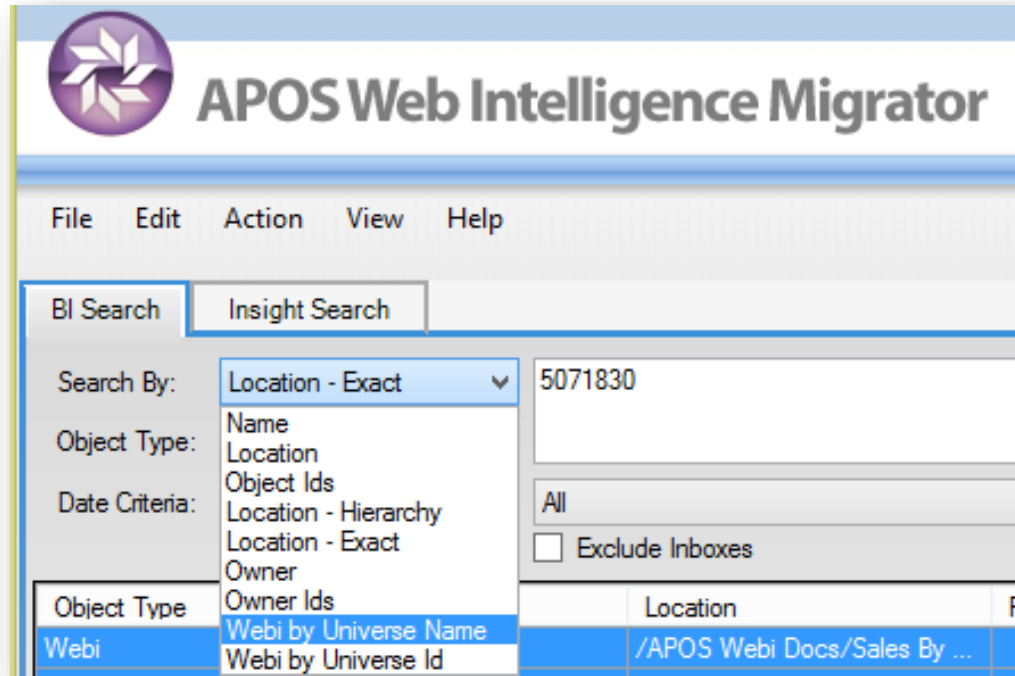
# Bulk Repointing of Reports



## Key Considerations

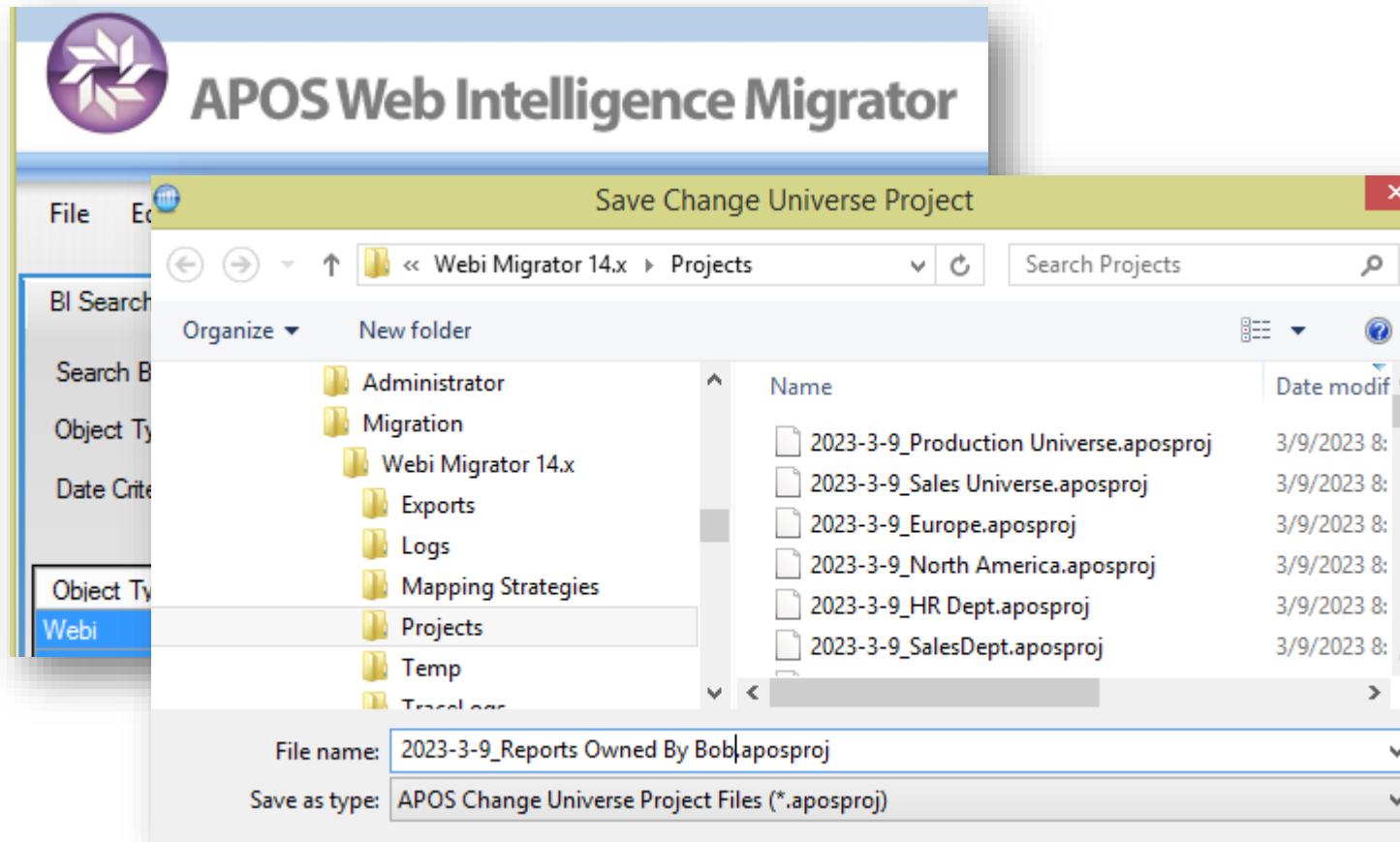
- Work with manageable chunks of reports
- Retain any Custom SQL that reports are using
- Spread the processing load across multiple machines

# Bulk Repointing of Reports



- Select reports by your choice of criteria
- Use a project based approach to streamline and control the repointing
- Ensure that only those reports that are being used in the organization are repointed

# Bulk Repointing of Reports



- Select reports by your choice of criteria
- Use a project based approach to streamline and control the repointing
- Ensure that only those reports that are being used in the organization are repointed

# Bulk Validation of Upgrade Success



## Key Considerations

- Reports need to be trusted
- Validation needs to happen quickly
- Validation should be automated

# Bulk Validation of Upgrade Success



Project - 2023-3-7

Successful  Unsuccessful

ID	Process
5071891	<input checked="" type="checkbox"/>
5071896	<input checked="" type="checkbox"/>
5071857	<input checked="" type="checkbox"/>
5071855	<input checked="" type="checkbox"/>
5071859	<input checked="" type="checkbox"/>
5071847	<input checked="" type="checkbox"/>
5071845	<input checked="" type="checkbox"/>
5071915	<input checked="" type="checkbox"/>
5071875	<input checked="" type="checkbox"/>
5071877	<input checked="" type="checkbox"/>
5071869	<input checked="" type="checkbox"/>
5071903	<input checked="" type="checkbox"/>


### Webi Validation Options


**Specify Webi Validation Options**

Source Document

Webi Document  Latest Instance  Latest Recurring Instance

Validate As

Current User (administrator)  Report Owner  Specific User:  

 This feature requires that BI impersonation and trusted authentication be enabled

Basic Validation Options

Validate Data Types  Validate Values

Count Errors  Sort Result Set Before Validating

Advanced Validation Options (Requires both basic validations be performed)

Maximum number of simultaneous validations

Restrict validation to

First  KB  Last  KB  Ignore invisible characters

Specified columns:   Skip first  rows

Example: A, C-E, G will validate columns A, C, D, E, G.

Warning: When using both the First KB and the Skip first rows options, if the value of the First KB option isn't large enough to contain more rows than the value of the Skip first rows option, the validation will always be considered as successful, as there will be no rows eligible to validate

Discard results of previous validations

- Ensure correct user is set
- Select how validation occurs
- Exclude certain rows/ columns

# Web Intelligence Migrator Overview



## Solution Demo

**Note: To view the Solution Demo, view the webinar [on demand](#)**

# Process Control Features



Commit Phase

High Availability

Projects Structure



# Commit Phase



## Key Considerations

- Which Webi will be used going forward – original or copy?
- Ensure that recurring schedules are maintained

# Web Intelligence Migrator Overview



**Commit Phase Demo**

# High Availability



## Key Considerations

- Need to work with many thousands of reports
- Need to spread the load across multiple machines
- Bullet point

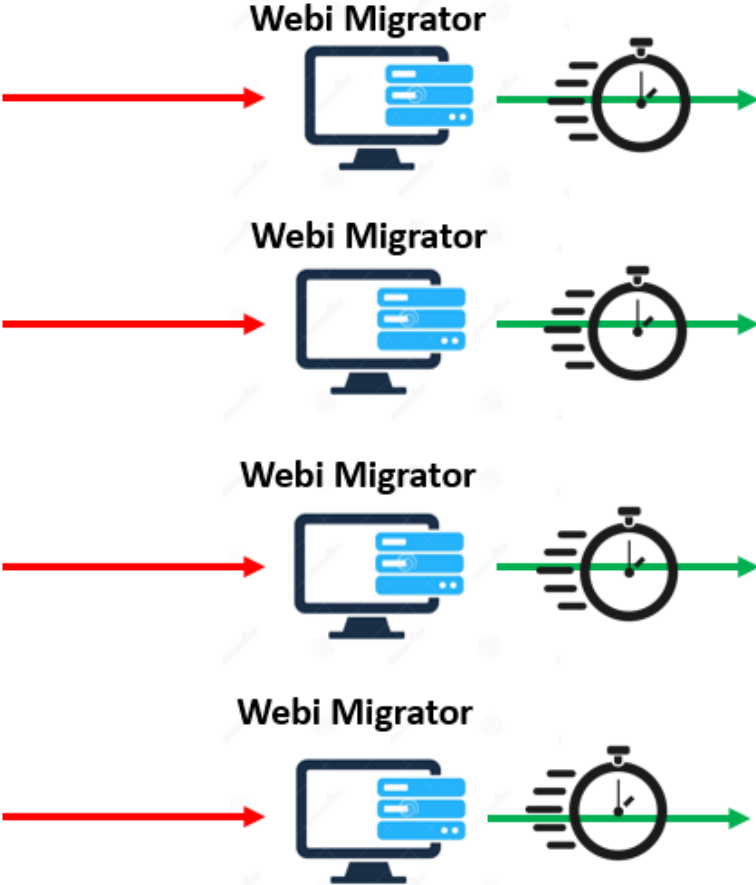
# High Availability



UNV Reports



High Scalability



UNX Reports



# High Availability



Webi Migrator High Availability System Status

Current Status | Completed Jobs

Summary

Job Type	Pending	Processing	Paused	Successful	Failed
Change Universe	0	1	0	71	13
Commit	0	0	0	35	1

Details

Submission Date	Source Machine	Project	Job Type	Time Received	Processing Start Time	Processing End Time	Pending	Processing	Paused	Successful	Failed
10/12/2022 1:55:34 PM	BI42SP9	2022-10-12-13-53-53-6...	Change Universe	10/12/2022 1:56:03 PM	10/12/2022 1:56:36 PM	10/12/2022 1:56:54 PM	0	0	0	0	1
9/21/2022 10:46:19 AM	BI42SP9	2022-9-21-10-44-15-91...	Change Universe	9/21/2022 10:46:46 AM			0	0	0	0	1
9/22/2022 9:43:52 AM	BI42SP9	2022-9-21-10-44-15-91...	Change Universe	9/22/2022 9:44:07 AM			0	0	0	0	1
9/22/2022 10:36:21 AM	BI42SP9	2022-9-21-10-44-15-91...	Change Universe	9/22/2022 10:36:37 AM			0	0	0	0	1
9/22/2022 10:47:14 AM	BI42SP9	2022-9-21-10-44-15-91...	Change Universe	9/22/2022 11:37:23 AM			0	0	0	0	1
9/22/2022 1:29:44 PM	BI42SP9	2022-9-21-10-44-15-91...	Change Universe	9/22/2022 1:30:12 PM			0	0	0	0	1

Show <All Job Types> submitted from <All Source Machines> Export Details to CSV Pause Pending Resume Paused

Automatically update system status every 10 seconds

Close

- Batches are executed on multiple machines
- Console allows monitoring of batch status
- Pause/Resume pending batches

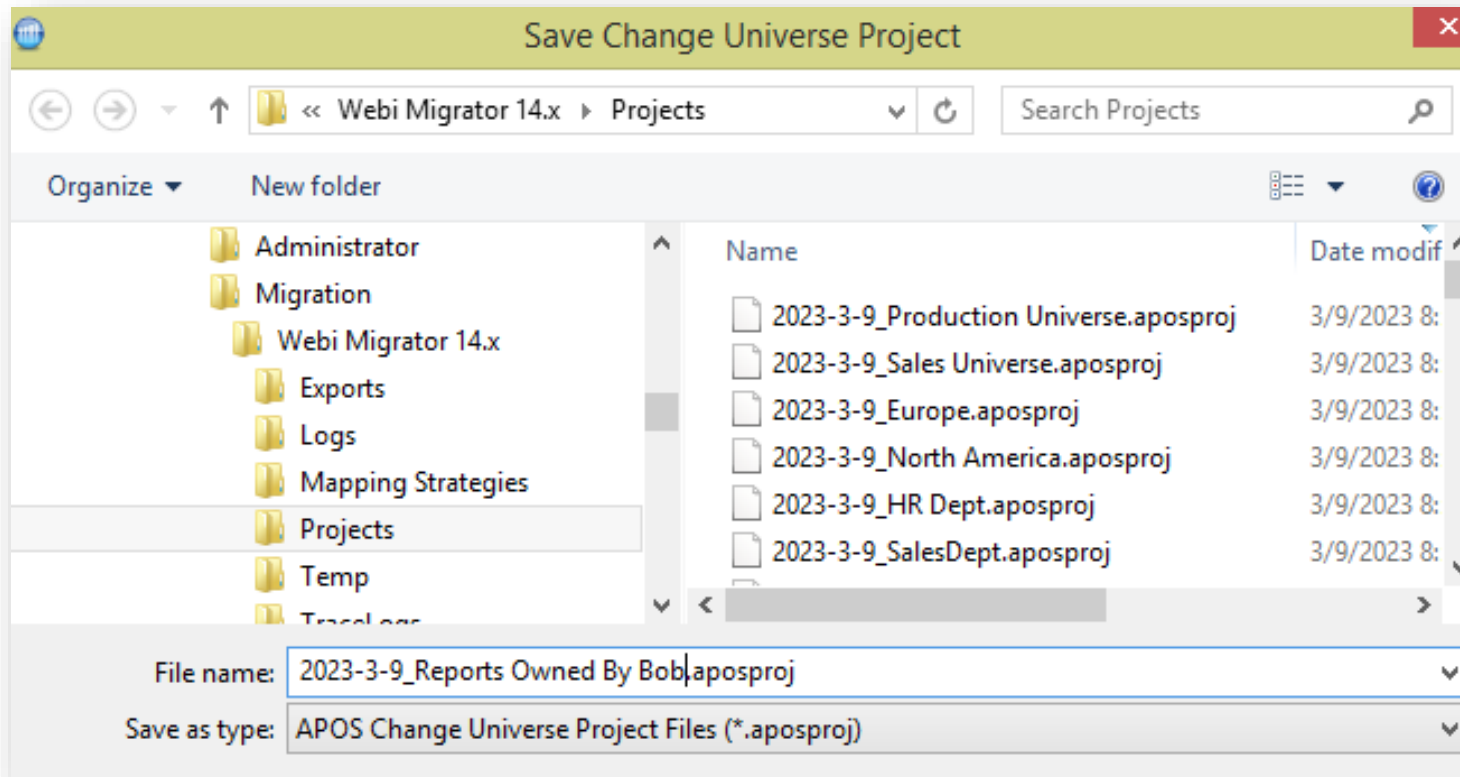
# Projects Structure



## Key Considerations

- Organized approach to repointing
- Work in manageable chunks

# Projects Structure



- Name the projects meaningfully

# Projects Structure



Save Change Universe Project

Webi Migrator 14.x > Projects

Administrator

## APOS Web Intelligence Migrator

File Edit Action View Help

BI Search Insight Search Project - 2023-3-7-13-36-14-133.aposproj

Result Filters

Unmodified  Successful  Unsuccessful  Skipped  Committed  Sub

Webi Name	ID	Processed	Committed	Last Status	*Data Type	*Value
Customer List By Country	5071891	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Successful	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Customer List By Country and Region	5071896	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Successful	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Product Class Sold by Country	5071857	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Successful	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Product Name Sold by Country	5071855	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Successful	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Product Type Sold by Country	5071859	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Successful	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Quantity Sold by Country	5071847	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Successful	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Sales By Country	5071845	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Successful	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Sales By Customer	5071915	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Successful	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Sales by Product Class	5071875	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Successful	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Sales by Product Name	5071877	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Successful	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Sales by Product Type	5071869	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Successful	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

- Name the projects meaningfully
- Work on them when you have the time
- Process all reports together or select specific reports



# Expanded Solution Feature



Custom Field Mapping

# Custom Field Mapping



## Key Considerations

- Universes may need to be made more user friendly
- Objects may need to be renamed or moved to different folders

# Custom Field Mapping



BI Search | Insight Search | Mapping Project - Xtreme\_Source\_to\_Target.aposumproj

Universe Mappings

Source Universe Name	Source Universe Path	Target Universe Name	Target Universe Path
XtremeSourceUNV	Universes/Xtreme	XtremeTargetUNX.unx	Universes/TargetUNX

Universe Mapping Configuration

Source Universe (XtremeSourceUNV - Universes/Xtreme)

Name	Type	Path
Customer	Folder	\Customer
City	Dimension	\Customer\City
Country	Dimension	\Customer\Country
Customemame	Dimension	\Customer\Customemame
Region	Dimension	\Customer\Region
Orders	Folder	\Orders
Orderdate	Dimension	\Orders\Orderdate
Orderid	Dimension	\Orders\Orderid
Quantity	Measure	\Orders\Quantity
Unitprice	Measure	\Orders\Unitprice

Target Universe (XtremeTargetUNX.unx - Universes/TargetUNX)

Name	Type	Path
CustInfo	Folder	\CustInfo
City	Dimension	\CustInfo\City
Country	Dimension	\CustInfo\Country
CustName	Dimension	\CustInfo\CustName
Region	Dimension	\CustInfo\Region
OrderInfo	Folder	\OrderInfo
Order Id	Dimension	\OrderInfo\Order Id
OrderDate	Dimension	\OrderInfo\OrderDate
Product Class	Dimension	\OrderInfo\Product Class
Product Name	Dimension	\OrderInfo\Product Name

Hide Items which have been matched to a target item

Hide Items which have been matched to a source item

Universe Links

Source Name	Source Type	Source Path	Target Name	Target Type	Target Path
Customemame	Dimension	\Customer\Customemame	CustName	Dimension	\CustInfo\CustName
Country	Dimension	\Customer\Country	Country	Dimension	\CustInfo\Country
Region	Dimension	\Customer\Region	Region	Dimension	\CustInfo\Region
City	Dimension	\Customer\City	City	Dimension	\CustInfo\City

- Map source UNV objects and classes to target UNX

# Custom Field Mapping



BI Search | Insight Search | Project - 2023-3-9\_UNV Mapping.aposproj

Result Filters  
 Unmodified  Successful  Unsuccessful  Skipped  Committed  Submitted

Webi Name	ID	Processed	Committed	Last Status	*Data Type	*Value	*Advanced	*Errors	Last Updated
Prices_By_Country_and_Region	5019569	<input type="checkbox"/>	<input type="checkbox"/>	Unmodified	?	?	?	0	1/25/2023 2:09:38 PM
Products sold in Country	50								
Sales By Country	50								
Sales By Product Class	50								
Sales By Product Type	50								

Custom Universe Mapping

Mapping Strategy

If no mapping strategy is provided here, the mapping strategy provided in the settings will be applied. If neither is provided, the BI default mapping strategy will be applied.

Universe Mapping Projects

strator\Documents\APOS\Migration\Webi Migrator 14.x\Projects\Xtreme\_Source\_to\_Target.aposumproj

Universe mapping projects will overwrite mapping strategies and apply the matches specified within the project. Mapping strategies are still used when no matches are specified.

Close

- Apply custom mapping to the repointing project

\* denotes a validation column

# Custom Field Mapping



Change Universe on Web Intelligence

Conversion List

Source Universe	Source ID	Source Path	Target Universe	Target ID	Target Path	Status
XtremeSourceUNV	4933117	/Xtreme/XtremeSourceUNV	Xtreme TargetUNIX.unx	4933776	/TargetUNIX/XtremeTargetUNIX.unx	

Clear Target

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

Select Target Universe

/TargetUNIX/XtremeTargetUNIX.unx [Set]

Filter List... Clear Filter

UNIX Target Location: [ ] Add [ ]

- Select the target UNX when executing the project

# Customer Scenario #1



- **Customer:** US Division 1 University
- **BusinessObjects:**
  - Version 4.2 Sp8
  - 80 UNV Universes
  - 50,000 Web Intelligence Reports
- **Key Motivator:**
  - Moving to Oracle version 19c
    - UNV connectivity not fully supported
- **Key Objectives:**
  - Convert 80 UNV Universes to UNX
  - Reprint 50,000 Web Intelligence reports to the UNX Universes
  - Validate to make sure nothing is broken
  - Execute the upgrade with limited personnel resourced available
  - Complete the project in a timely manner, without extensive project timelines



# Customer Scenario #2



**Customer:** Global Technology Manufacturer

- **BusinessObjects:**

- Version 4.2
- 250,000 Web Intelligence reports

- **Key Motivator:**

- Moving from legacy data warehouse to Snowflake DW

- **Key Objectives:**

- Migrate all 250,000 reports to leverage UNX
- Aggressive upgrade process timelines
- Massive volumes of reports requires rapid execution of report connection upgrades
- Massive volumes of content requires multiple personnel involved
- Needing strong content and project controls
- System metadata integration



# Customer Scenario #3



- **Customer:** Large Multi-national Financial Institution
- **BusinessObjects:**
  - Version 4.3
- **Key Motivator:**
  - UNV support deadlines
  - Long-term commitment to BOBJ
- **Key Objectives:**
  - Begin the upgrade process so that the project can be completed in a structured and orderly fashion
  - Central BI Team to handle the heavy lifting with automation
  - Many BI User departments to coordinate with, and time upgrade with each department and their priorities
  - Automate to vastly reduce cost and execution time







# APOS Web Intelligence Migrator



## STREAMLINE YOUR MOVE TO UNX UNIVERSE



### INVENTORY SYSTEM CONTENT

- Scan your system for Web Intelligence reports using the criteria you specify
- Accurately plan and prioritize upgrade steps with a deep understanding of your BI system:
  - ◆ *Report Objects* ◆ *Universe Objects* ◆ *System Objects*
  - ◆ *Report/Universe Usage* ◆ *Report/Universe Structure*
  - ◆ *Schedules & Instances* ◆ *System Structure & Security*



### HIGH VOLUME REPOINTING OF REPORTS

- Reprint Web Intelligence reports in bulk from old UNV to new UNX
- Update existing reports or create a new copy in a custom location & naming convention
- Project-based approach to select and manage Web Intelligence reports conversion process
- Define a mapping strategy, or create custom mapping
- Scale conversion infrastructure to handle high volume scenarios with multiple conversion processors



### BULK CONVERSION OF UNIVERSES

- High volume conversion of universes from UNV to UNX format
- Use system inventory to set project priorities for the most important universes



### VALIDATE UPGRADE SUCCESS

- Automated bulk testing and validation
- Ensure a successful and accurate upgrade process
- Take the risk out of migration



### STRONG PROCESS CONTROLS

- Synchronize and scale your migration processes
- Enterprise-grade process controls
- Handle massive volumes of reports with distributed project management

# STREAMLINE YOUR MOVE TO UNX UNIVERSE

## Freemium Upgrade Offer

---

### Automate UNX Adoption with APOS Web Intelligence Migrator

APOS Web Intelligence Migrator helps you reduce risk, reduce cost, and increase speed of UNX upgrades through rapid, high volume conversion, bulk repointing, automated testing and strong process controls.

---

#### APOS Freemium offer includes:

- ✓ Free Production deployment use of APOS Web Intelligence Migrator
- ✓ Scan and inventory your SAP BI systems
- ✓ Bulk convert all UNV universes to UNX
- ✓ Bulk repoint a target set of 200 WebI reports
- ✓ Validate migration success
- ✓ 100 days of free use
- ✓ Inventory multiple systems
- ✓ Guidance and support



Access now at  
[apos.com/freemium](https://apos.com/freemium)



# 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

## 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 Web Intelligence Migrator



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

# APOS Solutions for SAP Analytics Cloud



## APOS Live Data Gateway

- High performance, live data connectivity from SAC to wide range of data sources



## APOS Publisher for Cloud

- Automated broadcasting and distribution of personalized SAC reports to target user groups



## APOS Insight for Cloud

- Enhanced Monitoring, Auditing and Report Testing for SAP Analytics Cloud



# Upcoming Events



## Big Data Analytics – Uniting SAP Analytics Cloud and Snowflake Cloud Data Platform Webinar

April 20, 2023 – 11 am EDT

The **Snowflake Cloud Data platform** has become a very popular option for a distributed data landscape, letting its customers consolidate petabytes of data into a single secure, flexible, and readily accessible platform.

**APOS Live Data Gateway** is the rapid access conduit between the Analytics capabilities of SAC and the volume and variety of data in the Snowflake Data Cloud platform, providing the velocity necessary for a Big Data Analytics.

This session will examine how **APOS Live Data Gateway** facilitates:

- Expanded Analytics
- Live Data Connectivity
- Simplified Business Layer.
- Self-Service Modelling
- Exceptional Performance

SAP® Analytics Cloud



snowflake®



Register at [www.apos.com](http://www.apos.com)

# STAY CONNECTED



LINKEDIN

APOS Systems Inc.



TWITTER

@APOS\_Systems

**Interested in learning more about SAP Analytics Cloud and Sharing your experience?**

**JOIN THE SAP ANALYTICS CLOUD GROUP TODAY!**



Join easily by searching "SAP Analytics Cloud (SAC)" & Request to Join on  
LinkedIn!

# QUESTIONS?

Please enter your questions in the Q&A panel.





# Thank You!

## Get in Touch

### WEBSITE

[www.apos.com](http://www.apos.com)

### EMAIL ADDRESS

[info@apos.com](mailto:info@apos.com)

### PHONE NUMBER

(+1) 519 894 2767



Bonus slides from previous webinars

# Key Upgrade Process Considerations



Creating fresh new UNX Universes

Objects/Classes differ from UNV to UNX

Need way to automate mapping

Need way to apply mapping strategy

# High Volume Requirements

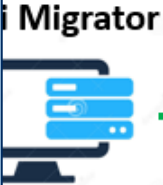


## High Volume

### UNV Reports



- Customer had over 250,000 reports
- Biggest concern was it even possible to migrate the reports manually. Was deemed simply not possible.
- Needed to be able to migrate reports in larger chunks at the same time in a more automated approach
- WebI Migrator would help overcome this challenge



### UNX Reports



# High Speed Requirements



## UNV Reports



## High Speeds

- Given the volume of reports, and requirements to deal with process migration in larger chunks doing it manually could take years
- They wanted WebI Migrator to have maximum performance in the migration process
- Customizations were made to maximize performance

WebI Migrator



## UNIX Reports



# High Scalability Requirements



UNV Reports



## High Scalability

Webi Migrator



Webi Migrator



Webi Migrator



Webi Migrator



UNIX Reports



- Customer had aggressive timelines for project. Even with customizations for Volume, and Speed, they wanted a scalable solution to help meet aggressive timelines
- APOS enabled them to execute the migration process across multiple nodes of Webi Migrator instances



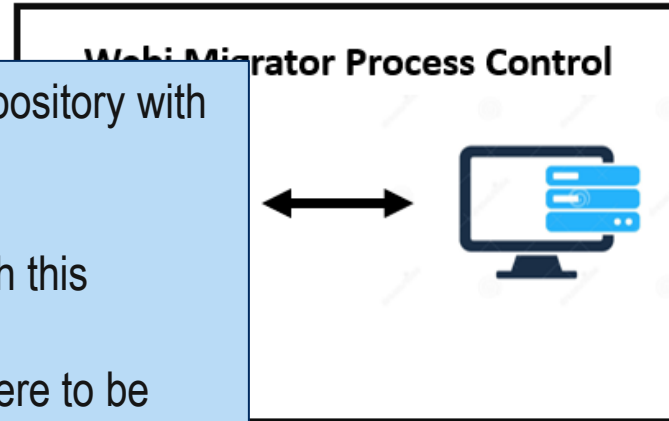
# High Process Control Requirements



## High Process Control

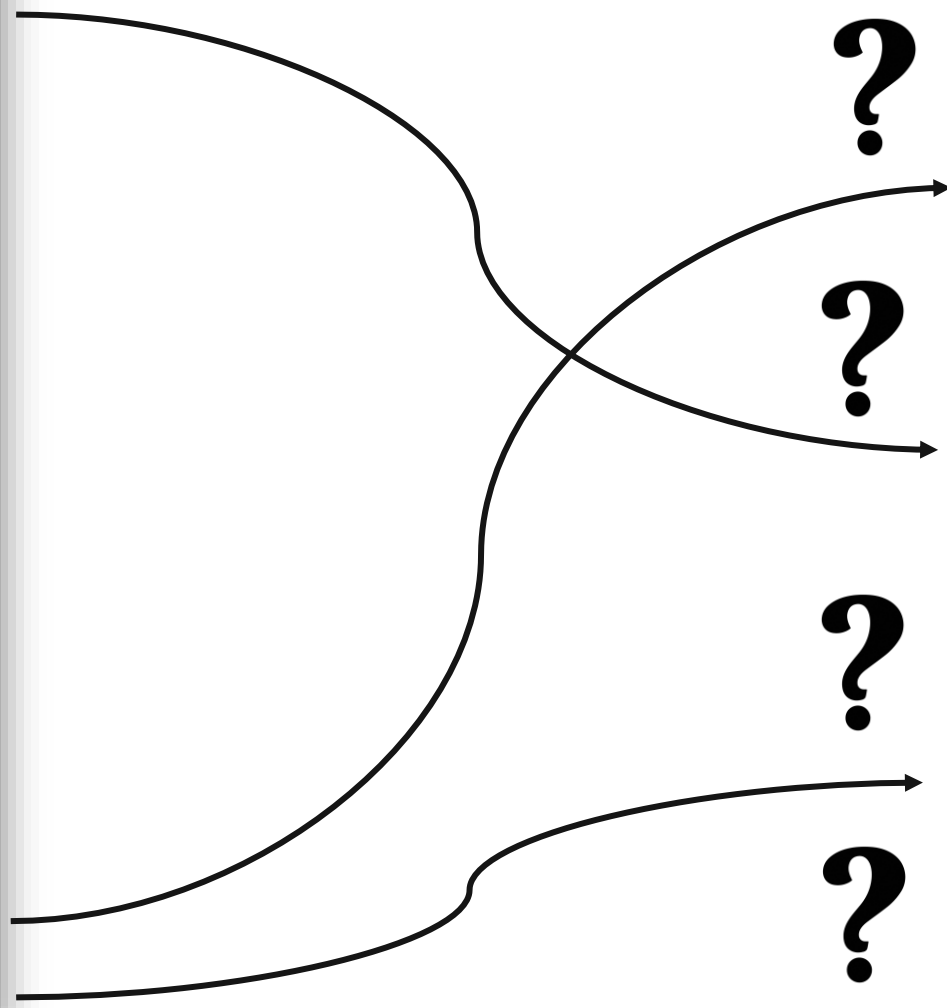
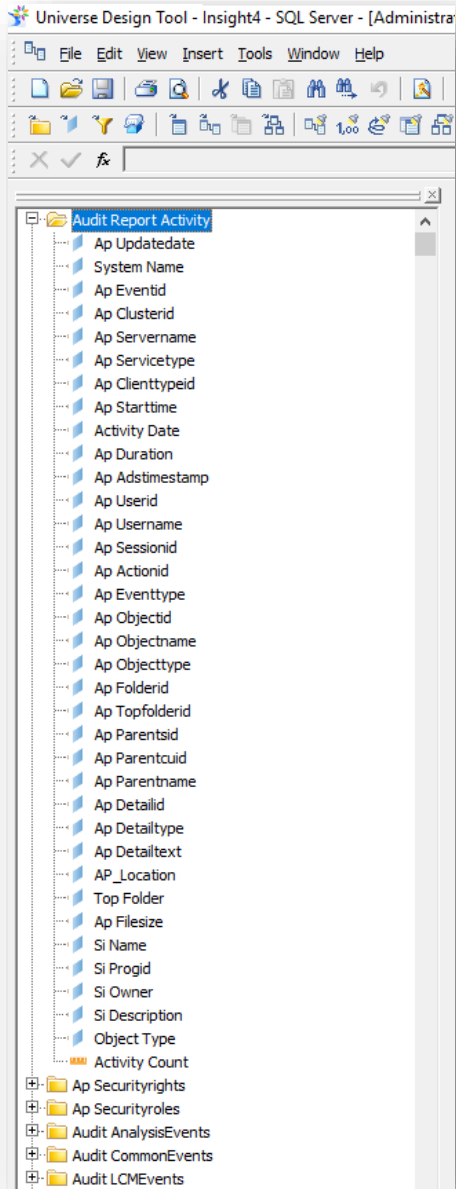
UNV Reports

UNIX Reports

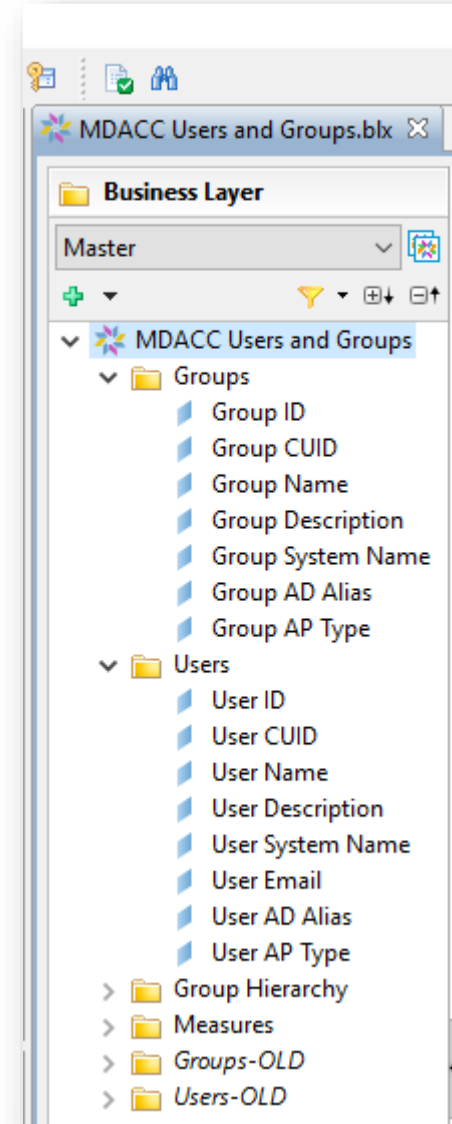


- Customer had a 3<sup>rd</sup> party metadata repository with information about the reports
- Needed Web Migrator to integrate with this repository so they could
  - Properly identify which reports were to be migrated and when
  - Keep track of what has been migrated and what has not, given volume

# UNV Universe



# UNV Universe





# Mapping Strategy applied during migration process



Universe Mapping Configuration

Source Universe (Insight4 - SQL Server - Universes/APOS Insight)

Name	Type	Path
Ap Securityrights	Folder	\Ap Securityrights
Ap Applytoobjects	Dimension	\Ap Securityrights\A...
Ap Applytosubobjects	Dimension	\Ap Securityrights\A...
Ap Object Location	Dimension	\Ap Securityrights\A...
✓ Ap Object Name	Dimension	\Ap Securityrights\A...
Ap Objectcuid	Dimension	\Ap Securityrights\A...
Ap Objectguid	Dimension	\Ap Securityrights\A...
Ap Objectid	Dimension	\Ap Securityrights\A...
Ap Objectruid	Dimension	\Ap Securityrights\A...
Ap Principal Name	Dimension	\Ap Securityrights\A...
Ap Principalcuid	Dimension	\Ap Securityrights\A...
Ap Principalguid	Dimension	\Ap Securityrights\A...
Ap Principalid	Dimension	\Ap Securityrights\A...
Ap Principalruid	Dimension	\Ap Securityrights\A...
Ap Rightdescription	Dimension	\Ap Securityrights\A...

Target Universe (Insight4 - SQL Server.unx - Universes/Insight\_UNX)

Name	Type	Path
Ap Securityrights	Folder	\Ap Securityrights
Ap Applytoobjects	Dimension	\Ap Securityrights\Ap ...
Ap Applytosubobjects	Dimension	\Ap Securityrights\Ap ...
Ap Object Location	Dimension	\Ap Securityrights\Ap ...
Ap Object Name	Dimension	\Ap Securityrights\Ap ...
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Ap Rightdescription	Dimension	\Ap Securityrights\Ap ...

Universe Links

Source Name	Source Type	Source Path	Target Name	Target Type	Target Path
Ap Object Name	Dimension	\Ap Securityrights\Ap...	Ap Object Name	Dimension	\Ap Securityrights\Ap...

# Mapping Strategy applied during migration process



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Name	Type	Path
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Universe Links

Source Name	Source Type	Source Path	Target Name	Target Type	Target Path
Ap Object Name	Dimension	\Ap Securityrights\Ap...	Ap Object Name	Dimension	\Ap Securityrights\Ap...

# APOS Web Intelligence Migrator



**A migration solution focused on automating time and labor-intensive activities of upgrading to the UNX Universe within SAP BusinessObjects.**

- Time Savings
- Timely Project Execution
- Accurate Project Execution
- Project Controls

## **Size of Challenge = Volume of Content**

Small size deployments – address manually?

Medium size deployments – automation brings big efficiencies

Large and Extra-large deployments – automation is a must