

Exploring the Universe with Explorer]

Dallas Marks
Session 1002



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[Breakout Description

Like a Hubble telescope for your BI environment, SAP® BusinessObjects Explorer software brings together the simplicity and speed of search with the trust and analytical power of BI to provide immediate answers to casual business users. This session focuses primarily on Explorer Standard Edition, which allows SAP BusinessObjects customers to begin using Explorer right away with existing universes. The benefits of Explorer Accelerated Edition will also be presented.

Learn how your IT organization can deploy and support Explorer effectively to provide users at all levels of the organization with intuitive access to the same “single version of the truth” that powers existing BI applications.

[About Dallas Marks

- Dallas is an SAP Certified Application Associate and authorized trainer for Web Intelligence, Information Design Tool, Universe Design Tool, Dashboards (formerly Xcelsius), and SAP BusinessObjects Business Intelligence administration. A seasoned consultant and speaker, Dallas has worked with SAP BusinessObjects tools since 2003 and presented at the North American conference each year since 2006.
- Dallas has implemented SAP BusinessObjects solutions for a number of industries, including retail, energy, health care, and manufacturing. He holds a master's degree in Computer Engineering from the University of Cincinnati.
- Dallas blogs about various business intelligence topics at <http://www.dallasmarks.org/>. You can follow him on Twitter at [@dallasmarks](https://twitter.com/dallasmarks).

[Learning Points

- Learn how to effectively install and deploy Explorer in your organization
- Understand how SAP BusinessObjects Explorer Information Spaces leverage your existing SAP Business Objects investments in universes and data security
- Visualize a solution to bring BI to your organization's masses

[Agenda

- What can Explorer do for your Organization?
- Installation and Configuration
- Security Roles
- Information Spaces: Creating, Securing and Personalizing (Demonstration)
- Next Steps
- Your Questions

NOTE: This presentation focuses on the standard edition of *SAP BusinessObjects Explorer* (formerly Polestar), not the *SAP BusinessObjects Explorer, accelerated version for SAP BW*

Special thanks to Ty Miller, Technical Director at SAP BusinessObjects, for answering my questions and clarifying Explorer internals. Also thanks to Dan Kearnan, director of Solution Marketing at SAP BusinessObjects.



Deploying BI for the Masses

WHAT CAN EXPLORER DO FOR YOUR ORGANIZATION?

Casual Information Workers Underserved by Traditional BI

Slide courtesy of SAP © 2009



Casual Information Workers

Who?

- Casual Users whose information needs are underserved by traditional BI tools
- Information workers who want easier, self service environments to find and explore information
- Users involved in day to day decisions affecting their line of business

What are their needs?

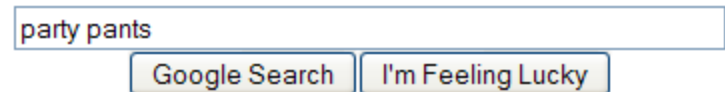
- Instant answers to “on-the-fly” questions without annoying time delays
- Intuitive interfaces with familiar ‘common language’ workflows
- Open access to all relevant corporate information
- No training required to get up and running

How do they get their answers today?

- Request help from IT or Business Analysts often leading to delays and frustration
- Rely on gut feel, intuition or best guess to make key decisions affecting important outcomes

[Inspiration

What if this...

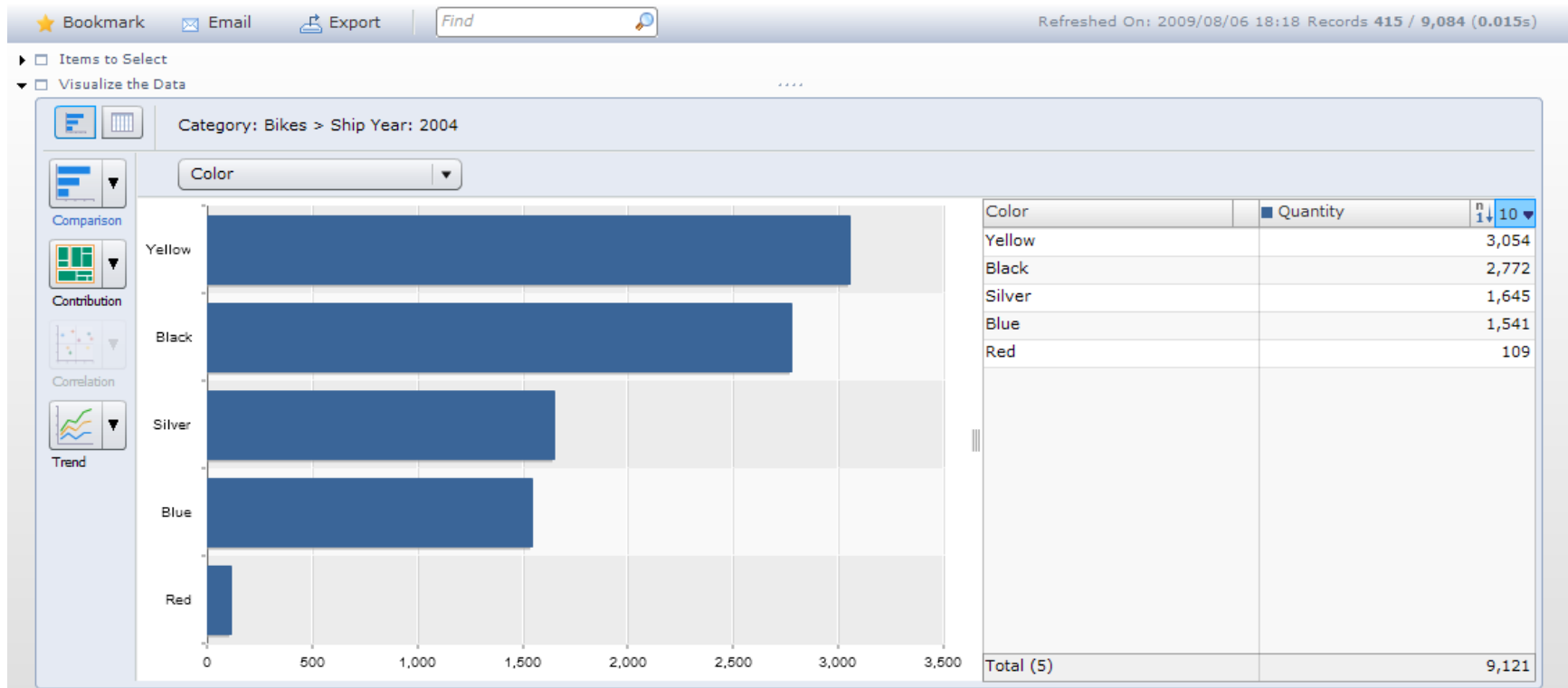


...became the front door
to your corporate BI?



[What is SAP BusinessObjects Explorer?

SAP BusinessObjects Explorer is a web-based search and exploration application that enables business professionals to explore and search through business information. By selecting from available values, you can focus the data set to the set of KPIs that interests you for a specific business question.



[What is SAP BusinessObjects Explorer?

SAP BusinessObjects Explorer XI 3.2 is:

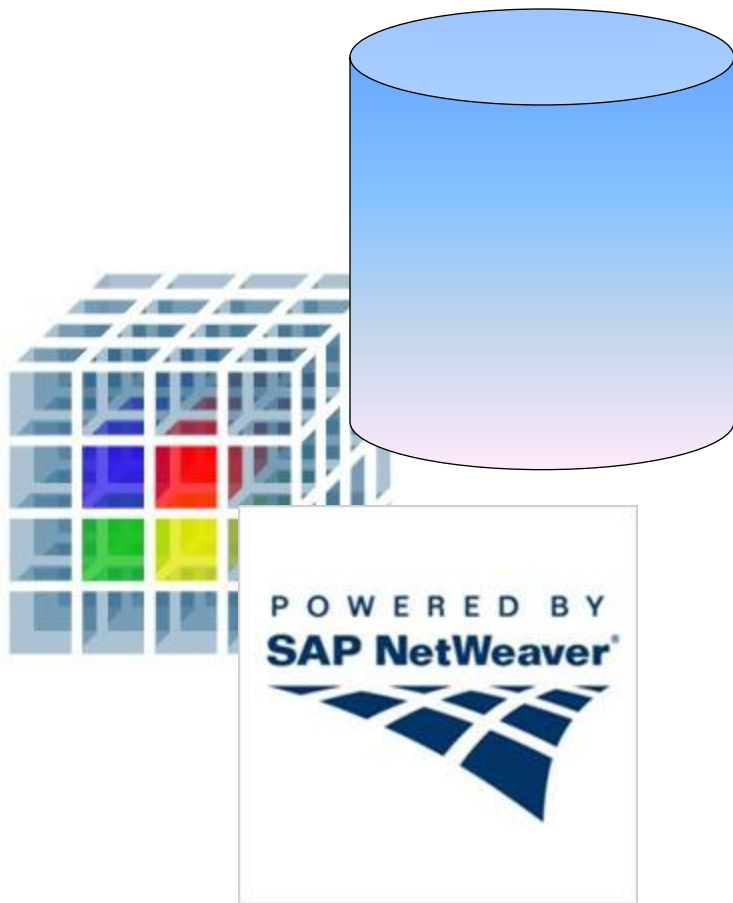
- Radical re-imagining of Intelligent Question XI R2
- Debuted as Polestar on the XI R2 platform
- Rebranded as Explorer in mid-July 2009 for XI 3.1 SPI release
- Supported on Microsoft Windows, IBM AIX, and SUSE Linux
- Available for iOS devices such as Apple iPhone and iPad



Manage Spaces

Visualize the Data

[What kinds of data can be visualized?



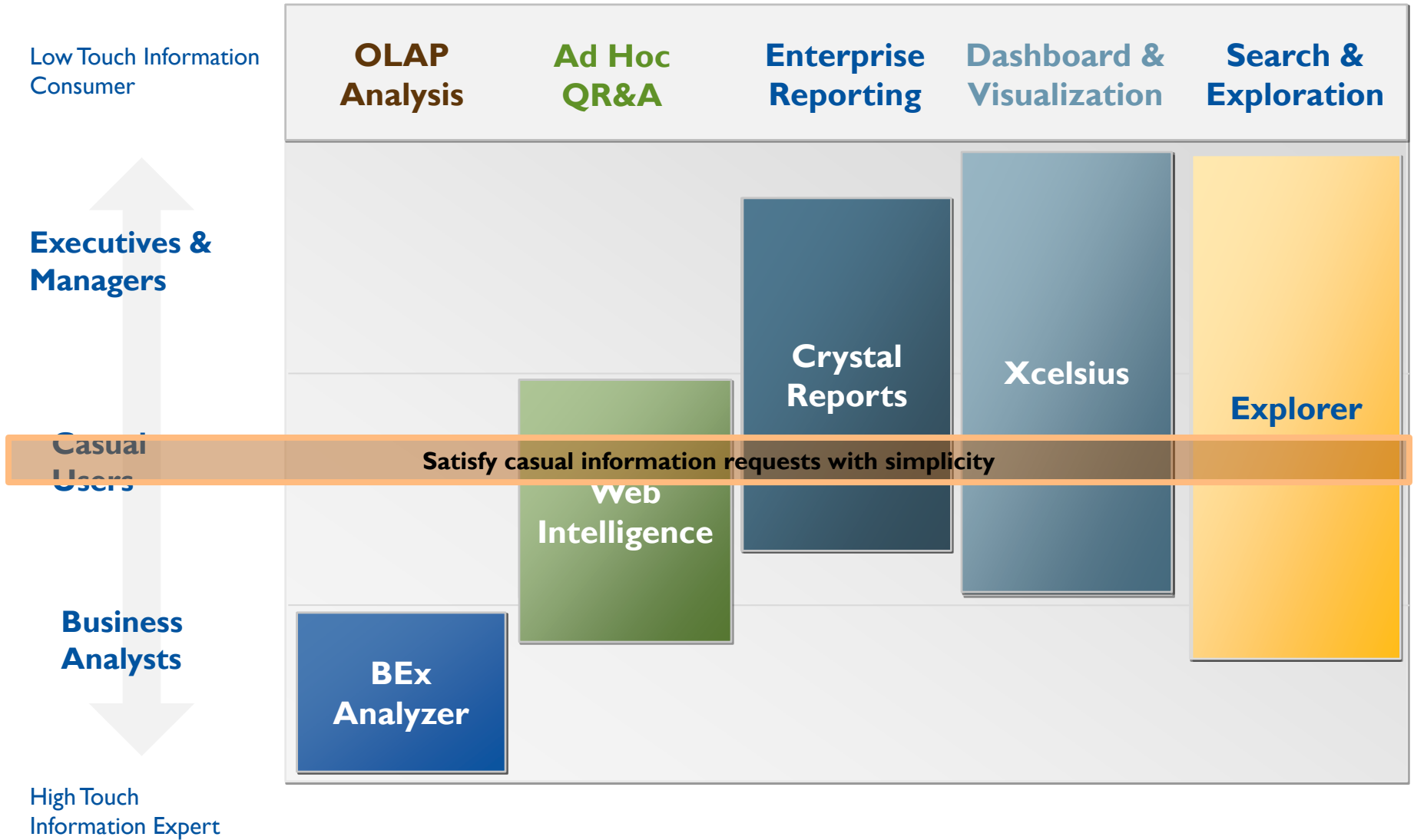
Explorer creates Information Spaces on the following data sources:

- Operational applications or data warehouses via BusinessObjects universes (Relational or OLAP)
- Unstructured data via SAP BusinessObjects Text Analysis
- Microsoft Excel workbooks
- NetWeaver Business Warehouse Accelerator*

* This presentation focuses on the standard edition of SAP BusinessObjects Explorer, not the accelerated version for SAP NetWeaver BW

The Right BI Solution for the Right BI Need

Slide courtesy of SAP © 2009





Exploring the Universe with Explorer

INSTALLATION AND CONFIGURATION

[Installation Prerequisites

Before you begin:

- Plan and size your deployment architecture. A guide entitled [Sizing SAP BusinessObjects Explorer](#) is available online from the SAP Service Marketplace.
- Explorer requires a Java-based Web Application Server such as SAP Netweaver, Apache Tomcat, Oracle/BEA WebLogic or IBM WebSphere. Explorer is **not** supported on IIS/.NET or the Web Application Container Service (WACS)
- SAP BusinessObjects Enterprise XI 3.1 (or Edge BI 3.1) must be installed and configured correctly before you install SAP BusinessObjects Explorer XI 3.2.
- You must uninstall previous installations of SAP BusinessObjects Polestar or Explorer prior to installing SAP BusinessObjects Explorer XI 3.2.

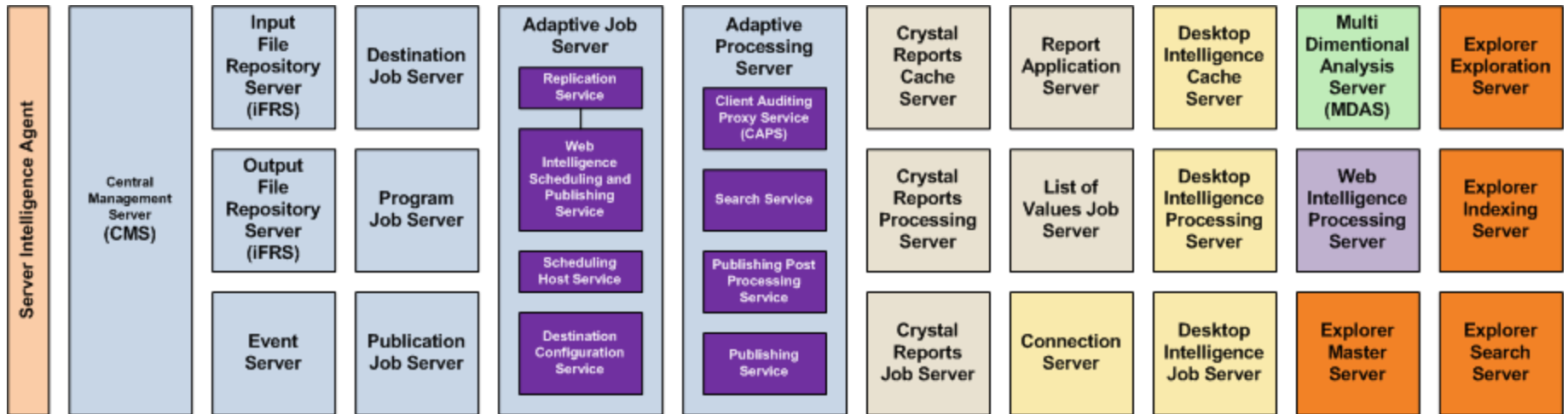
[Polestar? What's that?!?!?

Some minor vestiges of Polestar remain in this release. None of these items are cause for concern- just something to be aware of.

- BusinessObjects Enterprise servers are still named Polestar servers in the CMC
- Default URL is `http://[servername]:[port number]/polestar/`
- Software is installed at **<BusinessObjectsEnterprise install_dir>** /Polestar I2.0/ (ex. C:/Program Files/Business Objects/Polestar I2.0/)
- Web Application Server files installed at **<Polestar_web_app_install_dir>**\<web_app_server>\webapps (ex. C:\Program Files\Business Objects\Tomcat55\webapps\polestar)
- Error messages are prefixed with PS
- Explorer is listed in the CMC Applications area but in the alphabetical location where Polestar would appear

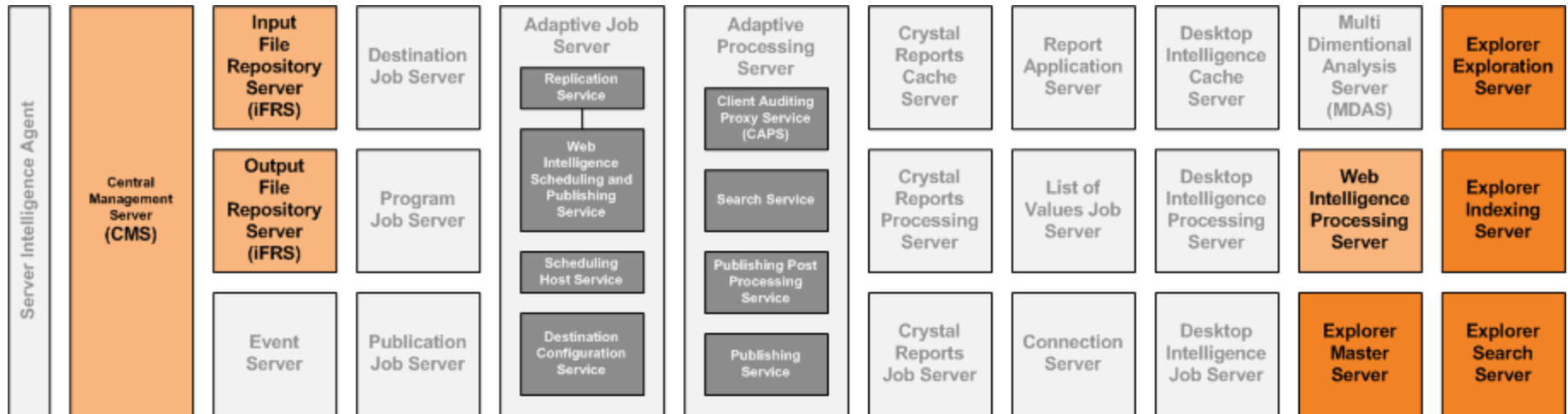
SAP BusinessObjects Explorer Architecture

Explorer adds four new servers to the BusinessObjects Enterprise architecture...



SAP BusinessObjects Explorer Architecture

Explorer adds four new servers to the BusinessObjects Enterprise architecture...



And additionally requires support from the CMS, Input and Output FRS, and Web Intelligence Processing Servers

[What does each Explorer server do?

Explorer
Master
Server

- The **Explorer Master Server** manages all of the other Explorer servers.
- The **Explorer Indexing Server** provides and manages the indexing of Information Space data and metadata.
- The **Explorer Search Server** processes search queries and returns search results.
- The **Explorer Exploration Server** provides and manages the Information Space exploration and analysis capabilities including search on data, filtering and aggregation.

Explorer
Indexing
Server

Explorer
Search
Server

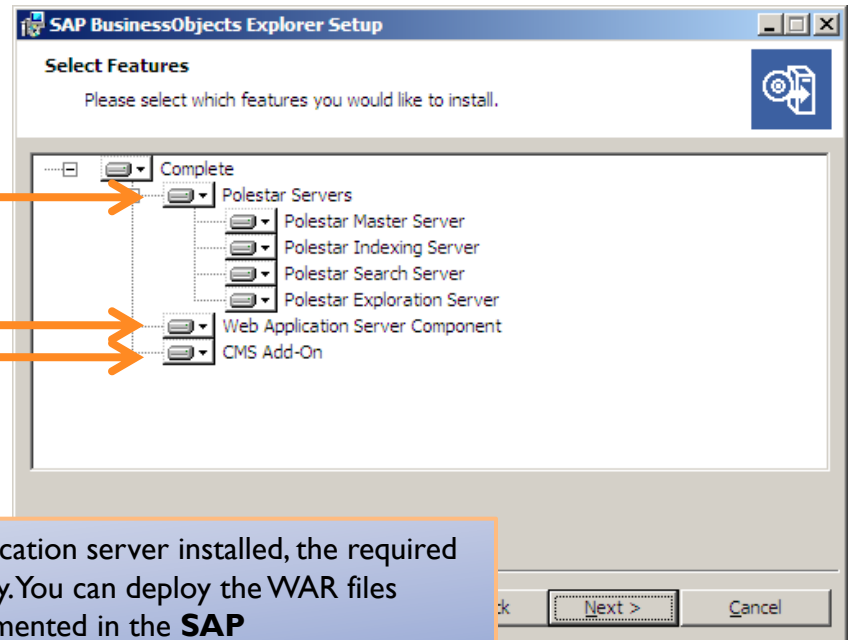
Explorer
Exploration
Server

[Installing Explorer

Explorer consists of three primary software components:

- Explorer Servers (Master, Index, Search, Exploration)
- Web Application Server Component
- CMS Add-on

The installation program allows each component to be installed separately if deployment to multiple locations is desired.



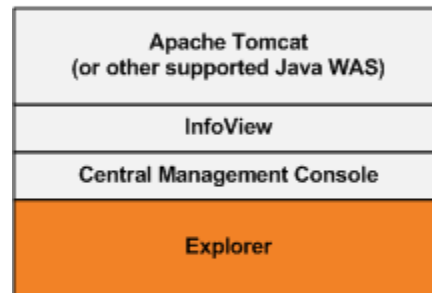
If you do not have the default BusinessObjects Enterprise web application server installed, the required WAR (Web Application Archive) files have to be deployed separately. You can deploy the WAR files manually using the *wdeploy* application. This procedure is well documented in the **SAP BusinessObjects Explorer Installation, Deployment and Administration Guide**.

[Explorer in Edge BI Configuration

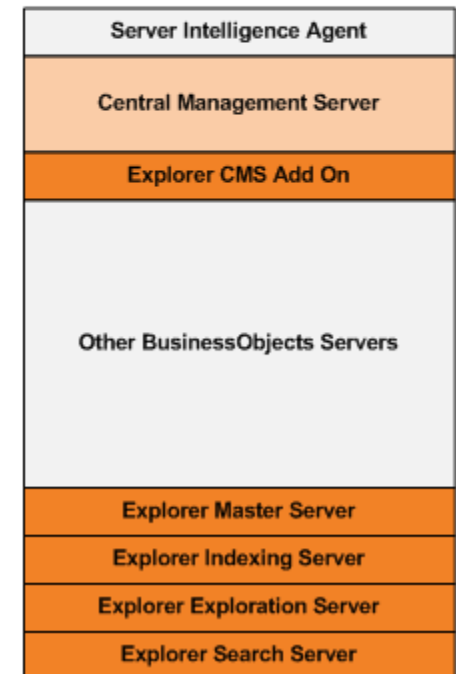
- Explorer is installed directly on the Edge BI server
- The Web Application Server (WAS) can reside on a separate machine to reduce load on Edge BI server
- Smaller Edge deployments can place WAS, Edge BI, and Explorer components on single server



Web Application Server



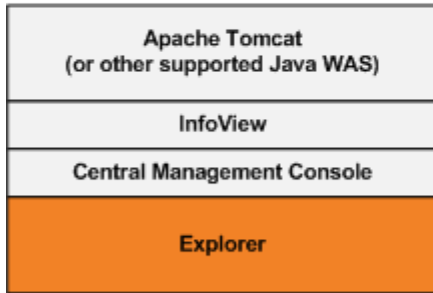
BusinessObjects Edge BI/
BusinessObjects Edge Server



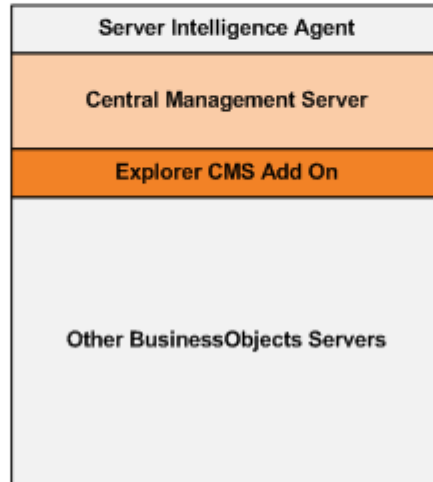
[Explorer in Distributed Configuration



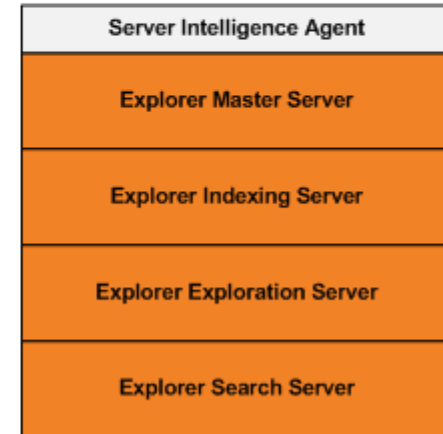
Web Application Server



SAP BusinessObjects Enterprise XI 3.1



BusinessObjects Explorer
(dedicated server)

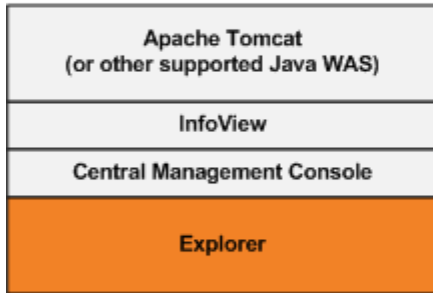


A guide entitled Sizing SAP BusinessObjects Explorer is available online from the SAP Service Marketplace

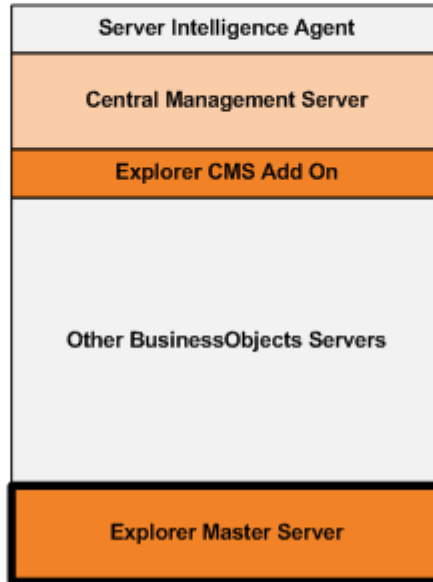
[Explorer Failover



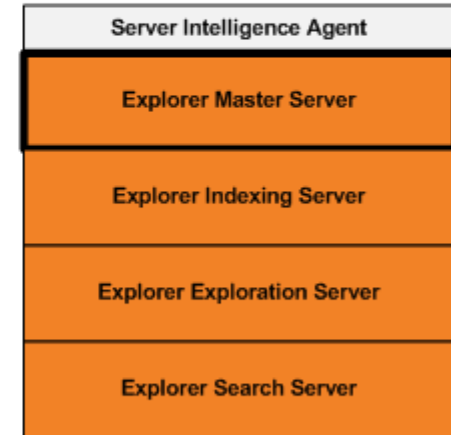
Web Application Server



SAP BusinessObjects Enterprise XI 3.1



BusinessObjects Explorer
(dedicated server)

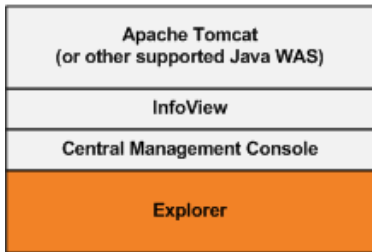


Multiple Master servers on different physical machines can be deployed to support failover. In previous editions of Polestar, only one Master server was active at any one time. This restriction is lifted in Explorer XI 3.1 SPI.

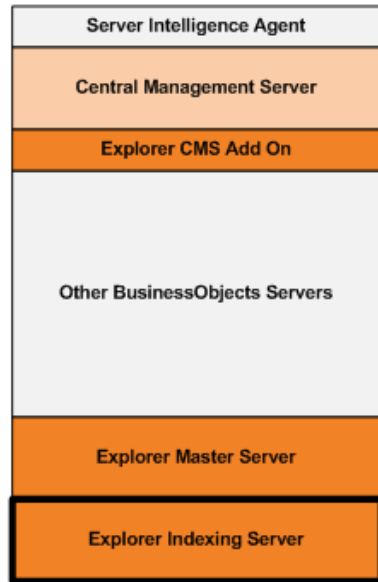
[Explorer Load Balancing - Indexing



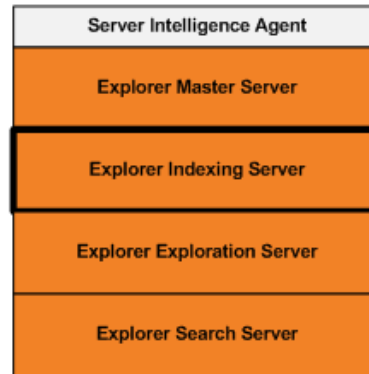
Web Application Server



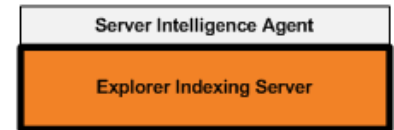
SAP BusinessObjects Enterprise
XI 3.1



BusinessObjects Explorer
(dedicated server)



BusinessObjects Explorer
(dedicated server)

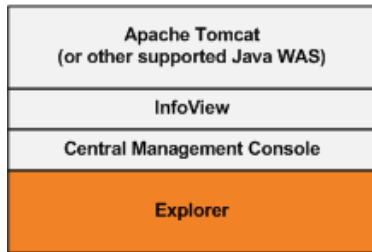


Multiple Index servers on different physical machines can be deployed to improve performance of index operations.

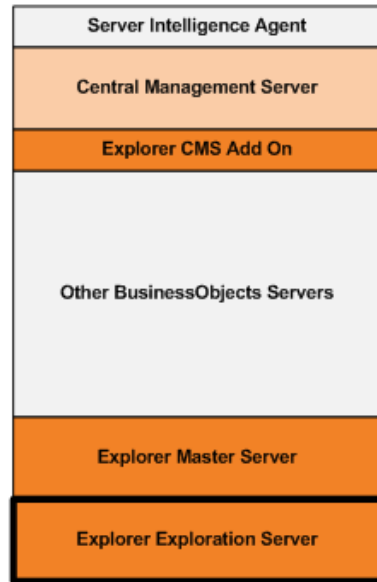
Explorer Load Balancing - Exploration



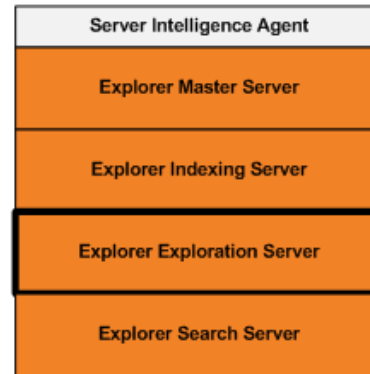
Web Application Server



SAP BusinessObjects Enterprise
XI 3.1



BusinessObjects Explorer
(dedicated server)



BusinessObjects Explorer
(dedicated server)

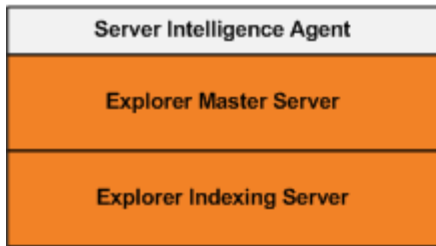


Multiple Exploration servers on different physical machines can be deployed to improve performance of user explorations.

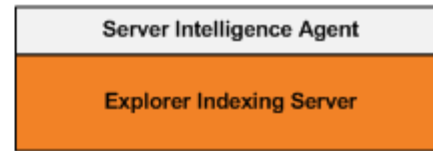
[Building and Distributing an Index – I of 4



Index Server A



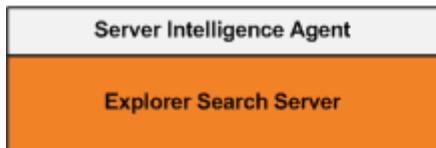
Index Server B



Index A



Search Server C



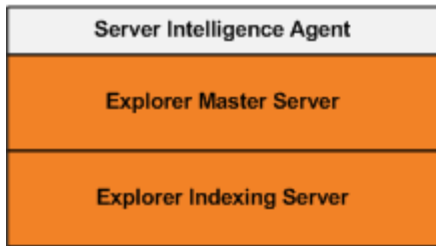
Exploration Server D



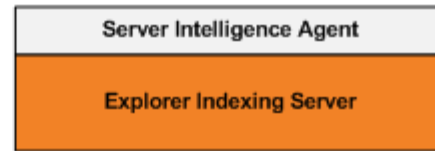
[Building and Distributing an Index – 2 of 4



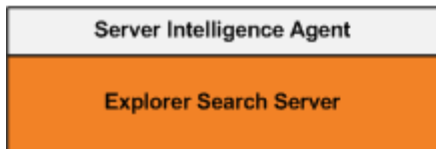
Index Server A



Index Server B



Search Server C



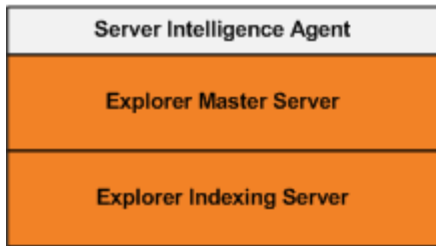
Exploration Server D



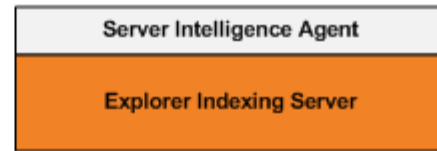
[Building and Distributing an Index – 3 of 4



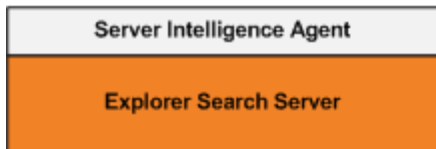
Index Server A



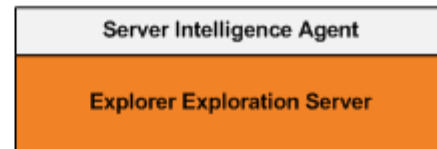
Index Server B



Search Server C



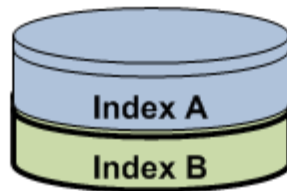
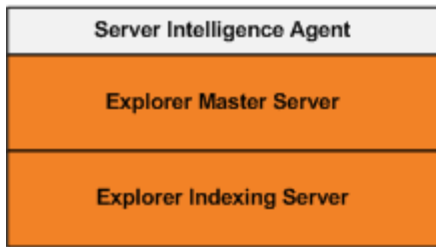
Exploration Server D



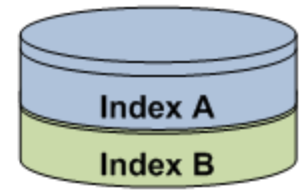
[Building and Distributing an Index – 4 of 4



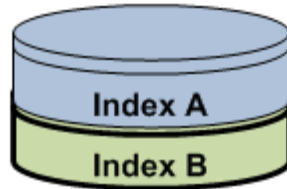
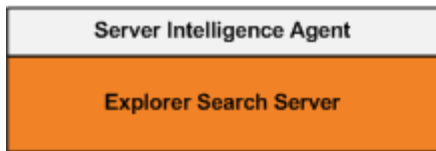
Index Server A



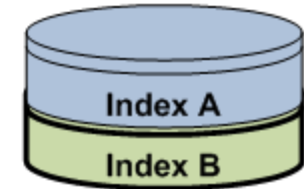
Index Server B



Search Server C



Exploration Server D



[Explorer Server Parameters

- The Master server has no configurable properties

Explorer Master Service

This service has no configuration property.

- The Indexing, Search and Exploration servers have a single parameter for the root index file directory

Explorer Exploration Service

Use Configuration Template

Index Files Directory:

Explorer Indexing Service

Re
 Se
 Use Configuration Template

Index Files Directory:

Resto *Explorer Search Service*

Set C Use Configuration Template

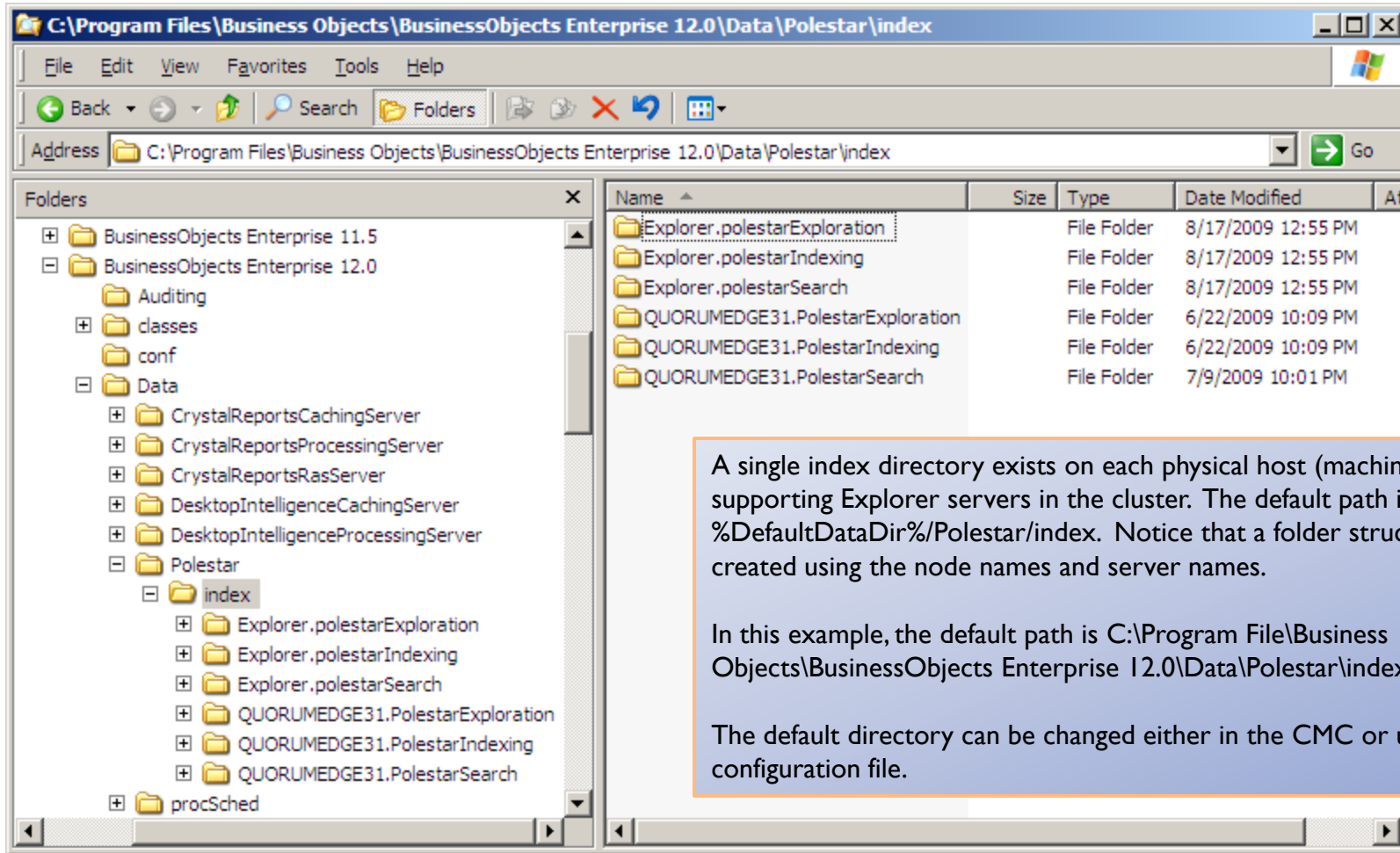
Index Files Directory:

Restore System Defaults

Set Configuration Template

- There are no audit events for Explorer servers

Explorer Server Parameters – cont.



The screenshot shows a Windows Explorer window with the address bar set to `C:\Program Files\Business Objects\BusinessObjects Enterprise 12.0\Data\Polestar\index`. The left pane shows a tree view of folders, with the 'index' folder under 'Polestar' selected. The right pane displays a list of folders with columns for Name, Size, Type, and Date Modified.

Name	Size	Type	Date Modified
Explorer.polestarExploration		File Folder	8/17/2009 12:55 PM
Explorer.polestarIndexing		File Folder	8/17/2009 12:55 PM
Explorer.polestarSearch		File Folder	8/17/2009 12:55 PM
QUORUMEDGE31.PolestarExploration		File Folder	6/22/2009 10:09 PM
QUORUMEDGE31.PolestarIndexing		File Folder	6/22/2009 10:09 PM
QUORUMEDGE31.PolestarSearch		File Folder	7/9/2009 10:01 PM

A single index directory exists on each physical host (machine) supporting Explorer servers in the cluster. The default path is `%DefaultDataDir%\Polestar/index`. Notice that a folder structure is created using the node names and server names.

In this example, the default path is `C:\Program File\Business Objects\BusinessObjects Enterprise 12.0\Data\Polestar\index`

The default directory can be changed either in the CMC or using a configuration file.

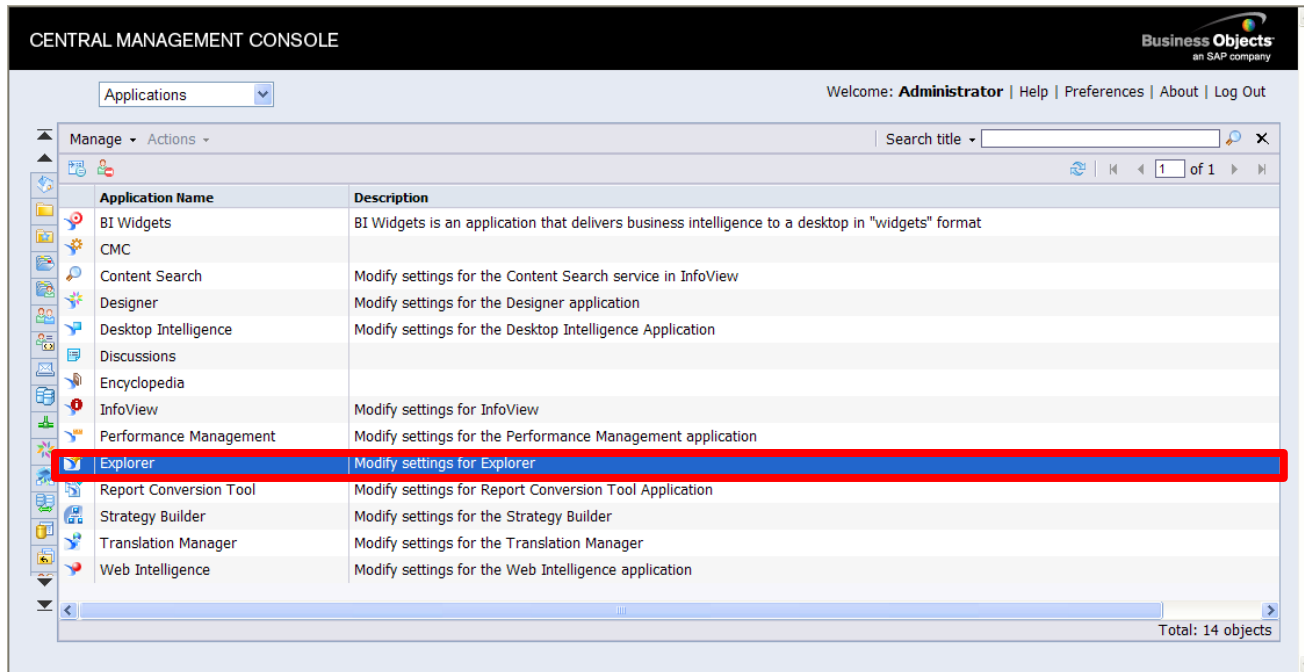


Exploring the Universe with Explorer

SECURITY

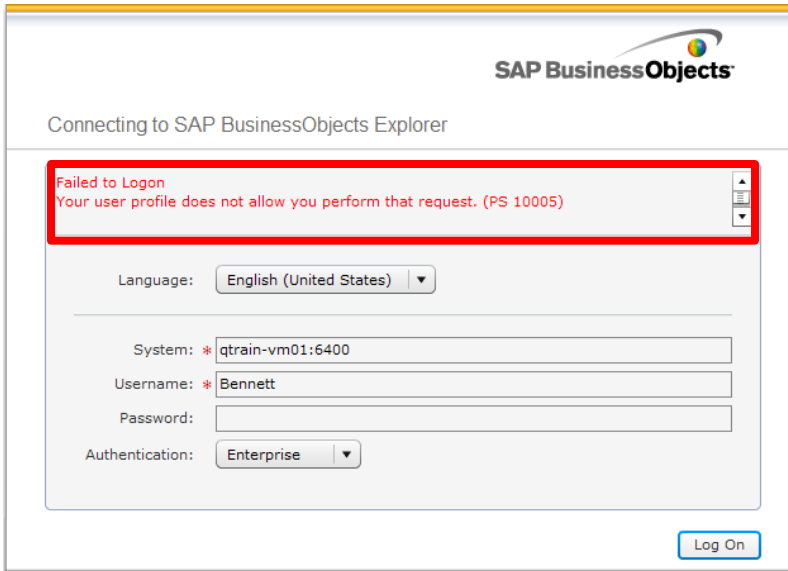
[Granting Access to Explorer

- Access to Explorer is controlled in the CMC Applications management area, as with other BusinessObjects applications



[Granting Access to Explorer

- By default, the Everyone group has the View access level and can access Explorer. To deny access, remove this right, effectively granting Everyone the No Access right.
- Users without logon privileges will receive the following error message – **Your user profile does not allow you to perform that request. (PS 10005)**



The screenshot shows the SAP BusinessObjects Explorer login interface. At the top, it says "SAP BusinessObjects" and "Connecting to SAP BusinessObjects Explorer". A red-bordered box highlights an error message: "Failed to Logon" followed by "Your user profile does not allow you perform that request. (PS 10005)". Below the error message, there are input fields for "Language" (set to English (United States)), "System" (qtrain-vm01:6400), "Username" (Bennett), "Password", and "Authentication" (Enterprise). A "Log On" button is at the bottom right.

Note: Sometimes users will receive a generic and sometimes vague error message (PS 10001, PS10005, etc.) from Explorer regarding logon issues.

In certain instances, the user (and the help desk) will gain more insight from having the user log into InfoView and seeing a more specific and descriptive error message.

[Explorer Application Rights

- There are three primary roles associated with Explorer, each having unique application rights:
 - Space Explorer
 - Space Creator
 - Administrator
- Explorer installation does not create custom access levels for these roles; however, they can be easily created
- The existing Administrator group can be leveraged instead of a unique custom access level, if desired

Custom Access Level – Space Explorer

CENTRAL MANAGEMENT CONSOLE Business Objects
an SAP company

Included Rights: GBN 2009 Space Explorer

Properties
User Security
Included Rights

Add/Remove Rights

GBN 2009 Space Explorer Common Filter Settings: Assigned Rights

Collection	Type	Right Name	Status	Apply To
Application	Explorer	Explore Information Spaces	✓	
Application	Explorer	Explore Information Spaces: Export to Bookmark/Email	✓	
Application	Explorer	Explore Information Spaces: Export to CSV	✓	
Application	Explorer	Explore Information Spaces: Export to Image	✓	
Application	Explorer	Explore Information Spaces: Export to Web Intelligence	✓	
Application	Explorer	Log on to Explorer and view this object in the CMC	✓	
Application	InfoView	Log on to InfoView and view this object in the CMC	✓	

Close

Total: 7 objects

Custom Access Level – Space Creator

CENTRAL MANAGEMENT CONSOLE Business Objects
an SAP company

Included Rights: GBN 2009 Space Creator

Properties
User Security
Included Rights

Add/Remove Rights

Common Filter Settings: Assigned Rights

Collection	Type	Right Name	Status	Apply To
Application	CMC	Log on to the CMC and view this object in the CMC	✓	
Application	Explorer	Explore Information Spaces	✓	
Application	Explorer	Explore Information Spaces: Export to Bookmark/Email	✓	
Application	Explorer	Explore Information Spaces: Export to CSV	✓	
Application	Explorer	Explore Information Spaces: Export to Image	✓	
Application	Explorer	Explore Information Spaces: Export to Web Intelligence	✓	
Application	Explorer	Manage Information Spaces	✓	
Application	Explorer	Manage Information Spaces: Create a new Space	✓	
Application	Explorer	Manage Information Spaces: Launch indexing	✓	
Application	Explorer	Manage Information Spaces: Modify a Space	✓	
Application	Explorer	Manage Information Spaces: Schedule indexing	✓	
Application	Explorer	Delete objects	✓	
Application	Explorer	Edit this object	✓	
Application	Explorer	Log on to Explorer and view this object in the CMC	✓	
Application	InfoView	Log on to InfoView and view this object in the CMC	✓	
Application	Web Intelligence	Create document	✓	
Application	Web Intelligence	Data Tracking: Enable for users	✓	
Application	Web Intelligence	Data Tracking: Enable format display changes by users	✓	
Application	Web Intelligence	Edit SQL	✓	

Close

Total: 7 objects

[Explorer Folder, Universe and Connection Rights

- Explorer users, just like Web Intelligence users, also need appropriate access on:
 - Folders where Information Spaces are stored
 - Universes used by Information Spaces
 - Connections used by those Universes
- Administrators can add these rights
 - To their Explorer custom access levels (Space Creator, Space Explorer)
 - Or rights can also be assigned effectively using pre-defined access levels (ex. View On-Demand)

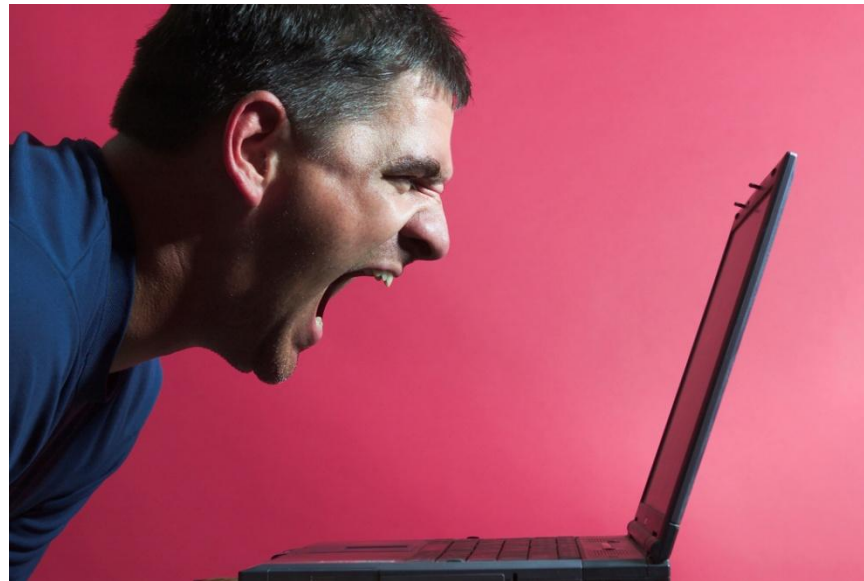


Exploring the Universe with Explorer

INFORMATION SPACES

[Building Information Spaces from Universes

- First, the good news.
 - SAP BusinessObjects Explorer can utilize your existing universes
- And now, the bad news
 - SAP BusinessObjects Explorer can utilize your existing universes



[Universe Design Considerations

- Measures that have an aggregation method of 'None' cannot be used in the Information Space facets, although the values do appear in the data table.
- Measures that have an aggregation method of “Database delegated” are not supported.
- Measures of non-numeric type are not supported. For example: character, long name, and date.
- Detail objects on BusinessObjects universes are not supported. As a result, SAP NetWeaver Display Attribute objects are not supported.
- Formatted dimension objects created from NetWeaver BW key figures are not supported.

[Data Security using Universe Restriction Sets

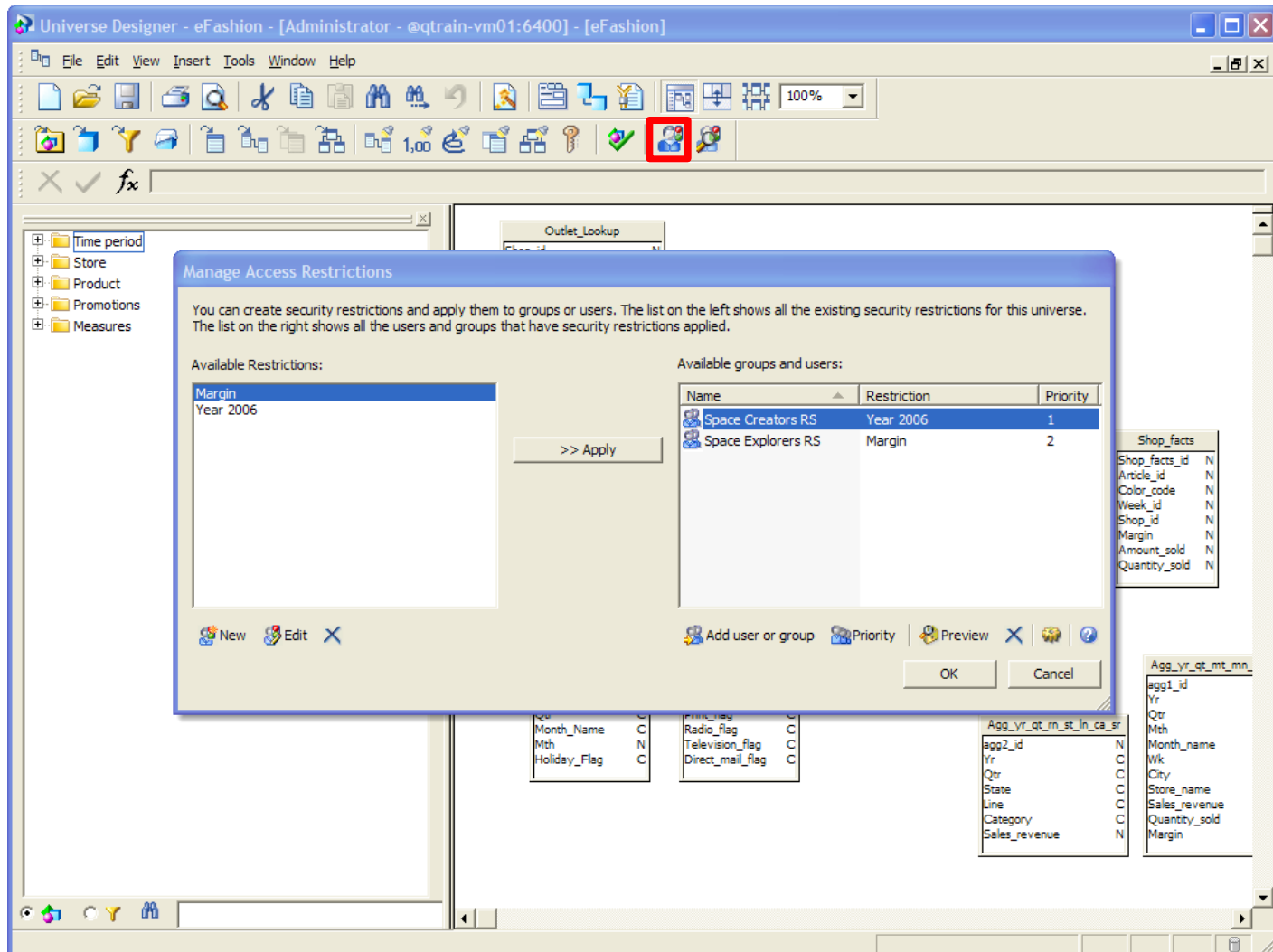
- Row and Column security can be achieved through Restriction Sets created in Designer. These will affect the search and exploration results within Explorer.
- Row restrictions affect the Information Space if those restrictions apply to **the user who scheduled the index creation/rebuilding**.
- Object (column) restrictions affect the Information Space if those restrictions apply to **the user who is performing a search or exploration**. Restricted objects will not appear as facets for those users.
- For more information on universe restriction sets, consult my Insight 2007 presentation, [Secure Universes Using Restriction Sets](#).



Exploring the Universe with Explorer

DEMO: **CREATING INFORMATION SPACES**

DEMO - Restriction Sets in Designer



[DEMO – Creating an Information Space

Create Information Space on: eFashion

Properties Objects Scheduling

Name * eFashion Texas

Description An information space limited to Texas sales data from 2004-2006.

Keywords

Folder GBN 2009 Explorer

Status

Regional Settings English (United States)

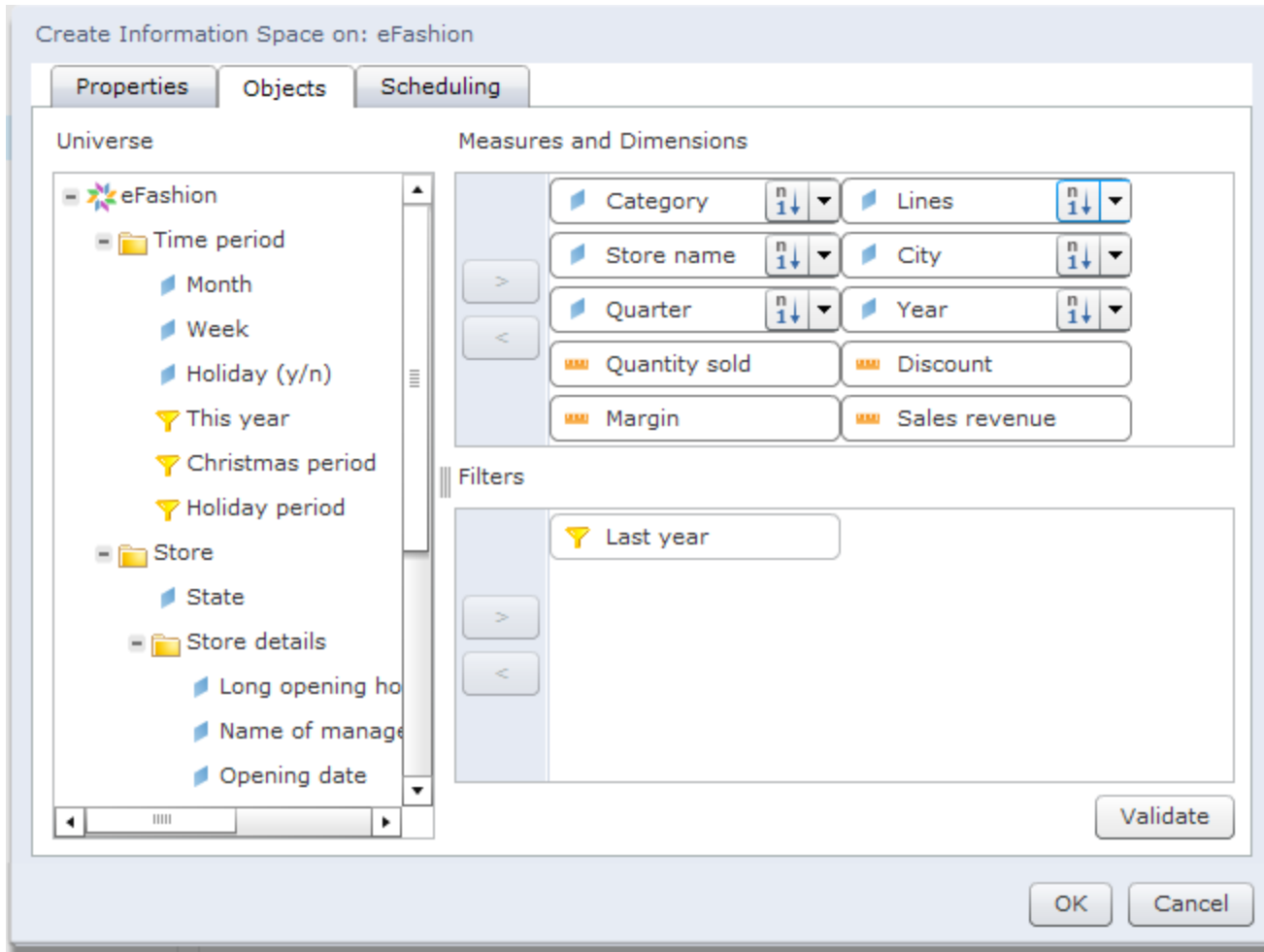
Use End-user Settings

Universe Name eFashion

Universe Description eFashion retail Data Warehouse dated 14 Oct 2007. 89,000+ row fact table.
Version 13

OK Cancel

[DEMO – Creating an Information Space



[DEMO – Creating an Information Space

Create Information Space on: eFashion

Properties Objects Scheduling

Scheduling Mode

Once

Periodically

None

Run Every

Minute(s)

Hour(s)

Day(s)

Week(s)

Scheduling Details

Account to Run Scheduling *

Password

Confirm Password

Scheduling Time Range

Start Date At: :

End Date At: :

OK Cancel



Exploring the Universe with Explorer

DEMO: **PERSONALIZING INFORMATION SPACES**

[DEMO – Personalize

Add Hidden Demo Slide



Exploring the Universe with Explorer

DEMO: **SAP BUSINESSOBJECTS EXPLORER**

DEMO – Explore

Home | Search Results: "party pants" california margin | Explore: eFashion 2006

Bookmark | Email | Export | "party pants" california marg

Refreshed On: 2009/08/20 10:07 Records 75 / 16,369 (0.031s)

Items to Select

Measures: Margin (SUM) | None | None (Showing 1 To 3 Of 6 Suggestions)

State	Category	Store name	Quarter	Color
California	Party pants	e-Fashion Los Ang...	Q2	Ficelle
Texas	T-Shirts	e-Fashion San Fra...	Q4	Oxford Light Blue J...
New York	Soft fabric		Q1	White
Illinois	Belts,bags,wallets		Q3	Ink
DC	2 Pocket shirts			Gaelic
Massachusetts	Sweats			Natural
Florida	Skirts			Brown Fancy 1
Colorado	Samples			
	Turtleneck			
	Short sleeve			
	Advanced...			

Visualize the Data

State: California > Category: Party pants

Quarter

Quarter	Margin
Q1	\$2,558
Q2	\$4,863
Q3	\$1,605
Q4	\$3,497
Total (4)	\$12,522



Exploring the Universe with Explorer

NEXT STEPS

[Relevant ASUG SBOUC 2010 Breakout Sessions



Explorer is a featured conference topic with eleven (11) breakout sessions. Consult the Session Builder web site for a complete list.

- **Planning and Implementing Large Scale Explorer Deployments with High Availability**
Roy Wells | Session 1001
Tuesday, October 05, 2010 | 9:15 AM - 10:15 AM
- **Explorer 4.0 Deep Dive**
Frederic Vanborre | Session 1005
Tuesday, October 5, 2010 | 4:00 PM – 5:00 PM
- **Explorer - Around the Enterprise in Eight Seconds**
Murali Lagisetty | Session 1006
Wednesday, October 6, 2010 | 9:15 AM - 10:15 AM
- **SAP Universe Designer techniques to build/enhance universes for use with SAP Explorer.**
Michael Kiser | Session 1012
Thursday, October 7, 2010 | 10:30 AM - 11:30 AM
- **Exploring Auditor Data**
Eric Vallo | Session 1013
Thursday, October 7, 2010 | 11:45 AM – 12:45 PM

[Getting More Information about Explorer



HELP PORTAL

- Lots of good stuff on the [SAP Help Portal](http://help.sap.com) @ <http://help.sap.com>, including
 - What's New in SAP BusinessObjects Explorer
 - SAP BusinessObjects Explorer At a Glance
 - SAP BusinessObjects Explorer Glossary
 - SAP BusinessObjects Explorer Installation, Deployment and Administration Guide
 - SAP BusinessObjects Explorer Online Help
- Older documents on SAP Help Portal filed under “Polestar” for version XI R2 may be helpful
 - BusinessObjects Polestar Information Space Creation Guidelines Whitepaper

[Getting More Information about Explorer, cont.



SUPPORT PORTAL

- Additional Documentation on SAP Service Marketplace @ <http://service.sap.com/bosap-support>
 - Sizing SAP BusinessObjects Explorer



COMMUNITY NETWORK

- [SAP BusinessObjects Explorer Community](http://www.sdn.sap.com/irj/boc/explorer) @ <http://www.sdn.sap.com/irj/boc/explorer>

- **BusinessObjects Enterprise XI 3.0/3.1: Administration and Security**
2 days - course code BOE310
- **BusinessObjects XI 3.0/3.1 Universe Design**
Introduction – 3 days - course code BOU310
Advanced - 2 days - course code BOU320
- **BusinessObjects XI 3.0/3.1 Web Intelligence**
Introduction – 2 days - course code BOW310
Advanced – 1 day - course code BOW320

Official SAP BusinessObjects curriculum is available on-site at your location or at authorized education centers around the world.

[Key Learnings

- Explorer utilizes your organization's existing BusinessObjects universes and security and extends them with a Google-like search interface
- Explorer's unique navigation of Information Spaces via Facets makes corporate data accessible and actionable to a wider audience in your organization
- Explorer results can be exported to Web Intelligence for additional analysis
- Explorer can be utilized by smaller organizations using Edge BI or larger organizations with scalability and fault tolerance requirements.

Thank you for participating.

Please remember to complete and return your evaluation form following this session.

For ongoing education on this area of focus, visit the Year-Round Community page at www.asug.com/yrcc

**SESSION CODE:
1002**

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