

Business Intelligence
for a **PASSIONATE**
COMMUNITY



**Session 0505 - Mastering the Dark Side: Deploying Explorer
Accelerated 4.1 with SAP HANA and BWA**

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Learning Points

- What's New in Explorer 4.1?
- Install and configure Explorer Accelerated 4.1
- Connect Explorer to BWA and HANA
- Create explorer “polestar” BW indexes in BWA and HANA/

What's New in Explorer 4.1?

What's New

- **Added .UNV data source support**
 - SAP BusinessObjects Explorer now allows you to access universes in both the .UNV and .UNX (relationalsources only) formats
- **Added SSO support**
 - SAP BusinessObjects Explorer now supports SAML Single Sign-On (SSO) and SSO Kerberos
- **Increased keyboard accessibility**
 - SAP BusinessObjects Explorer now provides keyboard accessibility for both Information Spaces and Exploration Views. Keyboard access is always available to all users and does not require special installation or settings.
- **Improved Online Help**
 - The Online Help has been rewritten and updated to facilitate access to information and examples for the creation and management of information spaces and exploration views, the personalization of information spaces, indexation, visualizing your data, and getting the most out of the Explorer user interface.

What's New

■ SAP HANA Integration

- Performance Optimizations: This new ability gives administrators the ability to define if would like to enable << Optimization >> for an Information space. When opening an exploration it is instantaneous.
- Refresh of Content on Real Time Sources: This new ability will help to better understand when data has been refreshed and could force the refresh to retrieve the last minute updates.
- Access to BW data on HANA: This new ability enables access to BW Data hosted in a SAP HANA database via automatically generated Analytic or Calculated views.

■ Access to Data

- Change source capabilities for Infospaces: This new ability allows for changing the original data source to another data source.

■ Usability

- Free Facets: This new ability is to offer users a way to not see the facet panel on load.

■ Mobility

- Integration into SAP BI Mobile platform: Explore Documents can now be viewed in SAP BusinessObjects Mobile Application

Prerequisites and Installation

Explorer Accelerated 4.1 Linux Prereqs.

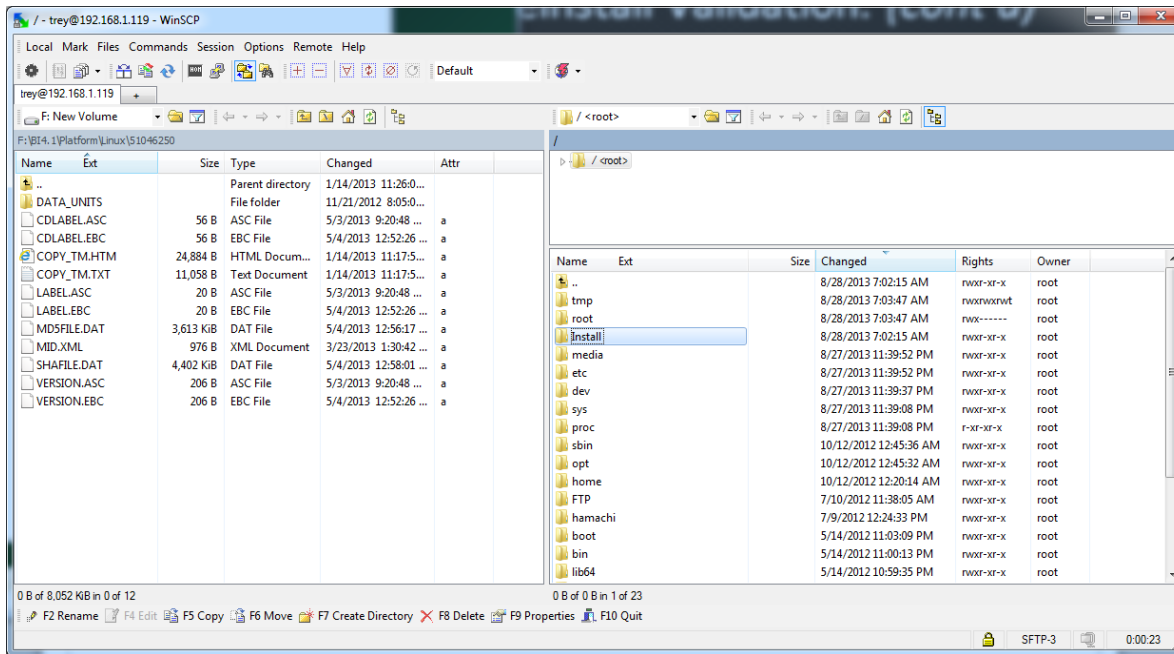
- **Minimum Patch Level for SUSE Linux Enterprise Server 11**
 - No additional components required outside the SLES 11 RTM install.
- **Minimum Patch Level for Red Hat Enterprise Linux 5**
 - Required Red Hat 5 operating system install plus:
 - Red Hat Enterprise Linux 5 Update 3
- **Minimum Patch Level for Red Hat Enterprise Linux 6**
 - Required Red Hat 6 operating system install plus:
 - Red Hat Enterprise Linux 6 Update 2
- **Required components for Red Hat Enterprise Linux 6**
 - `glibc-2.12-1.7-el6.i686` and `libstdc++-4.4.4-13.el6.i686`
 - Yum install `glibc-2.12-1.7-el6.i686` and `libstdc++-4.4.4-13.el6.i686`

Explorer Accel. Linux Preinstall Validation.

- Create a user account with the following permissions:
 - Read, write, and execute scripts for the appropriate directories (below).
- Log on with the user account that will do the BOBJ installation. From a command prompt, execute the locale command.
 - Ensure that LANG and LC_ALL are set to **en_US.utf8**.
- Use the ping command to ensure connectivity to a CMS server.
- Create directories for the Install files and installation location in the root directory:
 - /Install and /Explorer
- Set permissions to **755**, recursive.
 - **chmod -R 755 /Install**
 - **chmod -R 755 /Explorer**

Explorer Accel. Linux Preinstall Validation. (cont'd)

- Use an application like WinSCP to drag & drop installation files to the appropriate folder:



Beginning the Explorer Accel. Linux Installation

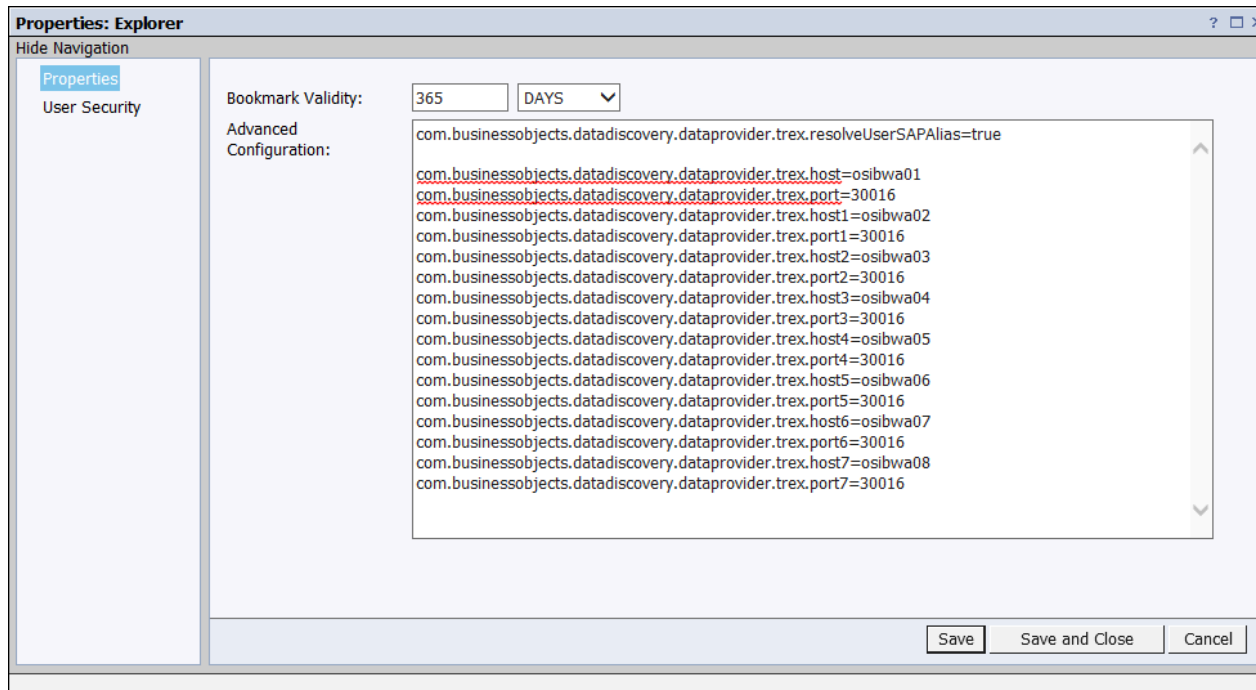
- Start the install by running **./Install.sh** from the location you copied the install files to.
- When prompted, use the **/Explorer** folder you created earlier.
- If prompted, use a **user-based** install, instead of system install
 - This will run the SIA and all the explorer processes under the user account you are installing with.
 - If the need arises, you can tighten security by adjusting the user account permissions.

Configuring BWA in the CMC...

- Log On to the CMC as an administrator, and navigate to **Applications, Explorer**.
- Add the following line to allow Aliased SAP accounts to relay into explorer:
 - **com.businessobjects.datadiscovery.dataprovider.trex.resolveUserSAPAlias=true**
- Create two lines for each BWA server as follows:
 - **com.businessobjects.datadiscovery.dataprovider.trex.host=server01**
com.businessobjects.datadiscovery.dataprovider.trex.port=30016
 - “server01” on the 1st line is the hostname of the first BWA server in the cluster.
 - The CMS will load balance to each server.
 - “00” on the trex instance number for each server, placed between “3” and “16,” to determine the connection port.

Configuring BWA in the CMC...

- Your BWA connection parameters should look something like this:



Configuring Explorer for HANA in the CMC...

- Log On to the CMC as an administrator, and navigate to **Applications, Explorer**.
- Create one line for your SAP HANA instance as follows:
 - `newdb.url=jdbc:sap://hostname.optimalsol.com`
 - **hostname** is your fully qualified name for your HANA instance.
- Security:
 - For database credentials, use the following command:
 - **newdb.authentication**
 - For SSO, you will use the groups you are allowing access to HANA, through the CMC.
 - To use a static user and password instead:
 - `newdb.authentication=static`
 - `newdb.username=configuredUser`
 - `newdb.password=password`
 - You must restart all explorer servers, after making any of these changes!

Connecting BOBJ 4.1 to HANA. (New Way)

- Create a JDBC Connection to HANA, using IDT.

Where's the data?

Indexing and Exposing BW Objects

Indexing and Exposing BW Objects

- You can use either the existing BIA Index Maintenance Wizard for BusinessObjects Polestar or the enhanced interface for activating BW objects.
- BIA Index Maintenance Wizard for BusinessObjects Polestar
 - Prerequisites
 - In the ABAP Editor (transaction SE38), start program RSDDTREX_ADMIN_MAINTAIN with OBJECT = 'POLESTAR_SYSTEM' and VALUE = 'X'
 - When running the for the Index Maintenance Wizard for the first time, you must select a language for all the texts displayed in BusinessObjects Polestar. You **cannot** offer different languages for different users. All the indexed texts are determined for the selected language.
 - Once the prerequisites are completed you will then:
 - Select the required BI InfoProviders (InfoCube, Multiprovider or Query)
 - Assign authorizations for users
 - Define conversions for key figures
 - Call BIA Index Maintenance Wizard to create logical rules
 - Create and fill the Index

Index Types

BW Accelerator Index for an InfoCube

- Once the Infocube is activated for SAP BusinessObjects Explorer, the system adds texts and characteristic values to the InfoCube's data in its external format. If a standard BWA index already exists for this InfoCube, the Explorer enhancements can be activated without the BWA index being deleted and rebuilt.

BW Accelerator Index for a MultiProvider

- With this option you can one or the following options
 - You can index all InfoProviders in the MultiProvider individually.
 - You can index all MultiProvider data as a snapshot.

BW Accelerator Index for a Query

- Use this option if InfoProvider data first needs to be subject to complex processing, meaning that the required functionality in the BWA Engine will not be available.
- To do this, you can index the snapshot of a query result in the BWA and make it available for SAP BusinessObjects Explorer.

Index Types (*cont 'd*)

BW Accelerator Index for a Query (Restrictions)

A query result **cannot** be indexed if the query meets one of the following conditions:

- It is an input-ready query. An aggregation level is used as the InfoProvider.
- Input-ready variables are used in the query. (As indexing is carried out in the background, no entries can be made.)
- The query contains a temporary hierarchy join. (The result cannot be stored in a "flat" index.)
- The query contains more than one structure
- Calculations in the query cannot be performed before aggregation.
- Local aggregation is used. (The query result in the OLAP Engine is not the same as the one that the user sees.)
- The technical name of the query is more than 20 letters long. An index ID is formed from the query name. There is a technical limitation for this.

Best Practices for creating explorer indexes

- Key figures that depend on **units** - Whether or not a conversion is possible depends on the units of the InfoProvider, since BusinessObjects Explorer only supports simple conversions. For complex conversion this can only be performed by the OLAP engine during indexing. For this use a query snapshot indexed as a BW InfoProvider.
- Key figures that depend on **currencies**, you have to select a currency translation type in addition to the target currency. The conversion always uses the rate that was valid when the conversion index was created.
- Key figures that the target unit or currency **cannot** be entered for are **not** convertible. The system displays a message informing you of this. These include:
 - Key figures with exception aggregation. These **cannot** be used in SAP BusinessObjects Explorer, as the dependencies there **cannot** be depicted for other characteristics and settings. The system therefore only supports key figures with aggregation type Total, Minimum or Maximum.
 - Non-cumulative key figures The system **ignores** these in the enhancement for SAP BusinessObjects Explorer.
- If conversion is **not** possible, you need to restrict the corresponding units and currencies in SAP BusinessObjects Explorer.
- If a key figure is not needed in SAP BusinessObjects Explorer, you have the option as a BW administrator of defining that this key figure is not displayed in SAP BusinessObjects Explorer.

Demo

- Live Demo of Explorer 4.1, connected to Optimal's HANA and BWA environments.

Key Learnings

- What's new
- Installation/configuration
- Indexing
- Exploration of data

- **SAP BusinessObjects Explorer Administrator Guide 4.1 SP1**
 - http://help.sap.com/businessobject/product_guides/sbo41/en/sbo41sp1_exp_admin_en.pdf
- **SAP BusinessObjects Explorer User Guide 4.1 SP1**
 - http://help.sap.com/businessobject/product_guides/sbo41/en/sbo41sp1_exp_user_en.pdf
- **Activating BW Objects for SAP BusinessObjects Explorer**
 - http://help.sap.com/saphelp_banking80sp07/helpdata/en/4a/74b3921a934d27e10000000a42189b/content.htm
- **Indexing BW Data for SAP BusinessObjects Explorer**
 - http://help.sap.com/saphelp_banking80sp07/helpdata/en/4a/68c7408f1d7386e10000000a421937/content.htm

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