Manage Your SAP S/4HANA Cloud

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SAP S/4HANA Cloud | 2111.1

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Warning

Manage Your SAP S/4HANA Cloud

Function	Used to
Identity and Access Management	Secure access to your solution for your business users.
License Compliance	Display and compare your license usage with your license entitlement.
Document and Output Management	Manage your documents and output with: • SAP S/4HANA Output Control • Output Management • Attachment Service
Install Additional Software	Display all apps that are available for download.
Process Management	Use frameworks and features that help you manage your business processes: • Responsibility Management • Business Event Handling • Situation Handling • Application Jobs • Application Logs • Business Workflow • Business Rule Framework plus (BRFplus)
Analytics	Use embedded analytics and other analytical functions in SAP S/4HANA Cloud to monitor and analyze your data.
Data Management	Get to know the options for managing your data in SAP S/4HANA Cloud.
Search Configuration	Learn how to configure your: • Search on SAP Fiori launchpad • Enterprise Search
Message Monitoring	Monitor interfaces and their data messages and execute error handling in a single framework.
Video Library for Managing Your SAP S/4HANA Cloud	Access all videos showcasing selected apps and functions across Manage Your SAP S/4HANA Cloud.
Service Interfaces for Managing Your SAP S/4HANA Cloud	• Business Events Queue - Read • Business Events Subscription • Business Situation – Read

System Landscapes in SAP S/4HANA Cloud

Depending on your installation, your SAP S/4HANA Cloud is based either on a 2-system landscape or on a 3-system landscape.

Note

The 3-system landscape is in an Early Adoption phase and is not available for all customers.

2-System Landscape

The 2-system landscape consists of a quality system and a production system. SAP is responsible for both the software and content updates and upgrades.

Quality system

The quality system combines development, configuration, and testing activities. You can test your custom developments and configurations separately in the quality system before transporting them to the production system.

In particular, you can do the following in the quality system:

- Configure your content in your configuration environment. For more information, see Configuration Environment of SAP S/4HANA Cloud.
- Create low-code custom developments in key user apps. For more information, see Key User Extensibility.

For more information about the available extensibility options, see Extensibility.

Production system

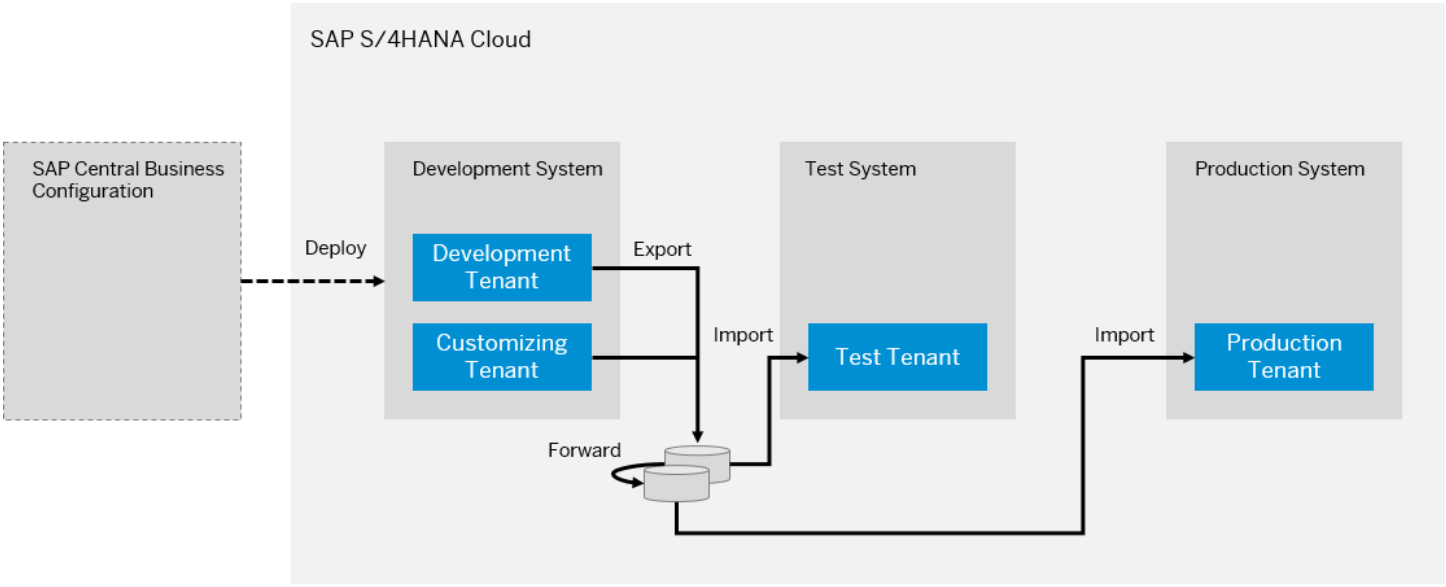
The production system is the system in which you work productively with the content provided by SAP and your custom developments from the quality system.

3-System Landscape

The 3-system landscape consists of a development system, test system, and production system. Development and testing activities are separated into two dedicated systems. This separation makes it possible to have advanced development projects in the 3-system landscape, enabling developer extensibility options.

Configuration content in the 3-system landscape is always provided via SAP Central Business Configuration, which is connected only to the development system. While SAP handles the software updates and upgrades, you decide within a dedicated time frame when you want to apply the content updates and upgrades available in SAP Central Business Configuration. For more information, see Settings via SAP Central Business Configuration.

The following graphic illustrates the connection between SAP Central Business Configuration with the development system. The graphic also shows the basic transport process from the development to the test system, and from the test to the production system.



Development system

The development system provides a safe environment for development projects that include advanced coding projects. The development system is divided up into two tenants with specific purposes: the development tenant and the customizing tenant.

Development tenant: The development tenant provides access to the SAP S/4HANA Cloud ABAP Environment. In this environment, you can build your own custom developments based on lifecycle-stable SAP objects. For more information, see Developer Extensibility.

Customizing tenant: In the customizing tenant, you can do the following:

- Configuration activities based on the reference content from SAP Central Business Configuration. For more information, see Configuration with SAP Central Business Configuration.

  To make your configuration content available in the test and production systems, you need to transport them. For more information about transports in the 3-system landscape, see 3-System Landscape and Transport Management.

- Create low-code custom developments in key user apps. For more information, see Key User Extensibility.

For more information about the available extensibility options, see Extensibility.

Test system

Once you've finalized your development and configuration projects in the development system, you can transport them to the test system. In the test system, you can test both your custom developments and configurations before forwarding them to the production system.

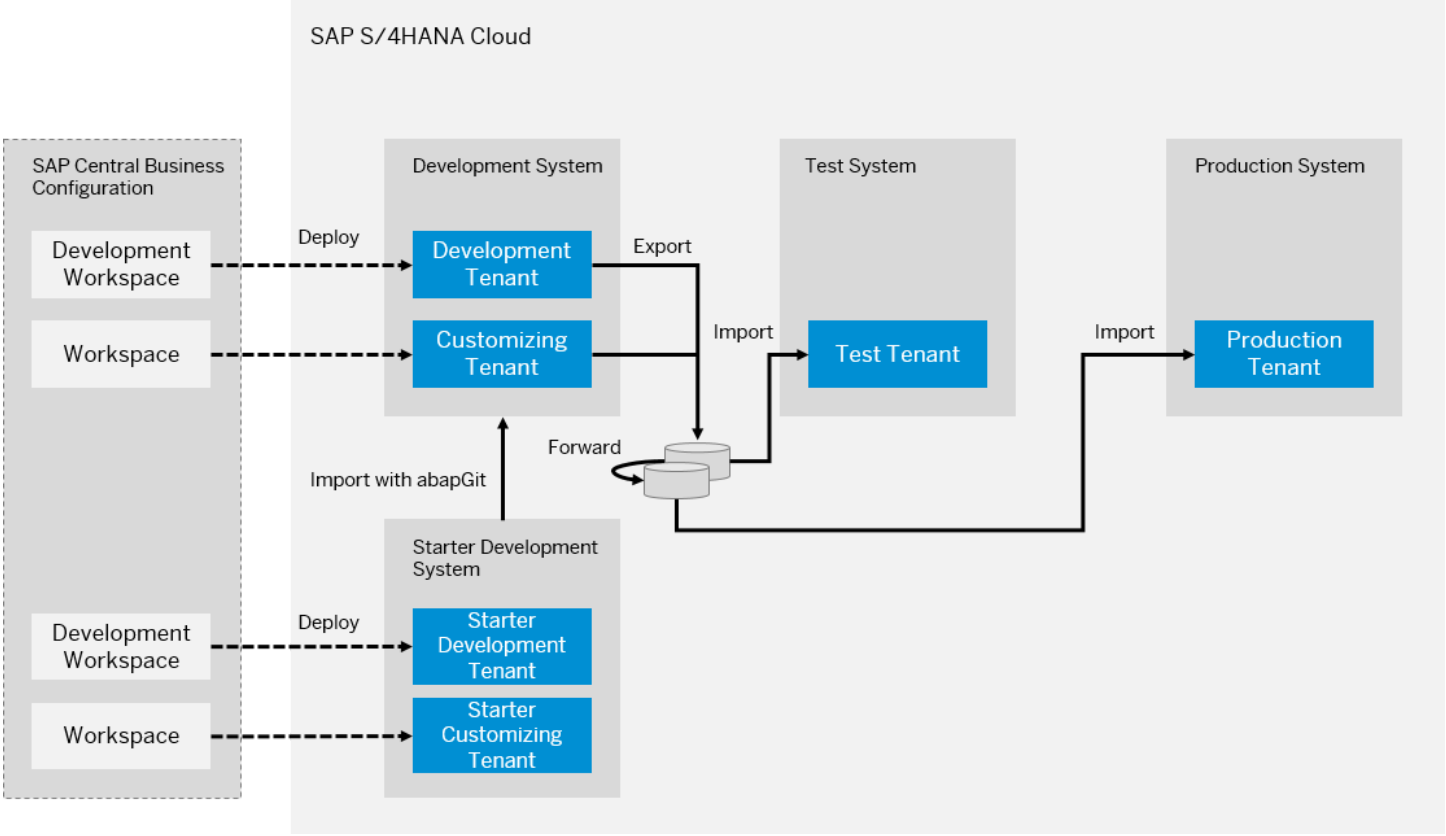
Production system

The production system is the system in which you work productively with the developments that you created and the content that you configured in the development system and tested in the test system.

3-System Landscape and Transport Management

The following information gives you an overview about the 3-system landscape in SAP S/4HANA Cloud and how to transport customizing, key user, and developer extensions between systems.

It is mainly targeted at project managers/architects and outlines the tasks the different personas involved in the process have to perform.



The landscape setup consists of the following systems and tenants:

- **Development system**
  - Development tenant for developer extensibility
  - Customizing tenant for business configuration and key user extensibility
- **Test system**
  - Test tenant for testing purposes
- **Production system**
  - Production tenant for productive usage
- **Starter development system**
  - Starter development tenant
  - Starter customizing tenant

ℹ Note

To check which system you are logged on to, go to the user actions menu in SAP Fiori launchpad and select **About**. See User Actions Menu and Information About App and Launchpad Version.

In such a 3-system landscape, the following steps can be performed in the respective systems:

- As a **business process configuration expert**, you scope the business scenarios in the workspace in SAP Central Business Configuration, deploy the workspace to the customizing tenant of the development system, and fine-tune the configuration content via implementation activities. For instance, you may scope the Enterprise Management with the USGAAP scenario and maintain fiscal year variants. When deploying the business configuration to the customizing tenant, the system records the changes on a customizing request for deployment in SAP Central Business Configuration,

whereas fine-tuning changes are recorded on customizing transports for fine-tuning changes. Once you have finished content authoring, you can release the customizing requests using the **Export Customizing Transports** SAP Fiori app.

- As a **key user**, you customize applications in the customizing tenant using SAP Fiori-based key user apps. For instance, you may add a custom field to the SAP-provided sales order business object using the **Custom Fields** SAP Fiori app. Once this is done, you can add the extensions to a software collection and export the software collection using the **Export Software Collection** app.
- As a **developer**, you implement custom ABAP code in the development tenant using ABAP Development Tools (ADT). For instance, you may create a custom business object using the ABAP RESTful application programming model. All the changes are recorded on workbench requests. Once you have finished the implementation, you can release the workbench request by using the **Transport Organizer** view in ABAP Development Tools.
- As an **administrator**, you import the customizing requests, the software collection, and the workbench request into the test tenant using the **Import Collection** SAP Fiori app.
- As a **tester**, you run the customized business processes in the test tenant. For instance, you may create a custom business object instance that was implemented by a developer or maintain data for the custom field that was added to the sales order business object by a key user.
- After successful testing, as an **administrator**, you forward the customizing requests, the software collection, and the workbench request to the production tenant from the test tenant using the **Import Collection** app. Afterwards, you import them into the production tenant using the **Import Collection** app.

As a rule, you can't perform any extensibility or business configuration change directly in the test and production tenant. However, there are certain cases in which you, as a business configuration expert, have to configure settings in the test and production tenant – the so-called system-specific settings – for example, for maintaining number ranges. See System-Specific Settings in a 3-System Landscape.

ℹ Note

- Transports for developer extensibility, key user extensibility, and business configuration are separated, and content can't be mixed
- Transport requests of the different categories can't be merged
- During import, transport requests of different categories can be imported together
- Transport requests can have dependencies. In this case, the **Import Collection** app enforces that dependent transports are imported together.

Related Information

ABAP RESTful Application Programming Model
Custom Fields
Export Software Collection
Import Collection
SAP Central Business Configuration
Transport Organizer
Working with abapGit
Export Customizing Transports

Tenants in the Development System

The development tenant and customizing tenant are technically clients in the development system. A client is an organizational unit in the system. Clients have separate user master records and separate authorizations. Client-specific data is split by the client column in database tables.

Development objects are stored in database tables without a client column. Such objects are called **client-independent** and are accessible in all clients. Hence, when you, as a developer, create development objects in the development tenant, these objects are available in the customizing tenant as well. For instance, when you create a new SAP Fiori app and assign this app to a business catalog in the development tenant, the app is also accessible in the customizing tenant.

Master data and transactional data are stored in database tables with a client column. Such data is called **client-dependent** and is only accessible in the respective client. Hence, when you, as an administrator, create a business role to a business user in the customizing tenant, this is only visible in the customizing tenant.

Related Information

Import Collection
Export Software Collection
Working with abapGit
Export Customizing Transports

Transport Management Summary

The following table gives you an overview of transport management in a 3-system landscape.

	Developer Extensibility	**Key User Extensibility**	**Business Configuration**	
			Business Scenario Scoping in SAP Central Business Configuration	**Client-Dependent Fine-Tuning**
Changeable in	Development Tenant	Customizing Tenant	Customizing Tenant (deployed from SAP Central Business Configuration workspace) Development Tenant (deployed from SAP Central Business Configuration workspace), no transport to test and production system	Customizing Tenant Development Tenant, no transport to test and production system Test and production tenant for current settings
Client Dependency	Client-Independent	Client-independent and Client-Dependent	Client-Dependent	
Change Recording	Workbench Request	Software Collection	Customizing Request	

Tool for Change Request Creation	Transport Organizer in ADT	Transport is created automatically by the system during export from the Export Software Collection SAP Fiori app	Customizing request is created automatically by the system during deployment of workspace from SAP Central Business Configuration	Export Customizin Fiori App
Creation of Change Request via Dialog	Available	Not Available	Not Available	Available
Tool for Change Request Release/Export	Transport Organizer in ADT	Export Software Collection SAP Fiori App	Export Customizing Transports SAP	
Tool for Import	Import Collection SAP Fiori App			
Collection Type in Import Collection App	Developer Extensibility	Key User Extensibility	Customizing	
Transport Type of Change Request (Attribute SAP_ATO_TRANSPORT_TYPE)	DEV	EXT	CBC	BC
Transport Target of Change Request (<SID> = System ID)	/<SID>_ATO/		/<SID>_CUS/	
Customizing Transport Category of Change Request (Attribute SAP_CUS_TRANSPORT_CATEGORY)	Not Available		Not Available	DEFAULT_CUST for default customizing request. There can only be one open default customizing request. MANUAL_CUST for manual customizing request
Business Catalog for Creating Requests	SAP_A4C_BC_TRN_MNG_PC	-	Request is created automatically by the system	SAP_CORE_BC_BC
Business Catalog for Releasing Request/Export	SAP_A4C_BC_TRN_REL_PC	SAP_CORE_BC_SL_EXP	SAP_CORE_BC_BCT_TRN_REL_PC	
Business Role Template	SAP_BR_DEVELOPER	SAP_BR_ADMINISTRATOR	SAP_BR_BPC_EXPERT	

Related Information

Import Collection

Export Software Collection

Export Customizing Transports

Business Roles and Catalogs

- Developer (SAP_BR_DEVELOPER)

Business Catalog ID	Business Catalog Description	Task
SAP_A4C_BC_DEV_PC	Development – ABAP Development Tools	Developing in ADT for Eclipse
SAP_A4C_BC_TRN_MNG_PC	Development – Transport Management	Creating transport requests in ADT for Eclipse
SAP_A4C_BC_TRN_REL_PC	Development – Transport Release Management	Releasing transport requests in ADT for Eclipse

- Key User (SAP_BR_ADMINISTRATOR)

Business Catalog ID	Business Catalog Description	Task
SAP_CORE_BC_EXT_FLD	Extensibility – Custom Fields	Extending SAP business object with custom fields
SAP_CORE_BC_SL_EXP	Extensibility - Transport Management - Export	Adding extension items to a software collection and exporting the software collection with SAP Fiori app **Export Software Collection**

- Business Process Configuration Expert (SAP_BR_BPC_EXPERT)

Business Catalog ID	Business Catalog Description	Task
SAP_CA_BC_IC_LND_PC	Customizing - Business Configuration	Creating tasks
SAP_CORE_BC_BCT_TRN_MNG_PC/ SAP_BCT_BC_TRN_MNG_PC	Business Configuration - Transport Management	Creating transport requests with SAP Fiori app **Export Customizing Transports**
SAP_CORE_BC_BCT_TRN_REL_PC/ SAP_BCT_BC_TRN_REL_PC	Business Configuration - Transport Release Management	Releasing transport requests with SAP Fiori app **Export Customizing Transports**

- Administrator (SAP_BR_ADMINISTRATOR)

Business Catalog ID	Business Catalog Description	Task
SAP_CORE_BC_SL_EXP	Extensibility - Transport Management - Export	Adding extension items to a software collection and exporting the software collection with SAP Fiori app **Export Software Collection**
SAP_CORE_BC_SL_IMP	Extensibility - Transport Management - Import	Importing software collections with SAP Fiori app **Import Collection**

- Tester (requires corresponding SAP business catalog assignment for SAP apps and custom business catalog assignment for non-SAP apps)

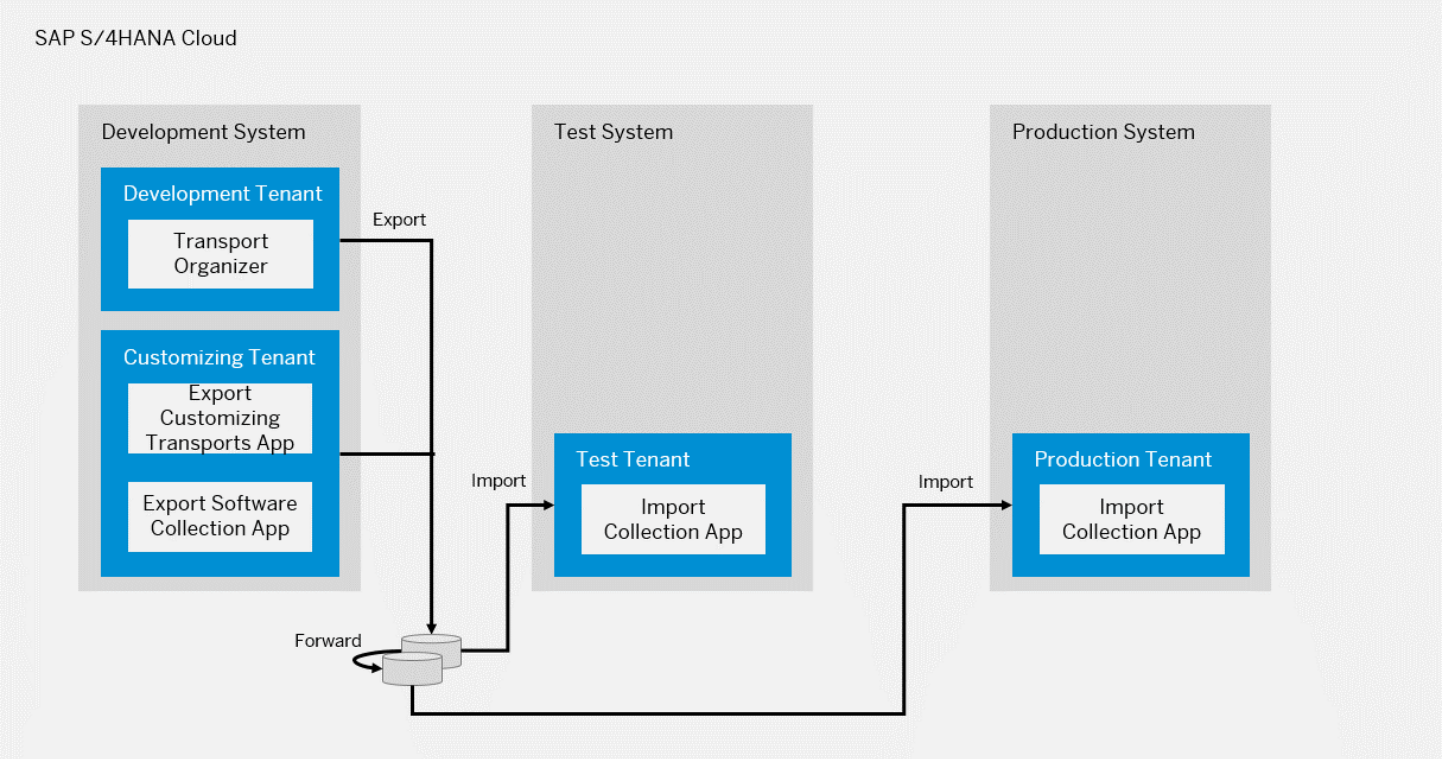
Related Information

Export Software Collection
Export Customizing Transports
Import Collection

Tools and Apps

You need the following tools and apps for transports:

- **Transport Organizer** in Eclipse-based ADT for managing workbench transports for developer extensibility development. With this tool, you can create, manage, and release workbench transports. See Transport Organizer.
- **SAP Fiori app Export Software Collection**: With this app, you can create collections of extensibility objects (items) and export them. See Export Software Collection.
- **SAP Fiori app Export Customizing Transports**: With this app, you can manage and export a customizing transport. It displays customizing transports, their project assignment, and piece list (client dependent objects only). See Export Customizing Transports.
- **SAP Fiori app Import Collection**: With this app, you can import software collection versions. It allows you to import workbench transport requests, customizing transport request, and software collections into the test or productive system. See Import Collection.



Export Customizing Transports

Changes to business configuration settings are recorded in customizing transport requests. With this app, you can manage these requests.

Access Information

The following business catalogs are available to manage the customizing transport requests.

- Display/Edit/Delete: SAP_CORE_BC_BCT_TRN_MNG_PC - Business Configuration - Transport Management (assigned to role SAP_BCR_CORE_BCT_TRN_MNG_PC)
- Display/Edit/Delete/Release: SAP_CORE_BC_BCT_TRN_REL_PC - Business Configuration - Transport Release Management (assigned to role SAP_BCR_CORE_BCT_TRN_REL_PC)

These business catalogs are contained in the business role template: SAP_BR_BPC_EXPERT.

Key Features

You can use this app to:

- Display a list of customizing requests.
- Create new customizing transport requests.
- Display the customizing tasks and objects of a customizing transport request.
- Display the objects recorded in a customizing task.
- Display the table keys recorded for an object.
- Check customizing transport requests.
- Release customizing transport requests.
- Assign a transport request to your user
- Create tasks for other users.
- Change transport category.
- Take over tasks and transports from other users and assign them to your user.

Component for Customer Incidents

If you need support or experience issues, please report an incident under component `BC-CUS-TOL-CTO`.

Working in the Export Customizing Transports App

Find out how to create, check, and release customizing transports using the **Export Customizing Transports** app.

Transport Types for Business Configurations

Transport types for business configurations behave differently depending on their type. The following table gives you an overview which transport type belongs to which collection type:

Collection Type	Transport Type	Transport Type	Created/Managed by
Business Configuration	SAP Central Business Configuration	Customizing Request	SAP Central Business Configurations
	BC (Business Configuration)		Export Customizing Transports
	BC (Business Configuration)		

Collection Type	Transport Type	Transport Type	Created/Managed by
Cross-client Business Configuration	CCC	Workbench Request	Export Customizing Transports

- **Transports of type SAP Central Business Configuration**: They're created by SAP Central Business Configurations and they contain content that was deployed from Central Business Configurations only. They can't be selected in the transport popup; no additional configuration can be added in fine-tuning.
- **Transports of type BC**: Requests of this type are created directly in the development system, and content that is created/edited in the development system can be transported with them.
    - `DEFAULT_CUST`: There can be only one open transport of type `DEFAULT_CUST`. If there's already an open transport request of this type, you can't create a second transport request of this type.
    - `MANUAL_CUST` : When a transport request is created from the transport popup, a request of type `MANUAL_CUST` is created. A transport request of type MANUAL_CUST is typically used for smaller, independent changes that can be released quickly.

Procedure

1. Open the **Export Customizing Transports** app. A list of "modifiable"customizing transport requests is displayed.
2. Use the search bar to filter for specific requests based on search criteria like the **Request No**, the **Owner**, or the **Status**.
3. Click **Create** to create a new request.

    ### ℹ Note

    Note that there can only be one default customizing transport request.

4. Navigate to a transport request's object page to display its customizing tasks, objects, and attributes.
5. Select a customizing task to display the objects recorded in it.
6. Select an object to display the table keys recorded in it.
7. Release any tasks belonging to your transport request. A customizing transport request can't be released until the tasks have been released.

    ### ℹ Note

    Note that you can only release tasks and transports assigned to your user.

8. Check your customizing transport request by triggering a release simulation: Select the request and click **Release** > **Simulate**.
9. View the results of the check in the log (**Release** > **Show log**).
10. Release your customizing transport request (**Release** > **Execute**).

Result

You have released the transport request. You can import it with the Import Collection app.

Transport Dependencies

In general, you can make changes, record the change on transport requests, as well as release and import the requests in test and productive systems independent from each other. However, in some cases, dependencies block the export or import of a request. This can be the case if the following events occur:

- SAP release upgrades
- Overtaking
- Object dependencies

SAP Release Upgrades

An SAP upgrade works as follows:

- Software upgrade starts in the test system. After the test system upgrade (release n+1), the development and production system are still on the old release (release n).
    - When the test system is upgraded and development and production system are still on the old releases:
        - You can release customizing and developer extensibility transports and import them into the test system
        - For key user extensibility transports, you can't import the transports into the test system, but you can directly forward them to the production system
- After a certain period of time, for example 2 weeks, the development and production system are upgraded to n+1. At this point in time, you may not be able to import older transports that were created on release n.

The import behavior for transports from release n to n+1 is described in the following table:

	Development, Test, Production System on Release N	**Development, Production System on Release N, Test System on N+1**	**Development, Test, Production System on Release N+1**
Key User Extensibility	You can export from the development system and import into the test and production system.	You can export from the development system and import into the production. You can't import into the test system.	You can export from the development system and import into the test and production system (for transports created on release N and N+1). Exception: For Key User Extensibility, you can't import transports created on release N into the test and production system, re-export is required.
Developer Extensibility		You can export from the development system and import into the test and production system.	
Customizing		You can export from the development system and import into the test and production system.	

ℹ Note

You can't import a transport created on release N into release N+2 and higher, which means that you have to recreate the transport in the development system.

Overtaking

Overtaking describes the following situations:

A)

- You release a transport request A
- You release a transport request B. In this transport request, an object is contained that is already in transport request A

- You import transport request B before A, the object is changed to the latest state of release of transport request B
- You import transport request A, the object is changed back to the state of the release of transport request A

B)

- You release a transport request A
- You release a transport request B. In this transport request, an object is contained that uses an object that is contained in transport request A.
- You import transport request B before A; due to a dependency to transport request A, the import runs into an error

The transport management avoids overtaking for the same objects (case A). If an object is recorded in multiple transports, the system enforces you to import the transport either together or in the right order (order of release). For customizing objects, an overtaking check is implemented per customizing object.

For objects dependencies (case B), the details are described in the following section.

Object Dependencies

Object dependency checks are executed during export. Dependencies of objects that can be detected by the system are analyzed.

Object Dependencies Within Developer Extensibility

Dependencies are analyzed by the Transport Organizer based on the where-use index. If dependencies are found to objects that have never been exported, you have to merge transports, move objects between transports, or release the transports in the right order so that dependencies are resolved.

Object Dependencies Within Key User Extensibility

Dependencies are analyzed by the **Export Software Collection** app. If dependencies are found, you have to merge collections or move objects between collections so that dependencies are resolved.

Object Dependencies Between Key User Extensibility and Developer Extensibility

Extensibility and developer extensibility objects are developed in different ABAP language versions (ABAP for Cloud Development and ABAP for Key Users), and are separated by default. This means, for developer extensibility, you can't use extensibility objects and vice versa. However, there are some exceptions:

- You can release developer extensibility objects for use in key user apps. These objects can be used by key user apps.
- Custom fields that are added to SAP structures and CDS views by the key user can be used in developer extensibility.

During export, the dependencies between key user objects and developer extensibility objects are analyzed. During import, you have to import the dependent transports together or in the correct order.

Exports with dependencies to local development objects are blocked during export.

Object Dependencies Between Business Configuration and Key User Extensibility

In some cases, business configuration refers to extensibility, however, extensibility does not equal business configuration. For example, form templates are extensibility objects created with Adobe Forms Designer. They can be referred to as business configuration, e.g. rules for finding the right form template for a country, a site, a customer group, etc. Another example for a reference from business configuration to extensibility are custom fields that can be used in business configuration rules. You should import the respective extensibility and business configuration transport together to avoid errors in the business process.

During import, the **Import Collection** app only allows you to import dependent transports together or in the correct order.

Object Dependencies Between Business Configuration and Developer Extensibility

If you create your own business configuration apps (C tables) and create and transport content for it, the transport with the table (or its latest changes) must be transported before the business configuration content.

Related Information

Export Software Collection
Import Collection
Releasing Transport Requests

Transferring Developer Extensions Between Development Tenants

The open-source Git client abapGit allows you to export code from and import code into your development tenant.

You should use it for the following use cases:

- Migrating on-premise code to the cloud
- Transferring your code from the cloud to on premise
- Exporting your code when the development ABAP system is decommissioned
- Transferring your code from the starter development tenant to the development tenant
- Transferring your code from one cloud to another to share it with others, for example as open source, or from a partner to a customer account.

Related Information

Working with abapGit

Analytics

SAP S/4HANA Cloud supports embedded analytics to simplify users' business processes (see *S/4HANA Embedded Analytics*). One of the ways of implementing embedded analytics is the use of multidimensional reports.

SAP S/4HANA Cloud contains analytical applications that enable you to monitor and analyze your data. Besides specific analytical functions integrated in various individual applications, there are three types of applications with generic user interfaces:

- Create, View, and Analyze Analytical Applications

  For more information, see Manage KPIs and Reports.

- Generic analytical reports

  For more information, see Using Analytical Reports.

- APF-based apps

  For more information, see Analytical Apps Based on Analysis Path Framework (APF).

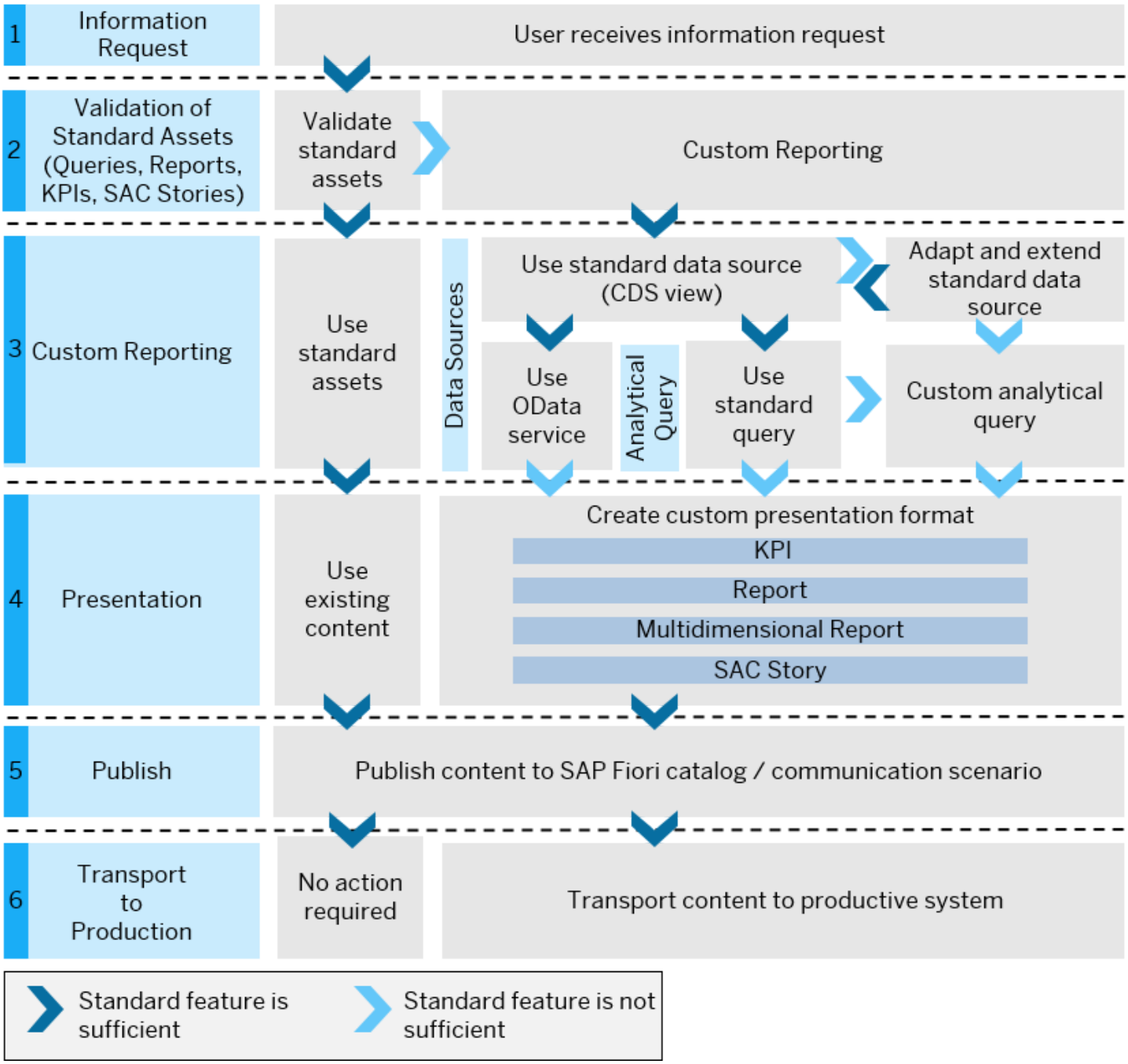
To get an overview on all available reports, you can use the Query Browser or the View Browser. For more information, see Query Browser and View Browser.

Embedded analytics operates on current data. Data in the historical area, that is, data aging or archived data is not retrieved.

To support the consumption and definition of semantically rich data, SAP offers a common set of domain-specific languages (DSL) and services called Core Data Services (CDS). For more information, see CDS Views.

Workflow for Analytics Key Users

Context



This image is interactive

The interactive image map on the left provides an

Validate Standard Assets

Use Existing Standard Content

Custom Reporting

Use Standard Data Source (CDS View)

Adapt and Extend Standard Data Source

Use OData Service

Use Standard Query

Required business

Custom Analytical Query

KPI

Required business role:

Report

The following options

Multidimensional Report

SAP Analytics Cloud Stories

Publish Content to SAP Fiori Catalog

Transport Cont

ive. Hover over each area for a description. Click highlighted areas for more information.

overview on the end-to-end process a key user has to go through when he prepares analytics for his business. In general, a key user leverages the standard content delivered by SAP as far as possible and enhances this content with own custom objects where needed.

Choose an area to see more information.

You need to have the **Analytics Specialist** (SAP_BR_ANALYTICS_SPECIALIST) role assigned to you.

See the following SAP Fiori apps to validate a standard asset:

- KPIs, Reports, and SAP Analytics Cloud St

Assets

If the standard assets are sufficient, use and skip **Custom Reporting**.

Use the standard assets and existing presentation format for KPIs, reports, and SAP Analytical Cloud Stories.

Assign the relevant catalogs and roles to your business users.

orting

Use **Custom Reporting**, if the standard assets are insufficient.

Required Business Roles:

- You need to have the Analytics Specialist (Required business role: SAP_BR_ANALYTICS_SPECIALIST) and Administrator (SAP_B

You need to have the Analytics Specialist (SAP_BR_ANALYTICS_SPECIALIST) and Administrator (SAP_BR_ADMINISTRATOR) role assigned to you.

Custom CDS Views: You can validate to check if the standard data source fits your needs. For more information, see [Custom CDS Views (To Be Deprecated)](). If the standard data source doesn't work for your information

Data of standard data sources is usually exposed using OData. You can create KPIs and reports based on an OData service.

role: SAP_BR_ANALYTICS_SPECIALIST

Analytical Queries: You can create KPIs, reports, multidimensional reports, and SAC stories based on analytical queries. Using **Custom Analytical Queries**, validate the data to check if the standard query fits your needs. Then, use the standard query and continue with **Create Custom Presentation Format**.

Required business role: SAP_BR_ANALYTICS_SPECIALIST

Analytical queries are multidimensional models, which are typically consumed in multidimensional reports. In simple cases, analytical queries also exposes an OData Service.

Use **Custom Analytical Query** to preview a standard query and check if the standard query meets

SAP_BR_ANALYTICS_SPECIALIST are available:

To create a KPI, use **Manage KPIs and Reports** and run the following steps:

1. Create a group or select an existing group.

For more information,

Use the **View Browser** app and follow the below steps:

- Generic drill-down
- Analytical-list page
- Data analyzer

To create **SAP Analytics Cloud Story**, use Manage KPIs and Reports and run the following steps:

1. Search and open the analytical query
2. Create applicati

You need to have the Analytics Specialist (SAP_BR_ANALYTICS_SPECIALIST) and Administrator (SAP_BR_Administrator) role assigned to you.

1. Choose stores
2. Create a story
3. Select a query

Publish the application using the **Custom Catalog Extension** app with these steps:

1. Click on **Save and Publish** on t

ent to Productive System

You need to have the Analytics Specialist (SAP_BR_ANALYTICS_SPECIALIST) and Administrator (SAP

ories: Manage KPIs and Reports

- Data Sources and Queries: View Browser

R_ADMINISTRATOR) role assigned to you.

- You must assign the related business user to your role to access the business data.

request, adapt or extend it in the following way:

- Add extension fields using Custom Fields App and Custom Logic App.

your needs.

If it doesn't, you can create your own custom query. For this, you have to consider the following scenarios:

- Copy and extend a standard query, for exam

2. Asee dReports da KPI.
3. Define the header details, owner, and add a CDS view.
4. Define

on

3. Choose More and select Show Application Status.
4. Continue with Pu

4. Configure your story
5. Create application
6. Choose Application and c

he Create Application page. The Custom Catalog Extension application is displayed.

_BR_Administrator) role assigned to you.

To ensure the availability of all extension items that are created with one of the extensibility

- [CDS Views](#)

Use the standard data source in the following way based on your request.

- **Use OData Service:** Allows you to create a KPI or a report using OData service. Navigate to **Create Custom Pres**

You can either continue with a standard query or create a new custom qu

ple, with your own calculated or restricted measures.

- Create a new

semantics for the CDS view.

5. Configure reports. [only for active KPI

blish Content to SAP Fiori Catalog.

For more information, see [View Browser](#).

ontinue with **Publish Content to SAP Fiori Catalog**

For more information, see [Manage KPIs and Reports](#)

2. Choose **Add**. Select a catalog from the list of business catalogs and choose OK.

y apps in the quality tenant, you need to transfer the corresponding items to the production system with the help of the **Export Software**

entation Format.

- **Use Standard Query:** Allows you to use an SAP delivered analytical query

ery.

- Join further data source with [Custom CDS Views (To Be Deprecated)](#).

custom query.

However, in both the cases, follow the steps:

1. Choose data source to access the needed data

s]

6. Create an application.
7. Choose Application Id and publish content

3. Select the catalog and choose **Collection and Import Software Collection application**. For more information, see [Transporting Analytics-Based Extension Items](#)

Once the status is **Published**, the application

You have to create a new custom query (OData).

For more information, see https://blogs.sap.com/2017/07/12/new-video-extending-master-data-for-fixed-assets-in-sap-ta.

2. Set properties.
3. Select fields and assign them to rows and columns to SAP Fiori catalog.

For more information, see Key Performance Indicators.

ation is now available in the catalog. You can add it to your home page.

4. Repeat

s4hana-cloud/

ms.

4. Set filter to retrieve the desired data.
5. Publish to save the CDS steps 1-3 for all the applications created for a report.

See Also:

- Custom Catalog Exte

view, which can later be added to a custom catalog for consumption by

nsions

- Identity and Access Management: To assign roles to your user for th

y b u s i n e s s u s e r s .

e s el e ct e d c a t al o g s

- C u st o m C o m m u ni c a ti o n S c e n a ri o s : F ol lo w t h e st e p s t o p u bl

is h a n O D a t a s e rv ic e fo r e xt e r n al u s e.

Manage KPIs and Reports

Use

Manage KPIs and Reports app is a single platform for creating all analytical applications using KPIs, reports, and stories. You can create applications that can be launched directly from SAP Fiori launchpad. You can configure metrics in the KPI, visualize the data either in chart or table format, and analyze the data to improve the quantity and quality of the different business units belonging to an organization.

This app is integrated with SAP Analytics Cloud, which helps to analyze and interact with real-time data. With SAP Analytics Cloud, data can imported or connected live from SAP S/4HANA Cloud systems, modeled, and converted into various visualizations. This helps the business units in data-driven decision making. For more details, see the following section which explains the capabilities of Embedded Analytics powered by SAP Analytics Cloud.

SAP S/4HANA Cloud Embedded Analytics Powered by SAP Analytics Cloud

SAP Analytics Cloud is cloud-based analytics tool used by business organization units to analyze their data. You can create dashboards and reports in which you can find insights about your business operations. With seamless integration of SAP S/4HANA with SAP Analytics Cloud, you can:

- Create beautiful stories
- View integrated dashboards based on SAP S/4HANA Cloud data using SAP Analytics Cloud
- View and analyze stories with classic visualizations, navigate to them and share them with different business units in a secured environment
- Pull data from analytical and non-analytical data sources and analyze it at runtime

Disclaimer

When using the Smart Business functionality, you need to ensure that you adhere to local legal rules and regulations, for example, data privacy legislation. Neither SAP nor its associated companies assume any responsibility for the adherence to authorizations or data protection rules for data processed by its customers using Smart Business.

Prerequisites

- The **Analytics Specialist** role has been assigned to you..
- The KPI content created in the quality system must be transported to production systems. For more details about transport, see Transporting Analytics-Based Extension Items. Only administrators can transport extensible items to a productive system using the **Transport Management** app.

Features

You can create groups, KPIs, reports, and stories from this page by choosing the relevant tabs. The basic functions, such as edit, copy, and delete, can be performed on the relevant entities by choosing the icons from the toolbar. The number groups, KPIs, reports, and stories are displayed for each entity. Using the `Search` tab, you can refine your search based on names, description, tags, and status.

The following features are available in the **Manage KPIs and Reports** app:

- **Groups:** You use this section to create groups for multiple KPIs.
- **Key Performance Indicators (KPIs):** KPIs are used to identify and measure the key metrics of a business. You create an evaluation to define a specific representation of a KPI, which means that you define a certain selection of the KPI data, the targets and thresholds that are relevant, together with some additional information. For example, you have defined a KPI to monitor car sales in a particular country. You can then create an KPI that restricts the results to a certain area of that country for which one sales representative is responsible. You must specify an active group when you are creating a KPI.
- **Reports:** You configure the reports for active KPIs as the starting point for further analysis. At runtime, you select the application to open either an SAP Smart Business generic drill-down application or a Data Analyzer and Story runtime. You can choose how to visualize the tile by selecting one of the available tiles (numeric, comparison, trend, or actual vs. target).
- **Stories:** With the integration of SAP S/4HANA Cloud with SAP Analytics Cloud you can create stories, add data, and generate powerful visualizations and analyze the data using **Data Analyzer and Story** runtime application.

For details, see the individual, related sections: Groups, KPIs, Reports, and Stories.

Supported Device Types

- Desktop
- Tablet
- Smartphone

Component for Customer Incidents

CA-GTF-SB-S4H-DT

CA-GTF-SB-S4H-RT

Related Information

Groups
Key Performance Indicators (KPIs)
Reports
Stories
Applications

Target Users

The SAP Fiori Launchpad enables you to find and retain the modeler apps required to carry out your work (for example, by using role-based allocation of default apps and app groups and personalization to add or remove additional apps from a global catalog).

To create a new report, you need to understand the related KPIs from the same and from different business areas. You also have to be aware of the implications from a business perspective of introducing the new report. This is why, the **Manage KPIs and Reports** app is used principally by data analysts or operations office employees. In addition, technical knowledge and alignment with development teams that build CDS views is required to link a report to a data source and provide the required input parameters.

Business knowledge is required to configure the drill-down views correctly. Data analysts and power users that are close to business users will benefit from and use the drill-down views at runtime.

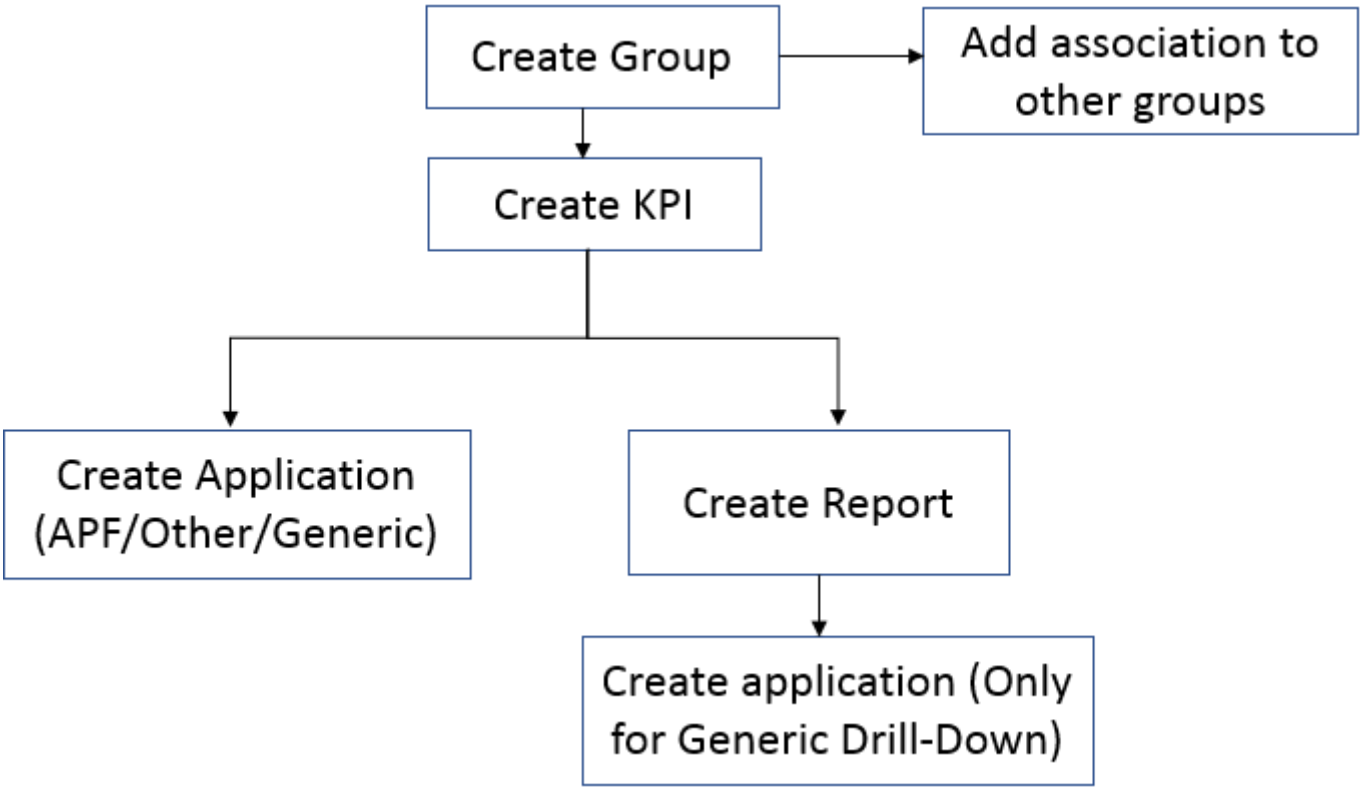
All user groups benefit from the versatility that the app provides through the repository.

You can use the search option on the Fiori Launchpad to search for the applications created using the modeler apps.

Process to Launch Reports

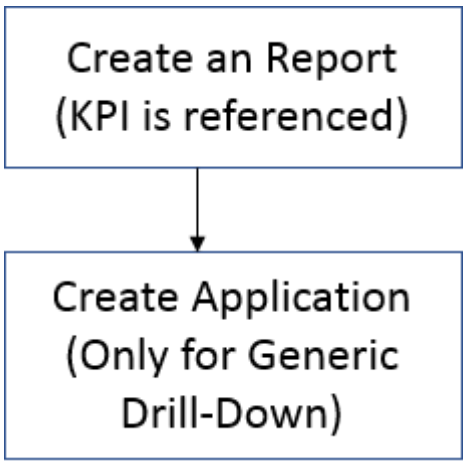
Using Groups

Below you will find a graphical representation explaining the steps for creating an application using a group:



The interpretation of the diagram shown above is as follows:

1. Create a group.
2. Create a KPI with all business metrics, thresholds, and trends from a data source.
3. To the created KPI, you can create a report and define views to the report.
4. From the report, you can create an application that is applicable only for the Generic Drill-down configuration type. Below is the graphical representation explaining the steps to create an application from a report:



> **Note**
>
> The report created using **Generic Drilldown** type must be referenced with a KPI.

5. You can directly create an application for the configured report from the KPI.

Using Data Analyzer Reports and Stories

1. Create a Data Analyzer report or a Story.
2. Define Views.
3. Create Application for the configured Data Analyzer report or Story.

Groups

Use

You use groups to combine similar KPI data, shape the data to meet your needs, and create intuitive visualization using multiple data sources. These visualizations are mainly used to analyze the data, to improve the quantity and quality of the different business units of an organization.

You can create groups, add KPIs to the active group, and, using those KPIs, you can create visualizations and applications.

Features

The **Groups** tab in the **Manage KPIs and Reports** page displays all the details relating to the group in tabular format. The groups are displayed based on the conditions set for each column. You can use the **Settings** button to select columns.

The **Tags** column displays the tag names used while creating the groups. Tags refers to group of terms associated with a group that allows you to ease your search.

The **Status** column displays any one of the group statuses (**Draft/Active/Active, Draft**). **Active, Draft** indicates that the group has been modified and saved but it has not been activated.

The **Number of KPIs** column displays the number of measures or KPIs defined for each group. When you select the numeric value, you have the option of viewing or editing the KPI details. The name, ID, and status of the KPI are displayed. You can navigate to the KPI details page or edit the KPI details. You can edit only KPIs created by customers.

You can select the row or use the arrow to navigate to the **Group Details** page.

Using the toolbar, you can:

- Assign Groups to your favorites or remove them

  Marking or removing as favorite is a design time concept and has no impact on the runtime environment. Groups that you mark as favorites are displayed at the top of the table. You can select a group and choose **Favorite**.

- Create new groups
- Edit, copy, and delete groups: See the individual related topics. You can also edit, copy, and delete a group from the **Group Details** and **Create Group** pages.
- Transport all the groups to production systems. For more information, see Transporting Analytics-Based Extension Items.
- View SAP Delivered Groups

Related Information

Creating a Group
Editing a Group
Copying a Group
Deleting a Group

Creating a Group

Use

The **Create Group** lets you define group, details, assign associated groups, and KPIs. You can create group from the **Manage KPIs and Reports** screen. You can add KPIs to an active group; add multiple KPIs from different OData services to the group, and associations can be added between groups.

You can either save, activate, or cancel the group creation. The **Save** button lets you save the group details in **Draft** status. You have to activate the group to add KPIs to the group.

Features

Header

You maintain the title, ID, application area, and the tags for the created group. The title can have a maximum of 40 characters. The Title and ID fields are mandatory. All IDs begin with a prefix that is uniquely system-dependent followed by a period. You can edit only the digits of the IDs and not the prefix. For example, YY1_K. 1480659270630 whereby YY1_ is the prefix generated by the system and cannot be edited. You can choose to make these IDs visible across all applications by choosing **App Settings** from the dropdown list in the top-left corner of the screen and selecting the **Make IDs Visible Across all Applications** checkbox. The **App Settings** on the screen is only available for the Smart Business Modeler Apps.

The value help in **Application Area** field lets you select an application component.

The **Tags** field allows you to enter a tag name manually or select tags from the value help. The manually entered tag is available for future use in the value help. Tags are a way of classifying the groups and can make searching of groups easier.

Business Information

The Business Information section lets you enter the owner's details, such as name, ID, and email.

Associated Groups

This section is enabled once the group is activated. In display mode (active status), you can associate more groups to the newly created group. You can edit or delete existing associated groups.

To add more groups, choose **Add (+)**. The **Add Associated** group allows you to select a group from the list of available groups. By default, the direction of the association is selected indicating the relation between the source and the selected association. There are two types of associations: **Supporting** or **Conflicting**. You define a supporting association between two groups whenever a change in one affects the other in the same direction. You define a confliction association if the two groups influence each other negatively. For example, if the current group is `Sales` and the associated group is `revenue`, then the upward arrow indicates that the rising trend of sales is with respect to the rising revenue. The association type will be `Supporting`.

You can edit or delete the association. You can only edit the association type of the added group.

KPIs

This section is enabled when the group is activated. In display mode, you can create and add KPI to the group using **Add KPI (+)**. For more details on creating a KPI, see Creating a KPI. The **Search** field is to check for KPIs already added to the group. You can search on any KPI attributes such as title, status, tags, and last changed by. You can navigate to the KPI by choosing the arrow against each KPI.

Editing a Group

Use

You can edit a group on the **Manage KPIs and Reports** screen by selecting the group and choosing **Edit**. The **Edit Group** screen allows you to edit the group details. All the fields except the ID field in the header section can be edited. The **Associated Groups** and **KPIs** sections can be edited in display mode (active status).

The **Edit Draft** button appears for the groups with **Active; Draft** status.

Copying a Group

Use

The **Copy** button screen allows you to a duplicate a group. The group details and the sub-entities of the original group - except for applications and associated groups - are copied. KPIs with unreleased CDS views are not copied to the new group.

Deleting a Group

Use

When you delete a group, you remove all the active versions of not only the group, but also all the associated entities such as KPIs, reports, and tiles that you have built, and all drill-down configurations. This deletion is irreversible and immediately comes into effect in the runtime environment.

A group with published applications cannot be deleted. To delete such groups, the applications must be unpublished from the catalog.

Additional Features

Use

- **Maintain Languages:** You can add additional languages using the Maintain Languages button. You need to select a language, title, and title descriptione. You can also delete the language using the **Delete** button displayed next to each row.
- **Favorite:** You can rearrange the groups by adding groups to or removing groups from your favorites. Use the Favorite button on the Manage Groups and KPIs page or Group Details page to add or remove the group from your favorites. The Favorites column shows groups marked as favorites.

Key Performance Indicators (KPIs)

Use

Key Performance Indicators are selected key figures used to evaluate a certain measure of their performance towards a goal or target. A KPI value is often evaluated against a reference or target value. A KPI can have a current value, reference value, target value, and thresholds. You can add multiple KPIs to an active group and define input parameters, filters, thresholds, targets, and trends for the same.

In other words, you create KPIs to identify and measure key metrics of a business. You can set alerts and create reports which help you to analyze the data and to identify actions.

You can use the KPIs to:

- Create a report and preview it to analyze the data
- Create an application and launch either the created report or Analytical Page Framework (APF) or other apps to analyze the data

Features

The KPIs tab displays all the details pertaining to the KPIs in tabular format. The Create button allows you to create a KPI for active groups. You can either select an active group and create a KPI for the selected group or you can use Create button and select a group from the value help.

You can sort the KPIs by date, name, and ID using the Settings button. You can sort the KPIs based on favorites and Last Worked On details. The tabular format displays the group to which the KPI belongs to, tags, and the status. You need to activate the KPI to create an application. The Status column displays any one of the KPI's statuses (Draft/Active/Active, Draft). Active, Draft status indicates that the active KPI has been modified and saved but not re-activated. The **Application** count column displays the count of applications created for the KPI. A quick view of the available applications is displayed when you click on the count. The title, subtitle, and the tile type are displayed. You can navigate to the applications details by choosing the navigation arrow in the selected application row.

From the toolbar, you can add, edit, copy, and delete KPIs. Using the relevant options in the **Settings** dialog, you can sort and filter the KPI details based on the defined conditions. You can show or hide the columns.

You can click on the row or on the arrow button next to KPI to navigate to the details page.

For a detailed description of the KPI features, see the related individual topics.

Related Information

Creating a KPI
Editing a KPI
Copying a KPI
Deleting a KPI

Creating a KPI

Creating a KPI for Manage KPIs and Reports

Use

The **Create KPI** screen allows you to define parameters, filters, thresholds, and trends for a KPI, and to add additional languages to the KPI.

Features

The Create KPI screen contains

- Define Header Details

  This section lets you define the KPI parameters by providing the title, ID, and the tags. You can choose to make these IDs visible across all applications by choosing **App Settings** from the dropdown list in the top-left corner of the screen and by selecting the **Make IDs Visible Across all Applications** checkbox. The **App Settings** on the screen are available only for the Smart Business Modeler Apps. The ID field is editable, and all IDs begin with a prefix that is uniquely system-dependent followed by a period. For example, YY1_E. 1480659270630 where YY1_E. is the prefix generated by the system.

  You can either add a tag by entering a name or select tag from the value help. The newly added tag is available in the value help for further use.

- Define Owner's Details

  The Business Information section lets you to enter the owner’s details, such as name, ID, and email address.

- Define Data Source Details

  In this section you can add a CDS view or an OData service, the corresponding entity set, and the value measure. You can also define the semantics in this section.

  The **Define** button lets you select a CDS view or an OData service. The **Views** table displays a list of released CDS views from which you can either select a CDS view or search for a CDS view using the **Search** button. OData Services and Entity sets are mandatory parameters for the CDS view. The OData Service field displays a value help with the related values pertaining to the CDS views. You can choose the OData service and the entity set from the respective value help.

  Input parameters are drawn from the selected CDS view. You need tospecify values for the input parameters that are available at runtime. You can add more filters to the configurations using the **Adapt Filters** button. You can either search for a filter or select filters using the **More Filters** button. For each filter, you can either specify values or set conditions and choose values. You can narrow down the filter values by setting search conditions. You can restore the default settings.

  Allow CDS View Annotations

This field lets you consider the annotations available in the CDS view while configuring the KPI. This field is visible only when you select a CDS view for the KPI.

These annotations are currently available in Smart Business:

Annotation	Expectations
Consumption.filter.hidden	If this annotation is set to `true` for a particular dimension, the dimension will not appear in the Smart filter in KPI configuration or in the Facet Filter in report configuration.This dimension is available in smart charts and tables. You cannot apply filters in the filter section.
UI.hidden	If this annotation is set to `true`, this annotation will show or hide data fields based on the state of the data instance and it will not be available in the KPI main measure, additional measures, optional measures, optional filters, input parameters, and thresholds for KPI on the **Configuration** page. It will not appear in the facet filter report or smart chart and table configuration.
UI.textArrangement	You can specify a corresponding label field for a particular dimension. This annotation can take one of the following values for the configuration: • **TEXT_ONLY**: If the annotation value is **TEXT_ONLY** then only the label property of the dimension is displayed. These changes occur when you configure option filters from the smart filter. In report configuration, the tables: mirror, smart responsive, and analytical only have a label field. • **TEXT_LAST**: If the annotation has this value, the display has the key value followed by the label in parentheses. These changes also occur in the **Smart Filter**, and in the tables, **Mirror**, **Responsive**, and **Analytical**. • TEXT_ONLY: If the annotation has this value, then only the label property of the dimension is displayed. These changes occur when you configure option filters from smart filter. In report configuration the tables, **Mirror** , **Smart Responsive** and **Analytical** has only label field.
UI.selectionField.position	This annotation can have numeric values. It decides on the position of the filters in the smart filter and facet filter. If it is set, it will appear at the given position in Smart Filter as a blank value if the value is not set. For facet the fields with the annotation value appear at the top of the list and are followed by those without values.

For more information, see:

- Consumption Annotations
- UI Annotations

Semantics

You can define the business metrics for the KPI. In other words, you can define Value Measure, Scaling Factor, Decimal Precision, and Additional measures, if required. You can define the thresholds, values for thresholds, and you can set

alerts if there is a violation.

- **Value Measure**: Value measure is the primary key figure. When you have defined goal types and the threshold values, then the value measure can be interpreted as positive or negative. The value help in the **Value Measure** field displays a list of value measures that is available in the selected CDS view. You have to select a value measure.

  Example: You have the Net Order Volume KPI; the current KPI value is 10 million. Without a reference or target value, you may not necessarily know how to interpret this value. You may need a means of comparison, such as net order volume from last year or last month, or, a target value of 100 million, to evaluate this KPI value correctly .

- **Goal Type**: The goal type indicates which improvement direction is best for the KPI. For maximizing KPIs, the improvement direction is higher (for example, revenue or profit KPIs). For minimizing KPIs, a lower value represents an improvement (for example, cost KPIs). For some KPIs, a range of values is best (for example, stock to sales ratio).

- **Scaling Factor**: You can choose a formatter from the value help. The formatters **Auto**, **Percent**, **Kilo (k)**, **Million (M)**, **Billion (B)**, and **None** are available.

  Based on the format you choose, the appropriate short form is displayed with the value. For example, if you use `Kilo` and the value is 100, 0.1k is displayed. The format you choose is applied to the main KPI value and to the main and additional measures in the table view, chart popover, and mini tiles.

  > **Note**
  >
  > No formatting is applied when you use `None`. However, decimal precision is still applied.

- **Decimal Precision**: Choose the decimal precision you want to use from the value help.

  > **Note**
  >
  > If the measures are currency types, then the selected currency's decimal precision takes precedence over the defined decimal precision. For example, if you have selected EUR, then the default decimal precision is 2.

- Additional Measures: You can choose an additional set of measures for the KPI from the value help for the Additional Measures field. All measures available in the entity set are available for selection in the value help for Additional Measures field. The formatting applied to the main measure (Value Measure) applies to the additional measures at runtime. For example, if you have defined `Percent` as scaling and `0.0` as decimal precision for the main measure, then the same holds true for the additional measures you've defined.

- Configure the target, thresholds, and trends

  You can define the target and threshold values (that is Critical, Warning, and Target). You can enter either a fixed value or, if a measure value can be aggregated, you can enter a measure. If the values are **Warning** or **Critical**, you can also enter a percentage of a selected measure as the target. You do this by choosing **Threshold Relative to Target** as the **Value Type**. You can choose measures only from the current entity set.

- **Fixed**: You have to enter fixed values that are integers or decimals in the **Critical**, **Warning**, and **Target** fields.

- **Measure**: You need to select a measure from the list of available measures from the selected CDS view in the **Critical**, **Warning**, and **Target** fields. Different measures have to be selected for each of the fields.

- **Threshold Relative to Target**: Here, the target is a measure that is selected from a list. The **Critical** and **Warning** values depend on the selected goal type.

Goal Type	Critical Values	Warning Values
Range	>100	< 100

Goal Type	Critical Values	Warning Values
Maximizing	< 100	< 100
Minimizing	> 100	> 100

These values indicate their relative values to the selected target measure.

You can enable alerts and notify the device or the person when threshold values (**Warning** and **Critical**) are violated at runtime. The **Set Alerts** toggle button is enabled only when you select a CDS view that is HANA-cached. You get an error message when you set an alert for thresholds with empty values. Enter any valid value in the threshold fields and either choose **Enter** or click outside the field. The error message disappears, and the **Set Alert** button is enabled.

Thresholds are used to determine the status of the KPI value. There are three statuses: **Alert**, **Warning**, and **On Track**, represented by the colors, red, yellow, and green. The status is used to visualize and monitor the KPI.

- **Preview**: You can view the color-coded thresholds based on the entered values. The different colors indicate a violation, a warning, and that you are on track. A color-coded bar is displayed indicating the threshold values. Red indicates violation, orange indicates warning, and green indicates being on track.

- **Save and Activate**: You can save the newly created KPI and activate it later. New KPIs cannot be used at runtime unless you activate them. You can create applications and configure reports only for active KPIs. For generic type drill-down, each application must have an associated report.

Editing a KPI

Use

The Edit button lets you edit all the fields except the ID. You cannot edit the CDS View field if there are any applications associated with the KPI. You must delete the existing applications to edit the CDS View field.

You can edit **Allow CDS View Annotations** to use the available annotations in the CDS view that are configured for the KPI. A warning message prompting you to activate the existing applications and reports and to use the annotations at runtime appears.

Copying a KPI

Use

The copy function allows you to select and copy the KPI details and underlying reports to a different KPI. The applications, if any, are not copied. The KPI can be copied to the same group or to a different active group.

ℹ Note

The value help does not list groups delivered by SAP. In other words, you cannot copy KPIs to groups delivered by SAP.

Deleting a KPI

Use

This function displays the list of underlying reports and applications that are associated with the selected KPI. Choosing **OK** will delete the KPI and the underlying entities. Deletion of the KPI and its associated entities is irreversible.

Additional Features

Use

- **Maintain Languages**: You can add additional languages to the KPI using the **Maintain Languages** button. You must select a language, title, and description for the title. You can also delete the language using the **Delete** button displayed next to each row.
- **Create Report**: You can create reports for the generic drill-down configuration. You can maintain titles, subtitles, tags, business information, and configure atleast one drill-down view. The configuration details of the KPI are displayed on the **Data Source Details** tab. For more details, see Creating a Report.

  Using these reports, you can create an application from the Visualize tab. For details, see Creating an Application.

Reports

Use

With this page, you can create and activate **Generic**, **Analytic List Page**, and **Data Analyzer** reports. Using these reports, you can create applications that can be launched directly from the SAP Fiori launchpad.

Features

From this page, you can create, edit, and delete reports. The **Settings** button allows you to select columns for viewing the report details in tabular format. The following table describes the columns and their uses:

Columns	Displayed Data
Source	Customized applications and applications delivered by SAP. The applications delivered by SAP have an icon in the **Source** column.
Report Type	The report types **Generic**, **Analytic List Page**, or **Data Analyzer**.
Data Source	The technical name of the data source.
Tags	The tag names used when creating reports.

ⓘ Note

The **Edit** and **Delete** buttons are not available for applications delivered by SAP.

Using the filter bar, you can filter the reports based on the names, report type, tags, and CDS views. You can either enter keywords or select from the value help for **Tags**, **Report Type**, and **CDS views** columns.

Common Features Available For Active Reports

- With the **Maintain Languages** feature in **Create Report** page,you can create in multiple languages. You need to enter a title, an optional subtitle, a description, and choose the language from the drop-down list. The number within the parentheses shows the number of added languages.
- The **Edit**, **Show Preview**, and **Delete** features are available after you've activated the report.
- The **Show Preview** feature allows you to view the detailed configuration of the report in real-time environment.

For a detailed description of different report types, see the related individual topics.

Related Information

Generic Reports
Analytical List Page Reports
Data Analyzer Reports

Generic Reports

Use

Generic reports are visualizations using charts and tables in which the data is filtered based on values defined in the KPI. You can view and analyze the reports detailed configurations during Smart Business runtime. The generic reports use smart charts and smart filters for data visualization. With the generic reports, you can:

- Toggle to display or hide the aggregated KPI value in the report
- Filter the data using facets
- Configure mini charts for the defined KPI or for KPIs of associated groups
- Add semantic objects and actions from the **Navigation Intents** page

For more information about managing reports, see related information.

Related Information

Creating a Generic Report
Deleting Reports
Editing Reports

Creating a Generic Report

Use

You can create a generic drill-down report, view the KPI configuration, and see the relevant details for the KPI you've selected. To activate the view, the drill-down report must be configured as a chart or a table.

Once you've activated the report, you can create an application that you can launch directly from SAP Fiori launchpad.

Features

Definition

In this section, you enter the title, subtitle, and the owner's details.You also define the tags for the KPI here. The default title of the KPI appears in the **Title** field, where you can edit the title name. The title can have a maximum of 40 characters. You can enter a tag manually in the **Tags** field or select tags from the value help. The tags you enter manually are available in the value help for future use. Tags are a way of classifying the reports and can make searching for reports easier.

Generic drill-down is the default in the **Type** field.

Data Source Details

All the configurations for the selected KPI are displayed and cannot be edited.

- **KPI Value**: You can choose to display the aggregate values.
- **Input Parameters and Filters**: The default parameters you added while creating the KPI are displayed. You can add more parameters to the KPI by using **Add Filters**.
- **Pagination Limit for Facet Filter**: At runtime, you can set the number of dimension values of the facet filter to be displayed at one time. This way you can control the scrollable area. Use the scroll bar to display the next set of dimension values.
- **Mini Charts**: You can add tile visualizations (mini charts) to the drill-down. These mini charts are supported by visualizations, such as number, trends, comparisons, actual vs. target, and comparison of multiple measures. Any or all of these visualizations can be added to the current KPI for which the report has been configured. This includes the current groups other KPIs, as well as all KPIs belonging to the associated group.

  You can create mini tiles for the selected KPI and for the associated group KPIs, if there are any. The **Associated Group KPIs** contain the list of KPIs associated with the selected KPI. A message is displayed if no associated KPI has been configured.

  You can choose a drill-down and the tile format based on the KPI and evaluation you've selected from the **Associated Group KPIs**.

  > **Note**
  > When you add mini charts to the drill-down, the additional load affects performance at runtime.

  If the SAP Smart Business user sets a filter value for any of the dimensions, the values in the mini chart are updated based on the filter. If it isn't possible to set the filter value, a gray area overlays the mini chart to indicate that it might be outdated.

- Charts and Tables

  You need to add at least one view to display the configured values as a chart or table. Choose **Add View** to create a view. Enter a title, add multiple languages (optional), and choose either the chart or table format.

  You can reorganize the views and edit or delete them as needed. Using the toolbar, you can configure each view with measures and dimensions like this:

  - **Add View**: Choose the + icon to create a view. Enter a title, add multiple languages, and choose chart or table. The **View ID** is filled by default but you can edit it. Additional chart settings are available.You can edit the title, add multiple languages, change the view to either a chart or table, and sort the measures or dimensions.
    - **General Information**: On this tab you can edit the title, add multiple languages, and change the view to either a chart or table.
    - **Options**: On this tab you can set totals of values for a table and set data limits for charts.
      - **Allow Totals**: At runtime, analytic tables can now display the totals of values. Key users have to configure this in the table settings. If this option is selected, then analytical table is displayed by default in the drill-down.

        > **Note**
        > Total values are displayed only for analytic tables, they are not displayed for responsive tables. When you select **Allow Totals**, the tables are not responsive.

      - **Setting the Data Limit for Charts**

        By default, the **Set Data Limit** checkbox is not selected. If you select this checkbox, a text box open. You can enter a valid integer representing the number of records to be retrieved in the text box. By

default, this value is set to 200.

- **Column Properties**: Displays the fields and the types and shows whether it's a dimension or a measure. You can show or hide the measure and dimension display in the view.

- **Delete**: Select a view and choose **Delete**. The **Delete** icon is visible only if there are multiple views.
- **Settings**: Choose the Gear icon if you want to make additional changes to the view properties. The **View Settings** page appears and you can change the role of each dimension and measure. In the chart view, the **Chart** column you can change the role of each dimension and measure. In the table view, you can choose additional measures and dimensions from the **Columns** tab.

  In the **Sort** column, you can sort data (such as measures or dimendsions) by ascending or descending order. When you view the data in a table, the columns are sorted accordingly. The chart renders changes immediately based on the settings but you cannot save them.
- These features are available only in the chart view.
  - **Toggle Legend Visibility**: You can either show or hide the legends on the chart.
  - **Zoom In/Zoom Out**: The **Zoom In** option enables you to magnify the chart and enlarge the details. The **Zoom Out** option enables you to view all of the data at once.
  - Select Chart Type:

    You can choose from these visualization types:
    - Bar
    - Column
    - Line
    - Pie
    - Donut
    - Stacked Bar
    - Stacked Column
    - 100% Stacked Bar
    - 100% Stacked Column
    - Waterfall
    - Horizontal Waterfall
    - Chart Visualization
  - **Toggle Chart and Table View**: The icon in the toolbar lets you toggle between the chart and table views.

- Navigation Intents

  On this tab you can add semantic objects and actions, and at runtime you can navigate to other applications, if you have the authorizations for them. You also have to be authorized to access the assigned role in the selected cataalog. For more information about analyzing generic reports at runtime, see Smart Business Runtime Environment.

Applications

You can view all the tiles available for the active report and create a tile visualization for it. For more information about creating an application, see Creating an Application.

Note

You need to activate the report to create an application.

You can also create an application for the active reports from the **Visualize** tab on the **KPI Details** page.

Analytical List Page Reports

Use

Analytical List Page (ALP) is an SAP Fiori element which uses business key performance indicators to create analytical dashboards with KPIs, charts, tables, and visual filters. ALP is driven by SAP UI annotations. You can analyze the data from different perspectives, investigate root causes, and take the necessary actions. You can publish the configured analytical list page applications on the SAP Fiori launchpad.

For more information about managing reports, see related information.

Related Information

Creating an Analytical List Page
Deleting Reports
Editing Reports

Creating an Analytical List Page Report

Use

You can use this page to create an Analytical List Page report. You need to activate the report to create an application. These applications can be launched directly from SAP Fiori launchpad to view the configured chart or table.

Features

Definition

The header details are the same as in generic report creation. Refer to the **Definition** tab in Creating a Generic Report.

On the **Data Source Details** tab, you need to configure an OData service to activate the Analytic List Page report. Choose **Define** and select a released CDS view, the underlying OData service, and the entity set. You can then display the report either as a chart or as a table.

Configuration

- **Input Parameters and Filters:** The default parameters added while creating the KPI are displayed. You can add smart filters and visual filters to the configuration. With smart filters, you can provide a fixed value to the filter. Using visual filters, you can select one or more data points on the visualization the data will be analyzed based on the selected data point.
    - Using smart filters, you can add default parameters to your KPI during creating. You can add more filters to the report using **Adapt Filters**. When you choose **More Filters**, you can see a list of the additional dimensions available for the selected CDS view to which you can apply filters. You can search for more filters to add to the report. For each dimension, you can add more conditions to the filters.

- Visual filters are an intuitive way to apply filters to charts and tables and to visualize them. You can choose one or more data points and the visualization will be available only for the specific data.. For example, You can choose and visualize the graphics for a supplier with highest offcontractspend. From the visualization, you can select a data point and view the data analysis for the selected data point.

  Visual filters are displayed as donut, bar, or line charts. The visual filter for a particular dimension and measure displays 6 values for a line chart, ; 3 for the bar chart, 2 for the donut chart. Theremaining values are grouped together as Other.

  Visual filter charts are based on psuedo data at design time and actual data is displayed at runtime. For more information on behavior of visual filters at runtime, see Choosing Filter Modes.

- KPI (Non-Filterable) and KPI (Filterable): You can add filterable and non-filterable KPIs to the ALP. The difference between filterable and non-filterable KPIs is the reciprocation of the data towards the filter bar when there is an exact match between the technical name, modified filter, and parameter field in the filter bar. The filterable KPIs react to the filter bar whereas the non-filterable KPIs do not.

  You can add multiple KPIs using the **Add** button. The value help displays only active KPIs. The KPI title, OData URL, and card navigation details are displayed in a tabular format. In the **Card Navigation** column, **Yes** indicates that the KPI has a smart business report and an application for the generic drilldown report.

  > **Note**
  > You cannot add the same KPIs to the Filterable and Non-Filterable KPIs sections. For example, the KPIs added in the Non-filterable section will not be displayed again to be added in the filterable section and vice versa.

- **Allow CDS View Annotations**: The functionality of this field is same as the functionality used to configure a KPI. For more information about this field, see Creating a KPI.

- Chart

  The **Chart** tab lets you display the dimensions and measures selected on the **Input Parameters and Filters** tab. The charts are rendered instantly.

  The toolbar on the chart offers you the following functions:

  - **Details**: Select a data point and choose **Details**. The datapoint values are displayed
  - **View By**: You can render the chart for a differnet dimension by selecting a dimesnion from the drop-down list. The chart visualization is based on the dimension selected.
  - **Toggle Legend Visibility**: You can either show or hide the legends on the chart.
  - **Zoom in to and out of a chart:** The **Zoom In** option enables you to magnify the chart and enlarge the details. The Zoom Out option lets you decrease the magnification of the data preview.
  - **Settings**: This screen lets you select a different chart type for the defined dimensions and measures. You can also select a different dimension and the chart rendered is then based on the selected dimension. The **Show Selected/All** button lets you view the defined dimensions or all of the dimensions available in the data source.
  - The **Sort** column lets you sort data by ascending or descending order. When you view the data in the tabular view, the columns are sorted accordingly. The chart renderschanges immediately based on the settings but you cannot save them. You can scroll up and down in the dialog box using the up and down arrows.
  - **Selected Chart Type**: Displays the selected chart type and enables you to change the chart type.

- Table

  This tab displays the selected dimensions and measures in a tabular view. Using the **Settings** button, you can select a different dimension and update the table. The **Show Selected/All** button lets you view the defined dimensions or all of the dimensions available in the data source. The **Sort** column allows you to sort data in ascending or descending order.

When you view the data in the tabular view, the columns are sorted accordingly. You can use the up and down arrows to scroll up or down in the dialog box.

- Application

  You can view all the tiles available for the active report and create a tile visualization for it. For more information about creating an application, see Creating an Application.

  > **Note**
  > You need to activate the report to create an application.

Additional features such as **Maintain Lanugages**, **Edit**, and **Delete** are available when the report is activated.

Data Analyzer Reports

Use

Data Analyzer, a ready-to-run service for analytical queries, is integrated into SAP S/4HANA to provide an ad hoc query analysis experience to the end user. With Data Analyzer, you can visualize and report on analytical queries in SAP Analytics Cloud without model creation. Instead the designer uses analytical queries as they are. You can analyze the information instantly.

For more information about managing reports, see the related information.

Prerequisites

You must have authorization to the analytical queries.

Advantages of integrating Data Analyzer into SAP S/4HANA

With the integration of Data Analyzer into SAP S/4HANA, you can:

- Analyze analytical queries on the fly
- Navigate, analyze, and filter data

Reference

Data Analyzer Tool: See **https://help.sap.com/viewer/product/SAP_ANALYTICS_CLOUD/release/en-US SAP Analytics Cloud Help Analytic Applications Working with Data Analyzer.**

A detailed how-to video covering creating a data analyzer report, configuring the datasource, creating applications for the same and analyzing the visualization at runtime is available in the section **Learning Videos** in Data Analysis and Stories Analysis.

Related Information

Creating Data Analyzer Reports
Editing Reports
Data Analyzer and Story Analysis

Creating Data Analyzer Reports

Use

You use this screen to create a Data Analyzer report for a selected data source.

Features

Definition

In Header section, you enter the title and define the tags for the report. The title can have a maximum of 40 characters. The Tags field lets you enter a tag name manually or select tags from the value help.

The Business Information section lets you enter the owner's details, such as name, ID, and email.

From the Data Source Details section, you can choose a CDS view to activate the Data Analyzer report. Using the Define button, you can select a query from the list of displayed queries. On selecting a query, you can view the technical details of the query by choosing the Show Definition field. This will navigate to Custom Analytical Query app which displays the CDS view details in read-mode.

Preview

The Preview tab allows you to view and analyze the data of the data source using the **Data Analyzer Designer**. The designer displays the values of the data source in a tabular format. The **Data Analyzer** contains a table, a filter area, and a builder panel with navigation capabilities to add and remove dimensions and measures from the table. The Designer allows you to set the variable values and the table displays a filter wherein you can set additional filter values.

→ Recommendation

We recommend that you refer to Data Analyzer documentation on SAP Help Portal for any feature and functional enhancements to the tool.

Application

The Application tab allows you to view all the tiles available for the active report. You can also create a tile visualization for the Data Analyzer report.

Procedure

1. Choose Reports from the Manage KPIs and Reports page.
2. Choose Create Data Analyzer .
3. On the **Definition** tab, enter:
    - The title in the **Header** section. The other fields are not mandatory.
    - **Business Information**: Choose a role from the drop-down list of the **Owner ID** field.
    - **Data Source Details**: Choose **Define**. The Select Query page displays the list of CDS views. You can either type in or choose a CDS view.
4. On the Preview tab, you can see the tabular representation of the CDS view using the Data Analyzer tool. You can add measures and dimensions to the table from the builder

ⓘ Note

Modifications to the report in preview mode are not reflected on the tile until the report has been activated.

5. Choose the **Applications** tab to view the tiles available for the active report. To create an application, see Creating an Application.

   You can view the applications as a tile on the SAP Fiori launchpad. You can change the measures, dimensions, input parameter values, and change the visualization accordingly at runtime. For more information on the behavior of the Data Analyzer report at runtime, see Data Analyzer and Story Analysis.

Editing Reports

Use

Generic Report

You can edit all the fields except the KPI's data source details and the input parameters or filter values that are configured in the KPI. On the configuration tab, you can edit the chart's features or the table view.

Analytic List Page Report

You can edit all the fields if there are no applications associated with the report. You can also edit the **Data Source** details. The new configuration uses the selected data source details. You can edit **Allow CDS View Annotations** to use the available annotations in the CDS view that are configured for the KPI. A warning message that prompts you to activate the existing application and to use the annotations at runtime appears.

You can add filterable and non-filterable KPI tags to the report The KPI ID, or the title, OData URL, and Card Navigation details are displayed in tabular format. You can move the KPIs using the arrows. The table highlights the deleted KPIs and a message list displays the deleted KPIs.

You can add or edit the details of smart filters and visual filters.

If an application is associated with the report, then you can edit only the **Definition** and **Configuration** tabs. To edit the Data Source details, you need to delete the associated applications.

ℹ Note

You can edit the reports created using the **Report Catalog** in both the **Report Design** catalog and the **Manage KPIs and Reports** app. The only difference is that the reports aren't available in the **Report Catalog** if they've been edited in the **Manage KPIs and Reports** app.

Data Analyzer

You can edit all the details of the Data Analyzer report. If an application is associated with Data Analyzer, a warning message to republish the application with the changes is displayed.

Deleting Reports

Use

The deletion process is the same for the Generic, Analytic List Page, and Data Analyzer reports.

You can delete reports directly if they don't contain any associated applications.

If the report contains applications published to the catalog, you need to remove the tile from the **Custom Catalog Extension** app. To do so, go to the **Applications** tab. Choose **App ID**. This will take you to the **Custom Catalog extension** app where you can

remove the tile from the catalog. You can delete the report once the application is unpublished. Deleting the report deletes the applications configured for the report.

Stories

Use

Stories transform raw data into powerful visualizations to help you drive business performance and make data-driven decisions about your business. A story helps you to discover hidden insights within your data. You can add data, text, images, generate powerful data visualizations, arrange the data visualizations (such as charts, graphs, and other visual elements), and create tiles on SAP Fiori launchpad. You can use these visualizations for in-depth analysis.

The **Stories** tab lists all the stand-alone and embedded stories and all the related details in a table. Using the filter bar, you can filter the stories based on the source (predefined or custom), tags, and CDS views. You can either enter keywords or select from the value help for tags and CDS views.

- **Embedded Stories:** These stories are completely managed by SAP S/4HANA Cloud. In other words, an SAP Analytics Cloud tenant is embedded for each SAP S/4HANA cloud tenant. And, the SAP Analytics Clousd accesses the CDS views using the analytical queries. All the SAP Analytics Cloud features: tenant provisioning, connectivity to content management, and the lifecycle are embedded in S/4HANA. Once embedded, you can then add data, generate visualizations, and create tiles on SAP Fiori launchpad. You can configure a story with charts and tables that best display the selected measure. Using the designer panel, you can refine the objects, change the chart type, and add new objects. By default, you can view the artifacts of the Embedded Stories. For details, see Embedded Stories.
- **Stand-alone stories:** This tab lists all the stories from Enterprise SAP Analytics Cloud tenant. For details see Stand-alone stories.

More Info

SAP Analytics Cloud Story: See https://help.sap.com/viewer/product/SAP_ANALYTICS_CLOUD/release/en-US and navigate to **SAP Analytics Cloud Help Stories**.

Embedded Stories

Use

You create **Embedded Stories** directly in the app. You can add data, generate powerful data visualizations, and create tiles on SAP Fiori launchpad.

Prerequisites

You need to have access to:

- CDS analytical queries delivered by SAP
- OData services, if you're accessing an application that is created based on a KPI

Features

The **Stories** tab on the **Manage KPIs and Reports** page displays all the details related to the stories in a table.

From the toolbar, you can create a story for the selected database, and edit, copy, or delete stories. You can click on the row or on the arrow button next to a story to navigate to the details page. Using the **Settings** button, you can sort the stories by name, data source, description, job status, and **Last Changed By**.

- **Source:** Displays an icon for all stories delivered by SAP and is blank for customized applications.
- **Data Source:** Displays the technical name of the data source.
- The **Tags** column displays the tag names used while creating the stories.
- **Job Status**: The stories and their configurations have to be made available in the production system for further use. To do so, transport all the stories, along with their configurations, to and from the tenants. Once exported, you can use the **Transport Management** function to export the stories to the production system. The **Job Status** column indicates the transport status in the tenant system. The success or failure of the import indicates the status of the stories in the tenant system delivered by SAP.

  For user-defined stories, the **Job Status** column displays the success or failure of an export from the quality to the production system. The user also has the option of triggering the transport if the export to the production system fails.

  For more details about transports, see Transporting Analytics-Based Extension Items.
- The **Application** column displays the number of applications created for the story. A quick view of the available applications is displayed when you click on the count. The title, subtitle, and the tile type are displayed. You can navigate to the applications details by choosing the navigation arrow in the selected application row.

For more information about managing stories, see the **Related Links** section.

More Info

- SAP S/4HANA – SAP Analytics Cloud system integration may cause differences in the date and time formats and preferred languages. The data representation of the SAP Analytics Cloud story in S/4HANA may differ. See SAP Note 2932126 to represent the data in Integrated SAP Analytics Cloud the same way as in SAP S/4HANA

  A detailed how-to video covering the defintion of a story, configuring the datasource, creating applications for the them, and analyzing the visualization at runtime is available in the **Learning Videos** section in Data Analysis and Stories Analysis.

Related Information

Creating a Story
Editing a Story
Copying a Story
Deleting a Story

Creating a Story

Use

The **Create Story** page lets you define an SAP Analytic Cloud story for a selected data source. You can create different visualizations for the data source. You can also add multiple data sources to the story, design interactive dashboards, create new pages, and add visualizations, such as charts, tables, and other graphics to visualize your data. The items on the page, such as charts, are arranged as tiles that you can move around, resize, and style to your liking.

You can either activate or cancel the creation of a story.

ℹ Note

Internet Explorer doesn't support the creation of stories. For more details about systems, software, and client requirements for SAP Analytical Cloud stories, see https://help.sap.com/viewer/product/SAP_ANALYTICS_CLOUD/release/en-US and navigate to SAP **Analytics Cloud Help** **Requirements** **System Requirements and Technical Prerequisites**.

Features

Definition

In the **Header**, you maintain the title, application area, and the tags for the created story. The header details are the same as when creating generic reports. See the **Definition** tab in Creating a Generic Report.

The **Business Information** section lets you to add a description to the story.

Configuration

A quick help listing the data sources is available. When selecting a data source, the SAP Analytic Cloud controls are integrated in the **Manage KPIs and Reports** app. You'll be prompted to set the variables to the input parameters that are available in the data source. Once the variables are set, the information is used by the tables and charts that use the same data source. You can also add multiple data sources and visualizations. You'll see a responsive page with the selected chart or table visualization. On the **Page** tab, you can select a page's drop-down menu to delete, duplicate, rename, move, hide, or add comments to that page. You can also copy and paste story pages from one story to another. You can customize your story in the **Pages** view.

The **Designer** panel allows you to style the visualization page. The **Control** panel displays a quick view of the filters of the selected visualization.

Application

The **Application** tab allows you to view all the tiles available for the active story. You can also create a tile visualization from the display page after activating the story.

Procedure

1. Choose Stories from the **Manage KPIs and Reports** page.
2. Choose **+ (Add)**.

   The **Create Story** page appears
3. On the **Definition** tab, enter the title in the **Header** section and the description in **Business Information** section.
4. Choose **Configuration** tab.
5. Select a data source from the list.
6. The **Set Variables** dialog box appears. Here you have to enter or choose the values for the input parameters of the selected data source.
7. From the **Insert** toolbar of SAP Analytics Cloud tool, choose either chart or table. Use the different toolbar functions to adjust the visualization to your liking. For more details about working with SAP Analytical Cloud tool, see SAP Analytical Cloud documentation on SAP Help Portal.

   The chart or table visualization appears.
8. Activate the story to create an application.

9. Choose **Applications** **Add Tile** to create an application. For more details, see Creating Data Analzyer and Stories Application.

   You can view the applications as a tile on SAP Fiori launchpad. You can change the measures, dimensions, input parameter values, and the visualization accordingly at runtime. For more information about the behavior of the stories at runtime, see Data Analyzer and Story Analysis.

More Info

SAP Analytics Cloud Story: See https://help.sap.com/viewer/product/SAP_ANALYTICS_CLOUD/release/en-US and navigate to **SAP Analytics Cloud Help** **Stories**.

Editing a Story

You can edit all the fields belonging to a story.

Copying a Story

Copy Stories

The **Copy** function allows you to duplicate the story details. The applications, if any, are not copied.

Deleting a Story

Process to delete a story

This function will delete the story from the database table and from the SAP Analytic Cloud story tenant.

Stand-alone Stories

Use

This tab lists stories from the Enterprise SAP Analytics Cloud tenant. You can see the definition and the configuration of the stories, and create applications for the same.

Prerequisites

You need to have the **Analytics Specialist** (SAP_BR_ANALYTICS_SPECIALIST) role assigned to you.

You need to have the authorization for the Analytics Cloud system. For more details about **SAP Analytics Cloud Integration**, see the topics **Integrating SAP Analytics Cloud (OAuth)** and **Integrating SAP Analytics Cloud (Direct Connection)** on the SAP Help Portal at http://www.help.sap.com and search for **SAP S/4HANA Cloud**. Navigate to **Product Assistance** **Extend and Integrate Your SAP S/4HANA Cloud** **Integration** **Integration Scenarios**.

Features

The **Stand-alone** stories tab lists all the authorized SAP Analytics Stories that were created using the authorized SAP S/4HANA analytical query.

Using the filter bar, you can filter the stories based on names and CDS views.

You can click on the row or on the arrow button next to the story to navigate to the details page. The details page displays the tabs, **Definition**, **Configuration**, which lists the businesses information and the datasources, and **Application** wherein you can create and view applications on the SAP Fiori launchpad. You can edit and launch the applications either in new window or embedded mode. You can only delete the application.

Related Information

Creating Data Analyzer and Stories Application
Deleting an Application

Applications

Functions of an Application

Use

The **Applications** page allows you to create, edit, and delete tile visualizations for an active report (**Generic**, **Analytic List Page**, and **Data Analyzer**), KPIs, and Stories. You can configure the drill-down navigation path for the tile. This determines whether you navigate from the tile to the SAP Smart Business generic drill-down application or to a custom application when you click the tile at runtime. On saving and publishing to a catalog, the new applications are displayed as tiles on SAP Fiori launchpad.

Save

An app ID is generated when you save the tile. To publish the tile, click on the app ID. The **Custom Catalog Extension** app opens. You use the buttons **Add** and **Publish** to add the application to the catalog and to publish it to the catalog.

Save and Publish: This takes you to the **Custom Catalog Extension** app where you can add the catalog and publish the application to the selected catalog. The application is now available in the catalog only if publishing is successful. You can then add the application to your home page. The tile status is available in the **Custom Catalog Extension** app.

Publishing to a catalog can take a long time. After publishing, it's a good practice to clear the cache so the newly published application appears on the launchpad faster.

ℹ Note

The SAP Fiori launchpad will not display the tiles published to the catalog “Analytics – Report Design” because of the deletion of the catalog. In such cases, users must publish the tiles to a different catalog using **Custom Catalog Extension** app.

Example

You've published the tile to the catalog **Materials Management – Multiple Measures** with semantic object as `PurchaseOrderItem` and action as `analyzeOverduePurOrdItems`. Once the tile is published, you can start the app in the browser with the semantic object and action. The URL is `https://<system>:<client>#PurchaseOrderItem-analyzeOverduePurOrdItems?EvaluationId=.SAP.MM.PUR.OVERDUEPO`

Additional Featues

- Choose the tile to get a quick preview of the tile details. You can also edit the fields and delete the application by choosing appropriate buttons. For details, see Editing an Application and Deleting an Application.

  ### ℹ Note

  You can only delete stand-alone stories.

- **Maintain Languages:** You can add additional languages using the Maintain Languages button. You need to select a language, title, and title description. You can also delete the language using the Delete button displayed next to each row.
- You can also transport the tiles to another system. See Transporting Applications to Other Systems.

For more information about managing applications, see the related information.

Related Information

Creating Applications
Editing an Application
Deleting an Application

Creating Applications

Use

You can create applications for each report type and story.

Use the **Add Tile** button from the **Applications** tab. You provide all the details, save, and publish the application to the catalog. The new applications will be displayed as tiles on SAP Fiori launchpad.

For more information on creating applications for different report types, see:

- Generic Reports: Creating Generic Report Application
- Analytical List Page: Creating Analytical List Page Application
- Data Analyzer and Stories Creating Data Analyzer Application

Creating Generic Report Application

Procedure

- Define the tile parameters such as title, subtitle, and the refresh time for caching.

  Select a tile format. You can choose one of theseg tile formats:

Tile Format	Description
Numeric	Data is presented in a numeric format. The aggregate value of the KPI's main measure is displayed on the tile. The color of the value indicates whether the value conforms with the threshold values defined for the KPI. **Note** The SAP Core Data Services (CDS) views ensure that all the values for the KPI main measure column have the same Unit of Measure (UoM), otherwise, the UoM displayed on the tile may not be the expected unit.

Tile Format	Description
Comparison	You select a dimension that compares the top KPI values with each other. For example, if you select 'Customer' as the dimension, you see a comparison of the values for the top customers contributing to this KPI.
Trend	Data is presented as a line chart illustrating the trend over time. You need to enter a time dimension that represents a duration (for example, month or week) to visualize this tile.
Actual vs. Target	Data is presented graphically in the form of a bullet chart that shows the KPI's current value in relation to the target value and its thresholds.
Comparison Tile Multiple Measures	You select multiple measures that you want to display on the tile. You need to select at least two measures. A maximum of three measures are allowed. The measures should be either the KPI main measure, the threshold measures, or one of the additional measures defined for the KPI. You can link semantic coloring with each of the measures that you choose.
Dual Tile	You can create a dual tile, which is a 2x1 tile. On the dual tile, the left side always shows the KPI measure in a numeric format. The right side can show any one of the mini chart visualizations supported by Smart Business.
Blank Tile	A blank tile has the same configuration options as a numeric tile. However, it cannot be used with a dual tile. At runtime, only the title and subtitle are displayed on a blank tile. Values or mini charts are not displayed. Clicking the blank tile takes you to the configured drilldown. **Note** The default title of a blank tile is the title of the selected KPI and the default subtitle is the name of the KPI used. A blank tile cannot be used as a mini tile while configuring a drilldown.

Use the **Edit** button to choose a different tile format.

Refresh Time for Caching: You can specify the duration for which the tile data is cached. This feature is available to improve the performance of tiles by reducing the load on the SAP HANA server. You do this while creating a tile.

Enabling caching for a tile ensures the following:

- A cache value is displayed on the tile when you start SAP Fiori launchpad.
- If the value is not cached, or if the value is in the cache for longer duration than the specified duration, when you start SAP Fiori launchpad:
  - Data is requested from the data provider. In the related http call, HTTP header fields are used to indicate that the app accepts data that is not older than the configured cache duration.
  - If the data provider can provide data from their own cache, then the data can be taken from this data provider's specific cache. This is possible only if the duration is not older than the duration configured for the tile.
  - SAP delivers provider-based cached definitions for selected SAP apps using the SAP HANA view result cache. For more information on SAP HANA cache features, see the **SAP HANA Troubleshooting and**

Performance Analysis Guide under http://help.sap.com/hana_platform **System Administration SAP HANA Troubleshooting and Performance Analysis Guide** .

- The **Data** section displays the selected KPI, the defined measures, and the threshold values. You cannot edit this field.
- Define the drill-down navigation type and target mapping.

  The **Navigation** section displays the default drill-down (Generic) and the report name.

  In the **Target Mapping** section, you need to specify the semantic object, action, default values, and application parameters with which the SAP Fiori framework can start these applications. Both semantic object and action have to be used together when forming the URL to determine the apps. The default value in action field is `analyze`.

  Keep-Alive: This option keeps applications alive when you navigate to a different application page. When you navigate back to the application page, the reports are not updated or refreshed. In other words, you see exactly the same data as before, when you return to the report. SAP Fiori launchpad destroys the persisted app state only if you navigate to the home page or any other launchpad page.

  The **Default Values** field allows you to select dimensions. At runtime, you can assign values to the dimensions. The visualization shows the data filtered by the values assigned to the dimensions and also by the values specified on your SAP Fiori launchpad settings. For details about how the data is filtered using default values, see the **Behavior of Default Values** section in .
- Smart Business Runtime Environment
- If either the main measure or the threshold measures are displayed on the tile and if the scaling factor (defined while creating KPI) of the KPI for which you configured the tile is percentage-based (%), then the value returned from the back end for the main measure or threshold measures in the back end is displayed as a percentage. For example, if the back end returns the value 0.70, it is displayed as 70%.
- Save the application.

Creating Analytical List Page Applications

Use

You can create only one application for Analytical List Page report.

Procedure

- Define tile parameters such as title and subtitle.
- The **Navigation** section displays the default type, **Analytical List Page** and the report name.
- In the **Target Mapping** section, you need to specify the semantic object and action.

  The **Default Values** field allows you to select dimensions. At runtime, you can assign values to the dimensions. The visualization shows the data filtered based on the values assigned to the dimensions and also on the values specified on your SAP Fiori Launchpad settings. For details on how the data is filtered using default values, see **Behavior of Default Values** section in Smart Business Runtime Environment.

ⓘ Note

The Analytic List Page applications created using the **Manage KPIs and Reports** application are not visible in the **Report Design** catalog but the reverse that is applications created in Report Design are visible in **Manage KPIs and Reports** app is allowed.

Creating Data Analyzer and Stories Application

Procedure

- Define tile properties, such as format, title, subtitle, and caching duration.

  > **Note**
  >
  > For stand-alone stories, you can choose the launch mode for the applications. You can open the applications in **Embedded** mode or in a **New Window**. When choosing the **Embedded** mode, the application is launched in the same URL as SAP Fiori launchpad. When choosing a **New Window**, the application is launched in a new window using the SAP Analytics Cloud tenant URL and story ID.

- The **Data** section allows you to choose a KPI for the report for all tile types, except for static tiles. At runtime, the KPI's parameters and filters take precedence over the Data Analyzer's or the story's parameters and filters.
- The **Navigation** section displays the default type **Data Analyzer** or **Story** (depending on the type) and the associated name.
- In the **Target Mapping** section, you've to provide a unique combination of semantic objects and actions to map a navigation target. You do this to launch applications based on runtime parameters.

  > **Note**
  >
  > Default values for dimensions aren't supported for stories and data analyzer reports.

  > **Caution**
  >
  > To avoid incorrect display of application titles at runtime, you must maintain different semantic objects and actions for each application.

- **Navigation Intents**: This section enables intent-based navigation. This is where you can add navigation targets (the combination of a semantic object and an action to trigger navigation) from a configured story application or data analyzer report. You can select a navigation target as a global target. You can add multiple combinations of semantic objects and actions to trigger navigation.

  Also, a single semantic object can have different actions and can be marked as global or local targets. The order of preference for navigation targets is as follows:

  - If a semantic object is marked as both a global and a local target, then the navigation intent with the global target takes precedence.
  - Additionally, if the semantic object is marked as a global target and has an action specified as * or is empty, then this navigation intent takes precedence over other combinations of actions and targets.

  When you save or publish the application, you get a warning message about ignored navigation intents.

  For example, here's a list of different validity preference scenarios for the semantic object **Supplier** with different actions and targets:

Scenario	Semantic Object	Action	Targets	Validity Preference
1	Supplier	Create /*	Global	Considered
	Supplier	Manage	Local	
2	Supplier	Create	Global	Considered
	Supplier	Empty or *	Local	

Scenario	Semantic Object	Action	Targets	Validity Preference
3	Supplier	Empty or *	Global	Considered
	Supplier	Create	Global	
4	Supplier	Empty or	Local	Considered
	Supplier	Create	Local	
5	Supplier	Create	Global	Considered
	Supplier	Manage	Global	Considered
6	Supplier	Create	Local	Considered
	Supplier	Manage	Local	Considered

For more details, see **Intent-based Navigation** in Data Analyzer and Story Analysis.

Editing an Application

Edit an application

Use

Applications created using the generic report types

You can edit all the fields except the tile format, KPI name, and the fields in the **Navigation** section. You can either save the modifications or save and publish the changes to the selected catalog.

Applications created using the Analytic List Page report type

You can edit all the fields except the report type and name fields.

Applications created using Stories

You can edit all the fields except the tile format, KPI name, and fields in the **Navigation** section, for applications launched in **Embedded** and **New Window** mode. The only difference is that if you've selected to launch the application in new window, you can switch to **Embedded** mode. The reverse is not possible.

Deleting an Application

Use

The deletion process is the same regardless of which application is created using the Generic report or Analytic List Page report.

To delete an application, select the application and choose **Delete**. If the tile is published to the catalog, you need to revoke and remove the tile from the **Custom Catalog Extension** app. To do so, choose **App ID**. This takes you to the **Custom Catalog Extension** app where you can revoke and remove the tile.

You can then choose **Delete**. A confirmation message is displayed.

If the application is not published to the catalog, you can delete the tile directly by choosing **Delete**. .

Transporting Applications to Other Systems

You can transport the applications you have created to other systems. To do so, you have to:

1. Publish the application using the Custom Catalog Extension app with these steps:

    a. Click on **Save and Publish** on the **Create Application** page.

    The **Custom Catalog Extension** app is displayed.

    b. Choose **Add**. Select a catalog from the list of business catalogs and choose OK.

    c. Select the catalog and choose **Publish**.

    Once the status is **Published**, the application is now available in the catalog. You can add it to your home page. Repeat steps a-c for all the applications created for a report.

2. Export Collection: This process allows you to add applications to your software collection and allows your software collection to transport the applications.

    a. Log on to the target system with the user with the SAP_BR_ADMINISTRATOR role.

    b. Goto **Transport Management** **Export Software Collection** .

    c. To create a new collection, choose **Create Software Collection**.

    d. Enter a valid name and choose **Create**.

    e. Choose **Add Items**.

    f. Search for the App ID of the new application and add it.

    g. Choose **Check** for dependencies (App descriptor or Custom Analytical Views) and errors, if any. To add the dependencies, copy the App Variant ID and choose **Add Items**.

    h. Export the collection.

3. Import Collection: This process enables you to import software collection versions and make extension items available for productive usage.

    a. Login to the target system with the user with the SAP_BR_ADMINISTRATOR role.

    b. To import the collection, open **Import Collection** app.

    All the collections that are exported from the **Export Software Collection** app are available.

    c. Select the collection based on the version and choose **Import**.

ℹ Note

To transport applications, the system from which you are exporting and the system to which you're importing need to be on the same cloud release.

Runtime Analysis

Use

You can analyze the reports and stories in detail at runtime. First you need to configure the tiles for active analysis and evaluation. You have to choose a tile to visualize. This in turn lets you define how the tile appears in the runtime environment. At runtime, you select the tile to open either a generic SAP Business drill-down application for generic reports or another analysis screen to view Data Analyzer and Story. You can choose the visualization of the tile by selecting one of the available tile types.

More Information

- Generic Reports: Generic Report Runtime Analysis
- To analyze **Data Analyzer** and **Stories**, see Data Analyzer and Story Analysis

Smart Business Runtime Environment

Runtime Environment

Use

You can view the detailed configurations of the evaluations in Smart Business runtime. The Smart Business runtime environment lets you see the configurations for the evaluation, to drill down, and to analyze the KPI in detail. The Smart Business runtime is enhanced with smart controls such as smart filter and smart charts.

Features

Visualization Behavior in Smart and Facet Filters

The SAP Smart Business user can filter and display the information using the smart filter or facet filter. Users can filter the dimensions in the entity set of the OData service. Both filters allow you to narrow down the configured data and display the details either as charts or tables.

The smart filter is a superset of facet filters and displays the chart or table based on multiple referenced CDS views, whereas the facet filter displays the data based on the current CDS view. The smart filter gives you a list of all the values for the dimension from the CDS annotation, whereas the facet filter contains only the individual values returned from the current CDS.

By default, the header parameters are hidden. You can use the arrow to view the headers and the filters. The filter configurations you make in the smart filter are valid in the facet filter .

All of the defined filters are applicable when you navigate to Smart Business runtime from any external application. The settings do not change when you switch between the filters.

Facet Filter

You can search for and add filters using the facet filter. You can make the following adjustments to the facet filter:

- Reset the applied filter values to **All** for all of the dimensions currently in the filter bar. The filters added at runtime disappear and the filters that were added during configuration remain in the filter bar.
- Add any of the remaining dimensions present in the VDM to the facet filter bar or hide dimensions that are currently visible.

The values listed for each dimension of the facet filter are retrieved from the back end only when you choose the dimension.

When multiple filters are applied, the filters are applied together with the other specified filters, not separately. This means that the system filters as follows:

Filter1 = Value1 and Filter 2 = Value 2

and not

Filter1 = Value 1 or Filter 2 = Value 2

Every time a filter value is specified, the filter values for the rest of the dimensions are refreshed based on the selected filter values as in the following example: You have selected 3 dimensions for the filter bar: Filter 1 (all countries in which a company has manufacturing plants), Filter 2 (all cities in which a company has manufacturing plants), and Filter 3.

At runtime, if the user chooses a country in Filter 1, only the cities within that country are used to populate the value list for Filter 2 and only the manufacturing plants within that country are used to populate the value list for Filter 3. The values in Filter 2 and Filter 3 are only updated when the user selects the respective filters.

If nothing is selected in any of the filters and the user chooses a city in Filter 2, the values in Filter 1 and Filter 3 are filtered based on the selected city. If the user now selects a user in Filter 3, then the values within Filter 1 and Filter 2 are again refreshed based on the Filter 3 selection. That is, only countries that represent the chosen cities (Filter 2) and countries that have manufacturing plants headed by the chosen individual (Filter 3) are displayed in the Filter 1 value list.

You can set the pagination limit at design time. This lets you view a specified number of dimension values to bedisplayed at one time. When you choose **Add Filter**, the **Filter** dialog box displays the list of dimensions. When you choose a dimension, the search results are empty. The same is applicable for dimensions added in facet filter bar. You can type the required dimension value in the search field or choose the search icon to display all the dimension values. The **Search** page displays the limited set of dimension values. You can also use the scroll bar to select a dimension value.

Smart Filter

The filter bar displays the default input parameters along with the values chosen on the **Create Evaluation** screen.

You can:

- Add more filters to the configuration using the **Filters** button. You can either search for a filter or select filters using **More Filters**. For each filter, you can either specify values or set conditions to the filters and choose values. You can narrow down the filter values by adjusting the search conditions. You can restore the default settings.
- Use **Show/Hide Filter** to toggle the visibility of the filter bar.

Interaction between the Smart Filter and Facet Filter

For instance, you've configured the dimensions **Airfare**, **Airline**, and **Maximum Capacity Bus**.

Your application displays a very long **Maximum Capacity Bus** list. You can group by various **Airline** and **Airfare** parameters.

At runtime, the chart rendered for the specified configuration is the same for both smart filters and facet filters. According to the configuration, the chart rendered is a bar chart displaying a long **Maximum Capacity Bus** list that is grouped by various airline and airfare values.

Variants

Visualization for configuring smart and facet filters

The smart filter allows comparison conditions for the filters, for example, less than or equal to, equal to, and so on, whereas the facet filter contains a value help displaying the values that match the conditions given in the smart filter. In other words, you can choose a value from the value help for each filter.

Choose an **Airfare** value that is greater than 200 and **Airlines** that contain the letter "A". The smart filter renders a chart with data that has an airfare value greater than 200 and airlines that contain the letter A, such as AL, BA, ZA, and so on.

The chart displayed in the facet filter is the same as the one in the smart filter. The **Airfare** value help displays only the fares that are greater than 200 and the **Airline** value help lists the airlines that contain the letter “A”.

You can drill down further and select AA as the **Airline** value. The result first considers the smart filter conditions and then the additional condition set in facet filter. In other words, the chart is rendered based on these conditions:

- **Airfare with a value greater than 200**
- **Airline with the value AA**

Configuration Mismatch between the Smart Filter and Facet Filter

The visualization is available only if both the smart filter and facet filter contain the same filters and the same configurations. This means the visualization is not available if the filters are different or if the same filter is configured with different values in the smart filter and facet filter.

Visualization when Optional Filters are Specified

If you have defined optional filters while creating the evaluation, the visualization is based on the optional filters and the additional configurations made at runtime. The visualization will first consider the specified optional filter and then the additional filters that you specified at runtime.

You cannot change the values of the optional filter at runtime. However, you can drill down further and choose the values available in the selected optional filter through facet filter. The values selected using the facet filter take precedence and override the values entered while creating the evaluation. (These are also known as optional filters).

Behavior of Default Values

At runtime, you can provide values to the dimensions selected in **Default Values** while creating an application for the Generic report and Analytical List Page. See Creating Generic Report Application and Creating Analytical List Page Applications. The filtered data is visualized either as a chart or as a table, depending on the selected configuration. At times, the visualization data is filtered based on default values specified in the SAP Fiori launchpad settings. For more details about SAP Fiori launchpad settings, see **https://help.sap.com/nw UI Technologies in SAP NetWeaver SAP Fiori Launchpad Using the Launchpad Maintaining your Default User Values**.

If a filter value is not specified for a dimension in a KPI, then the data visualized is filtered based on the values in the SAP Fiori launchpad settings.

If there is a conflict between the default values for dimensions specified on SAP Fiori launchpad and the values specified in the KPI, then the behavior of the visualization is as follows:

- **Conflicting single value**: The visualization is based on the specified values given in the KPI, ignoring the default values specified on SAP Fiori launchpad. For example, if the **Plant** value is set to 1 on SAP Fiori launchpad settings and set to 2 in the KPI, then the visualization at runtime is filtered by **Plant** value 2.
- **Conflicting multiple values**: If multiple values are set to the dimensions on SAP Fiori launchpad and in the KPI, then the visualization is based on the intersecting value of both sets of values. For example, if the **Plant** field has values 1 and 2 on SAP Fiori launchpad, and 2 and 3 in the KPI, then the visualization data is filtered by the intersection value 2.

Thresholds maintained in the KPI are not included if default values are maintained on SAP Fiori launchpad.

Smart Chart

Smart Chart allows you to display the dimensions and measures selected in the chart view or table view. They allow you to select a chart type and to change the dimensions and measures of the chart. The charts are rendered instantly at runtime.

The toolbar on the chart offers you these functions:

- Drill Down/Drill Up: This function allows you to drill down to the lowest level or drill up to the highest level of the existing hierarchy. This means you can view more general or more detailed information within a predefined dimensional hierarchy.

  For example, if the chart rendered has 4 dimensions in the X-axis, when you choose **Drill Up** the dimension you selected is removed and the chart is rendered with only 3 dimensions. Each time you choose **Drill Up**, one dimension is removed and the chart is rendered with the remaining dimensions.

  The Drill Down function displays a list of dimensions from which you can select additional dimensions. The visualization is based on the additional dimensions.

- You can either show or hide the legends on the chart.
- Zoom in and out of a chart: The Zoom In option enables you to magnify the chart and enlarges the details. The Zoom Out option enables you to view the microscopic data.
- Toggle Label Data Visibility: This optiona enables you to show or hide the data values of the labels on the chart.
- Settings: On this screen you can select a different chart type for the defined dimensions and measures. You can also select a different dimension so that the chart is rendered based on the selected dimension. The Show Selected/All button lets you view the defined dimensions or all of the dimensions available in the data source.

  In the **Sort** column you can sort data in ascending or descending order. When you view the data as a table,the columns are sorted accordingly. The chart renders changes immediately based on the settings, but you cannot save them. Use the up and down arrows to scroll in the dialog box.

- Select various chart types: You can change the chart type at runtime.
- Display in full screen: You can view the chart in full screen mode.
- Export to a spreadsheet: You can export the data, along with the dimensions and measures, to MS Excel format.
- Chart View and Tabular View: You can switch over from the chart view to the table view and vice versa.

Smart Table

With a smart table you can display the selected dimensions and measures as a table. These are the smart table features:

- Display the table in full screen
- Export the data along with dimensions and measures to MS Excel format
- Switch over to chart view and vice versa.

Display KPI Main Measure

At runtime, the main measure of the evaluations KPI is displayed at the top right-hand corner along with unit of measurement. The value is refreshed each time the filter value is refreshed in both the smart filter and facet filter. At the onset, the color of the value conforms with the threshold values. The color of the value changes to black once the filter is applied. All the decimal precision and scaling factors defined in the evaluation are included. For example, if the scaling factor is in percent, then, at runtime, the KPI main measure displayed will be a multiple of 100.

Display Mini Charts

With **Show/Hide Mini Chart** you can view the configured mini charts at runtime. The visualization of the mini charts depends on the format selected. If numeric, the mini chart displays the threshold values and the relevant details. If the mini chart is from an associated KPI, then the associated page is displayed when you choose the mini chart. There's no impact on the mini charts if the filters change.

Jump To

Enables you to navigate to other applications from Smart Business apps. It displays links to all effective target mappings for all the semantic objects created using the **Manage KPIs and Reports** app. This button is enabled only if you have authorization for the external app. You must be authorized to access the assigned role of the selected catalog.

Actions

Currently, there are two options, **Save As** and **Send Email**, available for smart business users. You can save your configurations as a separate tile using the **Save as Tile** button. You need to enter a subtitle and enter threshold values when you choose to save as a tile. The tile format and the field values fields available in the parent tile are displayed by default. You can change the tile format, goal type, and values, and save as a tile with the entered values.

Send Email allows you to send the KPI details, such as the page URL, KPI title, evaluation title, and main measure in an email.

Subscribe/Unsubscribe Alerts

You can subscribe to or unsubscribe from each KPI for email and FLP notification alerts at runtime. You must enable the gateway configuration to subscribe to alerts.

Refer to the following topics for different scenarios:

- Embedded Scenario: The front-end and back-end systems are in the same ABAP interface.

  See **https://help.sap.com/nw SAP NetWeaver AS for ABAP 7.52 Application Help SAP Gateway Foundation (SAP_GWFND) Notification Channel Notification Channel Configuration Embedded Scenario**.

- Hub deployment: The front-end and back-end systems are different.

  See **https://help.sap.com/nw SAP NetWeaver AS for ABAP 7.52 Application Help SAP Gateway Foundation (SAP_GWFND) Notification Channel Notification Channel Configuration Hub deployment**.

Note

Smart Business Framework uses the provider ID, /SSB/NOTIFICATION_PROVIDER and provider class, /SSB/CL_SSB_FLP_NOTIFICATION as provider class.

Display of Data on Tiles

There's a difference when you view the data displayed on the tiles at design time and at runtime. When you add the configured tile to your homepage, the default data displayed on the tile is always 0.0 USD. At runtime, the corresponding calculated data is displayed on the tile.

Setting the tile size on SAP Fiori launchpad

You can set the tile size on SAP Fiori launchpad. All the smart business tiles are displayed in a smaller size. If any previous tiles are in the error state, then a warning message about the changed configuration and to activate the tile to reflect the modified changes appears. To set the tile size,do the following:

- Choose the user icon.
- Choose **Settings Appearance Display Settings Tile Size Small**.

Data Analyzer and Story Analysis

Use

You can view and analyze the detailed configuration of Data Analyzer and Stories at runtime. When you create a tile, you have to choose a visualization from the list of available tile types.

Features

Manage Variants

You can create new variants from the existing applications. At runtime, you can change the visualization by changing the values of input parameters or by choosing a different story or data analyzer report from the data source, or both. You can also save the changes as a variant for further use. To do so:

1. Make the changes to the existing visualization
2. Choose the drop-down button available next to the text**Standard**.
3. Choose **Save As**.

   The **Save View** dialog box appears.
4. Enter a view name. You can either set this as the default view or the public view by selecting the appropriate checkbox.
5. Choose **Save**.

   A new variant is now available.

From the **My Views** screen, choose **Manage**. **Manage Views** lists the different variants. On this screen, you can set or remove the view as a favorite, remove variants, or set the variant as the default.

Save as Tile

From the existing visualization, you can create a separate tile for the same data source with different measures and dimensions and save the tile on SAP Fiori launchpad. To do so, make the changes to the existing visualization. Choose **Save as Tile**. Enter a title and subtitle, choose any tile format, group, measures, and dimensions. Choose **OK** to save the tile on SAP Fiori launchpad.

Intent-based Navigation

This intent-based navigation is available for story and data analyzer based applications and allows users to navigate to different applications, depending on selected dimensions and authorizations. These application targets are resolved into actual URLs and users with the appropriate authorizations can access the applications.

Navigation Intents

You can add navigation targets (a combination of a semantic object and an action) to the applications created using stories and data analyzer reports. Select the **Global Target** checkbox to change the navigation target to global target. This means, that at runtime the navigation target corresponds to all the visualizations configured for that particular story or the data analyzer report and the **Jump To** list of all visualizations will display the global navigation target.

If a navigation target is not selected as a global target, then the navigation target isrestricted to a specific visualization configured for that story or data analyzer report.The navigation target is displayed in the **Jump To** list where the semantic object is configured as a dimension in that particular chart or table.

Learning Videos

The following videos cover the following scenarios:

- Creating a Data Analyzer/SAP Analytics Story
- Configuring the Datasource
- Creating Applications for the objects
- Publishing the Applications to a catalog
- Launching the Application from the SAP Fiori launchpad
- Analysis of the applications at runtime

Creating and Launching Data Analyzer Report on SAP Fiori Launchpad

Open this video in a new window

Open this video in a new window

Configuring and Launching SAP Analytics Cloud Story on SAP Fiori Launchpad

[redacted]

Open this video in a new window

Multidimensional Reports (Web Dynpro Apps)

As a business user, you use multidimensional analytical reports to analyze your data and display your results in SAP Web Dynpro or your custom Web Dynpro apps. Multidimensional reports allow insight-driven, explorative, and flexible analyses of large amounts of data. They usually focus on a specific topic, for example, sales orders or cost centers. You can switch the display from table (grid) to graphical display, and both displays can be further configured via the settings menu.

In the SAP Fiori apps reference library, the application type of multidimensional reports is called ***Web Dynpro***.

Here's an example of a multidimensional report (English screenshot only):

In the past, multidimensional reports could also be viewed in SAP Design Studio apps. Now, these apps are no longer available. However, you can still use your existing custom Design Studio apps. For more information, see Design Studio Apps.

Key Features

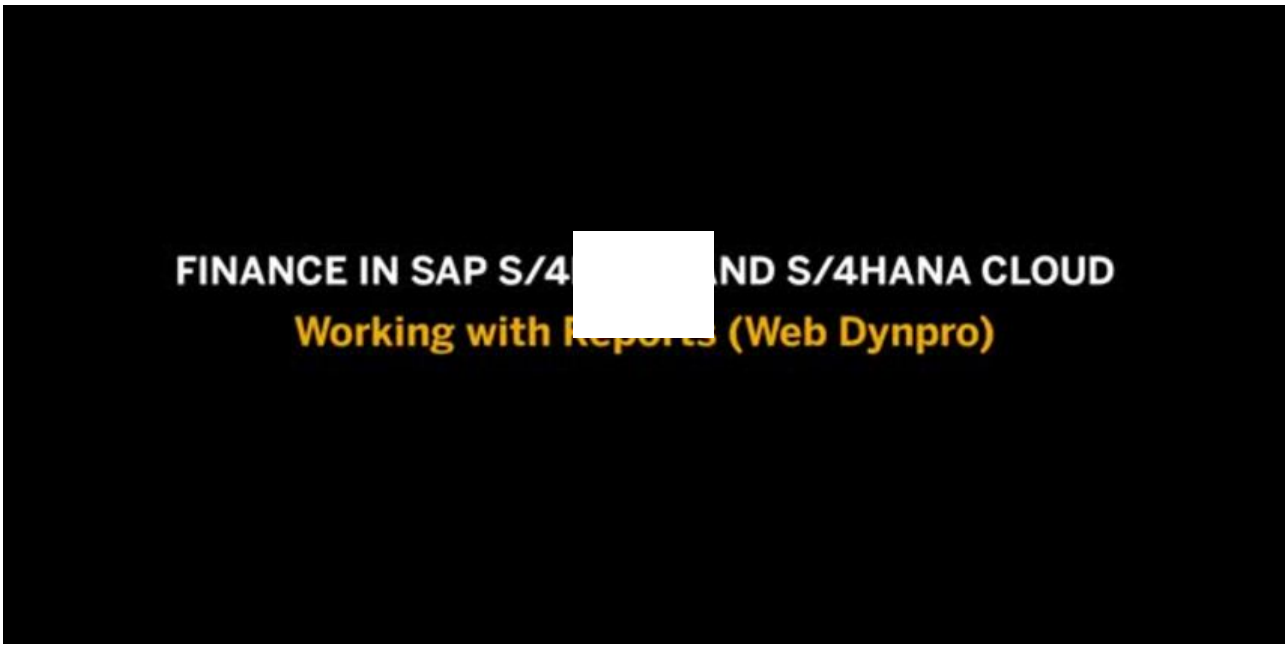
This type of app provides the following key features:

- Presents data in a pivot-like table
- Displays data in read-only mode
- Shows data in a chart or table
- Offers slice-and-dice as well as drill-down functions
- Shows subtotals at any level
- You can add dimensions (characteristics) and measures (key figures).
- **Note**
  This is not possible in reports based on CDS view queries.
- You can sort and filter the data.
- You can swap rows and columns.
- You can save personalized views (bookmarks) and share them.
- You can navigate to other SAP Fiori apps while staying in the same context.
- You can open and close the navigation panel.
- As an analytics specialist, you can create additional, customer-defined multidimensional reports.

See Also

For information about how to use this type of app, watch the **Working with Reports (Web Dynpro)** video:

[redacted]



Open this video in a new window

Note

Captions are available for **multiple languages**. Use the **CC** (Closed Captions) button in the video player to see which languages are supported.

You can also use the **Search within video** field to search for specific text in the English or German captions.

Related Information

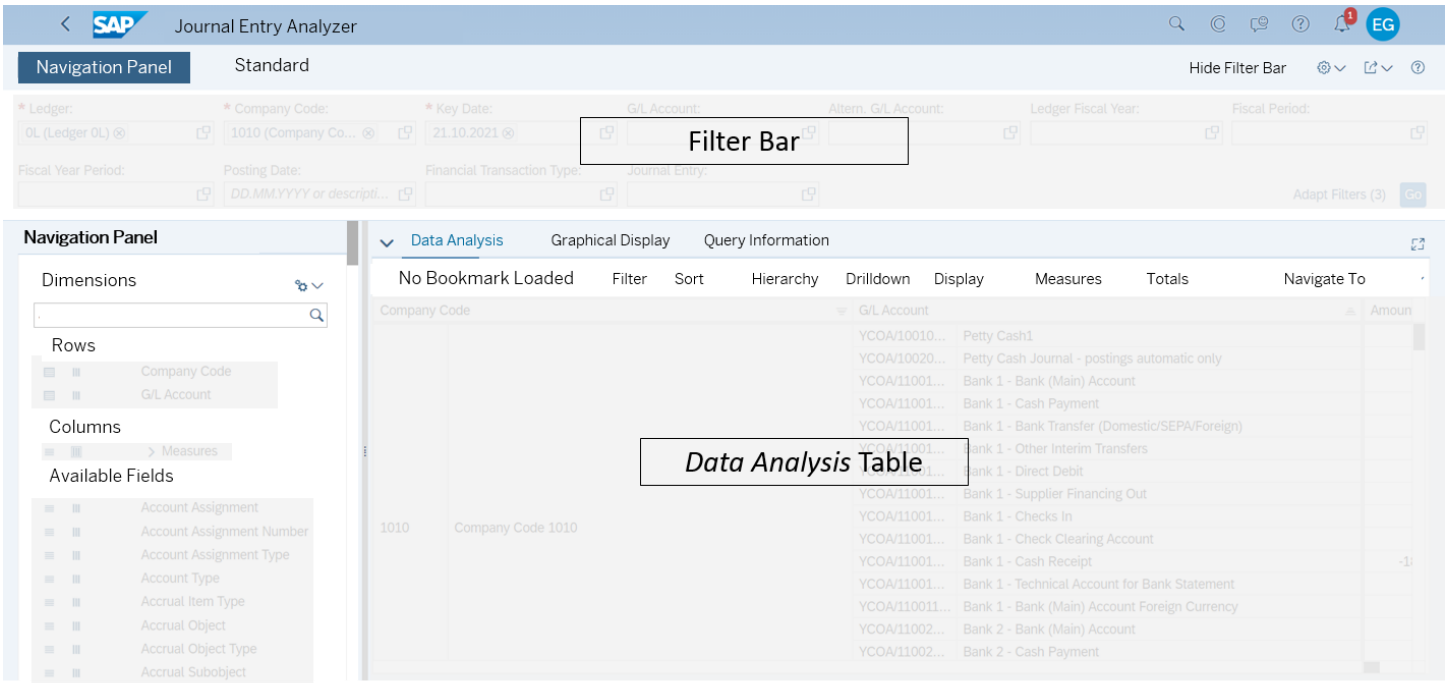
Personalizing Your Report Results
Design Studio Apps
SAP Note 3112220 - FAQ: Web Dynpro Apps and Design Studio Apps in SAP S/4HANA and SAP S/4HANA Cloud
FAQ: Deprecation of SAP Design Studio Apps in SAP S/4HANA and SAP S/4HANA Cloud

Personalizing Your Report Results

Learn how to adapt the results of multidimensional reports in Web Dynpro apps.

Overview

The following graphic shows the different components of a Web Dynpro app:



Navigation Panel

Open and close the navigation panel by choosing the button in the upper left corner.

The navigation panel contains the dimensions (characteristics and measures), which are arranged in columns and rows. You can select those that you want to add to the results table (grid) and/or graphical display.

Defer Layout Update Option

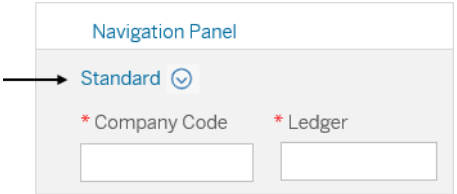
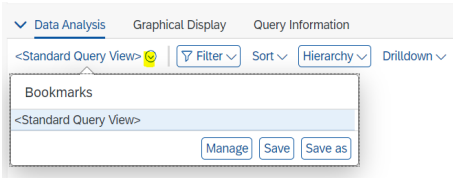
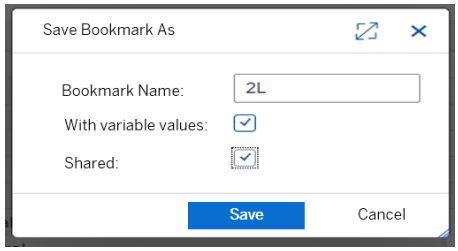
When you make many changes to the drilldown by selecting and deselecting dimensions, the table constantly reloads, which can hinder your work. To avoid this, choose ⚙ *(Settings)* and then **Defer Layout Update**.

Filter Bar

In the filter bar, you can choose **Adapt Filters** to define additional filters.

Variants and Bookmarks

You can use variants or bookmarks to change your display settings for the filter bar as well as for the table and graphical display. Here can you see the options in the system:

Filter Bar Variants	Bookmarks (Table and Graphical Display Variants)	Share Bookmarks
		

- The **filter bar variants** are located in the top-left area.

Choose **Adapt Filters** to add filter fields or to hide them. If you can't see the button, choose **Show Filter Bar**. To save your settings, choose the ⌄ *(down arrow)* button in the upper left corner.

- The **Bookmarks** option for changing your table and graphical display variants is located on the left below the filter bar and below the **Data Analysis** tab.

  Use the various options to adapt the table and graphical display to your needs. To save your settings, choose the ⌄ *(down arrow)* button.

- You can also **share these bookmarks** and make them available to all users. To be able to do so, you need to have the SAP_CORE_BC_UI_SHARE_PC (**User Interface - View Sharing**) business catalog assigned to your role.

Data Analysis Tab

On the **Data Analysis** tab, you can do the following:

- Sort the data
- Change the display of dimensions (display IDs only or also texts)
- Select hierarchies
- Show or hide totals
- Change the number format
- Set a filter on a selected dimension and switch the display to another dimension

See Also

For information about how to use this type of app, watch the **Working with Reports (Web Dynpro)** video:

Open this video in a new window

ℹ Note

Captions are available for **multiple languages**. Use the **CC** (Closed Captions) button in the video player to see which languages are supported.

You can also use the **Search within video** field to search for specific text in the English or German captions.

Related Information

Multidimensional Reports (Web Dynpro Apps)
Design Studio Apps
Characteristic

How to Create a Multidimensional Report

Find out how you can create your own multidimensional report, which you can use in a Web Dynpro app.

Context

You want to create a Web Dynpro app for an SAP query or a query that you created yourself.

ℹ Note

This procedure is based on default content and UIs. Depending on your configuration settings, the procedure may be slightly different.

Procedure

1. As an analytics specialist, in the quality or development system, open the **View Browser** app.
2. In the **Status** column, set the filter to **Released**.
3. In the **Data Category** column, set the filter to **Query**.
4. Select a query and choose **Create Application**.
5. In the **Create Application for Web Dynpro Grid** dialog, enter a title and subtitle. You can also select additional languages and enter a title as well as a subtitle for them.
6. Choose **OK**.

Results

The multidimensional report has been created. The application ID is displayed in the respective column. If you want to change any of the entries, choose the application ID and then **Edit**.

ℹ Note

Note down the application ID for the next step.

Next, you can add your report to a business catalog. For more information, see How to Add a Multidimensional Report to a Business Catalog.

Related Information

Multidimensional Reports (Web Dynpro Apps)
Personalizing Your Report Results

How to Add a Multidimensional Report to a Business Catalog

Find out how you can add your multidimensional report to a business catalog.

Context

You've created a multidimensional report as described in How to Create a Multidimensional Report.

> **Note**
> This procedure is based on default content and UIs. Depending on your configuration settings, the procedure may be slightly different.

Procedure

1. As an analytics specialist, in the quality or development system, open the **View Browser** app.
2. Search for the application ID that you noted down in the previous step.
3. Choose the application ID and **View in Catalog**.

   The **Custom Catalog Extensions** app opens.
4. On the right-hand side of the screen, choose **Add**.
5. In the **Add Business Catalog** dialog, select the business catalog to which you want to add the report and choose **OK**.
6. Select the business catalog and choose **Publish**.

   The enhanced business catalog is published.

Results

You've added the multidimensional report that you've created to a business catalog. You can now search for it in the App Finder and display it on the Fiori Launchpad.

Related Information

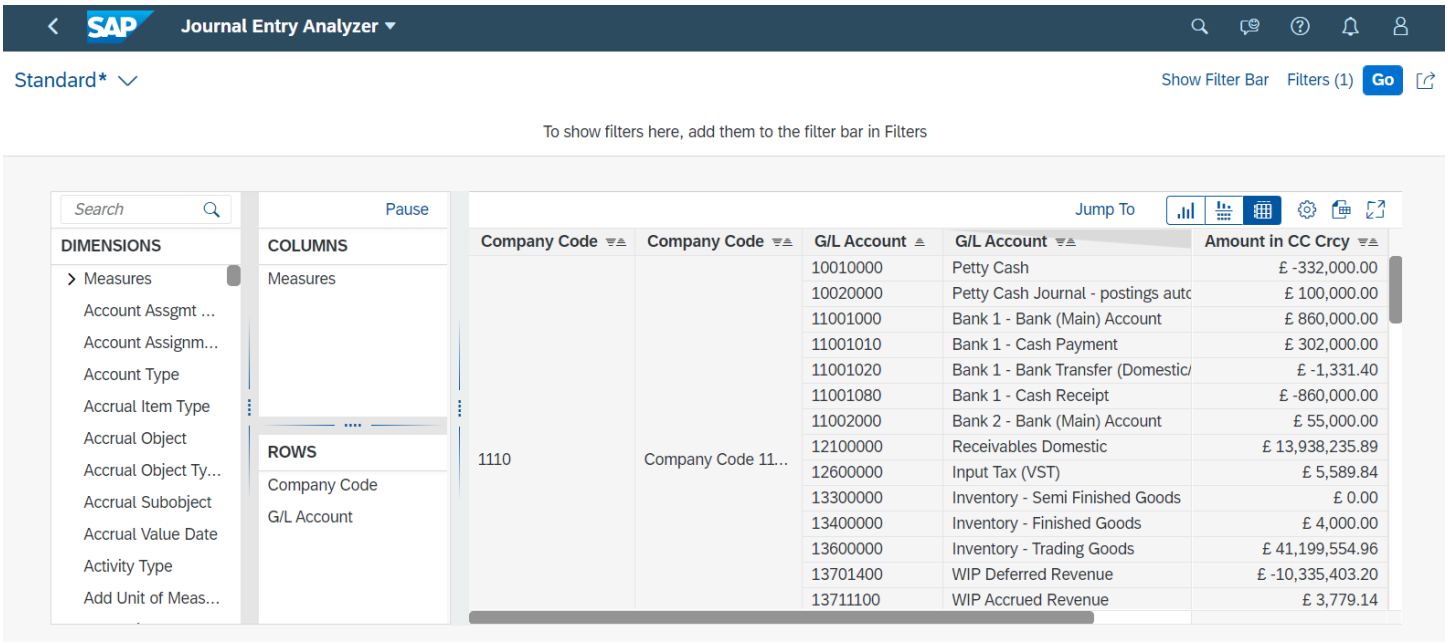
Multidimensional Reports (Web Dynpro Apps)
Personalizing Your Report Results

Design Studio Apps

Purpose

You can also use Design Studio apps to show analytical reports. Here's an example:

Here's an example of an SAP Design Studio app:



Deprecation of SAP Design Studio Apps

There are two types of Design Studio apps:

- **SAP Design Studio apps**: Most of these apps were deprecated in SAP S/4HANA Cloud 2102 and removed from the system in SAP S/4HANA Cloud 2108. The reason for this is that the SAP Design Studio technology is no longer supported.
- **Your custom Design Studio reports**

  You can continue to use the Design Studio reports that you created using the View Browser. However, you can no longer create new ones. We recommend creating Web Dynpro reports instead.

  For more information about Web Dynpro apps, see Multidimensional Reports (Web Dynpro Apps) and the SAP Community blog Six reasons why Web Dynpro is Better than Design Studio in SAP S/4HANA Cloud.

  Unfortunately, the custom design studio apps can't be migrated automatically to Web Dynpro apps. You need to recreate them as Web Dynpro reports using the View Browser. For more information, see View Browser.

  In most cases, the Web Dynpro apps are the successor apps. For a complete list of deleted Design Studio apps and their successor apps, see SAP Note 2997228.

Related Information

How to Use Design Studio Apps
Multidimensional Reports (Web Dynpro Apps)
FAQ: Deprecation of SAP Design Studio Apps in SAP S/4HANA and SAP S/4HANA Cloud
SAP Note 3112220 - FAQ: Web Dynpro Apps and Design Studio Apps in SAP S/4HANA and SAP S/4HANA Cloud

How to Use Design Studio Apps

Learn how to use Design Studio reports.

Using the Navigation Panel

On the left side of the app, you find the navigation panel. If you have many dimensions, you can use the search row to search for them. You can hide the navigation panel if you don't need it.

Using the Filter Bar or Panel

In the filter bar, you can define additional filters. Choose the **Personalize** icon to add additional fields to the filter bar/panel.

Using Variants and Bookmarks

You can save your display settings for the whole app in the upper left corner.

Using the Prompts Dialog

Once you open the app, a dialog asks you to enter the necessary parameters. You can relaunch the dialog from the settings menu.

Using the Context Menu

Depending on the context, you can use the context menu to do the following:

- Sort the data
- Change the display of dimensions (display IDs only or also texts)
- Select hierarchies
- Show or hide totals
- Change the number format
- Set a filter on a selected dimension and switch the display to another dimension

For more information about using Design Studio reports, watch the **Working with Reports (Design Studio)** video:

Open this video in a new window

ℹ Note

Captions are available for **multiple languages**. Use the **CC** (Closed Captions) button in the video player to see which languages are supported.

You can also use the **Search within video** field to search for specific text in the English or German captions.

Related Information

Design Studio Apps
Multidimensional Reports (Web Dynpro Apps)

View Browser

Get a list of all available CDS views and use the artifacts for analyzing the data.

Use

When installing SAP S/4HANA, the biggest challenge faced by key users is the availability of CDS views, be it CDS views released by SAP or customized CDS views. The key user responsible for building data models can then use the **View Browser** app to get a list of all available CDS views and their artifacts, such as Category, View Types, Dimensions and Measures, and Annotations.

The key user can also view the supported capabilities and modeling pattern of the CDS views.

The user can use various search options, such as descriptions, application components, and tables used in building the CDS views to search for CDS views.

With this app, you can search, browse, tag analytical and non-analytical queries, and analyze the data fields of the CDS view. This application displays all of the CDS views and underlying artifacts in tables. By default, the content views are organized by view name. You can also use the drop-down feature to filter the values in each column.

The advantage of using this app over the **Custom Analytical Query** app is that the latter displays only released analytical queries, but the **View Browser** app displays all the CDS views that were released by SAP, as well as custom SAP views irrespective of draft or released status. However, you can use **Custom Analytical Query app** to create, edit, and delete CDS views. For more details about custom CDS views, see Custom CDS Views.

Prerequisites

The **Create Application** feature is enabled for:

- Adaptation Transport Organizer (ATO) configuration
- Extensibility-enabled systems for queries that are created by customers and for queries created and released by SAP

  For an overview of extensibility, creating new queries, and transporting extension items between systems, see Extensibility

The analytical queries created in quality systems have to be transported to a production system. For more details about transport, see Transporting Analytics-Based Extension Items.

Key Features

The following functions are available:

- Views: Displays the number of all Core Data Services (CDS) views that are available in the system. The numbers above each view type (Basic, Composite, Consumption, Extension, Transactional, and Undefined) represent the number of views. The number displayed in the Views row and in the toolbar is the total number of CDS views available in the system. The number changes in the tool bar depending on the chosen view type.
- Variants: SAP delivers these standard variants:
    - Standard
    - All Views
    - Released Views
    - Favorite Views
    - Virtual Data Model Views
- You can use the variants delivered by SAP to create and your own variants. You do this by entering a name and choosing Save As. By default, all variants are marked as favorites. You can set any variant as the default. Choose Manage and then choose Default for the variant.

  If you've an existing variant from a previous release that is from a favorites list, then the new variant delivered by SAP also has to be marked as a favorite.
- CDS View Status: You can't alter or modify the views created by SAP. You can create, save, modify, and publish CDS views to catalogs using the Custom Analytical Queries app.

  The Status column in the View Browser app displays the status (Draft, Released, Not Released, Published, or Deprecated) of the CDS views. To enable this column, choose Settings Column Status. To view the draft status, choose Settings Column Draft Status. All of the CDS views start with YY1, regardless of their status. You can filter the CDS views based on the status by choosing Settings Filter. Select Draft Status and choose Yes/No.

  Suppose that a published CDS view is modified and saved as draft in the Custom CDS View app. The CDS view, now has 2 statuses, Published and Draft. In such cases, the View Browser app displays the details of the published view. The check mark next to t the draft status indicates that the published CDS view is also a draft.

  → Recommendation

  We recommend using CDS views delivered by SAP with the status Released. The SAP CDS views with statuses **Not Released** and Deprecated may be changed or deleted in the next releases and not be available to customers.

- Supported Capabilities and Modeling Pattern

  The `Supported Capabilities` column lists all the capabilities supported by CDS views. Choose `Show All` to view the complete supported capabilities.

  The Modeling Pattern describes the intention of the CDS view. You can display the CDS view's modeling pattern as a column on the View Browser page. To do so, Choose Settings Columns Modeling Pattern.

  For more details about supported capabilities and modeling patterns, see Supported Capabilities for CDS Views.

  ⓘ Note

  If the column details don't fit on one page, a few columns get displayed below each row area with an indentation.

- Search: Search for views, view types, view categories, tables, view descriptions, view column names, annotations, or user-added tags. The search results for a CDS view display the CDS view status, if this is enabled in **Settings**. If the CDS view is in draft status and published status, then the View Status fields are displayed as Published. Draft Status has a check mark next to it.

You can also search for CDS views based on annotations. To search for CDS views with specific annotations, use the syntax `@<Name of the Annotation>:<Value>`. For example, @VDM.VIEWTYPE:#BASIC lists all the CDS views with annotation **VDM.VIEWTYPE**" having value **#BASIC**.

You can also search for CDS views that match specific supported capability. For example, if you type `CDS_Modeling_Data_Source` in the search bar, the search results displays all the CDS views with supported capability, `CDS_Modeling_Data_Source`.

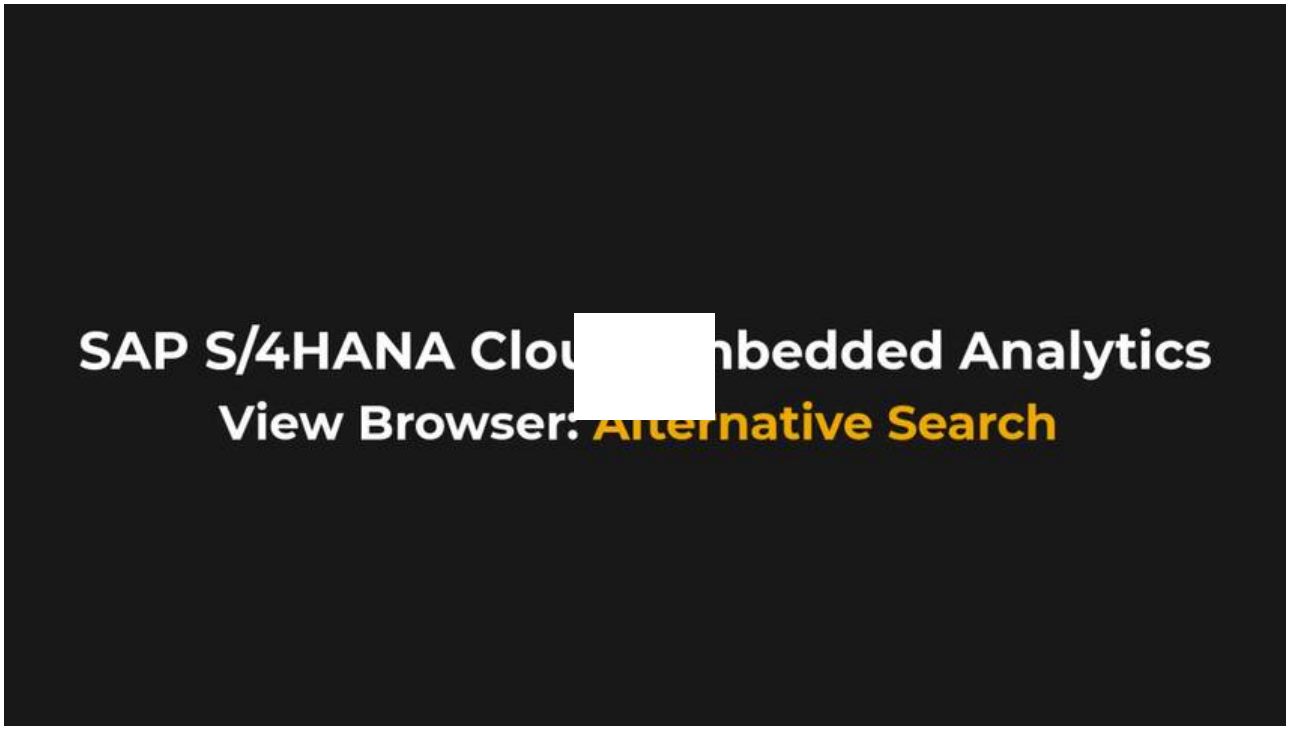
- **Alternative Search**:

  Alternative search is an extended search that allows you to search for CDS views in tables, columns, annotations, and tags. You can choose to search for CDS views separately in tables and columns or both.

  However, to search for CDS views in annotations, you must first select the annotation from the list. Then you must enter or select any value displayed in the selected annotation. The search query looks for CDS views in the selected annotation and value. If the annotation value is blank, the search results are a list of all possible CDS views that match the annotation and all the associated values of the selected annotation.

  To search for CDS views in tags, choose **Tags** and then enter the tag value.

  Step-by-step video explaining Alternative Search

  Open this video in a new window

  The search results are displayed in **Matched in** column and each result is prefixed with "**Table:**", "**Column:**" and "**Annotation:**" for clarity.

- **Personalize and Tag Views**: Create your own tags for CDS views. Select a view and then choose **Manage Tags**. You can add multiple tags to the selected view. Use commas to separate the views. The number of tags with which a view is associated is displayed as a link. Select the link to manage the tags. You can delete the tag by choosing **Delete**.

- **Show Content**: Displays a data preview of released analytical queries and customer created analytical queries. The **Show Content** button for the selected CDS view displays all the relevant information. A dialog box prompts you to provide input parameters for the selected view, if necessary. The analytical queries are displayed using **Web Dynpro Grid**.

- **Mark as Favorite**: Add views or mark views as your favorites. Select the checkbox for a view and select the **Favorite** icon.

- **Annotations**: Display a list of properties used by the selected CDS view. One view can have multiple annotations.

- Cross Reference: Display all the CDS views and tables used by the selected view. The CDS views are highlighted and you can navigate to other views and tables from them. The Release Status column displays the status of released CDS views.

  You can search for further views and tables using the Search button that is available on the Cross Reference tab. The search results display all the views and tables, except for views and tables whose relationship is Association. In other words, the search option doesn't find views or tables with unused associations.

- View Definition: Displays the column names, data elements, relevant definitions, and other parameters of the selected view.

- Create/Edit/Delete Application: You can create `Multi-Dimensional Report Using Web Dynpro Template` and publish a tile to the catalog for released analytical queries with the `Query` category type. You can then open the published query as a separate application.

  > **Note**
  > The created application support users with special needs. Some of the details or the displays pertaining to the applications may be available to users with screen readers and users of keyboard-only navigation. This means that applications are created suited to their requirements.

  To do so, you've to select an analytical query and choose the `Multi-Dimensional Report Using Web Dynpro Template`. You need to specify the title and subtitle of the tile. An app ID and a quick link are generated and available in the Application ID column. To add the query to the catalog, choose the app ID. The Custom Catalog Extension app opens to where you can add and publish the query to a catalog.

  You can maintain the title and description in other languages on the Maintain Languages screen. The Maintain Languages screen appears when you create or edit an application. You can select a language from the list of available languages and provide a title and an optional description. The first row, by default, is always English. Once you select a language and enter the title, that language isn't available in the dropdown list. The Delete icon lets you delete the language, title, and subtitle.

  You can edit, view the released analytical query in the catalog, or delete the analytical query by choosing the application ID link. However, you can edit and delete existing applications that are created using non-released queries.

  In Edit mode, you can you add, delete, and modify the language, title, and subtitle of the selected analytical query.

  In Delete mode, you can delete the application [from the View Browser app]. Only those applications that haven't been published to any catalog are deleted. If the application has been published to a catalog, you've to remove the catalog from the Custom Catalog Extension app.

- Managing Analytical Queries from View Browser

  - Creating Analytical Query

    You can create an analytical query for customer queries and queries released by SAP. In other words, you can create analytical queries only for those queries that have the status Released and for the Cube/Dimension category type. Select a query and choose Create Analytical Query. Enter a query name and select a view from the dropdown list. This lets you create an analytical query from the View Browser app that can be used by multiple users.

  - Opening an Analytical Query

    You can open the analytical queries using the Create Analytical Query app from the View Browser app. To do so, choose an analytical query that has the status Released and the Query category type. Choose Open in Analytical Query from the ⋯ icon. You can also open analytical queries created by customers.

- Copying analytical query data to a different view

  You can also copy analytical query to a different view. This option is enabled only for queries with the status **Released** and the **Query** category type. Select the query and choose **Copy Analytical Query** from the ⋯icon. The Copy Source Query

dialog box prompts you to select a view. When you choose **OK**, the query data is copied to a different view. You can also copy analytical queries created by customers.

> **Note**
>
> As of SAP S/4HANA release 2108, the **View Browser** app supports CDS view entity. The following functions for CDS view entity aren't available in the app:
>
> - **Create Analytical Query** function for released cubes
> - **Open in Analytical Query** and **Copy Analytical Query** for released queries

- **Navigation to CDS view details page from other apps**: You can navigate to the CDS view details page that is available in the View Browser app from other apps. To do so, enter https://<system+client url>&sap-language=EN#CDSView-browse?View=<CDSViewName>. Enter the CDS view name that you want to look for. The **View Details** page of the CDS view, along with all details, is displayed.

Supported Device Types

- Desktop computers
- Tablets
- Smartphones

Component for Customer Incidents

CA-GTF-VDM-VB

Create Tile for SAP Analytics Cloud Stories

Creating tiles for SAP Analytics Cloud Stories

Use

You use this app to create a tile in SAP S/4HANA for the dashboard or for analytic cloud stories built on S/4HANA content. You can launch the analytic cloud stories directly from this app.

This app is intuitive and easy to use on any device. Using this app reduces time and errors that occur while navigating between multiple products. The built-in social collaboration function enables users to work together and act instantly. SAP Analytics Cloud stories connect to heterogeneous data sources, both SAP and non-SAP. whether in the cloud or on premise.

> **Note**
>
> Some stories created between April 15-28, 2018 (Version 2018.6) may have IDs exceeding 32 characters. These stories are not listed in the **Create Tile for SAP Analytics Cloud stories** appand cannot be used to create tiles. However, you can copy the stories to the app manually to create tiles. This issue is resolved from version 2018.7+ onwards.

Prerequistes

You need to have the **Analytics Specialist** (SAP_BR_ANALYTICS_SPECIALIST) role assigned to you.

You must have authorization for the Analytics Cloud system. For more details about **SAP Analytics Cloud Integration**, see the topics, **Integrating SAP Analytics Cloud (OAuth)** and **Integrating SAP Analytics Cloud (Direct Connection)** from

https://help.sap.com/SAP_S4HANA_CLOUD and navigate to **Product Assistance Extend and Integrate Your SAP S/4HANA Cloud Integration Integration Scenarios**.

The tiles created in the quality system have to be transported to the production system. For more details, see **Transporting Analytics-Based Extension Items**

Features

- Lists all the BOC stories that are created from the query that is connected to the SAP S/4HANA system.
- **View Stories**: Displays the SAP Analytics Cloud Stories that you are authorized to access. The numbers beneath each status (Published, Unpublished, Error, Running, Partially Published) represent the number of stories. In the first instance, the number displayed shows the total number of SAP Analytics Cloud Stories available in the system. The total number changes depending on your search criteria.
- **Settings**: You can sort and filter the columns that are available on the SAP Analytics Cloud Stories screen .
- **Create Fiori Application**: You can create an SAP Fiori application ID for the selected SAP Analytics Cloud Story. When you choose**Create SAP Fiori ID**, a screen on which you enter a title and, subtitle, and choose a language appears.. The first row is always the default language in which the SAP Analytics Cloud Story is created. You have to select the language from the available list. Once the language has been selected, it is not available in the subsequent selection. The title, subtitle, and languages are displayed in tile format at the bottom of the screen. You can save and publish the story to the catalogue from the **Custom Catalog Extension** app. When you choose **Publish**, the Custom Catalog Extension app opens and you can add the catalog and publish the tile to the selected catalog. The tile is now be available in the catalog and you can add it to your home page.

  The ID starting with YY_<> is now available in the Fiori Application ID column. You can edit, view the story in the catalog, or delete the Fiori application ID by choosing the link.

  The **Edit** button allows you to add, delete, and modify the language, title, and subtitle of the selected SAP Analytics Cloud Story. You can delete the title, subtitle, and language by using the delete icon that is available in each row.
- **Delete**

  If the tile is published to the catalog, you must remove, revoke and delete the catalog from the **Custom Catalog Extension** app. You can then delete the tile.

  If the tile is not published to the catalog, you can delete the tile directly with the delete icon.
- **Tile Status**: The Published Status column displays the status of the SAP Analytics Cloud Story you've created.
  - **Published**: The story is published to the selected catalog and is available in the catalog to be added to the home page.
  - **Unpublished**: The story is either blank or not associated with any catalog.
  - **Running**: The story is not yet published or unpublished to and from any catalog.
  - **Partially Published**: The story is associated with multiple catalogs. Partially published means the tile is published or unpublished in a few catalogs while the story is in the process of publishing or unpublishing in other catalogs.
  - **Error**: The story is associated with multiple catalogs. An error occurs when the publishing or unpublishing the story fails in one or more catalogs.

See Also

For more information about SAP Analytics Cloud, see https://help.sap.com/viewer/p/SAP_BusinessObjects_Cloud **User Help SAP Analytics Cloud Help**.

Query Browser

Application used to search, browse, and tag the analytical queries

Introduction

The **Query Browser** is a Fiori application using which you can quickly and easily search, browse, and tag the analytical queries. This application displays all the authorized SAP released analytical queries and authorized customized analytical queries. You need to assign the **Query Browser** role to a user. To launch the application, click the **Tile Catalog** and choose **Query Browser** from the Query Browser catalog. By default, the content views are pre-organized by the view name.

Prerequistes

You must be assigned the **Employee (SAP_BR_EMPLOYEE)** role.

Features

Custom Analytical Query View and Status

You cannot modify or delete SAP created analytical queries. However, you can create, save, and publish an analytical query from Custom Analytical Queries app and view the details of that query in **Query Browser** app.

For more information on creation, save, and publishing of analytical query, see How to Create Custom Queries. The query status, whether draft or published is displayed in **Custom Analytical Queries** app.

The Query Browser app displays all the authorized published queries that are created in **Custom Analytical Queries** app and also SAP authorized released queries.

Search

Use this field to search for the views, tables, view description, view column names, annotations, or user added tags. The search results also display matched in tags, tables, columns, and annotations. To search for an annotation, the search text should be in the format **@annotation_name:value**. The annotation search can be combined with the simple text search. From the search results, you can also choose to view the definition or content of each view. You can enter the following set of characters to search: a-z, A-Z, 0–9, *, +, _ and space. Search using the question mark and single quotes are not allowed.

You can use this field to search for draft and published analytical queries that are created using **Custom Analytical Queries** app but the search results displays the values of the published queries.

Filter views

Use the **Filter** option to sort or filter the views. The sorting of views is based on the view name and application component in the system. The filtering is based on the user added tags and application component. The list of application component displays in an hierarchy. Click the **Reset** button to remove all the filter conditions.

Personalize and tag views

Use this option to create or personalize your own tags to CDS views. Select a view and then click the **Add Tag** option. Multiple tags can be added for the selected view(s) by separating them using comma. The number of tags to which a view is associated displays as a link. Click the link to manage the tags.

Mark as favorites

Use this option to add or mark views as your favorite. Select the checkbox against a view and click the favorite icon. You can select multiple views and add as favorite. If you select views that are marked as favorites, and click the favorite icon, all the selected views are deselected. To select all views, click the checkbox on the table header.

Open for Analysis

Use the **Open for Analysis** option to open the analytical queries in the **Web Dynpro Grid** tool for analysis.

Context sensitive help

You can view descriptions of fields using this option. Click the help icon in the right top corner of the page to view the contents against each field.

Related Information

Custom Analytical Queries
View Browser

Manage Date Functions (To Be Deprecated)

Used to determine a single date or a date range from SAP-defined and user-defined date functions.

Use

You use this app to view predefined (by SAP) and to create user-defined date functions. This app determines a single date or a date range using base and relative dates. The result displayed is the difference between the base and the relative date. The date functions that you create are categorized as **Custom**.

From the **Manage Date Functions** page, you can view, search, and delete the customized date functions. The **Search** field allows you to search for a date function. You can search for multiple date functions using *.

To view the predefined date functions, choose the arrow button next to the selected date function.

To create a new date function, choose **Add**. For more details, see **Creating a Date Function**.

Prerequistes

All the date functions created in quality system must be transported to production system. For more details, see Transporting Analytics-Based Extension Items.

Features

The predefined date functions display the date function name, description, date function type whether single or date range, the base date, relative date, and the result under **Simulated Date** section. This section displays both the server-based and the user-based dates.

- **Server-Based**: Often, database servers run in UTC. The date displayed is the datestamp based on the server's timezone.
- **User-Based**: The date displayed is the datestamp based on user's timezone maintained in the **Maintain Business Users** app.

More details on base date and relative date, and the date calculations is as follows:

Base Date

The base date is the reference date for the date calculation. These are some examples of base dates:

- Today
- Yesterday
- First Day of Previous Week Previous Year
- Custom (You can enter a specific date using the calendar option)

If you have selected the option **Today**, then the base date is the current date of the specified server or the local system.

For example, if the current date in the local system or the server is `2/27/2017` and if you choose the base date as `First Day of Previous Week Previous Year`, then **02/15/2016** is displayed.

Relative Date

The relative date is the date range that is relative to the base date.

Some examples of relative date conditions are:

- 4 weeks ago
- 3 quarters from now

The result displays the date range that is calculated based on the base date and the relative date. The dates can be earlier or later dates with the base date as the reference point.

For example, if the base date is `2/28/2017` and the relative date is `Last Day of Current Week Next Year`, then the simulated date range is **02/28/2017 - 03/04/2018**.

New date configurations `From Today`, `From First Day of`, and `From Last Day of` are available in base and relative date fields. The configurations are available in the `Base Date` field when you choose the `Single` Date function type and are available in both the `Base Date` and `Relative Date` fields when you choose **Relative Date Type Configured**.

The result displayed is the date range that is calculated based on the base date and relative date.

Creating a Date Function

The **Add** button allows you to create a date function based on the specified base and relative date. In the **New Date Function** screen, you must enter the following:

- Define Date Parameters

  All IDs must beging with Z, Y, or YY_1. The prefix IDs are filled depending on system configuration. You maintain the name and the description for the date function. The name and the description can be maintained in additional languages. The **Maintain Languages** field allows you to create the date function in multiple languages where you select a language from the drop-down list, provide a name, and an optional description. The number within the parenthesis is the count of the added languages. You can also delete the language, name, and description using the delete icon that is available next to each row.

- Date Function Type: Choose option **Single** or **Range**.
  - Single

Returns a single date in the format MM/DD/YYYY based on the base date selection. Choose a date format from the **Base Date** field. The date function calculates the date based on the system date and the selected date in the **Base Date** field.

For example, if the current date in the system is 2/27/2017 and you choose `Yesterday` as the base date, the result is 2/26/2017.

- Range
  - **Relative to Base Date:** You can select a base date, and enter an integer as the relative date. The date range displayed can be in the past or a later date range with the base date as the reference date. The options for the relative date are Days, Weeks, Months, Years, and Quarters.

    For example, if the base date is 2/27/2017 and the **Relative to Base Date** is 4 days later, the result is 02/23/2017 - 02/27/2017.
  - **Configured:** You can configure the dates for Base and Relative date. The result is the date range that is between the base date and the relative date.

    For example, if the base date is `Today` and relative date is `First Day of Previous Week Previous Year`, the result date range is 02/15/2016 - 02/28/2017.

- Edit/Delete customized date functions

  You can edit the title and the description of the customized date functions using **Edit** button. Choose **Delete** to delete the customized date function.

Customer Incidents

CA-GTF-VDM-DF

Manage Date Functions

You use this app to view predefined (by SAP) and to create user-defined date functions. This app determines a single date or a date range using base and relative dates. The result displayed is the difference between the base and the relative date. The date functions that you create are categorized as **Custom**.

From the **Manage Date Functions** page, you can view, search, and delete the customized date functions. The **Search** field allows you to search for a date function. You can search for multiple date functions using *.

To view the predefined date functions, choose the arrow button next to the selected date function.

To create a new date function, choose **Add**. For more details, see **Creating a Date Function**.

Prerequistes

All the date functions created in quality system must be transported to production system. For more detailed information on transport, see the product assistance on https://help.sap.com/s4hana_cloud. Navigate to **Manage Your SAP S/4HANA Cloud Analytics Transporting Analytics-Based Extension Items**.

Key Features

The predefined date functions display the date function name, description, date function type whether single or date range, the base date, relative date, and the result under **Simulated Date** section. This section displays both the server-based and the user-based dates.

- Server-Based: Often, database servers run in UTC. The date displayed is the datestamp based on the server's timezone.
- User-Based: The date displayed is the datestamp based on user's timezone maintained in the Maintain Business Users app.

More details on base date and relative date, and the date calculations is as follows:

Base Date

The base date is the reference date for the date calculation. These are some examples of base dates:

- Today
- Yesterday
- First Day of Previous Week Previous Year
- Custom (You can enter a specific date using the calendar option)

If you have selected the option **Today**, then the base date is the current date of the specified server or the local system.

For example, if the current date in the local system or the server is `2/27/2017` and if you choose the base date as `First Day of Previous Week Previous Year`, then **02/15/2016** is displayed.

Relative Date

The relative date is the date range that is relative to the base date.

Some examples of relative date conditions are:

- 4 weeks ago
- 3 quarters from now

The result displays the date range that is calculated based on the base date and the relative date. The dates can be earlier or later dates with the base date as the reference point.

For example, if the base date is `2/28/2017` and the relative date is `Last Day of Current Week Next Year`, then the simulated date range is **02/28/2017 - 03/04/2018**.

New date configurations `From Today`, `From First Day of`, and `From Last Day of` are available in base and relative date fields. The configurations are available in the `Base Date` field when you choose the `Single` Date function type and are available in both the `Base Date` and `Relative Date` fields when you choose Relative Date Type Configured.

The result displayed is the date range that is calculated based on the base date and relative date.

Creating a Date Function

The **Add** button allows you to create a date function based on the specified base and relative date. In the **New Date Function** screen, you must enter the following:

- Define Date Parameters

  All IDs must beging with Z, Y, or YY_1. The prefix IDs are filled depending on system configuration. You maintain the name and the description for the date function. The name and the description can be maintained in additional languages. The **Maintain Languages** field allows you to create the date function in multiple languages where you select a language from the drop-down list, provide a name, and an optional description. The number within the parenthesis is the count of the

added languages. You can also delete the language, name, and description using the delete icon that is available next to each row.

- Date Function Type: Choose option **Single** or **Range**.
    - Single

      Returns a single date in the format MM/DD/YYYY based on the base date selection. Choose a date format from the **Base Date** field. The date function calculates the date based on the system date and the selected date in the **Base Date** field.

      For example, if the current date in the system is 2/27/2017 and you choose `Yesterday` as the base date, the result is 2/26/2017.

    - Range
        - **Relative to Base Date:** You can select a base date, and enter an integer as the relative date. The date range displayed can be in the past or a later date range with the base date as the reference date. The options for the relative date are Days, Weeks, Months, Years, and Quarters.

          For example, if the base date is 2/27/2017 and the **Relative to Base Date** is 4 days later, the result is 02/23/2017 - 02/27/2017.

        - **Configured:** You can configure the dates for Base and Relative date. The result is the date range that is between the base date and the relative date.

          For example, if the base date is `Today` and relative date is `First Day of Previous Week Previous Year`, the result date range is 02/15/2016 - 02/28/2017.

- Edit/Delete customized date functions

  You can edit the title and the description of the customized date functions using **Edit** button. Choose **Delete** to delete the customized date function.

Supported Device Types

- Desktop
- Tablet
- Smartphone

Component for Customer Incidents

If you need support or experience issues, please report an incident under component `CA-GTF-DF`.

Transporting Analytics-Based Extension Items

Transport of items to production systems

Use

To ensure the availability of all extension items that are created with one of the extensibility apps in the quality tenant, you need to transfer the corresponding items to the production system with the help of the **Export Software Collection** and **Import Software Collection** applications.

You can create all the extension items in the quality tenant using the appropriate applications. Here's a list of some of the extensibility applications and the extension items you can create:

Extensibility Applications	Extensible Items to be created
Manage KPIs and Reports App	Groups, KPIs, Reports, Stories, and Applications
Manage Date Functions	Date Functions
Create Tile for Analytic Cloud Stories	Applications for launching Analytics Cloud Story
View Browser	Applications for launching the Multidimensional grid

Any creations, modifications to extension items, and deletions have to be transferred from the quality tenant to the production system. For more detailed information on export, see the product assistance on http://help.sap.com/s4hana_cloud. Navigate to **Extend and Integrate Your SAP S/4HANA Cloud Extensibility Export Software Collection** and for importing see **Import Collection**.

Prerequisites

Only user with Administrator role can transport the objects using the following business catalogs in **Transport Management**:

- Export Software Collection app
- Import Collection app

Activities

To export and import extension items using **Export Software Collection** and **Import Collection** app:

1. Create an extensible item in the quality system using the relevant applications.
2. In the quality system, go to **Transport Management Export Software Collection.**
3. Create a new collection by choosing **New Software Collection** from the left column or by selecting an existing collection.
4. Choose **Add Items**.
5. Select the newly created object and choose **OK**.

   The object details are shown in table format. The column description is as follows:

   - **Status:** Displays the status **New/Changed/Deleted**. The status column notifies you about any modifications made to the object. The deletions will also be updated in the status column.
   - **Name:** Displays the ID and the title
   - **Type:** Types are categorized based on the application. These are some of the types relevant for analytics and applications:

Application	Object Type	Description
Create Tile for Analytics Cloud Story	Analytics Cloud Story Application	Create tiles for SAP Analytics Cloud Stories
Manage Date Functions	Date Functions	Create a data function to determine a single date or a date range.
Manage KPIs and Reports Apps	Smart Business Content	Create groups
	Smart Business Evaluations	Extension of SAP-delivered KPIs

Application	Object Type	Description
	Smart Business Customer Extension Reports	Extension of SAP-delivered reports
	Analytical List Page	Create Analytical List Page
	Data Analyzer	Create Data Analyzer reports
	Embedded Analytics Cloud Story	Create SAP Analytics Stories
View Browser	App for Analytical Queries	Create and publish a tile to the catalog for released analytical queries.

- **Last Changed By:** Displays a user ID
- **Last Changed On:** Displays the date and time when an object was changed

6. Choose **Check** to validate the transport.

   Some errors may occur because of the dependent objects. Copy the IDs of those objects and add them to the selected collection as explained in Step 5. Alternatively, you can choose **Add Missing Items** button that lists all the dependent objects, you select the objects, and add to the collection.

   The checks have to be successful if you want the object to be exported to the production system.

7. Choose **Export** to export the object to the production system.

ℹ Note

8. Log on to the production system and go to **Transport Management** **Import Collection**.
9. Search for the collection. Choose **Import**.

The objects are available in the production system if the import was successful.

ℹ Note

You can view the import success status of SAP-delivered stories in **Job Status** column in **Manage KPIs and Reports** app. For user-defined stories, you can view the success or the failure status in the **Job Status** column. You can trigger for transport from **Manage KPIs and Reports** app if the transport failed.

Video

Step-by-step video explaining the transport of analytics-based extension items

Open this video in a new window

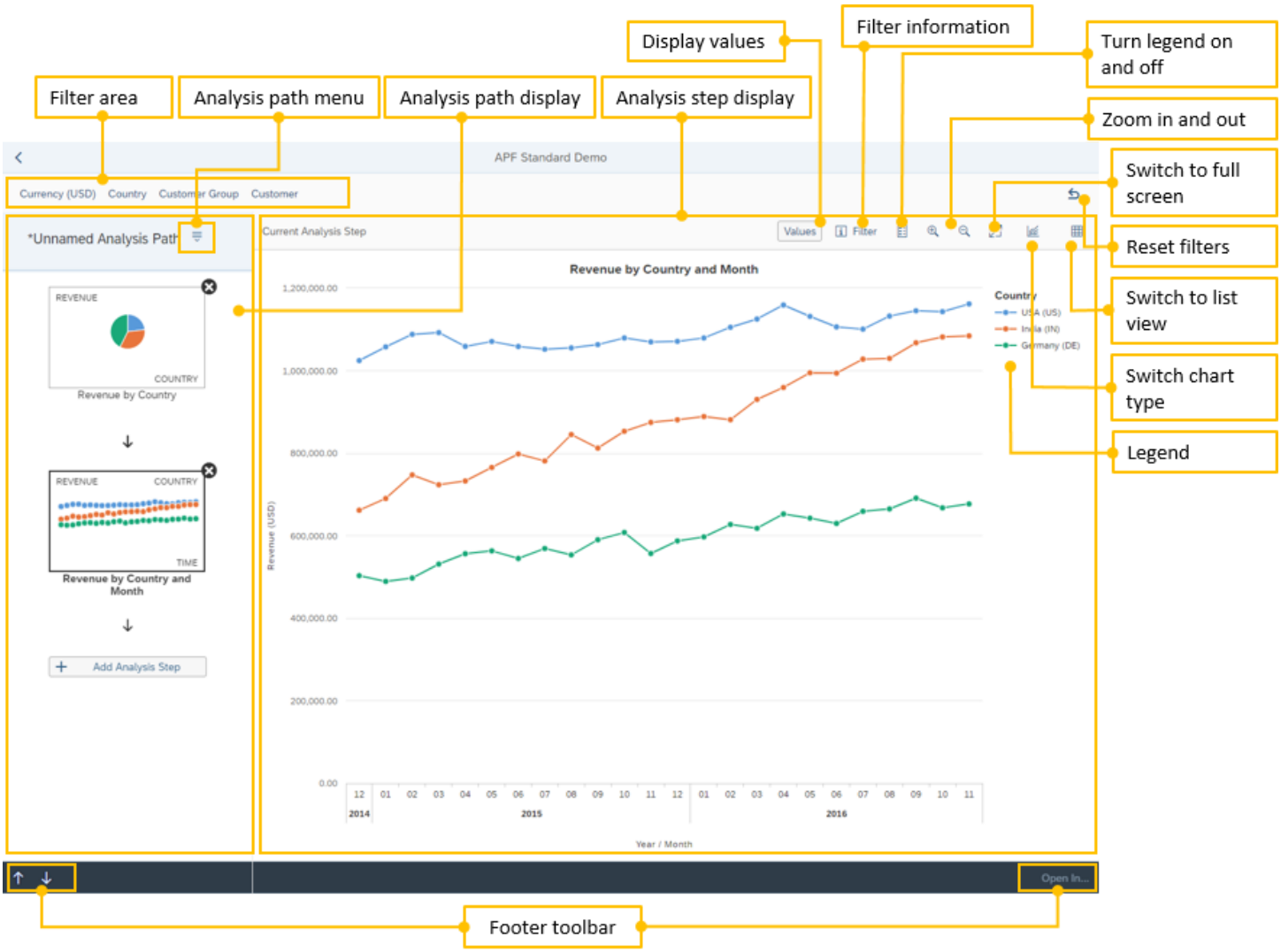
Analytical Apps Based on Analysis Path Framework (APF)

APF-based analytical Fiori apps are interactive drill-down apps that you can use to explore KPIs and their influencing factors by drilling down into multidimensional representations of data, such as charts or tables. You can perform a step-by-step analysis of KPIs by looking at them from different perspectives. Choose from a number of predefined analysis steps, which consist of data that is depicted on the UI in various types of visualizations, such as charts or tables.

In each analysis step, you can select data to filter the information provided in subsequent steps. By combining different analysis steps and applying filters, you interactively create your own flexible analysis paths.

UI Layout

The figure below shows the UI layout of the APF demo application and is followed by an explanation. All APF-based apps have the same UI layout, while the data of your particular app will be different.



UI Layout

The UI of an APF-based app is made up of the following areas:

- **Filter area**
  - Provides global filters that are applied to all analysis steps of an analysis path.
- **Analysis path display**
  - Provides the analysis path menu where you can create, save, open, delete, or print analysis paths.
  - Includes the entire analysis path with thumbnails of all charts (analysis steps) that are used for the analysis.
  - Allows you to add analysis steps, select a step as active step, rearrange steps, or delete them.
- **Analysis step display**
  - Shows the visualization of the active analysis step.
  - Allows you to select and filter relevant data for further analysis.
  - Provides the following options:
    - Show or hide values in the chart
    - Display a list of the filters that were set in previous analysis steps and are applied to the active analysis step
    - Turn the legend on and off
    - Zom in and zoom out (if the chart type supports zooming)

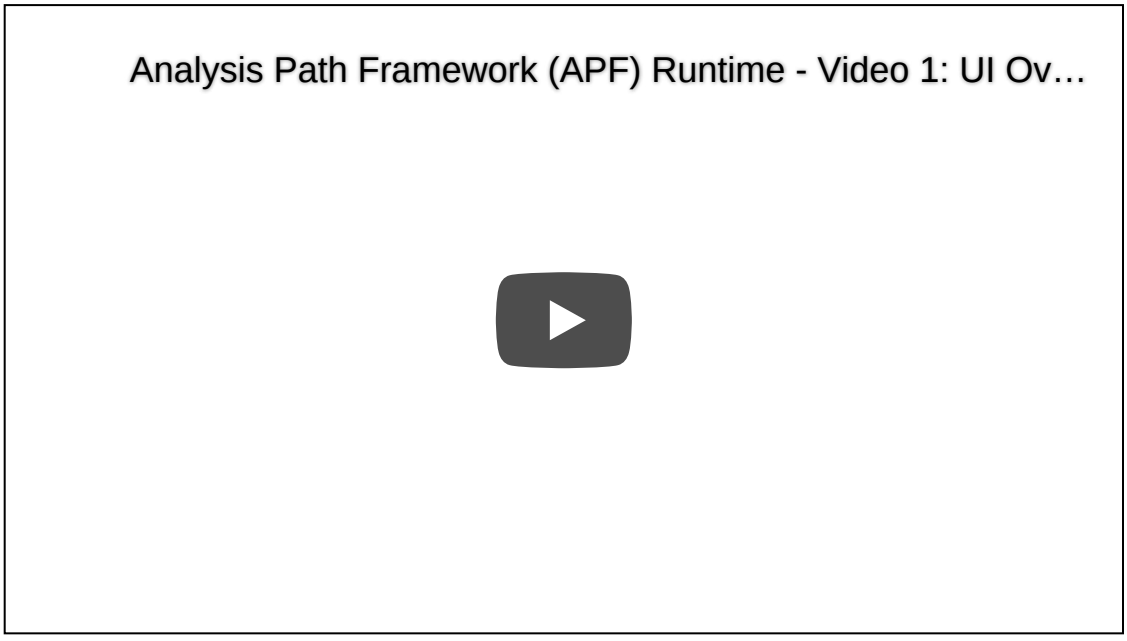
        - Go fullscreen
        - Change the visualization type
        - Switch to list view
    - Provides the following options for table representations:
        - See the number of data records that are already on the front end and the total number of data records
        - Load all data records to the front end so that you don't have to page down to the end of the table to ensure that all data records are loaded
        - Export the table to a Microsoft Excel file

          > **Note**
          > If you use this feature on an iPad, you must first add the file extension `.xlsx` to the downloaded file before you can open it in Microsoft Excel.

- **Footer toolbar**
    - Allows you to move an analysis step up or down the analysis path by using the arrow icons and may contain further settings.
    - Allows you to navigate to another application using the **Open In...** button.

The following video provides a UI overview:

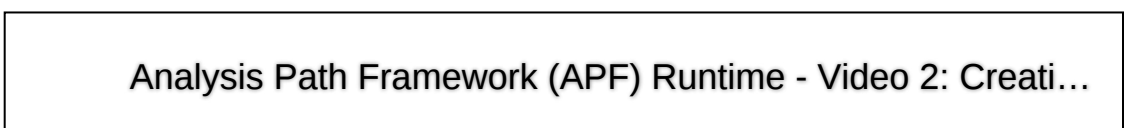
Disclaimer: The below video is not part of the SAP product documentation. Please read the legal disclaimer for video links before viewing this video.

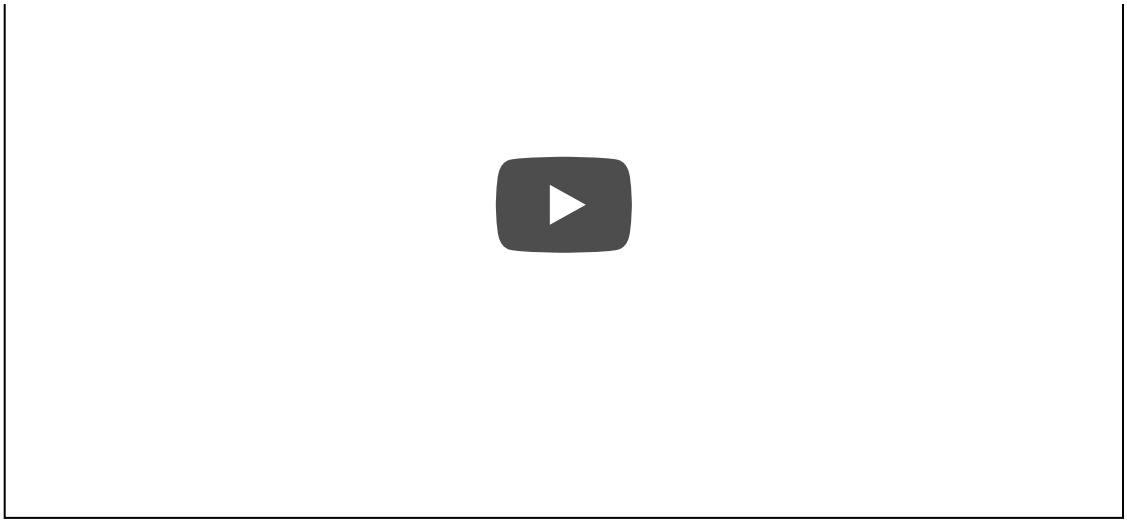


Creating an Analysis Path

The following video shows how to create an analysis path in an APF-based app:

Disclaimer: The below video is not part of the SAP product documentation. Please read the legal disclaimer for video links before viewing this video.





Typically, you create an analysis path in the following way:

1. **Define global settings**

   Using the filter area at the top of the application you can define global settings that apply to the entire analysis path. Depending on the customizing, some filter values may be preselected by default, for example, when a context (filters and input parameters) is handed over from a Smart Business KPI tile.

   If you make changes to these fields at any stage, your changes will filter down to all steps in the current analysis path.

   Some applications may also have an option to define further settings using the footer toolbar.

2. **Add first analysis step**

   Choose **Add Analysis Step** to access the analysis step gallery, which is grouped according to categories. First, select a category to display the available analysis steps for this category. Then select an analysis step to display the chart types available for the analysis step. Finally, select the chart type you want to start your analysis with.

3. **Select data (optional)**

   In the chart or table displayed, select data as required to filter the information provided in subsequent steps. Selecting data serves as a filter to narrow down the results of subsequent steps. The results of any subsequent analysis step depend on the selections you have made in the preceding ones. If you change a selection, all subsequent analysis steps are instantly updated accordingly.

   > **Note**
   > Not all analysis steps provide the option to select data.

   Types of Selections:

   - Single Selection: Allows you to select one item from the chart by clicking directly on that item.
   - Multiple Selections: Allows you to select two or more items from the chart by clicking directly on those items.
   - Range Selection: Allows you to select multiple items from the chart by clicking, holding, and dragging a box over the data you require.
   - Legend Selection: Allows you to select items from the chart by clicking on the corresponding items in the legend of the chart.

4. **Add further analysis steps**

   If required, drill down by adding further analysis steps and making further selections.

5. **Save your analysis path**

Click on the icon beside the analysis path name to access the analysis path menu. Here you find the save options. Until you save your analysis path, the default analysis path name is **Unnamed Analysis Path**. Unsaved changes are indicated by an asterisk next to the analysis path name. When you save an analysis path, it is saved including each selected analysis step, and it retains the data selection made to filter the information.

For more information about the options in the analysis path menu, such as saving, opening, deleting, or printing analysis paths, watch the following video:

Disclaimer: The below video is not part of the SAP product documentation. Please read the legal disclaimer for video links before viewing this video.

For more information about how the filter handling works in an APF-based app, watch this video:

Disclaimer: The below video is not part of the SAP product documentation. Please read the legal disclaimer for video links before viewing this video.

Further Options for Analysis Paths

The following features are available to work with analysis paths:

- **Information tooltip** (not available on iPads)

You can move your cursor over items in the charts or icons on the screen to display a tooltip containing more information about the items and icons.

- **Delete analysis steps**

  To delete an analysis step, choose the **Delete** icon on the thumbnail of the step. When you delete a step in which you had made selections to filter the data, this filter is deleted along with the step. All subsequent analysis steps are then instantly updated.

- **Reordering the analysis paths**

  You can use the arrows in the footer to move a selected analysis step up or down the analysis path or by dragging and dropping a selected analysis step. Reordering steps may affect the way in which the selections made filter down to the subsequent steps. All subsequent analysis steps are instantly updated.

- **Open saved analysis paths**

  When you select **Open** in the analysis path menu, all saved analysis paths including the date of saving and number of steps are displayed. You can use saved analysis paths, for example, to quickly access analyses that you perform on a regular basis, or to adapt your standard analysis in an easy and flexible way.

  For saved analysis paths, the following applies:

  - A saved analysis path retains each selected analysis step and the data selections made in each step. When you open a saved analysis path, the system reloads all analysis steps so that you always see the up-to-date data for your analysis.
  - Saved analysis paths are user-specific and client-specific, that is, you can see only those analysis paths that you have saved in the client that you are currently using.

- **Print analysis paths**

  You can print analysis paths, for example, to keep the displayed data for later use or reference.

  > **Note**
  > For analysis steps that use a table, the system prints as many lines as you have loaded when scrolling down in the table.

- **Navigate to another application**

  Use the **Open In...** button in the footer of an APF-based app to navigate to other applications. The context of the current analysis path including start filters and other filters such as selections made in the charts up to the active analysis step are handed over to the other application.

  For more information about navigating to another application, watch the following video:

  Disclaimer: The below video is not part of the SAP product documentation. Please read the legal disclaimer for video links before viewing this video.

Enhancing an Application Using the APF Configuration Modeler

You can use the APF Configuration Modeler to enhance applications that were built using Analysis Path Framework (APF). For example, you can change UI texts or create new analysis steps.

For more information, see the APF documentation in the SAPUI5 Demo Kit under https://sapui5.hana.ondemand.com/sdk/#docs/guide/1c457c53595a6655e10000000a423f68.html.

The following sections are particularly relevant:

- Enhancing an APF-Based Application
- APF Configuration Modeler

Predictive Analytics integrator (PAi)

Predictive Analytics integrator (PAi) integrates predictive functionality into business applications.

PAi allows you to manage the predictive use cases shipped by SAP S/4HANA Cloud. PAi comprises two SAP Fiori applications - the **Predictive Models** app and the **Predictive Scenarios** app. Both of these applications are shipped out of the box with SAP S/4HANA Cloud. The **Predictive Models** app allows you to use your own data to administer the life cycle of a predictive model version. The **Predictive Scenarios** app is used to review predictive use cases.

ℹ Note

Intelligent Scenario Lifecycle Management (ISLM) is the new SAP machine learning management framework. It consists of 2 Fiori apps similar to PAi but supports additional functionality.

Predictive Models **Intelligent Scenario Management**

Predictive Scenarios **Intelligent Scenarios**

For more information, see Intelligent Scenario Lifecycle Management.

For more information on these apps, you can refer to the chapters called *Predictive Models App* and *Predictive Scenarios App*.

Related Information

Predictive Models App
Predictive Scenarios App

What is a Predictive Scenario?

A predictive scenario describes a predictive business use case.

Business cases requiring a predictive measure are described as predictive scenarios. The predictive use case defines a business goal, the type of prediction to make, for example, regression or classification, and the datasets to be used. There are two types of datasets:

Training Dataset

A dataset to be analyzed to build a predictive model. A training dataset contains historical facts, and has known outcomes.

Apply Dataset

A dataset for which predictions are required. An apply dataset is a selection of current data with unknown outcomes.

For information on how to review and publish predictive scenarios, you can refer to the chapters called *Reviewing a Predictive Scenario* and *How to Publish a Predictive Scenario*.

Related Information

Reviewing a Predictive Scenario
How to Publish a Predictive Scenario

What is a Predictive Model?

A predictive model is used for predicting outcomes from a given dataset.

Predictive models provide predictive capabilities to your business processes. Before a predictive model can be used for predicting outcomes, it must be trained in order to create a predictive model version. The predictive model version can be regularly retrained using the most recent data.

- To ensure predictions created are based on the most recent data, train your model, and retrain your model version.
- Review training status and quality.
- Delete any inactive model version that has never been set to active.

For information on training predictive models, refer to the chapter called *Training a Model*.

Related Information

Training a Model

Predictive Models App

The **Predictive Models** app allows you to use your own data to administer the life cycle of a predictive model. Train a model to produce a model version, retrain model versions, validate, and activate predictive models in order to return a predictive result.

You can access this app by selecting the **Predictive Models** tile from the **SAP Fiori Launchpad**. For more information, you can refer to the chapter called *Accessing the Predictive Models App*.

ℹ Note

Intelligent Scenario Lifecycle Management (ISLM) is the new SAP machine learning management framework. It consists of a Fiori app similar to PAi but supports additional functionality.

Predictive Models Intelligent Scenario Management

For more information, see Intelligent Scenario Management.

Related Information

Accessing the Predictive Models App
Predictive Analytics integrator (PAi)

Accessing the Predictive Models App

How to access the **Predictive Models** app.

Prerequisites

To use the **Predictive Models** app, you must have the appropriate access rights to the **SAP Fiori Launchpad**.

Contact your IT Administrator responsible for managing **SAP Fiori Launchpad** user profiles and roles and ask them to:

1. Add you as an **SAP Fiori Launchpad** end user. Information about how to set up roles is provided for administrators in the **SAP Fiori Launchpad** documentation at https://help.sap.com.
2. Assign the appropriate tile catalog to your **SAP Fiori Launchpad** user profile. Information for administrators is provided in the **SAP Fiori Launchpad** Launchpad documentation at https://help.sap.com.

Context

Once you have all the necessary authorizations, follow these configuration steps:

Procedure

1. Launch the **SAP Fiori Launchpad**.
2. Personalize your home page by adding the tile called **Predictive Models**. For more information, refer to the **SAP Fiori Launchpad** documentation, at https://help.sap.com.

Selecting a Predictive Scenario

Select the predictive scenario you want to work with.

When you select the **Predictive Models** tile, you immediately see a list of the available predictive scenarios you can work with. Only predictive scenarios set to status **Published** appear in this list. Each predictive scenario listed is described under the following headings:

Field	Description
Catalog	The catalog to which the predictive scenario belongs.
Predictive Scenario	The name of the predictive scenario.
Predictive Scenario Description	Describes the business case with which the predictive scenario is associated.
Scenario Type	The type of algorithm used for a particular predictive scenario, for example, classification or regression.
Created	Displays the date when the predictive scenario was first created.

To find the predictive scenario you want to work with, you can do so in one of the following ways:

- scroll down the pre-populated list and select.
- search by predictive scenario name using the **Search** field.
- search by catalog using the **Search Catalog** dialog. To access this dialog, select the icon beside **All** in the **Catalog** section at the top of the **Predictive Models** page.

Associated Models and Settings

Viewing the model templates and settings associated with your predictive scenario.

Selecting the predictive scenario you want to work with, brings you to the page in the **Predictive Models** app that describes the **Models** and the **Settings** associated with your predictive scenario.

Models

The **Models** tab displays a list of predictive model templates. A model template describes and explains the relationships that exist between the dataset and the target variable to allow predictions. Each model template listed is described under the following headings:

Field	Description
Name	The name of the model template.
Active	Checkbox indicating that the model template contains an active model version.
Description	A short description of the model template.
Created	Details when the model template was created.

Settings

The **Settings** tab displays the settings for the predictive scenario. The application developer defines the settings when they create the predictive scenario. You cannot change them.

Area	Field	Description
Settings	*<Model Type>*	The relevant algorithm, for example, classification or regression, used for your predictive scenario.
	<Description>	A short description of the predictive scenario.
Targets	*<Input Name>*	This section contains the input name for the predictive scenario dataset.
	<Target Name>	Other variables model and predict the target variable values, to fulfill the business case set up in the predictive scenario.

Training a Model

Train a model to create a model version.

Context

Each model can contain many model versions. Only one model version per predictive scenario can be active at a time, and this active model version is the one used to generate predictions.

It is possible to train a model or retrain a model version.

Procedure

1. On the main **Predictive Models** app page, select the relevant Predictive Scenario.
2. Select the radio button beside the model template you want to train.
3. Select the **Train** button.

   The **Train Model** dialog opens. You can see the name and type of model to be trained.
4. If you wish, you can edit the **Model Version Description**.
5. You can also see the **Dataset Record Count**, which tells you the total number of unfiltered records in the training dataset, upper bound in the range of 1000 records. Insufficient records can have a negative effect on the quality of your predictive model. So, being able to view the number of records in the training dataset gives you the chance to check you have enough records, before training.
6. You can add training filters to the model version. The fields that can be used as filters are specific to the model. Select **+** to open the **Training Filters** panel.
7. Add filters as required, to refine your predictions. Select **+** to add another filter to the list.
8. To create the model version, select the **Train** button in the bottom right of the page.

   The model version is created, and added to the model version list on the **Models** tab.

Model Status

A model can have several model versions, and each model version can have a different status.

Information about model versions is displayed in the **Models** tab. Depending on the status of your model version, different actions are possible:

Model version status

Model Status	Meaning	Possible Action
Training	The model version is currently training.	Delete a model version during training.
Training Failed	An error occurred during the training and the model version is unusable.	A model version at status **Training Failed** can only be deleted.
Ready	The training has completed successfully.	Delete, activate, or retrain a model with status **Ready**.
Scheduled	The model version was created, and the training operation task has been scheduled, but training has not yet begun.	It is possible to delete a model which has been scheduled for training.
Activating	The model version is in the process of being set to active.	You can delete a model version that is in the process of being set to active.
Active	The model version is active.	It is possible set the model version to inactive.

Activating and Deactivating a Model Version

Activate and deactivate a model version.

Context

The active model version is the version that is used to generate predictions in a predictive scenario.

Procedure

1. On the **Model Versions** section, under the **Name** column, select the relevant model version using the radio button.
2. Select the **Activate** button.

   The version status changes to **Activating**. The status then changes to **Active** , and it is possible to use this model version to generate predictions.

   > **Note**
   >
   > You can only activate a model version with the status **Ready**.

   If your model has deteriorated in quality, you can use the **Deactivate** button to deactivate an active model version. Deactivated model versions can be reactivated as shown in the preceding steps.

Retraining a Model Version

You can retrain a model version.

Context

Over time, the underlying business data typically changes. These changes affect the accuracy of the model version. A periodic retraining of model versions is recommended to ensure accuracy. It is possible to retrain a model version either with the same filters, or by adding or removing filters to refine your predictions. When you retrain a model version, you can also change the description.

Procedure

1. In the **Model Version** section, select the radio button of the model version to be retrained.
2. Select the **Retrain** button.

   The **Retrain Model** window opens.
3. If you wish, you can change the **Model Version Description** field.
4. Add or remove **Training Filters**, if necessary. To add more filters, select the **+** button.
5. Select the **Train** button.

   A new model version is created for this model.

   > **Note**
   >
   > It is not possible to retrain a model version with the status **Error**, **Training**, **Activating**.

Deleting a Model Version

Context

You can delete a model version that has never been set to status **Active**.

Procedure

1. In the Models Version section, select the radio button of the model version to be deleted.
2. Then select the Delete button.

   The model version is deleted from the list of model versions.

Model Version Report

When you train a model, reports are automatically created containing statistical information on variables and performance of the model.

In the Models Version section, select a model version in the list to display the Model Version Report screen. This screen gives you an information summary about a particular model version.

For each model version, the following information is displayed, when relevant:

Model Report

Name	Description
Model Status	Model Status indicates if the model version is ready or not.
Created At	The date and time when the model version was created.
Description	A short description of the model version.
Created By	The creator of the model version.
Training Record Count	An indication of the number of records the model version was trained on, after applying the training filter. Available when supported.

Quality Information

Quality Information detail varies according to the predictive scenario type and underlying predictive model library used.

Quality	The quality of your model version rated in star symbols (one - five stars, with five stars indicating the best quality). The Predictive Models app evaluates the quality of your model in terms of its prediction confidence and predictive power. Prediction confidence and predictive power give you a quality indicator from which you can decide whether to use your model version as is or do further training.
Predictive Power	The predictive power is an indicator of the quality of the predictive model. It allows you to evaluate the explanatory power of the model, that is, its capacity to explain the target variable when applied to the training dataset.
Predictive Confidence	The predictive confidence defines the degree of robustness of the model. It defines the capacity of the model to achieve the same explanatory power when applied to a new dataset. In other words, the degree of robustness corresponds to the predictive power of the model applied to an application dataset.

Training Filters

Lists all filters used when training this model version.

Performance

Displays a **Key Influencers** bar graph of up to ten key influencers. If the algorithm type supports it, a performance graph is displayed.

Predictive Scenarios App

The **Predictive Scenarios** app is used to review predictive use cases.

> **Note**
>
> Intelligent Scenario Lifecycle Management (ISLM) is the new SAP machine learning management framework. It consists of a Fiori app similar to PAi but supports additional functionality.
>
> **Predictive Scenarios** **Intelligent Scenarios**
>
> For more information, see Intelligent Scenarios.

Related Information

Predictive Analytics integrator (PAi)
Accessing the Predictive Scenarios App

Accessing the Predictive Scenarios App

How to access the **Predictive Scenarios** app.

Prerequisites

To use the **Predictive Scenarios** app, you must have the appropriate access rights to the SAP Fiori Launchpad.

Contact your IT Administrator responsible for managing SAP Fiori Launchpad user profiles and roles and ask them to:

- Add you as an SAP Fiori Launchpad end user. Information about how to set up roles is provided for administrators in the SAP Fiori Launchpad documentation at https://help.sap.com.
- Assign the appropriate tile catalog to your SAP Fiori Launchpad user profile. Information for administrators is provided in the SAP Fiori Launchpad documentation at https://help.sap.com.

Context

Once you have all authorizations, follow these configuration steps:

Procedure

1. Launch the **SAP Fiori Launchpad**.
2. Personalize your home page by adding the tile **Predictive Scenarios**. For more information, refer to the **SAP Fiori Launchpad** documentation, at https://help.sap.com.

Reviewing a Predictive Scenario

You can review all elements of a predictive scenario.

Context

The following elements of a predictive scenario can be reviewed - CDS views, ABAP signatures, API Details etc.

Procedure

1. To open the application, select the **Predictive Scenarios** tile.

   Each predictive scenario listed is described under the following headings:

Field	Description
Catalog	Specifies the catalog to which the predictive scenario belongs.
Predictive Scenario	Specifies the name of the predictive scenario.
Status	Status of a model version, for example, **Draft**, **Published**.
Predictive Scenario Description	Describes the business case with which the predictive scenario is associated.
Scenario Type	Specifies the type of algorithm used for a particular predictive scenario, for example, classification or regression.
Created	Displays the date when the predictive scenario was first created.

2. Select a predictive scenario to review its details.

   The predictive scenario details are divided into the following sections - **Settings**, **Inputs**, **Outputs**, and **Models**.

   The **Settings** section displays the following information:

Field	Description
Predictive Scenario Name	Specifies the name of the predictive scenario.
Predictive Scenario Description	Describes the predictive scenario.
Status	Status of the predictive scenario, for example, **Draft**, **Published**.
Predictive Scenario Type	The type of algorithm used for a particular predictive scenario, for example, classification or regression.
Catalog	Specifies the catalog to which the predictive scenario belongs.
Created At	Displays the date and time when the predictive scenario was first created.
Training Dataset	A dataset to be analyzed to build a predictive model. A training dataset contains historical facts, and has known outcomes.
Apply Dataset	A dataset for which predictions are required. An apply dataset is a selection of current data with unknown outcomes.

   The **Input** and **Output** sections display the following information:

Field	Description

Field	Description
Field Name	Specifies the names of the fields in the training dataset.
PAi Data Type	Specifies the field data type at database level.
Data Element	Specifies the ABAP data element or data reference <CDS View> field name.
Data Type	Specifies the predefined data types as referred to in the ABAP Dictionary.
Length	Specifies the number of characters in the data element.
Scale	Specifies the number of decimal places of the data element.
Precision	Specifies the accuracy with which a number can be represented. The accuracy or precision is usually expressed in terms of the number of digits preceding the decimal separator.
Short Description	A brief description of the data element.
Role	Specifies the role the variable has in the model. There are multiple variable role types, for example, Input, Key, Target, and Prediction. The Input variable is considered for modeling. The Key variable is a key field of the dataset, and is also considered for modeling. The Target variable is the variable whose values are to be modeled, and predicted by other variables. The Prediction variable includes the calculation result.

The Models section displays the models associated with the predictive scenario under the following headings:

Field	Description
Name	Specifies the name of the model template.
Model Description	Describes the model template.
Status	Specifies the status of the model template. The model template can be at status Draft or Published.
Native Model Type	The technical algorithm.
Created	The creation date and time of the model template.

3. Select the API Details button to view the associated predictive scenario-generated class name and CDS View. The CDS view is generated as part of the predictive scenario development. If the CDS view is generated, it allows end users to get runtime predictions for the predictive scenario. The predictions are created without the need for custom coding. The runtime predictions are based on the apply dataset, and the current active model version.

Reviewing a Model within a Predictive Scenario

You can review a model associated with a predictive scenario.

Context

From within the Models tab in the Predictive Scenarios app, you can review a model under the headings - Model Settings, Model Input, and Model Output.

Procedure

1. Select a model from within the Models tab in the Predictive Scenarios app.

   The Model Settings tab opens. The Model Settings section displays this information:

Field	Description
Model Name	Specifies the name of the model template.
Description	Describes the model template.
Status	Specifies the status of the model template. The model template can be at status Draft or Published.
Native Model Type	The technical algorithm.

2. Select the Model Input and Model Output tab.

   The Model Input tab or Model Output tab opens. The Model Input and Model Output sections display the following information:

Field	Description
Field Name	Specifies the names of the fields in the training dataset.
PAi Data Type	Specifies the field data type at database level.
Data Element	Specifies the ABAP data element or data reference <CDS View> field name.
Data Type	Specifies the predefined data types as referred to in the ABAP Dictionary.
Length	Specifies the number of characters in the data element.
Scale	Specifies the number of decimal places of the data element.
Precision	Specifies the accuracy with which a number can be represented. The accuracy or precision is usually expressed in terms of the number of digits preceding the decimal separator.
Short Description	A brief description of the data element.
Role	Specifies the role the variable has in the model. There are multiple variable role types, for example, Input, Key, Target, and Prediction. The Input variable is considered for modeling. The Key variable is a key field of the dataset, and is also considered for modeling. The Target variable values are modeled, and predicted by other variables. The Prediction variable includes the calculation result.

How to Publish a Predictive Scenario

To make a predictive scenario available for use in the Predictive Models app, you must publish it.

Context

The Predictive Models app displays for use predictive scenarios only in status Published.

Your new predictive scenario has been created in status Draft and is displayed in the Predictive Scenarios app. In order for the predictive scenario to be used, its definition must be completed and published.

Procedure

1. To open the application, select the Intelligent Scenarios tile.

   A list of published and draft scenarios is displayed, by Package, Intelligent Scenario, Status, Intelligent Scenario Description, Scenario Type, and Created.

2. Select an intelligent scenario set to status **Draft**.

   The **Settings** tab opens.

3. You can edit the entries in the **Name**, **Description**, **Package**, **Training Dataset**, and **Apply Dataset** fields.
4. Any required changes can be made in the **Data Element** column in both the **Input** and **Output** tabs.
5. You can now select **Save Draft** to save a draft intelligent scenario.
6. Select the **Publish** button to publish the intelligent scenario.

   The published intelligent scenario is now available for use in the **Intelligent Scenario Management** app.

   Published intelligent scenarios can be moved to production using the ATO framework.

> **Note**
>
> For more information on working with the ATO framework, you can refer to the chapter called *Export Software Collection* in the *General Functions for the Key User* guide on the SAP Help Portal at https://help.sap.com. When adding an intelligent scenario to a software collection within the **Export Software Collection** app in the **Transport Management** area, you should search for the type **ISLM : Intelligent Scenario**.

Publishing a New Model to an Existing Predictive Scenario

You can create a new predictive model from SAP Analytics Cloud Smart Predict, and add it to a predictive scenario that already exists in the **Predictive Scenarios** app.

> **Note**
>
> Publishing a new model to an existing predictive scenario is supported only for predictive scenarios created by customers from release 1905 of SAP S/4HANA Cloud.

To publish the model successfully, it must have the same target and keys as the predictive scenario with which it is associated. When the model is successfully published to the **Predictive Scenarios** app, it appears in the **Predictive Scenarios** app. The model is in the status **Draft**, and it appears within the specified predictive scenario **Models** tab.

For more information on creating a predictive model in SAP Analytics Cloud Smart Predict, you can refer to the chapter called *Publish a Predictive Model to a PAi Application* on the SAP Help Portal at https://help.sap.com.

Related Information

How to Publish a Draft Model

How to Publish a Draft Model

To make a model available for use in the **Predictive Models** app, you must publish it.

Context

The **Predictive Models** app displays for use, predictive models only in status **Published**.

Your new model has been created in SAP Analytics Cloud Smart Predict. The model is created in status **Draft** within the selected predictive scenario that already exists. It is displayed only in the **Predictive Scenarios** app. In order for the model to be used, its definition must be completed and published.

> **Note**

Publishing a new model to an existing predictive scenario is supported only for predictive scenarios created by customers from release 1905 of SAP S/4HANA Cloud.

Procedure

1. To open the application, select the **Intelligent Scenarios** tile.

   A list of published and draft scenarios is displayed, by **Package**, **Intelligent Scenario**, **Status**, **Intelligent Scenario Description**, **Scenario Type**, and **Created**.

2. Select the intelligent scenario to which your draft model has been added.

   The **Settings** tab opens.

3. To indicate that there is a model in status **Draft**, the **Models** tab is highlighted in a different color to the other tabs. The number of models associated with this intelligent scenario is indicated beside the **Models** tab.

4. Select the draft model.

   The **Model Settings** tab opens.

5. You can edit the **Model Name** and **Description** fields.

6. You can edit the entries in the **Model Name**, **Description**, **Training Dataset**, and **Apply Dataset** fields.

   ### ⚠ Caution

   ISLM doesn't generate access controls. Securing your own intelligent scenario predictions using suitable access control is very important. Care should be taken to ensure that the access controls for the intelligent scenario CDS View are sufficient to protect the data that could be exposed.

   Within the intelligent scenario CDS View and CDS Table Function processing, the access controls of the **Apply Dataset** are not used.

   For more information, you can refer to the chapter called *Access Controls* in the *SAP (On-Premise) - ABAP CDS Development User Guide*, on the SAP Help Portal at http://help.sap.com.

7. Review the information in the **Model Input** and **Model Output** tabs and maintain any missing data types if necessary.

8. To save any changes made, select **Save Draft** button.

9. To publish the model, select the **Publish** button.

   The published model template is now available for use in the **Intelligent Scenario Management** app.

   Published model template can be moved to production using the ATO framework.

   ### ℹ Note

   For more information on working with the ATO framework, you can refer to the chapter called *Export Software Collection* in the *General Functions for the Key User* guide on the SAP Help Portal at https://help.sap.com. When adding an intelligent scenario to a software collection within the **Export Software Collection** app in the **Transport Management** area, you should search for the type **ISLM : Intelligent Scenario**.

Related Information

Predictive Models App

Publishing a New Model to an Existing Predictive Scenario

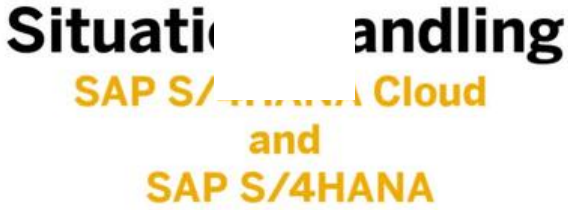
Video Library for Managing Your SAP S/4HANA Cloud

This video library gives you quick access to videos showcasing selected apps and functions that are relevant across Manage Your SAP S/4HANA Cloud.

This image is interactive. Hover over each area for a description. Click highlighted areas for more information.

Process

Situation Handling



Open this video in a new window

For more videos with Situation Handling examples, see Situation Handling Videos.

Responsibility Management

You can open this video in a new window.

Identity and Access Management

Open this video in a new window

Analytics

Analytics

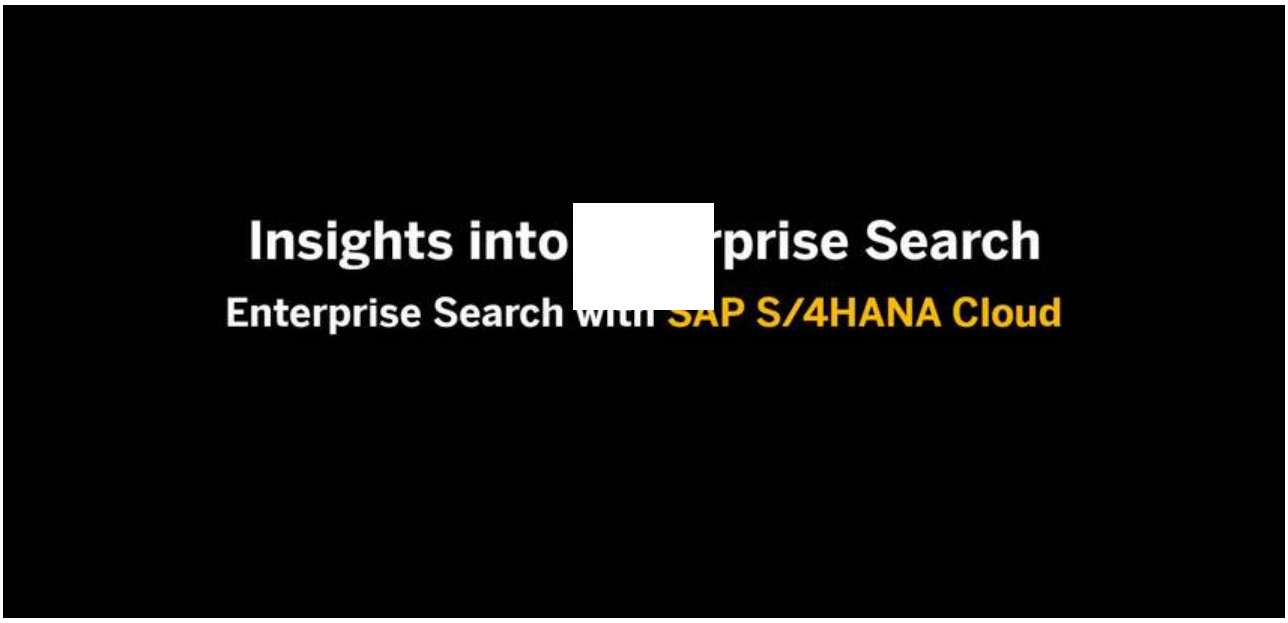
Open this video in a new window

Open this video in a new window

Search

Enterprise Search

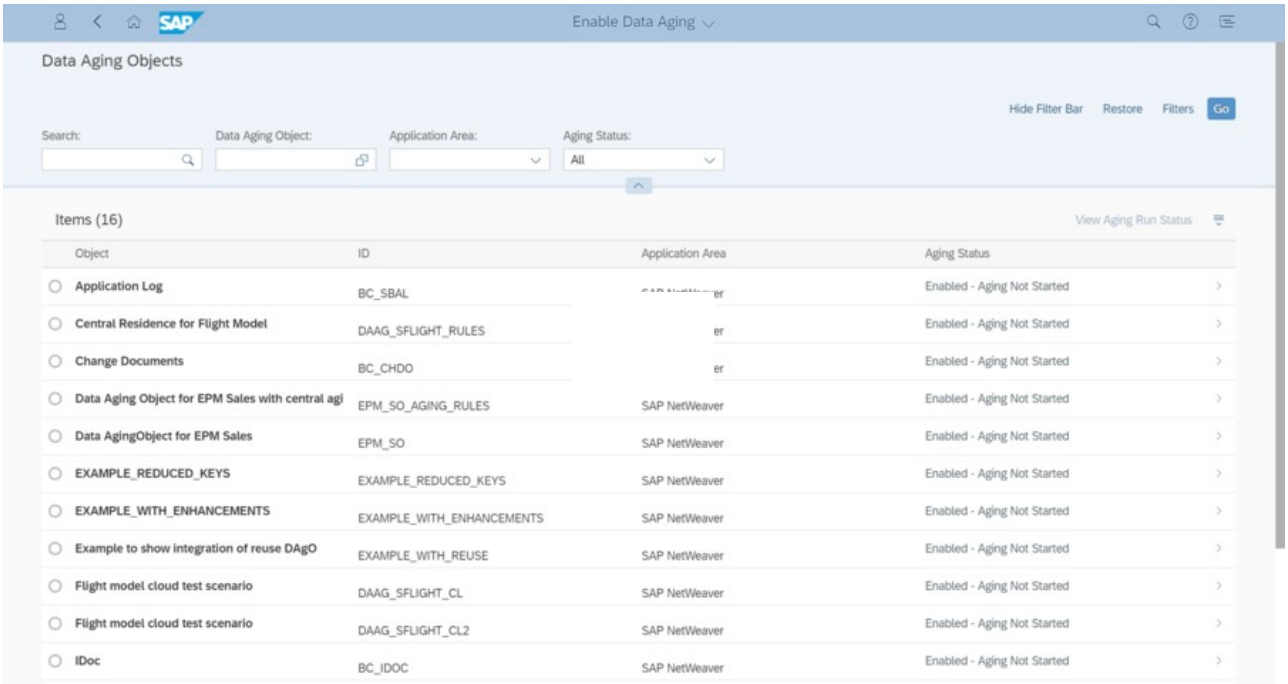
Watch this video to find out more about Enterprise Search.



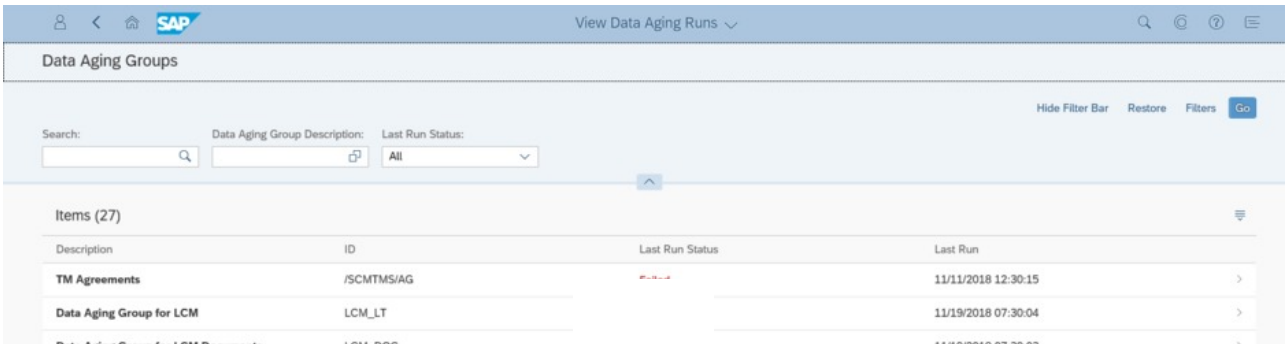
Open this video in a new window

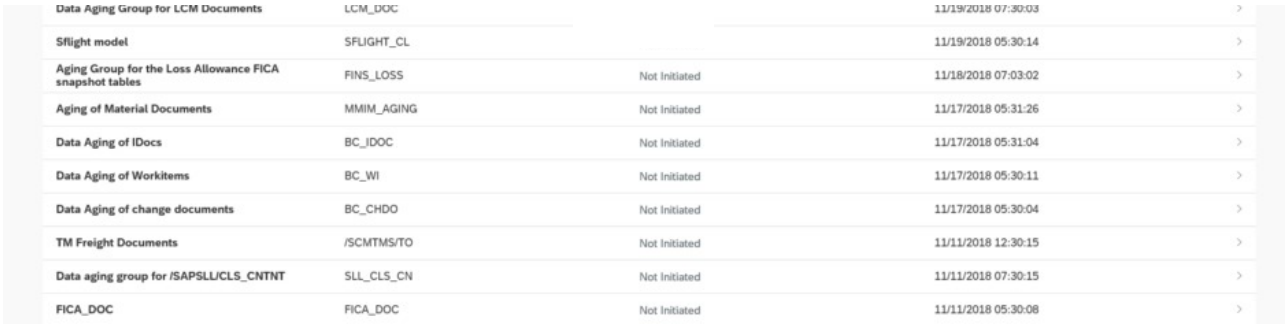
Data Management

Data Aging



Open this video in a new window





Data Aging Group for LCM Documents	LCM_DOC		11/19/2018 07:30:03
Sflight model	SFLIGHT_CL		11/19/2018 05:30:14
Aging Group for the Loss Allowance FICA snapshot tables	FINS_LOSS	Not Initiated	11/18/2018 07:03:02
Aging of Material Documents	MMIM_AGING	Not Initiated	11/17/2018 05:31:26
Data Aging of IDocs	BC_IDOC	Not Initiated	11/17/2018 05:31:04
Data Aging of Workitems	BC_WI	Not Initiated	11/17/2018 05:30:11
Data Aging of change documents	BC_CHDO	Not Initiated	11/17/2018 05:30:04
TM Freight Documents	/SCMTMS/TO	Not Initiated	11/11/2018 12:30:15
Data aging group for /SAPSLL/CLS_CNTNT	SLL_CLS_CN	Not Initiated	11/11/2018 07:30:15
FICA_DOC	FICA_DOC	Not Initiated	11/11/2018 05:30:08

Open this video in a new window