Duet Enterprise – Add SAP ERP Reports and SAP BI Queries/Workbooks to Duet Enterprise Configuration

Applies to:

Duet Enterprise 1.0, Feature Pack 1 for Duet Enterprise

Summary

This paper gives an overview of the basic functionality available with Duet Enterprise Reporting. This out of the box functionality allows an end user to schedule and receive an SAP ERP Report or BI Query/Workbook through Duet Enterprise using SharePoint 2010 as the user front end.

This paper will also cover the steps required by an administrator to expose specific reports to SharePoint users through Duet Enterprise.

It should be noted that not all types of SAP ERP and BI reports are supported so this will also be discussed.

Author: Linda Peruzzi

Company: SAP

Created on: 07 November 2011

Author Bio

Linda Peruzzi is a Solution Owner for SAP in the Duet Enterprise team.

Table of Contents

Running SAP ERP and BI Reports through Duet Enterprise Reporting

Duet Enterprise provides out-of-the-box functionality to allow an end-user to schedule and receive SAP ERP Reports and BI Queries/Workbooks directly from SharePoint.

In order for this functionality to be available, the following assumptions are made:

1) The SAP ERP Reports or SAP BI queries/workbook are available in the SAP Backend system and the end-users have the SAP authorizations to run the report (this is outside of Duet Enterprise)
2) Duet Enterprise installation and configuration is complete and the users have been assigned the correct authorizations to run the reports using Duet Enterprise. For information, refer to the Duet Enterprise Installation guides on the Service marketplace.
3) Duet Enterprise Reporting must be deployed and configured as required in the Gatewayserver based on the SAP Duet Enterprise Deployment Guide available on the SAP Service Marketplace.
4) Report Templates, Scheduling and Format Options have been configured. This guide will go over an example of this configuration.

The following types of Reports are supported by Duet Enterprise.

SAP ERP: ALV, SAP Queries, Non-ALV Reports

SAP BI: Queries and Workbooks (Web Based reports or Business Object Reports are currently not supported)

There are some cases where Duet Enterprise may not support a report due to the following reasons:

- Parameter Popup screens require input by the end user therefore can't be scheduled in the background
- Drill down capabilities are not available in Duet Enterprise

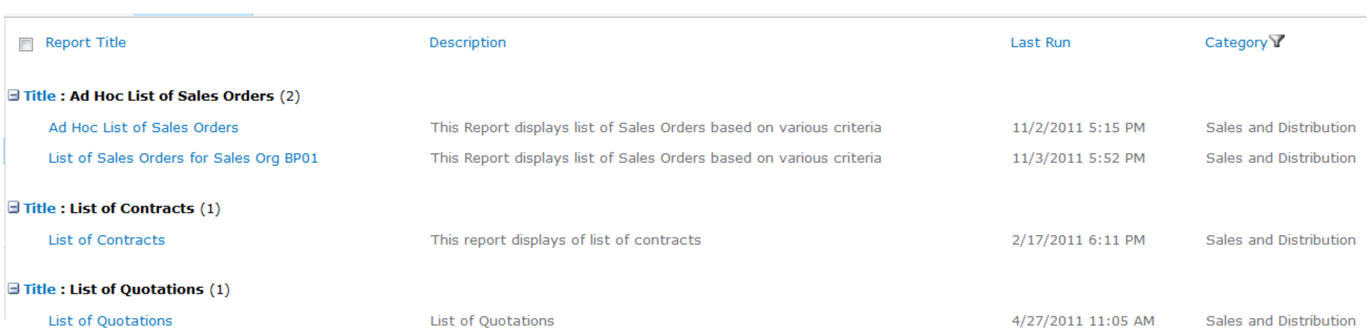
Extra considerations need to be accessed with very large reports as the limitations on an SAP Backend System as well as the size of document that can be delivered to SharePoint will determine if a report can be delivered.

Functionality Overview

This section will give a general overview of what can be done with Duet Enterprise Reporting out-of-the-box.

View a List of Available Reports

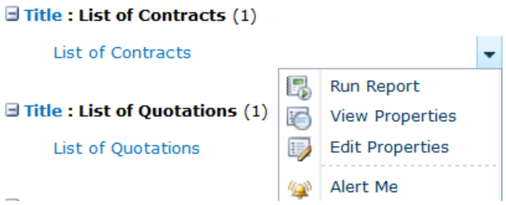
When a user is logged into SharePoint, he/she can go to the main Reporting site to view a list of all the reports that are available for them to run. This list is controlled by an administrator during configuration of Gateway. Though a user may have access to run the report, the SAP authorizations in the SAP ERP or BI system will determine what data can be seen. Data access is still controlled by SAP authorizations and not by Duet Enterprise.



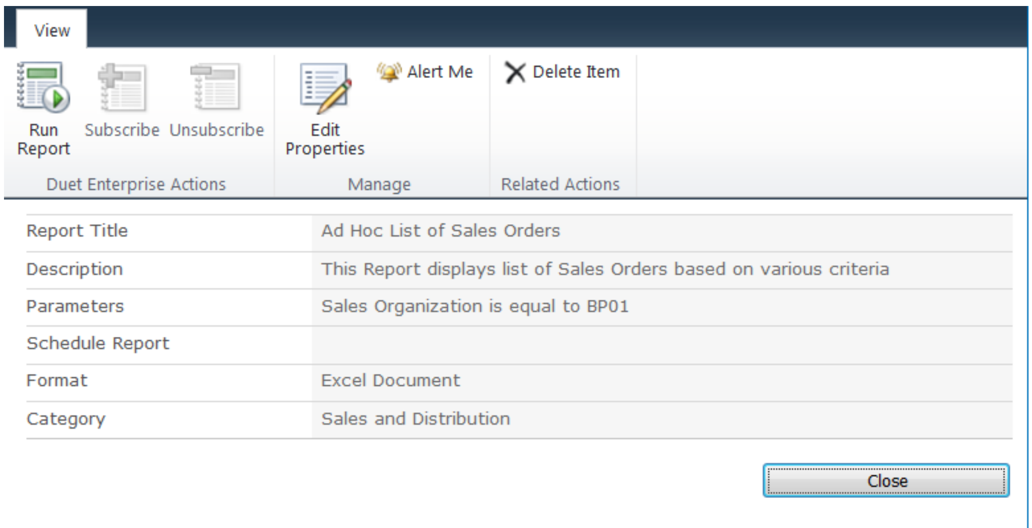
Report Title	Description	Last Run	Category
Title : Ad Hoc List of Sales Orders (2)			
Ad Hoc List of Sales Orders	This Report displays list of Sales Orders based on various criteria	11/2/2011 5:15 PM	Sales and Distribution
List of Sales Orders for Sales Org BP01	This Report displays list of Sales Orders based on various criteria	11/3/2011 5:52 PM	Sales and Distribution
Title : List of Contracts (1)			
List of Contracts	This report displays of list of contracts	2/17/2011 6:11 PM	Sales and Distribution
Title : List of Quotations (1)			
List of Quotations	List of Quotations	4/27/2011 11:05 AM	Sales and Distribution

Run a Report Immediately using default parameters

Default parameters for a report are controlled by an Administrator. An end user can run a report using the default parameters through the report menu by choosing ***Run Report***

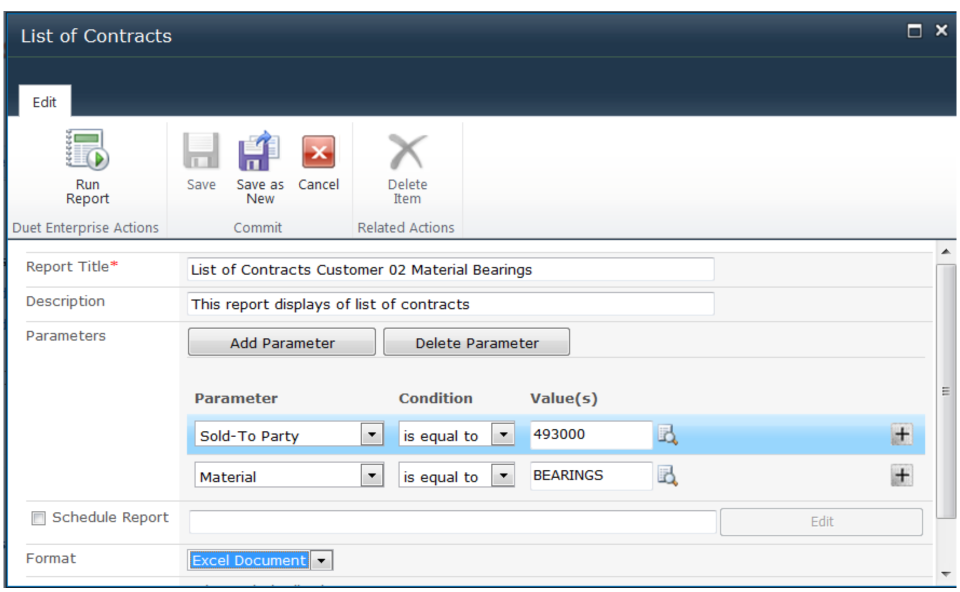


An end user can see the default parameters by choosing ***View Properties*** from the menu



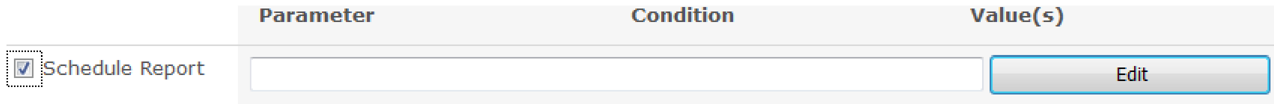
Run a Report Immediately changing defaults

An end user can also run a report immediately with changed Titles, descriptions, parameters and different delivery format through the report menu by choosing ***Edit Properties***. They can then save this as a personalized template to be used in future.

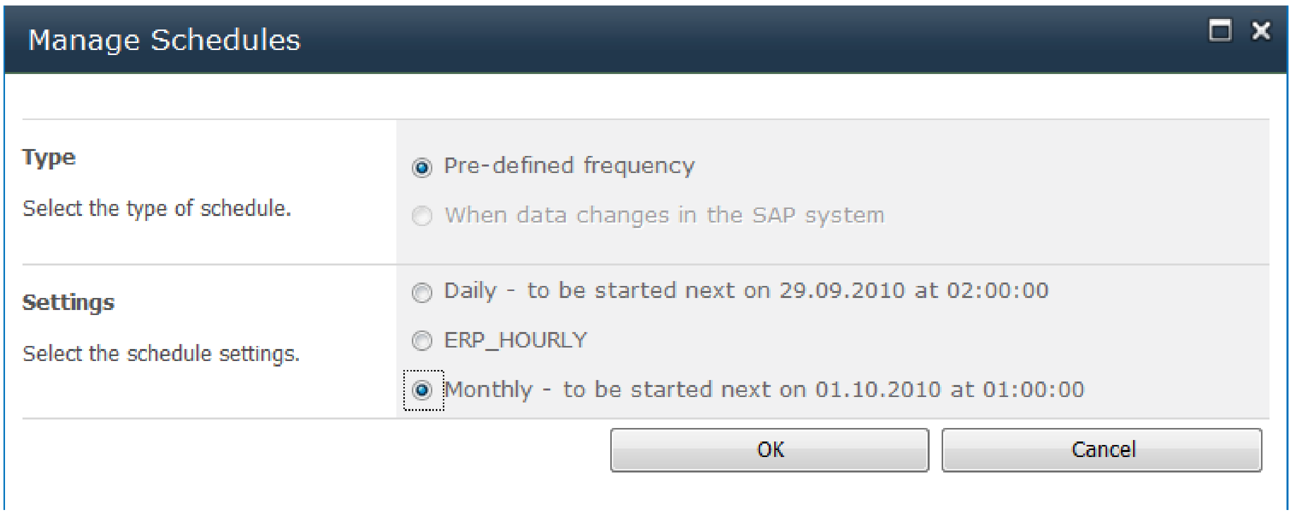


Schedule a Report using a Pre-defined Time Point

An end user may want to schedule a report to be delivered on a regular schedule such as month end. The available Pre-defined Time Points for a specific report is configured by the administrator in Gateway. A user can choose ***Edit Properties*** from the drop down menu. Check the *Schedule Report flag* and click the *Edit button* to set the desired schedule.

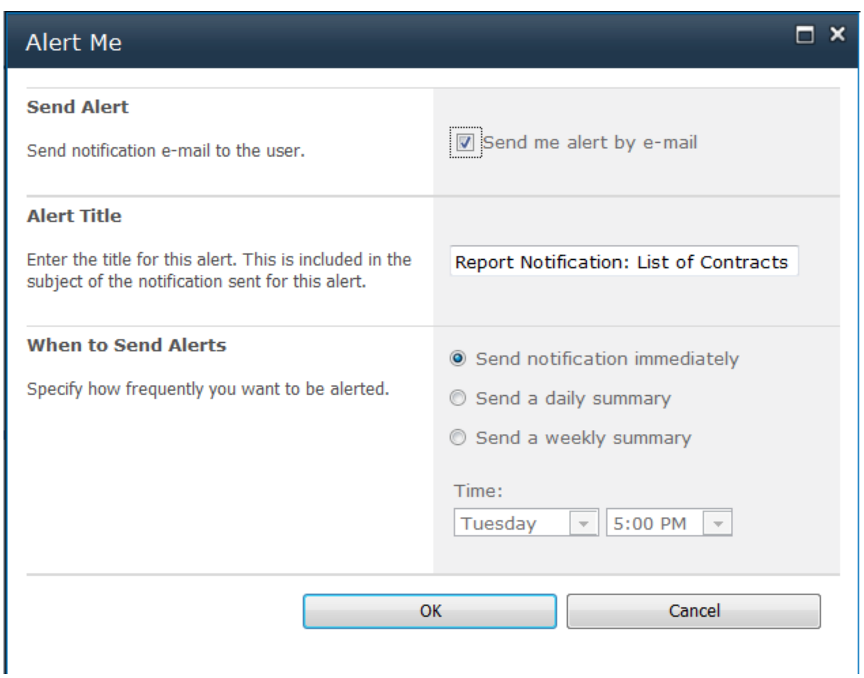


For BI reports, an additional scheduling option is available to trigger a report run for a specific data change event.



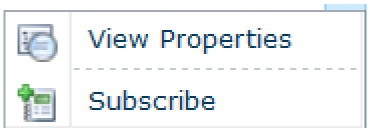
Request E-mail Alert upon Report Delivery

An end-user may want to be alerted by e-mail when a specific report has been delivered to SharePoint. They can set this alert by using the ***Alert Me*** option in the drop down menu. They can be alerted immediately when the report is available or get a summarized report on a daily or weekly basis.



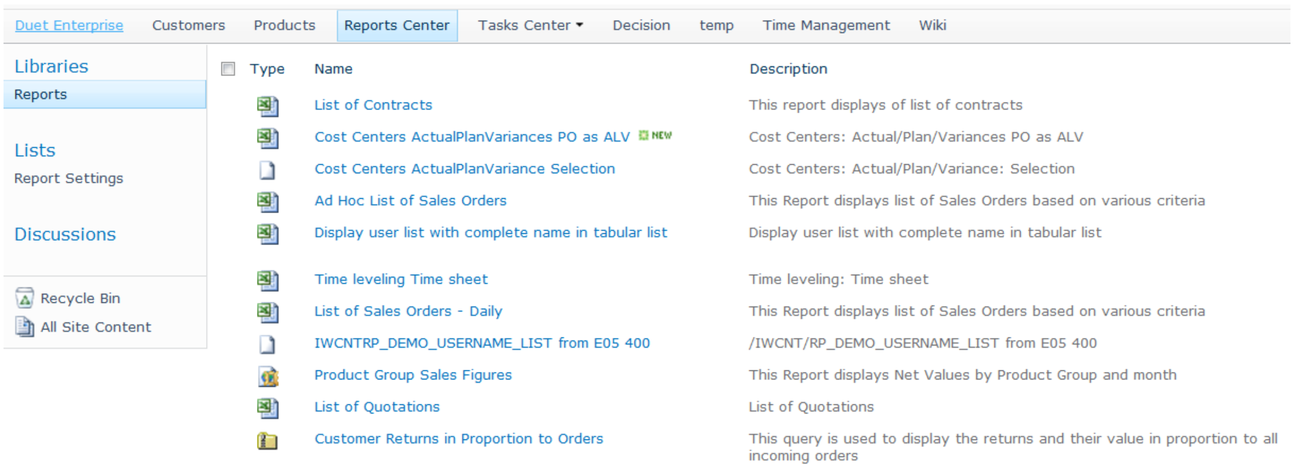
Subscribe/Unsubscribe to a Pre-defined Report

For Reports that are used consistently by multiple users with the same defaults, an administrator may decide to use the subscription option for running reports. The administrator will configure the report for a specific pre-defined time point with pre-defined defaults. In their list of reports, an end user can choose to subscribe to this report meaning they will trigger the scheduling of this report. All users assigned the SAP role associated to the subscribed report will see this report delivered to them. A user can decide to unsubscribe to the report so they do not see this report.



View Delivered Reports

An end user can see list of all the delivered reports by choosing the Reports link from the left navigation panel. Clicking on the link of the delivered report will open the latest delivered report. A user can also open older reports with the same Report title in the version history option of the menu.

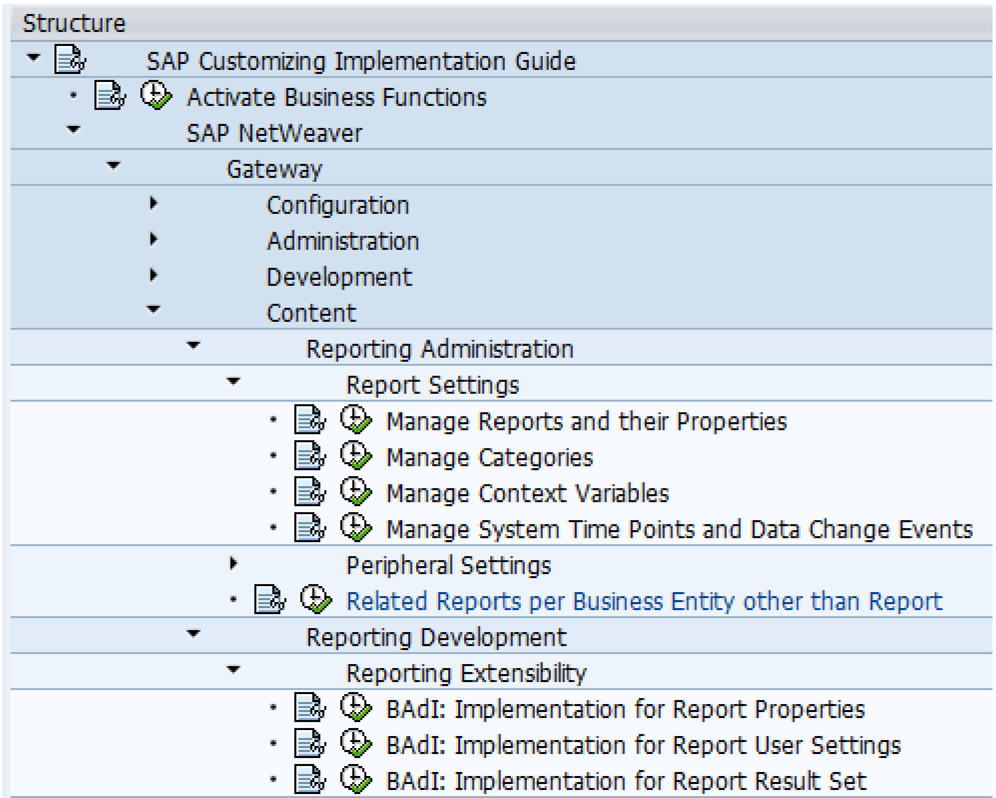


Configuration Overview

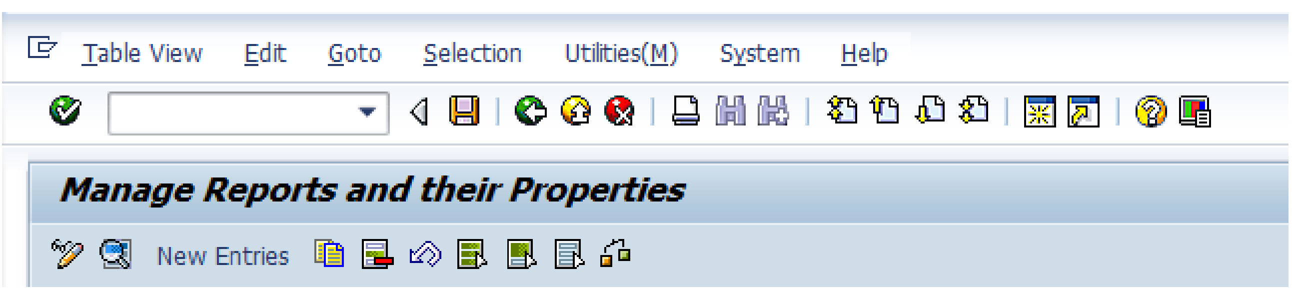
This section will give step by step instructions on how to configure a report to be exposed in SharePoint using Duet Enterprise Reporting.

Adding a New Report

In the Gateway Environment, navigate to transaction SPRO and follow the menu path: SAP customizing Implementation Guide -> SAP Netweaver -> Gateway -> Content -> Reporting Administration -> Report Settings -> Manage Reports and their Properties

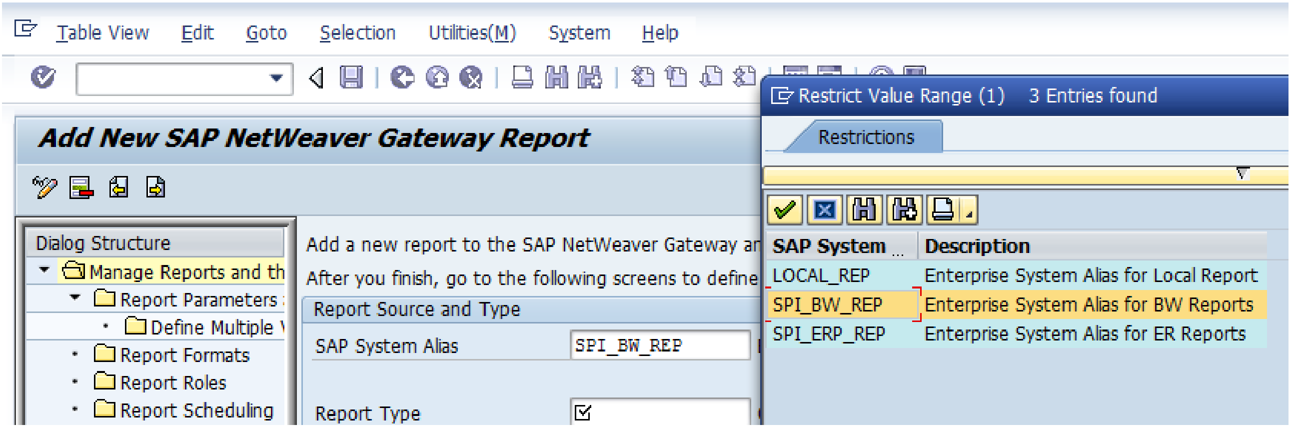


In the Manage Reports and their Properties application menu, choose New Entries to create a new Report Template.



Screen 1 Manage Reports and Their Properties

Section 1 Configuring Source and Type of Report



<u>SAP System Alias</u>

The Administrator must first decide on where this report will be run by choosing the SAP System Alias. In this landscape, 3 systems have been configured to be the source of reports. Values could be, the local Gateway system, a BI system and an ERP system.

During the initial Reporting Configuration, the System Alias must be configured with version BW or ERP to show up in the dropdown.

<u>Report Type</u>

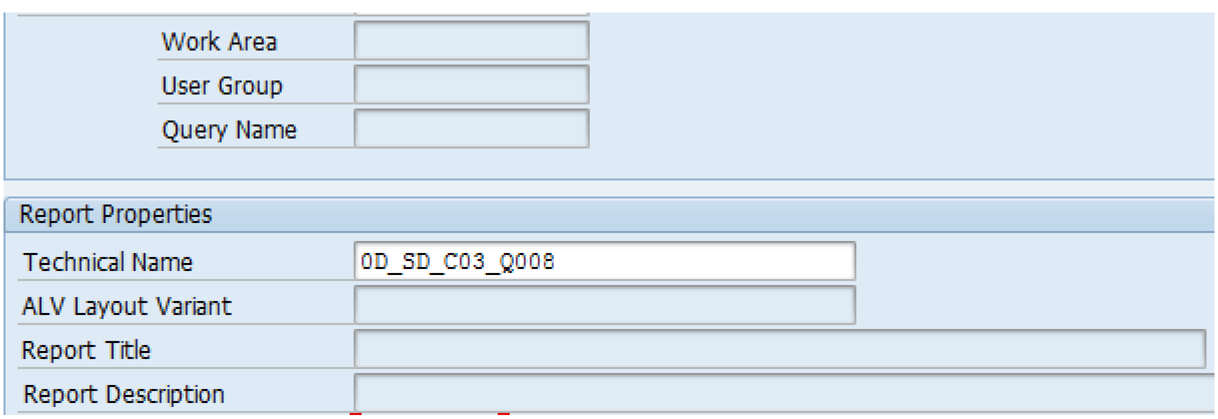
The following Report Types are available:

For BI: QU = BI Query WB = Workbook

For ERP: SQ = SAP Query AL = ALV Report NA = Non-ALV Report

Section 2 Configuring Technical Details of the Report

The Administrator will give specifics on which Report they want to configure from the SAP source system. Keep in mind that in the following fields, the list received using F4 is dependent on what authorizations the administrator has in the Source system they have chosen.



Work Area / User Group / Query Name

These fields are only required if you are configuring an SAP Query Report.   An F4 help will give you a list of available queries. An Administrator may also choose to bypass this and configure the report as an ALV report using the technical name field

Technical Name

Choose the technical BI or ERP Report from the F4 drop down list or enter in the technical name.

ALV Layout Variant

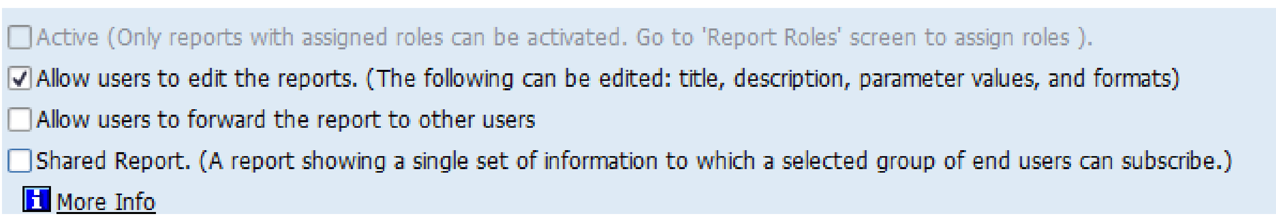
For ALV Reports, an Administrator may want to use a pre-defined layout for the output of an ALV Report. The output variant can be entered here. When the Report runs in Sharepoint it will use the output variant to determine which columns will be in the output.

Report Title / Report Description

When you hit enter after populating technical name, the system uses the RFC associated to the SAP System Alias and calls the source system to retrieve the Report Title and Description and populate the fields shown. This information can be overwritten by the Administrator. This Report Title and Description will be displayed in SharePoint as it is here.

Section 3   End User action control

An administrator can limit what can be done with a report by an end-user in this section.



Active Report

After configuring all options for a report, an administrator must check this flag to have it displayed to eligible end users in Sharepoint. It will be greyed out if not all configuration is completed for the report template.

Allow users to forward the report to other users

THIS FIELD IS NOT APPLICABLE FOR DUET ENTERPRISE

Allow users to edit the Reports

This will give users the Report menu function in SharePoint of “Edit Properties”. As noted, the users can change the title, description, parameter values and formats of a report template to run a report and will also be able to create a personalized template in their list.

If this field is not checked, users will only have the option to Run Report and View Properties in the SharePoint menu.

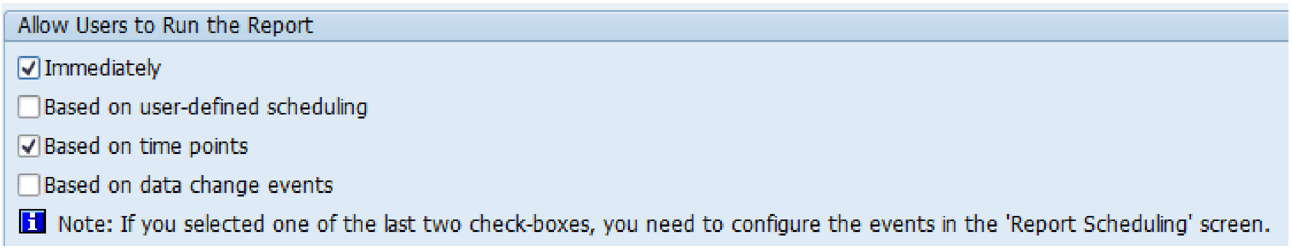
Shared Report

An administrator can choose to set the report as Shared or Subscribed Report. As noted previously in the functionality section, a subscribed report must be associated to a pre-defined schedule.   By subscribing to a report an end user will trigger the scheduling of the report which will be delivered to all eligible users based on the Report Roles assigned to this report.   The report is run only once which multiple users will see in SharePoint.

*Note: With subscribed reports, SAP authorizations are only checked against the first person who triggers the report delivery by subscribing to it. All other users will be able to see the report that the initial person ran but no authorization checks will be done for them. Therefore, an administrator must be very careful when choosing this option for a report.   It is like allowing a end-user to forward a report through email without checking SAP backend authorizations to the recipient.

Section 4 Scheduling Options

An administrator can control what type of scheduling is allowed for a specific report. For example, if there is a large report that they only want to be scheduled after hours, an administrator can limit the report to be based on pre-scheduled time points only.



Immediately

An end-user can run the report ad-hoc.

Based on user-defined scheduling

THIS FIELD IS NOT APPLICABLE FOR DUET ENTERPRISE

Based on time points

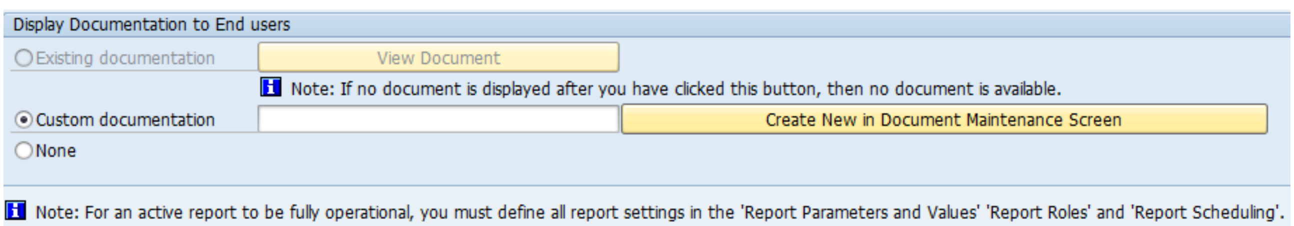
An end-user will be able to choose for one or more pre-defined schedules created by the administrator. For more details on how to create Time Points, refer to section: *Creating and Configuring Pre-defined Time Point Schedules*

Based on data change events

An end-user can choose to schedule a report based on an existing BI data change event. For more details on how to configure for this, refer to section: *Creating and Configuring Pre-defined Time Point Schedules*

Section 5 Documentation Options

In SharePoint, an administrator may want to have documentation attached to the Duet Enterprise Report Template to give more information to end-users on what the report is for, what parameters should be used etc.



Existing documentation

This will be the default for ERP reports. Clicking in the View Document will make a call to the source system and will show the available documentation already associated to the ERP Report. This information will be available in the Report Template in Sharepoint. This option will be grayed out for BI reports.

Custom documentation

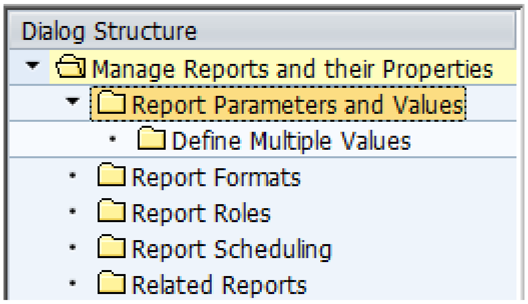
An administrator can create custom documentation for both ERP and BI reports. For more details, refer to section ________________

None

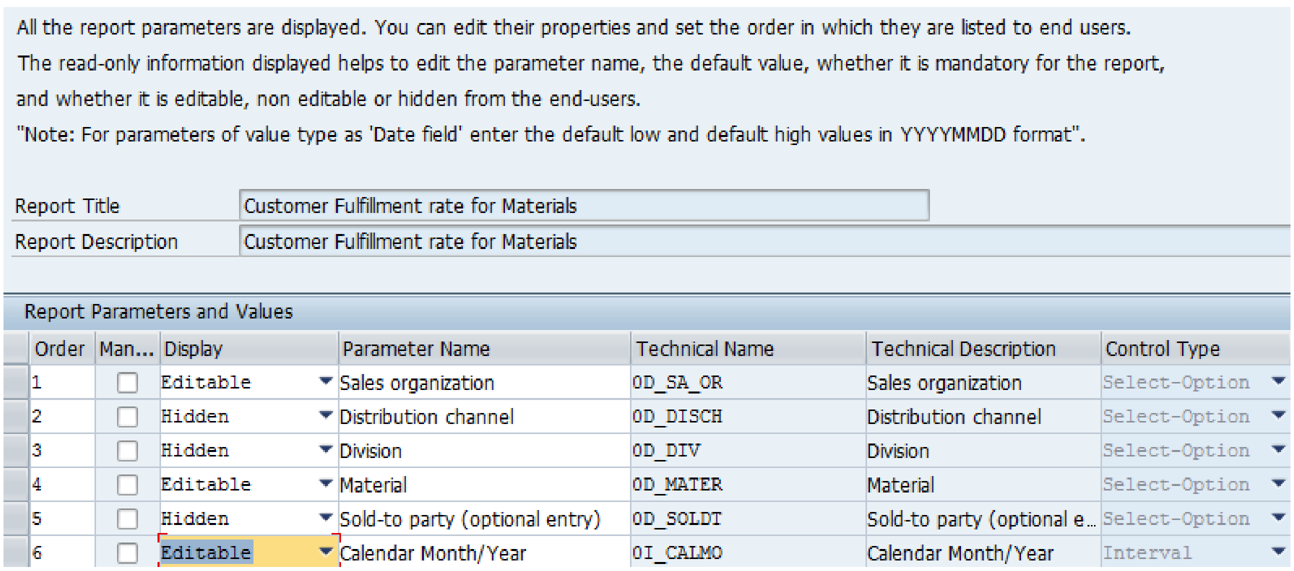
No documentation will be displayed in the report template

Screen 2 Report Parameters and Values

An administrator has control over the options and end user will have for editing parameters as well as what defaults will show up in SharePoint



A list of available parameters will automatically be retrieved from the report source system. Some fields are for display only such as details on the type of parameter it is including *Technical Name, Technical Description, Control Type*, Value Length and Value Type. The other fields can be modified. Use the **Define Multiple values** for select options that require multiple value entries instead of just a range of values as a default.



All the report parameters are displayed. You can edit their properties and set the order in which they are listed to end users.
The read-only information displayed helps to edit the parameter name, the default value, whether it is mandatory for the report,
and whether it is editable, non editable or hidden from the end-users.
"Note: For parameters of value type as 'Date field' enter the default low and default high values in YYYYMMDD format".

Report Title: Customer Fulfillment rate for Materials
Report Description: Customer Fulfillment rate for Materials

Report Parameters and Values

Order	Man...	Display	Parameter Name	Technical Name	Technical Description	Control Type
1	☐	Editable	Sales organization	0D_SA_OR	Sales organization	Select-Option
2	☐	Hidden	Distribution channel	0D_DISCH	Distribution channel	Select-Option
3	☐	Hidden	Division	0D_DIV	Division	Select-Option
4	☐	Editable	Material	0D_MATER	Material	Select-Option
5	☐	Hidden	Sold-to party (optional entry)	0D_SOLDT	Sold-to party (optional e...	Select-Option
6	☐	Editable	Calendar Month/Year	0I_CALMO	Calendar Month/Year	Interval

__Order__

Controls the sort order of the displayed Parameters in SharePoint

__Mandatory__

By default, mandatory values in a report with have this flag checked. An administrator can use this flag to set additional fields as mandatory.

__Display__

An administrator can allow a field to be Editable, Non-editable but viewed by end users, or hidden

__Parameter Name__

Parameter names will be retrieved automatically but an administrator can overwrite these texts to be displayed in SharePoint

Radio Buttons Group Name	F4 Availability
	☑
	☑
	☑
	☑
	☑
	☑

Radio Buttons Group Name

This field will only be editable if the parameter in question is a radio button. An administrator can overwrite the default value that comes in automatically.

F4 Availability

F4 refers to the drop down features to view the possible values. This field may be grayed out if F4 is not available for a specific field.

Sign	Default Condit...	Default Low/From Value	Default High/To Value
Inclusive	is equal to		
Inclusive	is equal to		
Inclusive	is equal to		
Inclusive	is equal to		
Inclusive	is equal to		
Inclusive	is between		

Setting Defaults – Sign, Default Condition, Default Low, Default High

Sign:	Include or Exclude specific default values
Default Condition:	For select options, can choose is equal to or is between. For parameters, radio buttons or flags, only is equal to is supported
Default Low:	Open field to enter low value or a range or single value
Default High:	Open field to enter high value or a range or single value

Context Group	Context Variable

Context Group and Context Variable

For ERP report date parameters only, an administrator can create a context variable for example, Today, to default the date value to current date or some other value they want to code in ABAP.

Screen 3 Report Formats

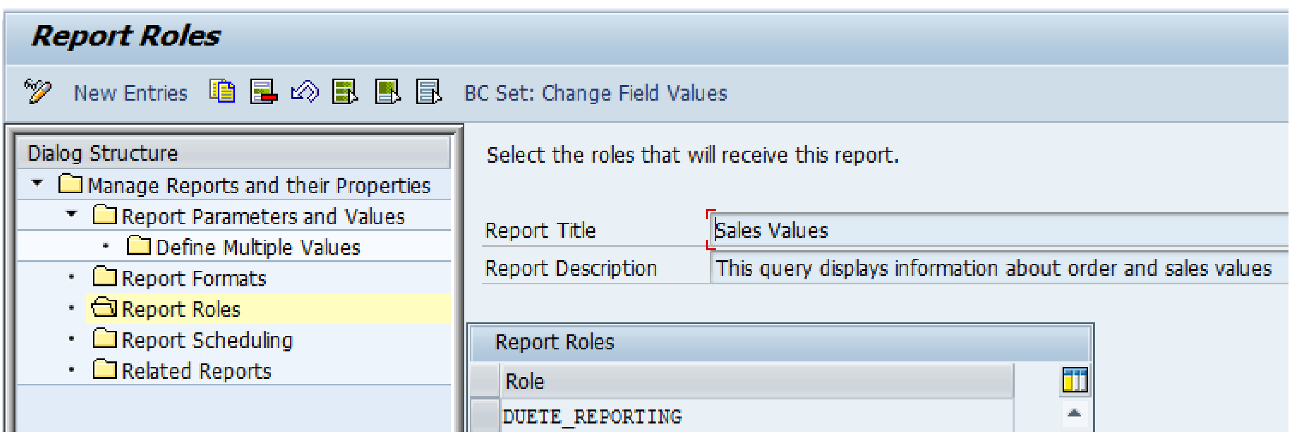
This refers to the output format allowed for a specific type of report. The following formats are supported"

SAP ERP Queries	Excel and Zip
SAP ERP ALV	Excel and Zip
SAP ERP Non-ALV	PDF
SAP BI Queries	PDF, HTML, ZIP

The administrator can set the format to be the default (mandatory for at least one format), Allowed or Not Allowed. If Not Allowed is selected, an end-user will not be able to run a report using this format.

Screen 4 Report Roles

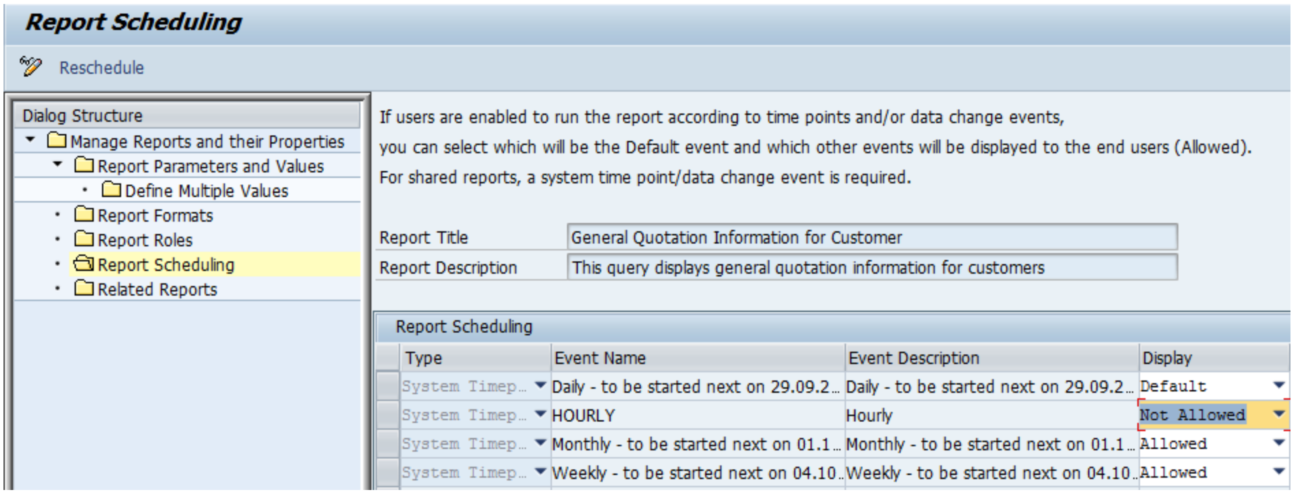
In order for any end-users to see a report template in SharePoint through Duet Enterprise, an SAP Report Role MUST BE SET in this configuration. This role will be available on the Gateway server in transaction PFCG. An SAP user who has a mapping to a SharePoint user in table VUSREXTID, can view this particular report if they have been assigned the Report Role (for example DUETE_REPORTING) in their SAP Authorizations.



This configuration gives the administrator flexibility in assigning reports to different users. He/she can set different or multiple roles to different report templates so what one user will see in SharePoint as far as a list of available reports can differ from another user.

Screen 5 Report Scheduling

The administrators can enable scheduling using pre-defined schedules or in the case of BI reports by data change events available in the SAP source systems.   For more details on creating and configuring Time Points, refer to the section __________.



A list of available schedules will automatically be displayed. The administrator can choose to set one as a Default, Allowed, or Not Allowed.

Screen 6 Related Reports

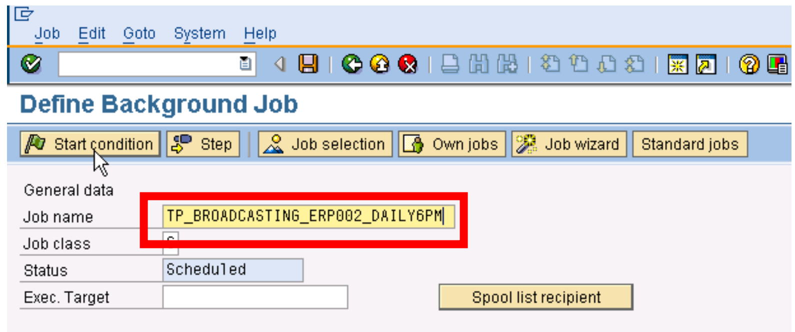
THIS FOLDER IS NOT APPLICABLE TO DUET ENTERPRISE.

Creating and Configuring Pre-defined Time Point Schedules

Create Recurring Schedule in the Source System of the Report

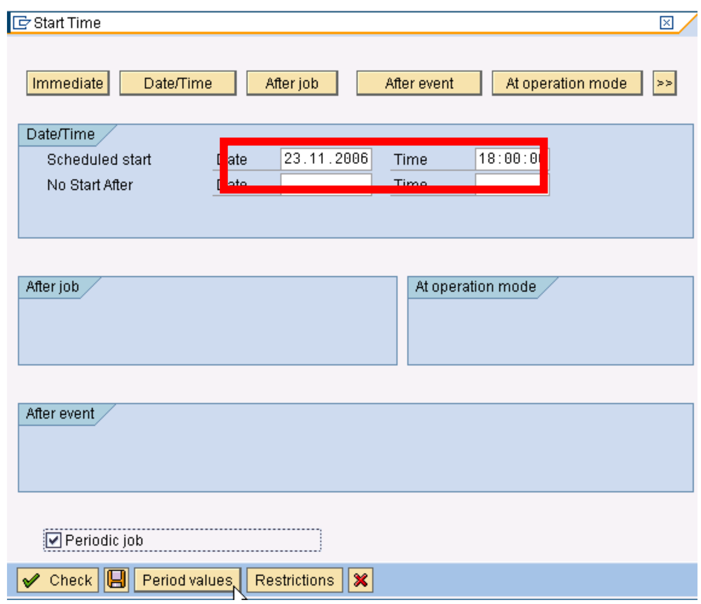
1. Logon to your SAP system, and in the system client for which you want to create a System Time Point, navigate to transaction SM36.

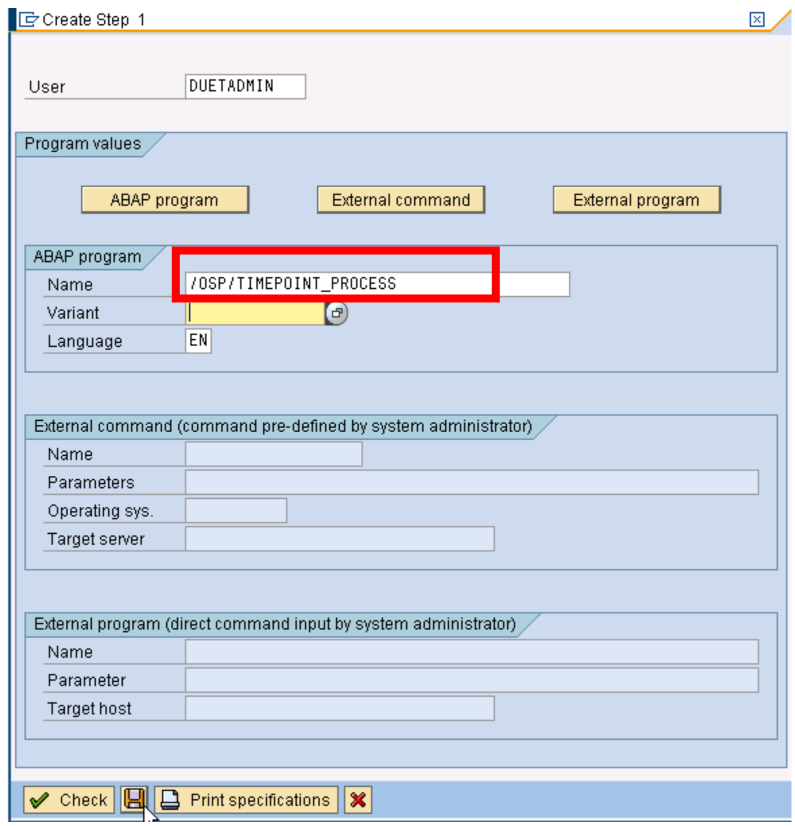
- In the Job name, enter TP_BROADCASTING_<id>
where <id> is a unique identifier for the schedule.
- Click the button *Start condition*.



2. Enter the *Scheduled Start time* and check the flag for *Periodic job*. Enter the *Period values*.

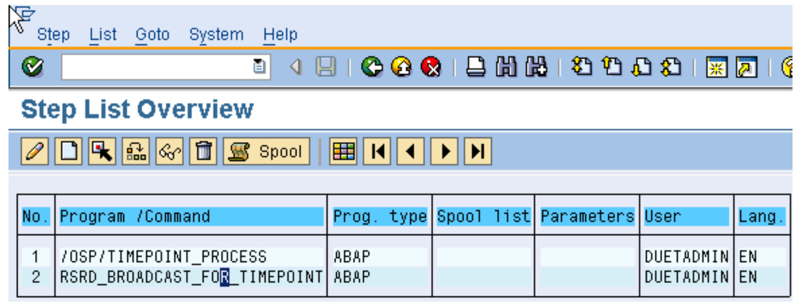
- Click the *Save* icon at the bottom of the window.
- Note: In the restrictions section of scheduling, ensure the Calendar ID remains blank.



3. Create the job steps by clicking on the *Step* button. Steps determine what action gets triggered for the start condition.	
4. For ERP reports, under the ABAP program, enter **/OSP/TIME POINT_PROCESS** without a variant. • This Duet specific program is used to run the ERP reports from Duet. If no ERP reports will be used, this step is not required. • Save the Step by clicking on the Save button.	

5. For both BW and ERP reports, repeat step 4 but use ABAP program **RSRD_BROADCAST_FOR_TIME POINT**.

- This program is not Duet specific but is a standard program used for Information Broadcasting for BI reporting.
- For ERP reports, both steps 4 and 5 must be included in the same schedule. For BI reports, only step 5 is required.
- Click on the *Back* button to go back to the initial screen.



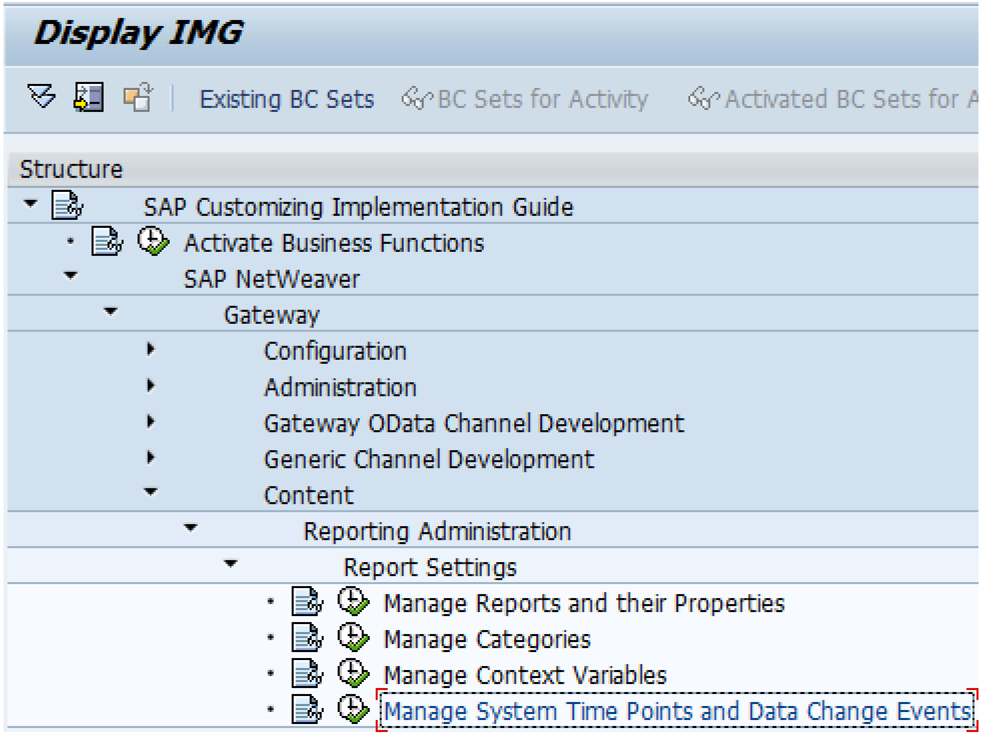
6. Click on the *Save* icon to save the schedule.

- Once the schedule is saved, the recurring System Time Point job will run automatically in the background based on the defined start and period values.

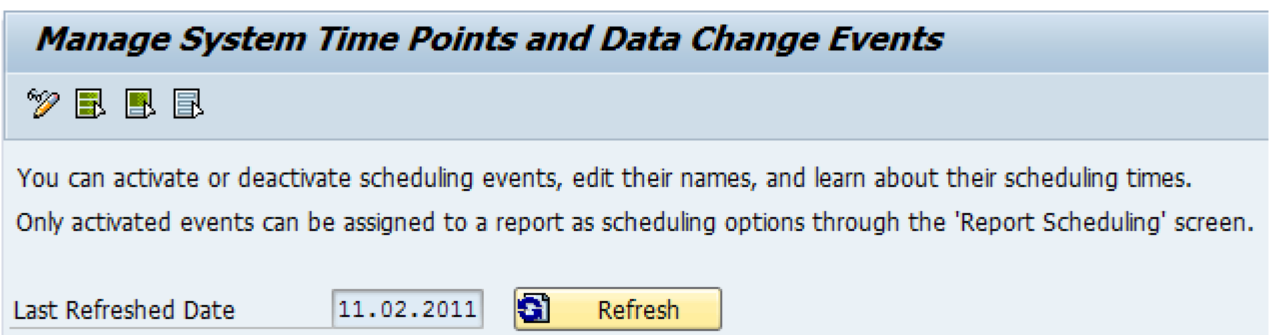
Activate the Time Point for Duet Enterprise

This step is required to expose the created Time Point or Data Change event so that it can be used when configuring Duet Enterprise templates.

In the Gateway Server, navigate to transaction SPRO. Choose the menu: SAP NetWeaver -> Gateway -> Content -> Reporting Administration -> Report Settings -> Manage System Time Points and Data Change Events



Refresh the list of available Time Points and Data Change Events so that the new schedule is seen in the list.



Check the Active flag if this Time Point or Data Change Event should be available in Reporting configuration. An administrator can change the Technical Description field to the desired text they would like to be displayed in SharePoint in the available schedule list.

View for System Timepoint/Data Change Events Master data

SAP System Alias	Type	Event Name	Active	Technical Name	Technical Description
SPI_BW_REP	Data Change …	CO-OM-CCA: Costs and Allocations (by		0CCA_C02	CO-OM-CCA: Costs and Allocations (by…
SPI_BW_REP	Data Change …	CO-OM-CCA: Costs and Allocations		0CCA_C11	CO-OM-CCA: Costs and Allocations
SPI_BW_REP	System Timep…	Daily - to be started next on 29.09.2…	✓	DAILY_8AM	Daily - to be started next on 29.09.2…
SPI_BW_REP	System Timep…	Weekly - to be started next on 04.10…		ERP225_WEEKLY	Weekly - to be started next on 04.10…
SPI_BW_REP	System Timep…	Daily - to be started next on 29.09.2…		ERP_DAILY_8AM	Daily - to be started next on 29.09.2…
SPI_BW_REP	System Timep…	ERP_EVERY_20_MIN		ERP_EVERY_20_M…	ERP_EVERY_20_MIN
SPI_BW_REP	System Timep…	ERP_HOURLY		ERP_HOURLY	ERP_HOURLY
SPI_BW_REP	System Timep…	Monthly - to be started next on 01.1…		ERP_MONTHLY_1ST	Monthly - to be started next on 01.1…
SPI_BW_REP	System Timep…	HOURLY	✓	HOURLY	Hourly
SPI_BW_REP	System Timep…	Monthly - to be started next on 01.1…	✓	MONTHLY_1ST_7AM	Monthly - to be started next on 01.1…

Copyright