

Upgrade Guide for mWorkOrder 2502

Connected Worker Solutions



Title and Copyright

Copyright and Terms of Use for Upgrade Guide for mWorkOrder, a Mobile Workorder Management Solution of *Connected Workforce Platform*[™].

Upgrade Guide for mWorkOrder, a Mobile Workorder Management Solution of *Connected Workforce Platform*[™].

Product Version: 2502

Release Date: 11 March 2025

Published Date: 11 March 2025

Document Version: 1.0

Copyright © 2025, Innovapptive Inc. and/or its affiliates. All rights reserved.

Primary Author: Innovapptive Inc.

Copyright Notices: Neither our Application nor any content may be copied without inclusion of all copyright notices and/or disclaimers provided therein. Any third party provider logos or marks provided through the Application shall remain owned by such third party provider as may be indicated in a notice contained in the Application or content and you shall not modify or remove any such notice. Neither we nor our suppliers or any third party providers grant any rights or license to any logos, marks, or copyrighted material other than as expressly set forth herein.

Preface

Understand audience, know related documents and products and conventions followed in this document.

Audience

This guide is for technical configurators who Upgrade and do related configurations for mWorkOrder, a Mobile Workorder Management Solution of *Connected Workforce Platform*TM.

Related Documents and Products

- [Work Order Management](#)
- [Inventory and Warehouse Management](#)
- [Operator Rounds](#)
- [Inspections Checklist](#)
- [Fixed Asset Management](#)
- [Field Procurement](#)
- [Analytics and Dashboards](#)

Contact Innovapptive

For information on Innovapptive products, visit the Innovapptive's Support Portal at <http://helpdesk.innovapptive.com>.

The updates to this document are published on this support portal. Check this website periodically for updated documentation.

For additional information about this document, send an email to documentation@innovapptive.com.

Document Conventions

Table 0-1 Conventions followed in the document

Convention	Meaning
boldface	Indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.

Table 0-1 Conventions followed in the document (continued)

Convention	Meaning
<i>italic</i>	Indicates book titles, emphasis, or placeholder variables for which you supply values.
<code>monospace</code>	Indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter

Contents

- Title and Copyright..... ii
- Preface..... iii
- 1. Upgrade mWorkOrder..... 8**
 - 1.1. Upgrade supporting systems8
 - 1.2. Upgrade mWorkOrder.....10
- 2. Back up/Save RACE™ table configurations..... 14**
- 3. Install RACE™ SAP® ECC and Gateway..... 15**
 - 3.1. Install RACE™ SAP® ECC and Gateway Add-ons and support packs.....18
 - 3.1.1. Verify SAP® ECC RACE™ Add-On.....21
 - 3.1.2. Verify SAP® GW RACE™ Add-On.....23
 - 3.2. Install RACE™ SAP® ECC and Gateway Support packs.....23
 - 3.3. Activate RACE™ OData Service.....28
 - 3.4. Activate UI5 Service.....30
 - 3.5. Activate FIORI Service.....32
 - 3.6. Import RACE™ SAP® ECC and Gateway ABAP Transports.....34
 - 3.6.1. Import Transports.....35
 - 3.6.2. Verify SAP® ECC RACE™ Transport.....38
 - 3.6.3. Verify SAP® GW RACE™ Transport.....40
 - 3.6.4. Activate RACE™ OData Service.....40
 - 3.6.5. Activate UI5 Service.....42
 - 3.6.6. Activate FIORI Service.....44
- 4. Install mWorkOrder SAP® ECC, Gateway, and UI5.....47**
 - 4.1. Install mWorkOrder SAP® ECC, Gateway and UI5 Add-ons and support packs.....48
 - 4.1.1. Verify SAP® ECC MWO Add-On.....52
 - 4.1.2. Verify SAP® GW MWO Add-On.....53
 - 4.2. Install mWorkOrder SAP® ECC, Gateway, and UI5 Support packs.....55
 - 4.3. Activate mWorkOrder OData Service.....59

4.4. Activate Gateway UI5 Service.....	61
4.5. Activate Gateway FIORI Service.....	62
4.6. Import mWorkOrder SAP® ECC, Gateway and UI5 Transports.....	64
4.6.1. Verify SAP® ECC MWO Transport.....	65
4.6.2. Verify SAP® GW MWO Transport.....	66
4.6.3. Activate mWorkOrder OData Service.....	68
4.6.4. Activate Gateway UI5 Service.....	69
4.6.5. Activate Gateway FIORI Service.....	71
5. Check Schema Change Indicator.....	74
6. Clean SAP Gateway Cache.....	76
7. Configure SAP Gateway for mWorkOrder.....	80
7.1. Prerequisites for SAP Gateway Configuration.....	80
7.2. Configure screens based on Order Types and Notification Types.....	82
7.3. Configure Plant Maintenance Emergency Order Types.....	83
7.4. Map Measuring Entry List to Mobile User.....	84
7.5. Configure Priority and System Status Color Coding.....	86
7.6. Configure Work Order Numbers Color Coding.....	88
7.7. Configure DMS Document Object Links.....	89
7.8. Configure staging table for Equipment and Functional Location master.....	90
8. Configure RACE™ for mWorkOrder.....	95
8.1. Features of RACE™.....	96
8.2. How to Configure RACE™ for mWorkOrder	97
9. SAP transactions and tables for mWorkOrder.....	98
10. Deploy MWO UI5 package to SAP Cloud platform (SCP).....	99
11. Implement BADIs.....	101
11.1. Prerequisites for BADI Implementation.....	101
11.2. Activate and Implement BADI.....	102
11.3. Verify BADI Implementation.....	107
11.4. List of BADIs for mWorkOrder.....	108

12. Generate Secondary Indices.....	120
12.1. Create Secondary Index.....	120
13. Update Resource File.....	124
14. Download App and Install.....	131

1. Upgrade mWorkOrder

Ensure that the pre-upgrade requirements are met before you upgrade mWorkOrder. See *Pre Install or Pre Upgrade Configurations Guide* for information.

mWorkOrder upgrade process involves two stages:

- [Upgrade supporting systems \(on page 8\)](#)
- [Upgrade mWorkOrder \(on page 10\)](#)

1.1. Upgrade supporting systems

Upgrade the following supporting systems as part of the pre-upgrade requirements.

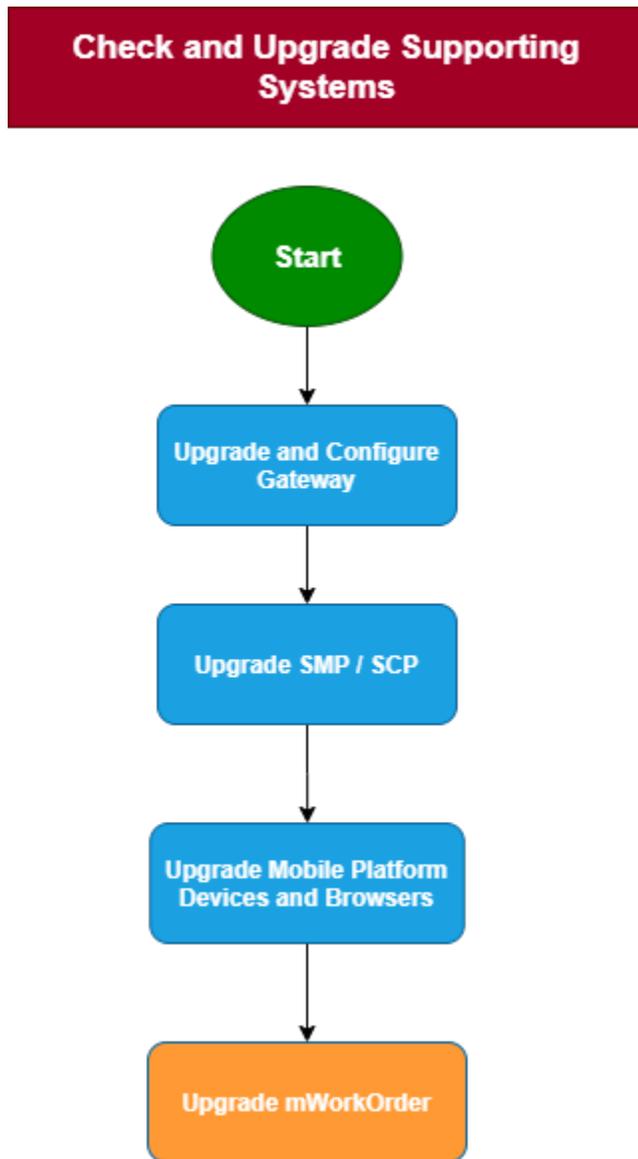
Table 1-1 Prerequisites

Software	<ul style="list-style-type: none">• SMP 3.0 SP11 PL06 and above (SAP Mobile Platform)• BTPms (Business Technology Platform Mobile service)• SAP Cloud Connector latest version• SAP NetWeaver Gateway 7.4 and above with SAP_GWFND 740 component (SP 13 and above)• Reverse proxy (SAP Web Dispatcher, Apache, Junos Pulse, NetScaler proxy servers are recommended. Others need to be evaluated)• RACE 2208—SAP_UI 740 SP13 and above or SAP_UI 750 SP01 and above or provide access to online UI5 libraries of version 1.71• SPAM Version 69 and above (only for Add-Ons).
-----------------	--

Table 1-1 Prerequisites (continued)

<p>SAP Business Suite</p>	<ul style="list-style-type: none"> • ECC 6.0 EHP 5 with SAP_BASIS 702 and above (recommended) • Lower versions are compatible (requires evaluation) • SAP S/4HANA Business Suite 1709, 1809, 1909 and 2021 (versions requires evaluation)
<p>Compatible Security Authentication Mechanism</p>	<ul style="list-style-type: none"> • Basic authentication • SSO2 between SMP and NetWeaver Gateway • Active Directory SSO • SAML 2.0 Authentication
<p>Access</p>	<ul style="list-style-type: none"> • SAP Basis System Admin with access to 000 clients in Gateway and ECC systems. • Access to SAP File directory usr/sap/trans/EPS/in to upload PAT files.
<p>Assumptions</p>	<p>Access to the RACE™ portal can be completed after the RACE™ admin user credentials setup is completed.</p>

Figure 1-1 Validate Systems



1.2. Upgrade mWorkOrder

Once you complete the pre-upgrade requirements, begin mWorkOrder upgrade. The following flow gives you an overview of the steps involved in upgrading mWorkOrder.

Figure 1-2 Configurations to upgrade MWO

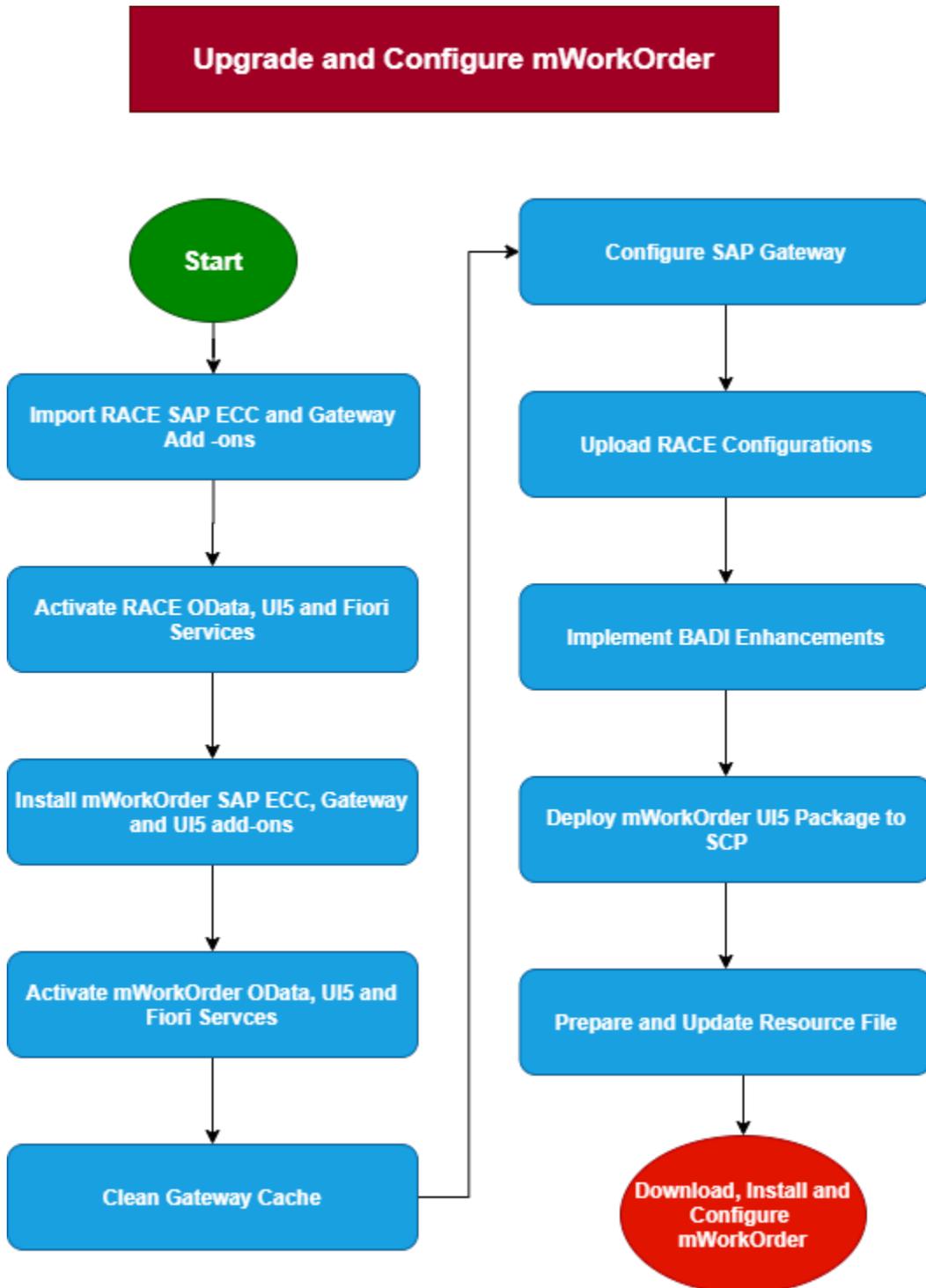


Table 1-2 References

Task	Reference to section
Install RACE™ SAP ECC and Gateway Add-ons or Support Packs / Import Transports	<ul style="list-style-type: none"> • Install RACE™ SAP® ECC and Gateway (on page 15) • Import RACE™ SAP® ECC and Gateway ABAP Transports (on page 34)
Activate RACE™ oData, UI5, and Fiori Services	Activate RACE™ OData Service (on page 28)
	Activate UI5 Service (on page 30)
	Activate FIORI Service (on page 32)
Install mWorkOrder SAP ECC, Gateway and UI5 Add-ons/ Import Transports	<ul style="list-style-type: none"> • Install mWorkOrder SAP® ECC, Gateway, and UI5 (on page 47) • Import mWorkOrder SAP® ECC, Gateway and UI5 Transports (on page 64)
Activate mWorkOrder oData, Gateway UI5 and Fiori Services	Activate mWorkOrder OData Service (on page 59)
	Activate Gateway UI5 Service (on page 61)
	Activate Gateway FIORI Service (on page 62)
Check Schema Indicator	Check Schema Change Indicator (on page 74)
Clean Gateway Cache	Clean SAP Gateway Cache (on page 76)
Configure SAP Gateway for mWorkOrder	Configure SAP Gateway for mWorkOrder (on page 80)
Upload / Update the Configurations in Excel format to RACE™ Application	Upload / Update Application Configurations Using RACE™ (on page)
Deploy mWorkOrder UI5 package to SCP	Deploy MWO UI5 package to SAP Cloud platform (SCP) (on page 99)
Implement BADI enhancements	Implement BADIs (on page 101)

Table 1-2 References (continued)

Task	Reference to section
Prepare & Update Resource File	Update Resource File (on page 124)
Download and Install App	Download App and Install (on page 131)

2. Back up/Save RACE™ table configurations

Upgrade process can impact data in the following SAP database tables. Download and back up the RACE™ table configurations using the **/INVCEC/RACE_UPLOAD_DOWNLOAD** program before importing the updates.

Repeat the download process for each table and store:

- /INVCEC/APPCONFI—Application and Module Configuration
- /INVCEC/COCKPIT—Application Configuration Cockpit
- /INVCEC/FMCONFIG—Function Module Configuration
- /INVCEC/LOCALIZT—Localization Table Text
- /INVCEC/SCOPING—Global App Scoping
- /INVCEC/SEARCH—Dynamic Search Fields
- /INVCEC/TEXTS—Maintain Texts
- /INVCEC/UILABELT—UI label text table

3. Install RACE™ SAP® ECC and Gateway

Add-On: All the transports of previous releases and the transports of the current release are packaged into a single add-on for the main release. For example, 2003, 2006 and so on. Install the add-on for the current release that is provided by Innovapptive representative.

Transport: Only the changes for that HotFix are packaged into a transport. You MUST install all the transports till date and must install them in the order they are mentioned. Even a single misplaced installation of transport could result in installation errors.



Note:

Ask your Innovapptive contact for the latest add-ons and support-packs and these components will be provided in a compressed file format, such as .zip, .rar, and sent to you either through email or through FTP.

Table 3-1 RACE™ ECC Add-On and Support Packages

Type	Add-On	Description	Dependency
Add-On	EZY0021310268_ - 0000004.PAT	INNOV:RACE™:2208 SP02 ECC Objects	None
SP01	EZY0021310268_ - 0000006.PAT	Innov RACE 2208 SP02 HF01 ECC Objects	Dependency
SP21	EZY0021310268_ - 0000053.PAT	Innov RACE 2208 SP02 HF03-HF25 ECC Ob- jects	Dependency
SP31	EZY0021310268_ - 0000078.PAT	Innov RACE 2208 SP02 HF26-HF35 ECC Ob- jects	Dependency
SP42	EZY0021310268_ - 0000104.PAT	Innov RACE 2208 SP02 HF36-HF46 ECC Ob- jects	Dependency
SP43	EZY0021310268_ - 0000118.PAT	Innov RACE 2208 SP02 HF47.1 ECC Objects	Dependency
SP44	EZY0021310268_ - 0000119.PAT	Innov RACE 2208 SP02 HF48 ECC Objects	Dependency

Table 3-1 RACE™ ECC Add-On and Support Packages (continued)

Type	Add-On	Description	Dependency
SP45	EZY0021310268_- 0000121.PAT	Innov RACE 2208 SP02 HF49 ECC Objects	Dependency
SP46	EZY0021310268_- 0000126.PAT	Innov RACE 2208 SP02 HF50 ECC Objects	Dependency
SP47	EZY0021310268_- 0000131.PAT	Innov RACE 2501.1 ECC Objects	Dependency
SP48	EZY0021310268_- 0000140.PAT	Innov RACE 2502.1 ECC Objects	Dependency

Table 3-2 RACE™ Gateway Add-On and Support Packages

Type	Add-On	Description	Dependency
Add-On	NZY0021310268_- 0000006.PAT	INNOV:RACE™:2208 SP02 Gateway Ob- jects	None
SP01	NZY0021310268_- 0000008.PAT	Innov RACE 2208 SP01 UI5 Application	Install RACE™ Add- On NZY0021310268_- 0000006.PAT before importing SP01
SP39	NZY0021310268_- 0000113.PAT	RACE 2208 SP02 GW Addon(HF03 - HF25)	Install RACE™ Add- On NZY0021310268_- 0000008.PAT before importing SP01
SP58	NZY0021310268_- 0000148.PAT	RACE 2208 SP02 GW Addon (HF26 - HF35.1)	Dependency
SP59	NZY0021310268_- 0000149.PAT	RACE 2208 SP02 UI5 (HF26 - HF35)	Dependency
SP60	NZY0021310268_- 0000150.PAT	RACE 2208 SP02 Fiori (HF26 - HF35)	Dependency
SP61	NZY0021310268_- 0000152.PAT	RACE 2208 SP02 HF36 GW Objects	Dependency

Table 3-2 RACE™ Gateway Add-On and Support Packages (continued)

Type	Add-On	Description	Dependency
SP62	NZY0021310268_- 0000154.PAT	RACE 2208 SP02 UI5 (HF03 - HF35)	Dependency
SP63	NZY0021310268_- 0000155.PAT	RACE 2208 SP02 Fiori (HF00 - HF35)	Dependency
SP74	NZY0021310268_- 0000179.PAT	RACE 2208 SP02 GW Addon (HF36 - HF46)	Dependency
SP75	NZY0021310268_- 0000182.PAT	RACE 2208 SP02 Fiori (HF36 - HF46)	Dependency
SP76	NZY0021310268_- 0000183.PAT	RACE 2208 SP02 HF47 GW Objects	Dependency
SP77	NZY0021310268_- 0000184.PAT	RACE 2208 SP02 HF48 GW Objects	Dependency
SP78	NZY0021310268_- 0000186.PAT	RACE 2208 SP02 HF49 GW Objects	Dependency
SP79	NZY0021310268_- 0000191.PAT	RACE 2208 SP02 HF50 GW Objects	Dependency
SP80	NZY0021310268_- 0000194.PAT	RACE 2208 SP02 2501.1 GW Objects	Dependency
SP81	NZY0021310268_- 0000195.PAT	RACE 2208 SP02 2501.1 Fiori Objects	Dependency
SP82	NZY0021310268_- 0000197.PAT	RACE 2208 SP02 2501.2 Fiori Objects	Dependency
SP83	NZY0021310268_- 0000200.PAT	RACE 2208 SP02 2501.3 GW Objects	Dependency
SP84	NZY0021310268_- 0000202.PAT	RACE 2208 SP02 2501.4 GW Objects	Dependency

3.1. Install RACE™ SAP® ECC and Gateway Add-ons and support packs

Install the add-ons and support packs at one go using the steps given below. However, if you have already installed add-ons and now you want to install the support packs (hotfixes), follow the procedure detailed in [Support packs installation procedure \(on page 23\)](#).

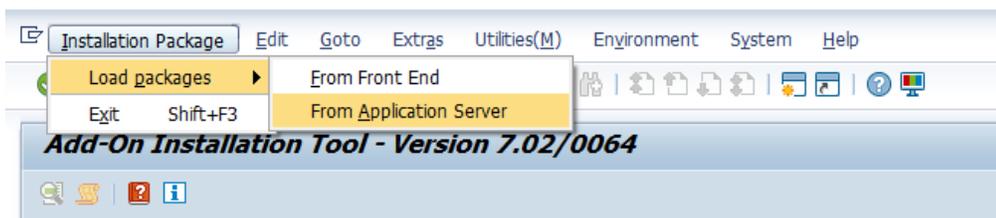
To install RACE™ SAP® ECC and Gateway add-ons:

1. Extract the zip or .rar files that you received from Innovapptive representative and save the files to your local machine.
2. Upload/copy the Add-On files and Support Packs from software deployment package to the USR/SAP/TRANS/EPS/in path on SAP ECC & GW systems.

 **Note:**
Upload all the add-ons and support packs that are mentioned in the tables.

3. Log in to **000** clients of SAP GW / ECC System (based on the Add-On being imported).
4. Navigate to the transaction code **SAINT**.
5. Navigate to **Installation Package, Load Packages, From Application Server**.

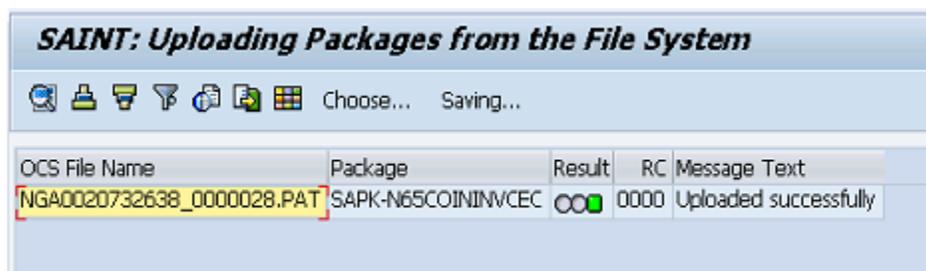
Figure 3-1 SAINT



6. Click **Yes** in the confirmation screen.

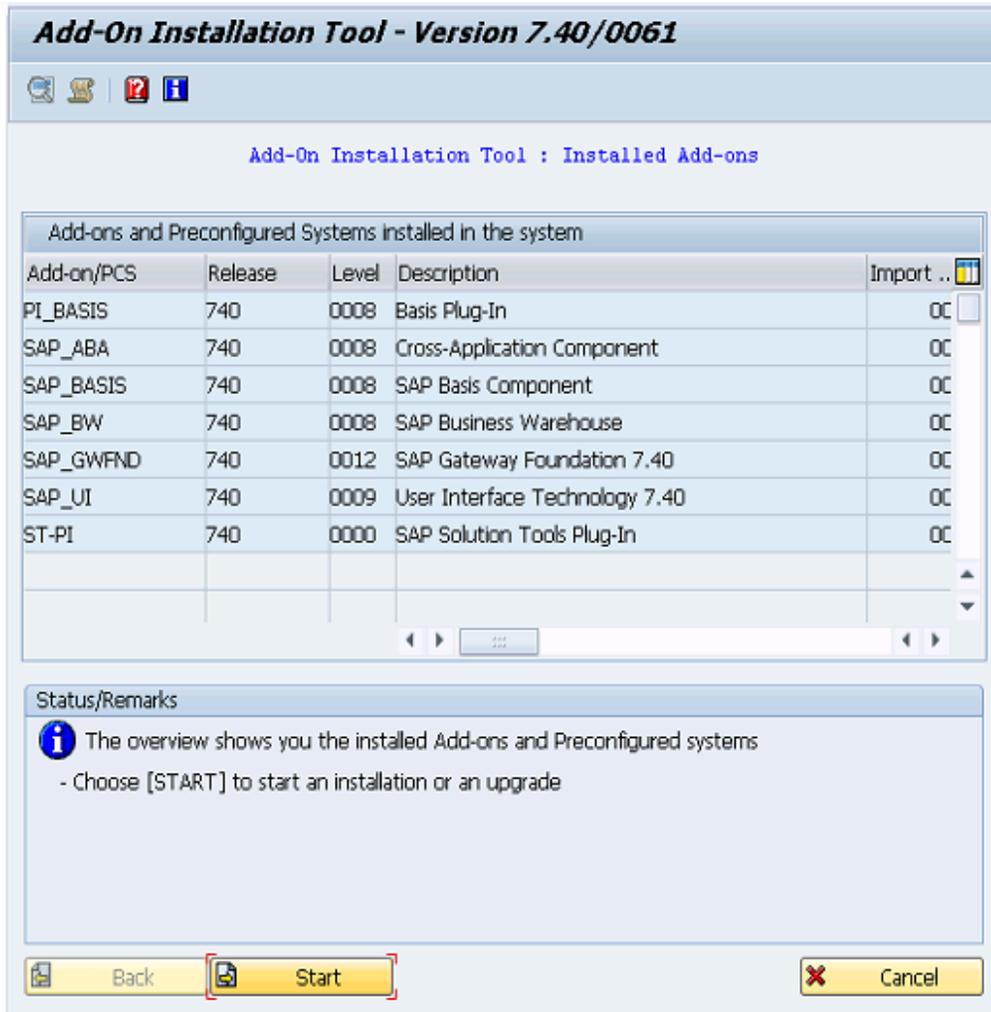
Packages are loaded in the file system

Figure 3-2 SAINT: Upload Packages



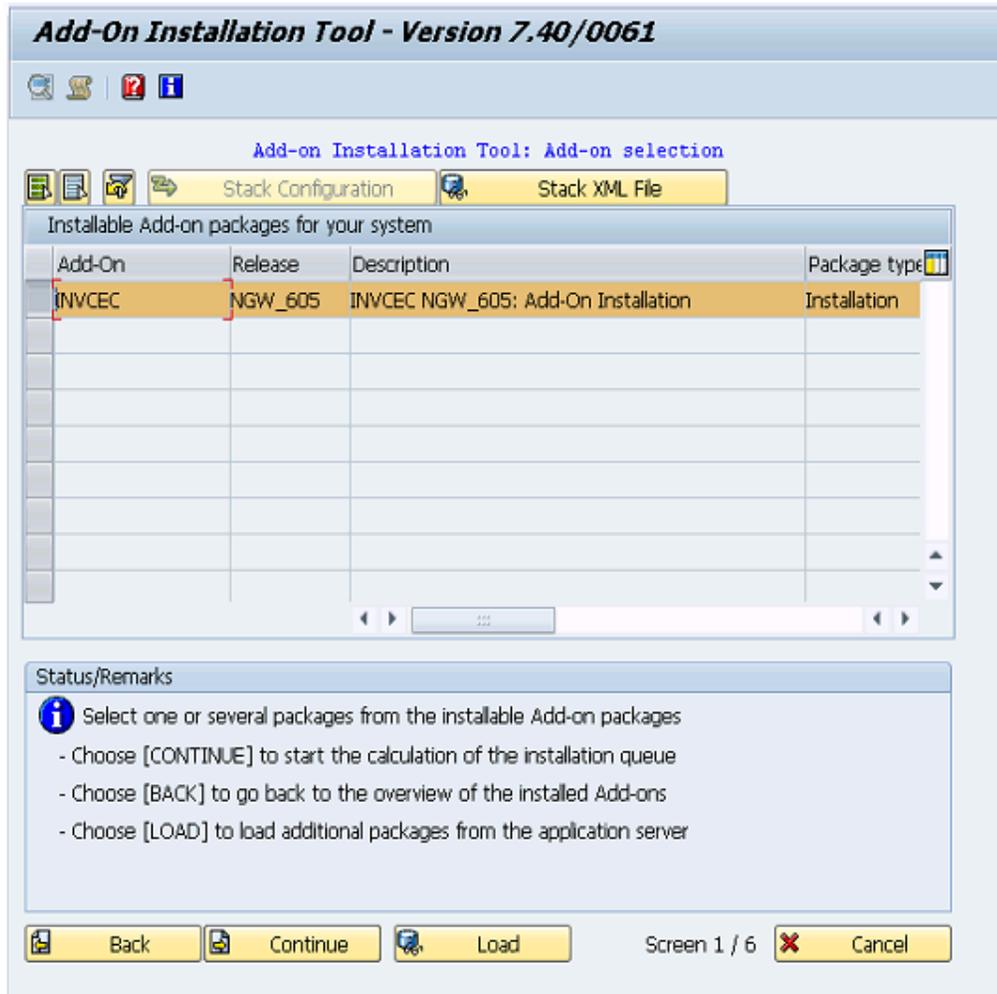
7. Once the packages are loaded, go back to the main screen, and click **Start**.

Figure 3-3 Installed Add-ons



8. Select the Add-On in the next screen and click **Continue**.

Figure 3-4 Select Add-on

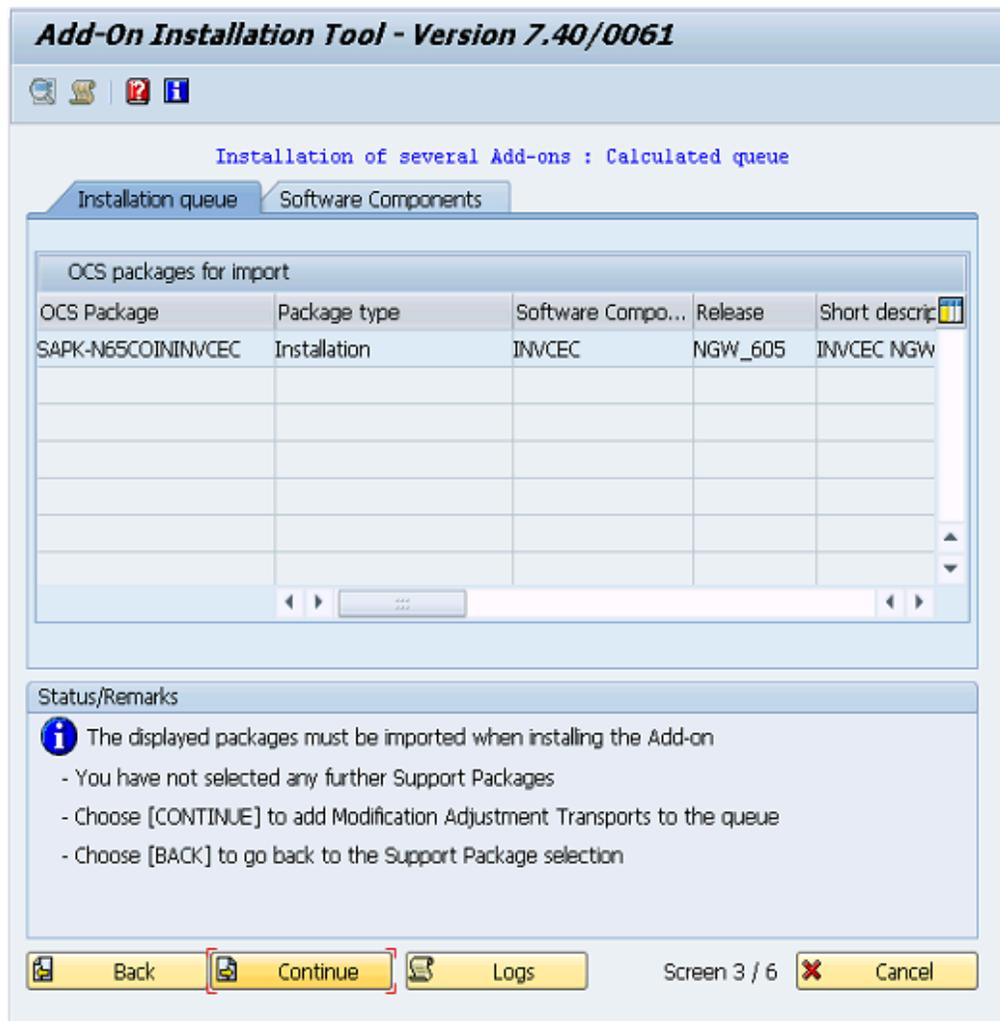


9. Click **Continue** in the next screen.

The OCS packages that are going to be imported are displayed in the next screen.

10. Click **Continue** to proceed to the next step.

Figure 3-5 Add-on Queue



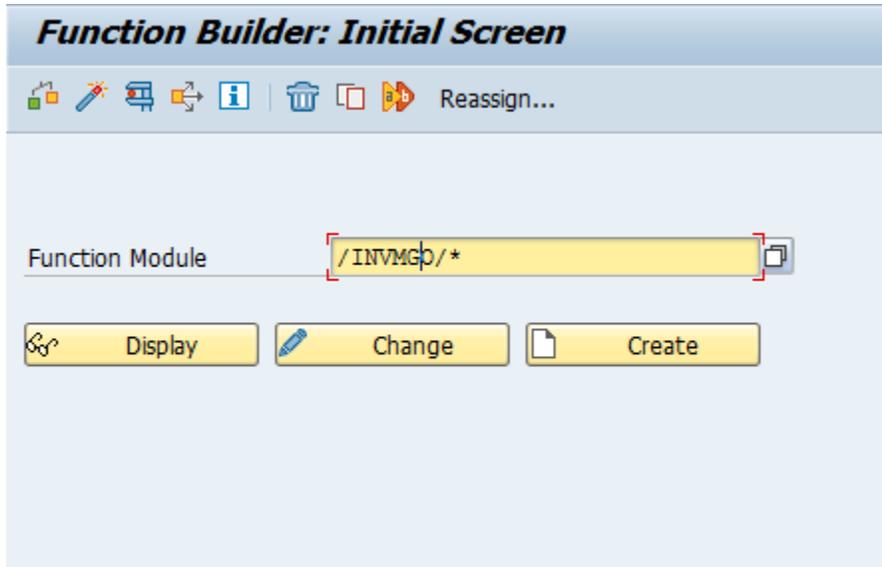
11. Click **No**, when asked to add Modification Adjustment Transports to the queue.
12. Click the **Import**  icon.
13. Click **Finish**.

3.1.1. Verify SAP® ECC RACE™ Add-On

To verify the SAP® ECC RACE™ add-on:

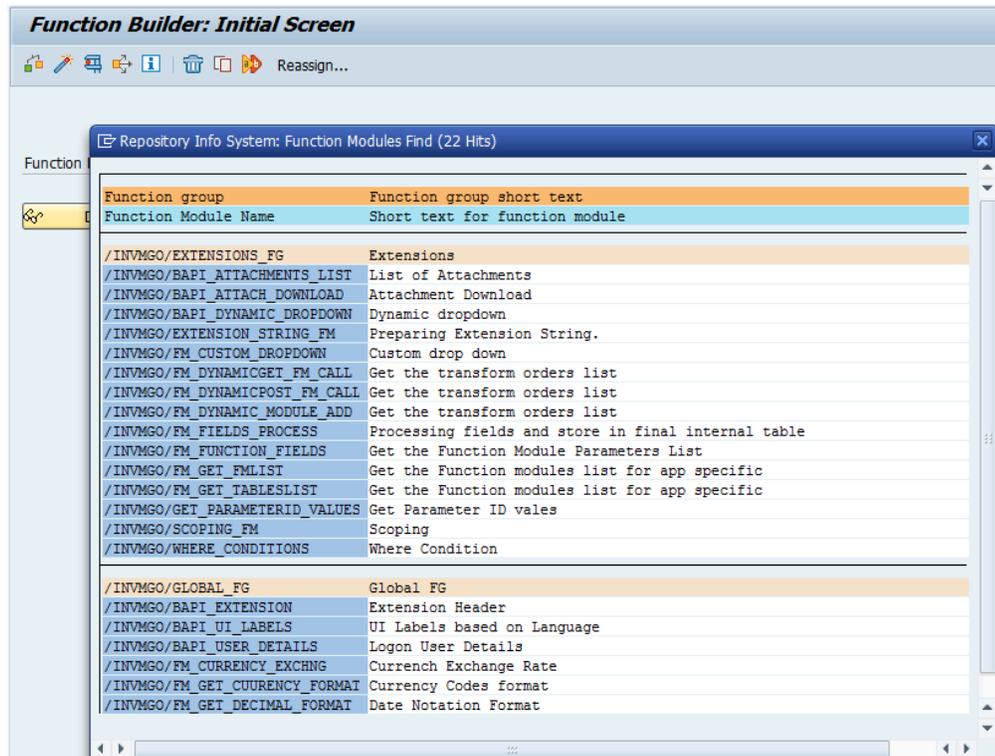
1. Run the transaction code **SE37**.
2. Enter **object type** to search for all objects **/INVMGO/***.

Figure 3–6 Function Builder Initial Screen



3. Press **<F4>** to view the list of classes and capture the screenshot(s) to share the results.

Figure 3–7 Function Module Classes



3.1.2. Verify SAP® GW RACE™ Add-On

To verify the SAP® GW RACE™ Add-On:

1. Navigate to the transaction code **SE24**.
2. Enter **object type** to search for all objects **/INVCEC/***.
3. Press **<F4>** to view the list of classes and capture the screenshot(s) to share the results.

Figure 3-8 Object Classes

Object Type Name	Short Description
/INVCEC/CL_GW_DP_TRANSPORT	Gateway Data Provider: Interoperability 700
/INVCEC/CL_GW_MP_TRANSPORT	Gateway Model Provider: Interoperability
/INVCEC/CL_RACE_DPC	Data Provider Base Class
/INVCEC/CL_RACE_DPC_EXT	Data Provider Secondary Class
/INVCEC/CL_RACE_MPC	/INVCEC/CL_RACE_MPC
/INVCEC/CL_RACE_MPC_EXT	/INVCEC/CL_RACE_MPC_EXT
/INVCEC/IF_BAPI_ATTACH_DOWNLOAD	/INVCEC/IF_BAPI_ATTACH_DOWNLOAD
/INVCEC/IF_BAPI_ATTACHMENTS_LI	/INVCEC/IF_BAPI_ATTACHMENTS_LI
/INVCEC/IF_FM_CUSTOM_DROPDOWN	/INVCEC/IF_FM_CUSTOM_DROPDOWN
/INVCEC/IF_ZDYNSCREENCONF	/INVCEC/IF_ZDYNSCREENCONF

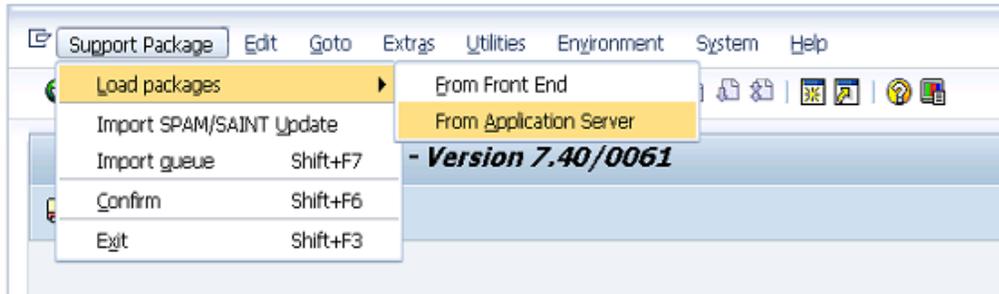
3.2. Install RACE™ SAP® ECC and Gateway Support packs

If you have installed the add-ons and are installing only the support pack (hotfixes), follow the steps described below.

To install the RACE™ SAP® ECC and Gateway support pack:

1. Log in to **000** client of SAP GW & ECC System (based on the support pack being imported).
2. Navigate to the transaction code **SPAM**.
3. Navigate to **Support Package, Load Packages, From Application Server**.

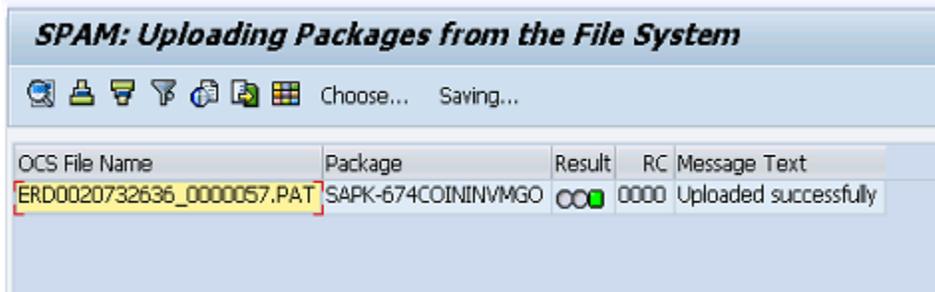
Figure 3-9 SAINT



4. Click **Yes** in the confirmation screen.

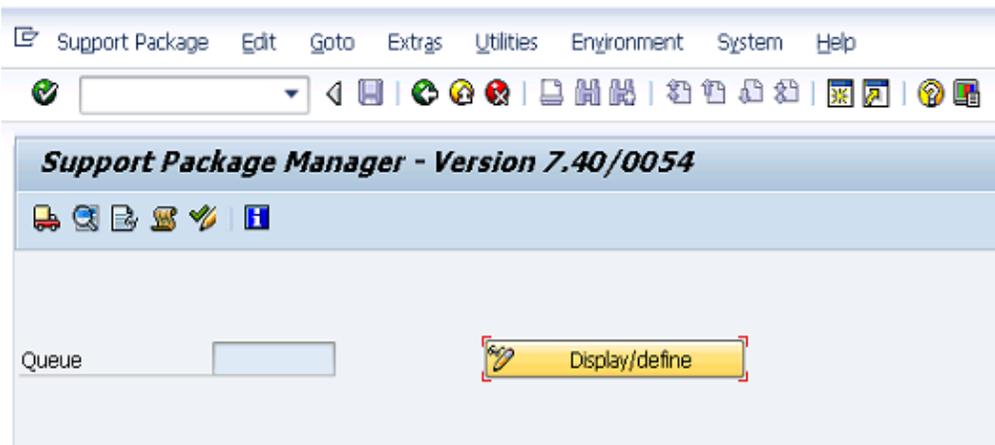
Packages are loaded in the file system

Figure 3-10 SAINT: Upload Packages



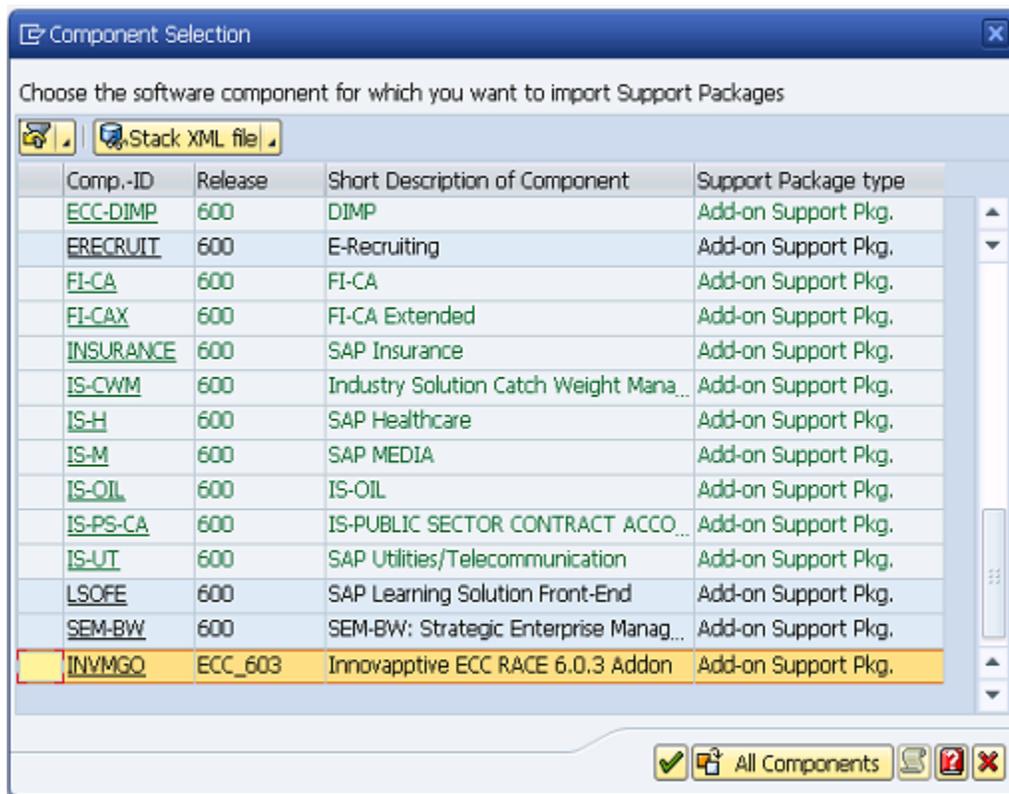
5. Once the packages are loaded, go back to the main screen, and click **Display/define**.

Figure 3-11 Support Package Manager



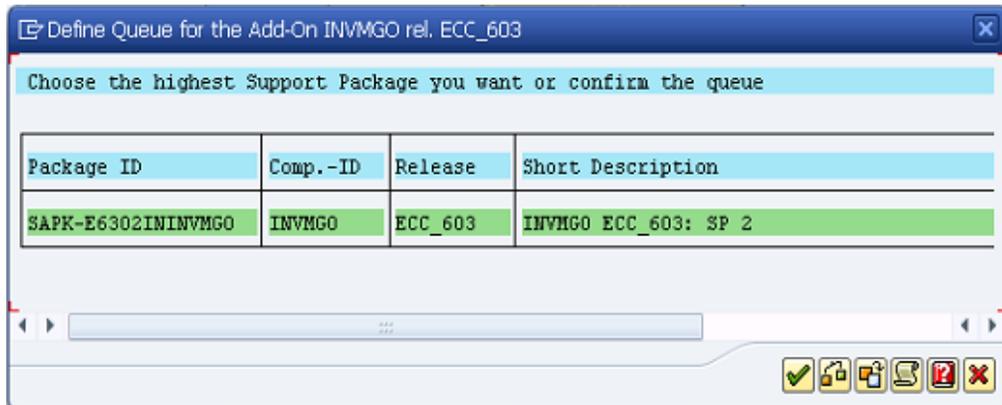
6. Choose the software component for which you want to import Support Packages and click .

Figure 3-12 Component Selection



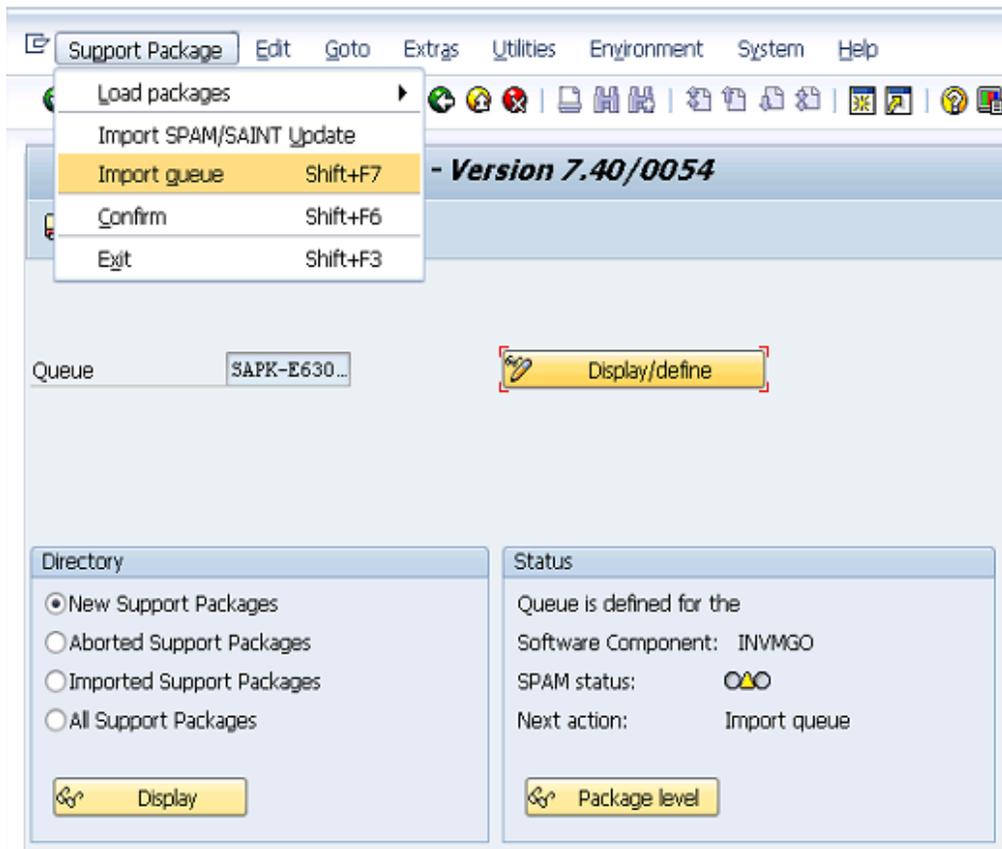
7. If all the conditions are met, and you get the package (**green**) click .

Figure 3-13 Confirm Queue



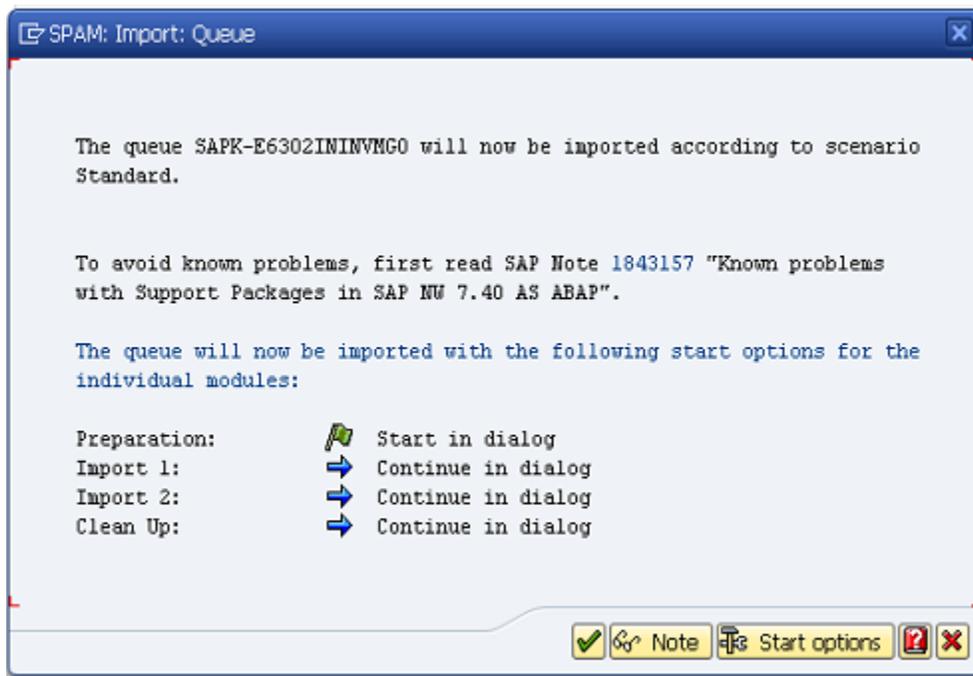
8. Click **No**, when asked to add Modification Adjustment Transports to the queue.
9. Go to **Support package** in the menu bar and click **Import Queue**.

Figure 3-14 Import Queue



10. Click  to start the import process.

Figure 3-15 Import Queue Confirm



11. Once the package is imported, a confirmation screen appears. Click in the screen.

12. Go to **Support Package** in the menu bar and click **Confirm**.

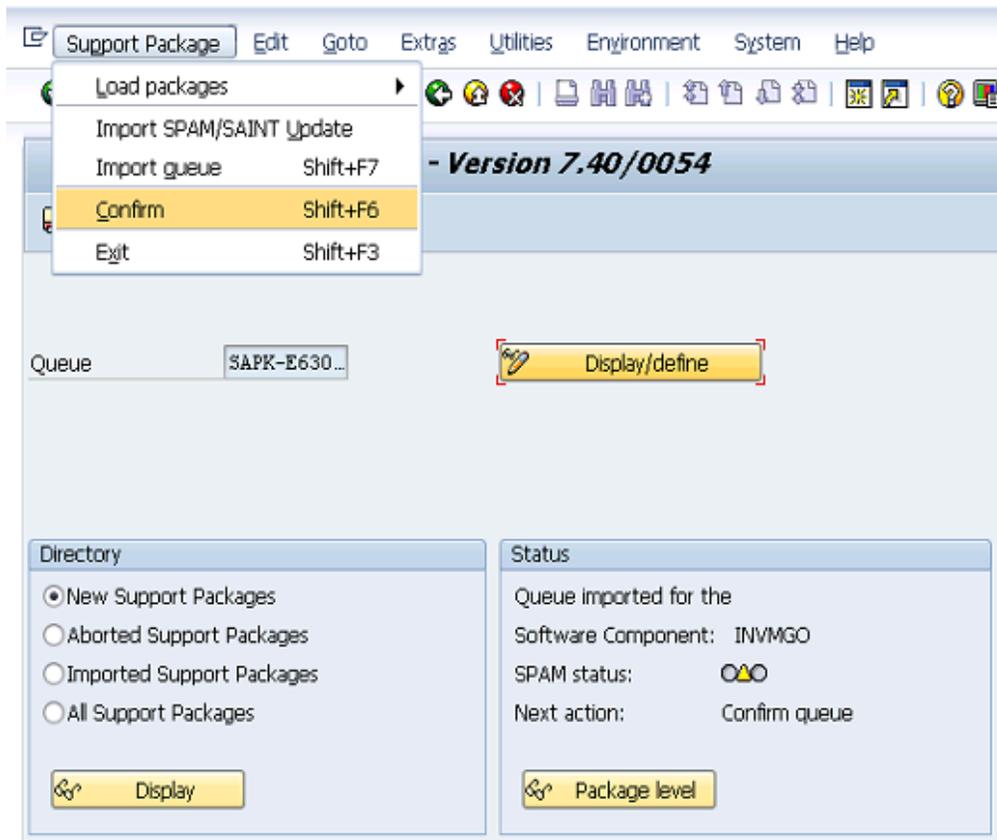
A confirmation message appears.



Note:

If you face any issues/errors while installing the Add-On/Support pack, send log files with screenshots and details of the error to your **Innovapptive SAP Basis team** contact assigned to your project.

Figure 3-16 Confirm Support Package



3.3. Activate RACE™ OData Service

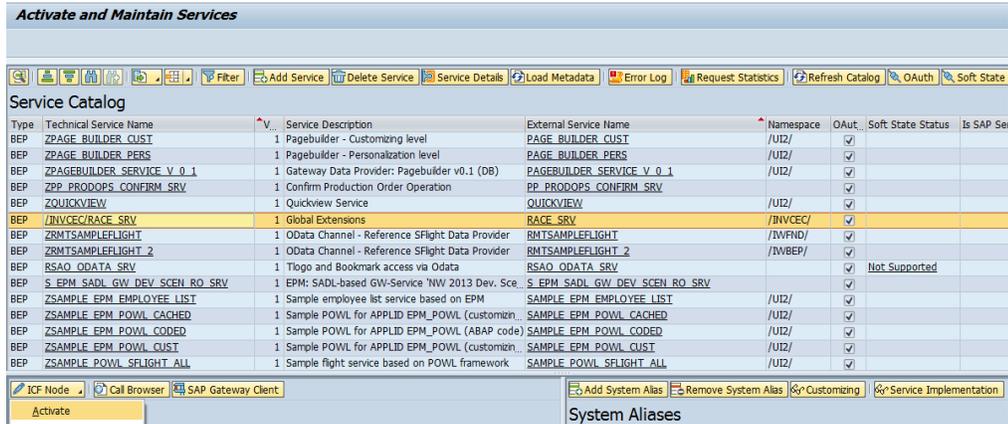
Once add-on and support packs are installed, activate RACE™ OData Service.

To activate the RACE™ OData:

1. Login to Gateway system.
2. Navigate to the transaction **/IWFND/MAINT_SERVICE**.
3. Select the service **/INVCEC/RACE_SRV**.
4. Click **Activate** from the drop-down list of **ICF Node** options.

A message appears notifying the package selection appears.

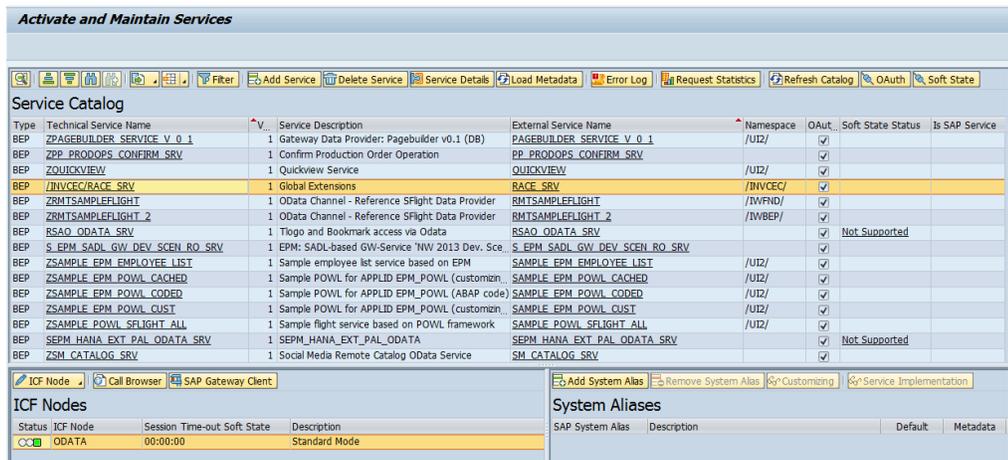
Figure 3-17 Activate and Maintain Services



5. Click the **Local Object** button and continue to activate the service.

The OData service is activated and the status turns **green**.

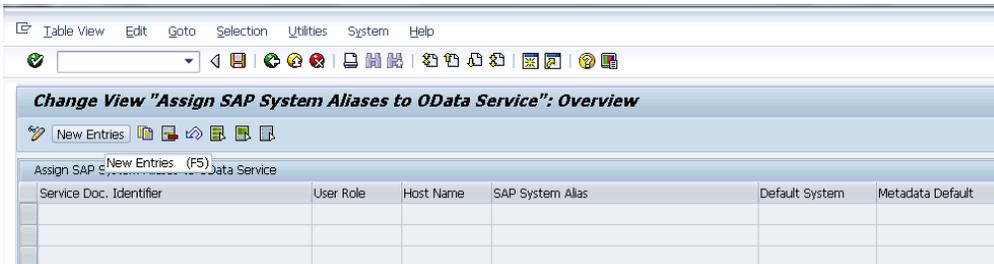
Figure 3-18 Service Status



6. Click **Add System Alias** above **System Aliases** on the right to add the SAP System alias for the selected service.

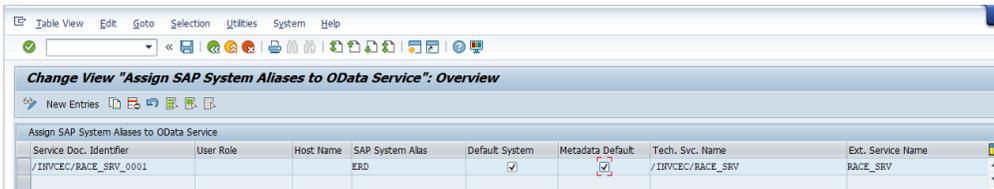
7. Click **New Entries**.

Figure 3-19 New Entries for System Alias



8. Assign the System Alias (ERD in this case) for the service and save changes.

Figure 3-20 Assign SAP System Alias to Service



3.4. Activate UI5 Service

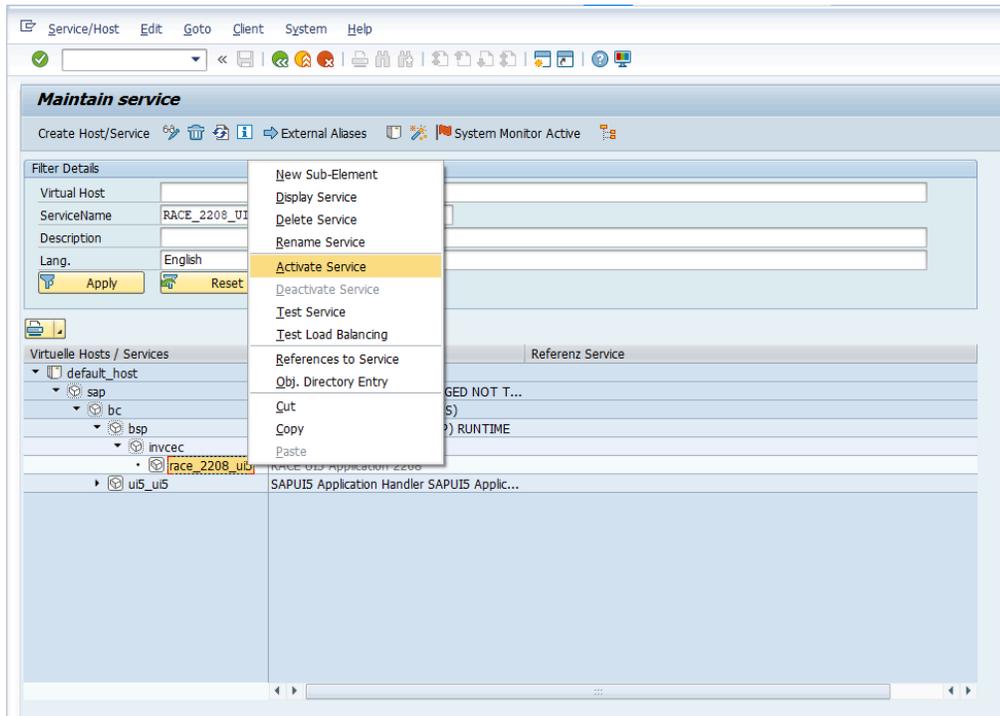
Activate UI5 Service once you have activated RACE™ OData Service.

To activate UI5 Service:

| 3 – Install RACE™ SAP® ECC and Gateway

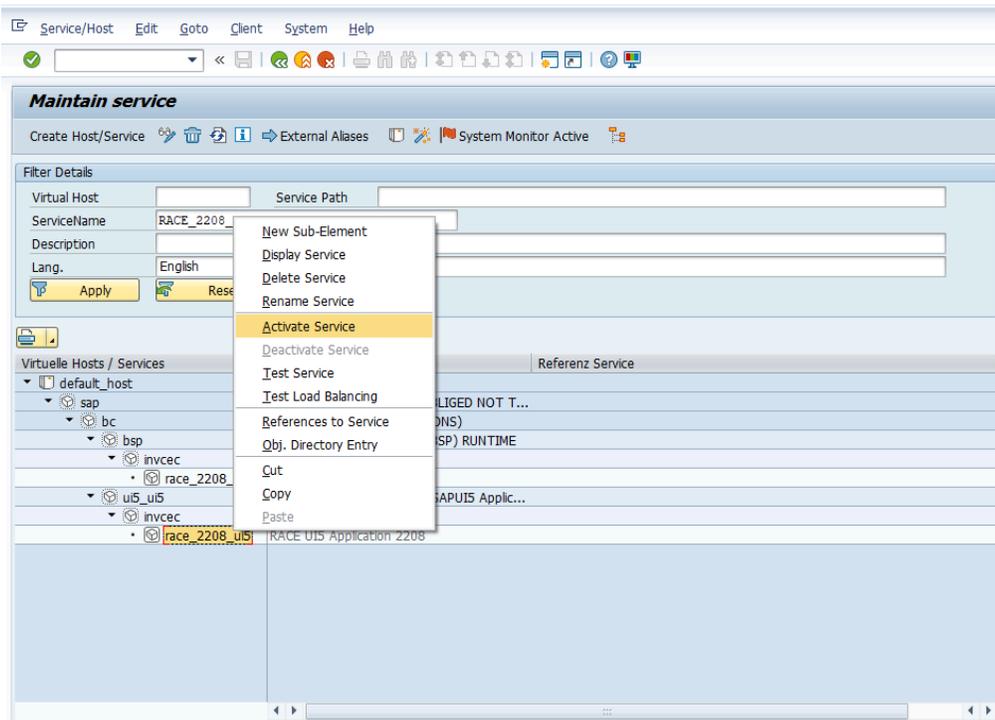
1. Go to the transaction code SICF and navigate to **/default_host/sap/bc/bsp/invcec/race_2208_ui5**.
2. Right-click **RACE 2208 UI5** and click **Activate Service**.

Figure 3–21 Activate RACE BSP Service



3. Click **Yes**.
4. Go to **/default_host/sap/bc/ui5_ui5/invcec/race_2208_ui5**.

Figure 3-22 Activate RACE UI5 service



5. Right-click **RACE 2208 UI5** and click **Activate Service**.
6. Click **Yes**.

Access the SAPUI5 web application by replacing the **host name**, **port number** and **client number** in the following template's URLs to match your SAP NetWeaver Gateway instance:

- `http://<hostname>:<port_number>/sap/bc/ui5_ui5/invcec/race_2208_ui5/index.html?sap-client=100`
- `http://<hostname>:<port_number>/sap/bc/ui5_ui5/invcec/race_2208_ui5/index.html?sap-client=100&sap-ui-language=EN&sap-ui-appcache=false`

3.5. Activate FIORI Service

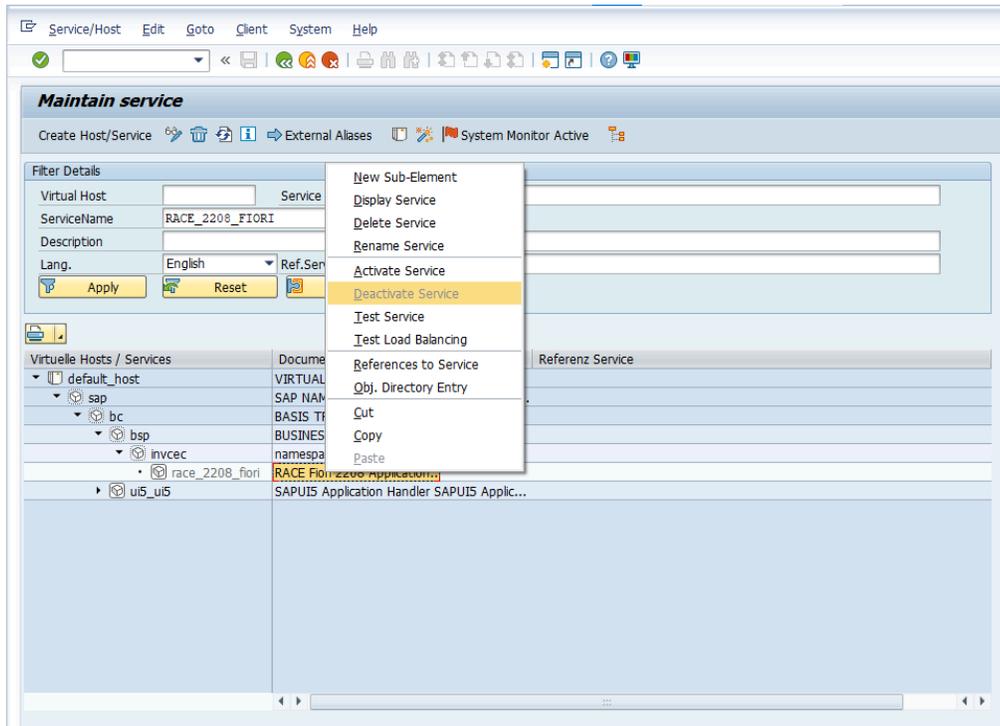
Activate FIORI service after you have activated UI5 service.

To activate FIORI Service:

| 3 – Install RACE™ SAP® ECC and Gateway

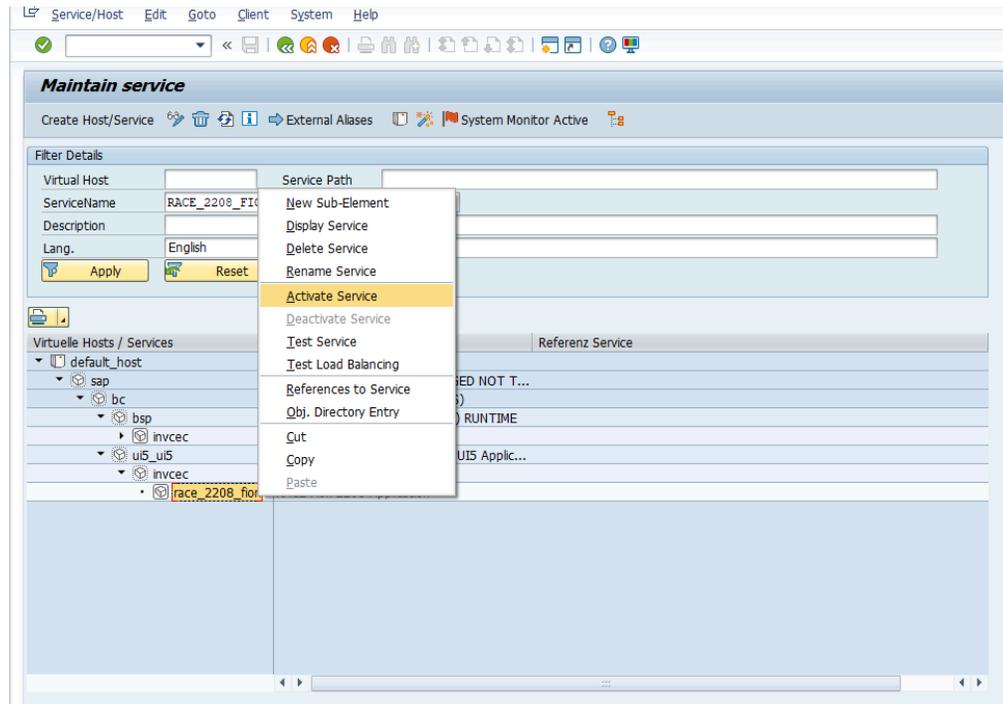
1. Go to the transaction code SICF and navigate to **/default_host/sap/bc/bsp/invcec/race_2208_fiori**.
2. Right-click **RACE 2208 FIORI** and click **Activate Service**.

Figure 3–23 Activate RACE FIORI Service



3. Click **Yes**.
4. Go to **/default_host/sap/bc/ui5_ui5/invcec/race_2208_fiori**.

Figure 3–24 Activate RACE Fiori service



5. Right-click **RACE 2208 FIORI** and click **Activate Service**.
6. Click **Yes**.

Access the SAP Fiori web application by transaction code **/N/UI2/FLP**. You are redirected to the below template URLs to match your SAP NetWeaver Gateway instance:

- `http://<hostname>:<port_number>/sap/bc/ui5_ui5/invcec/race_2208_fiori/index.html?sap-client=100`
- `http://<hostname>:<port_number>/sap/bc/ui5_ui5/invcec/race_2208_fiori/index.html?sap-client=100&sap-ui-language=EN&sap-ui-appcache=false.`

3.6. Import RACE™ SAP® ECC and Gateway ABAP Transports

Innovapptive recommends that you install Add-ons instead of importing Transports for error free installation. However, if you prefer to import Transports, import them in the order listed in the table.

**Note:**

Ask your Innovapptive contact for the latest transports and these components will be provided in a compressed file format, such as .zip, .rar, and sent to you either through email or through FTP.

Table 3-3 RACE™ SAP® ECC Transports

Transport	Description	Dependency
ERDK913573	Innov RACE 2208 SP02 ECC Objects	None

Table 3-4 RACE™ Gateway Transports

Transport	Description	Dependency
NG5K903797	Innov RACE 2208 SP02 Gateway Objects	None
NG5K903799	INNOV RACE™ 2208 SP02 UI5 Application	Import NG5K903797 before importing NG5K903799
NG5K904110	INNOV RACE™ 2208 SP02 Fiori Application	Import NG5K904077 before importing NG5K904110

3.6.1. Import Transports

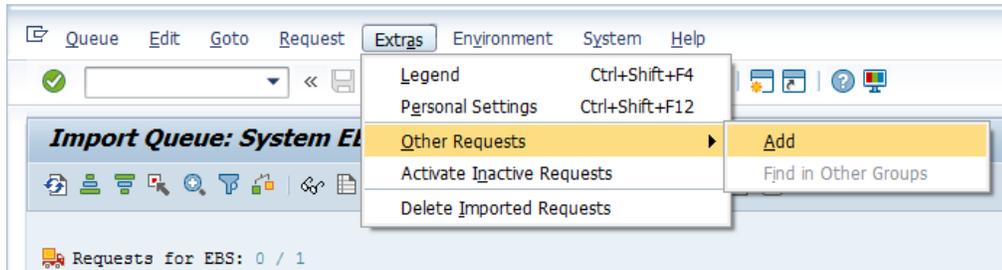
Import transports in the order of dependency.

To install Transports:

1. Extract the zip or .rar files that you received from Innovapptive representative and save the files to your local machine.
2. Extract and upload/copy the files to the SAP ECC & GW System Directories.
 - a. Extract the zip files and copy all co-files (files starting with 'K90*') from software deployment package to the *USR/SAP/TRANS/COFILES* path on SAP ECC & GW system.
 - b. Extract the zip files and copy all the data files **R90*** provided in the software deployment package to the specified path on the SAP ECC & GW system *USR/SAP/TRANS/DATA*.
3. Log in to the SAP GW or ECC System (based on the transport being imported).
4. Navigate to the transaction code **STMS_Import**.

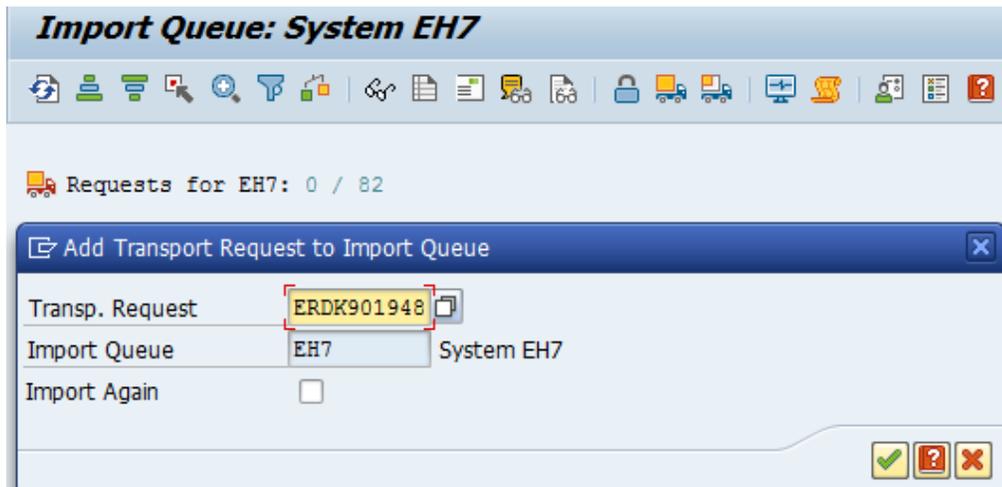
5. Navigate to **Extras, Other Requests, Add**.

Figure 3-25 STMS_Import



6. Enter the transport number in the Transp. Request field and confirm by pressing the **ENTER** key (or click the green-colored icon) to attach transports to the import queue.

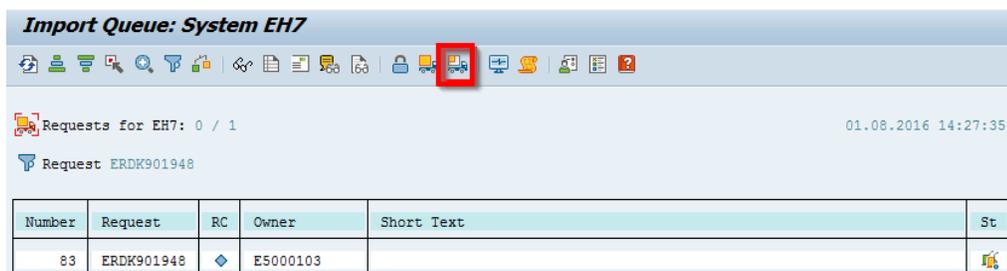
Figure 3-26 Add Transport Request to Queue



7. Click **Yes** to proceed to the next step.

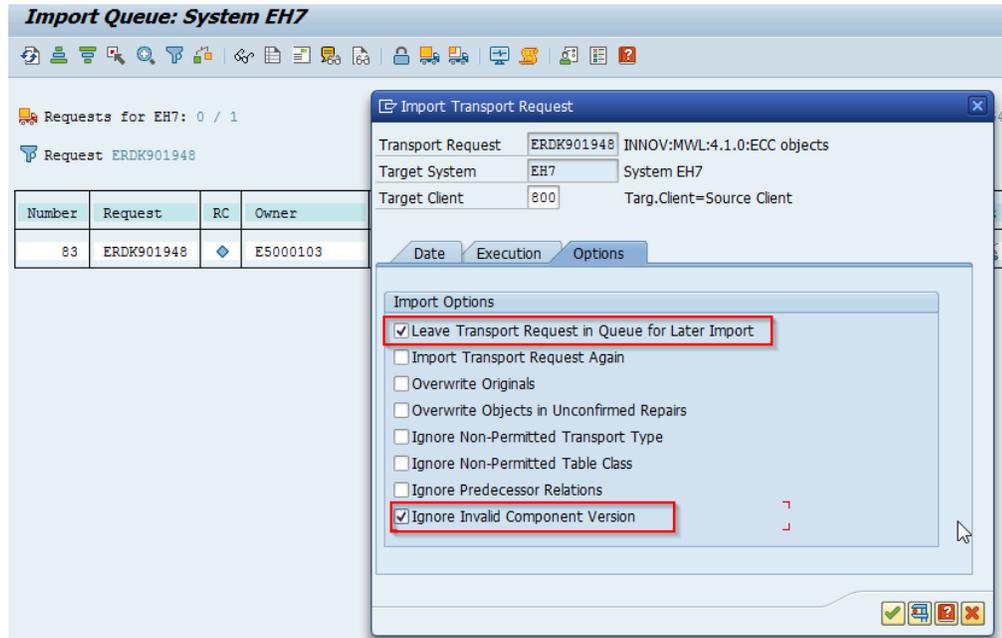
Select the transport request and click the **Transport** icon (highlighted by red in the screenshot).

Figure 3-27 Import Queue



8. Enter the target client number in **Target Client** field.
9. Select **Leave Transport Request in Queue for Later Import** and **Ignore Invalid Component Version**.
10. Click .

Figure 3–28 Import Transport Options



11. Click **Yes** in the confirmation screen.
12. Capture the screenshots of the imported transports.

Figure 3–29 Imported Transports

Request ERDK901948

Number	Request	RC	Owner	Short Text	St
13	ERDK901948	▲	E5000131	Innov:mWorklist:Global Transport for ECC	

13. Add all transports in the order specified.



Note:

If you face any issues/errors while importing the Transports, send the log files with screenshots and details of the error to your **Innovapptive SAP Basis team** contact assigned to your project.

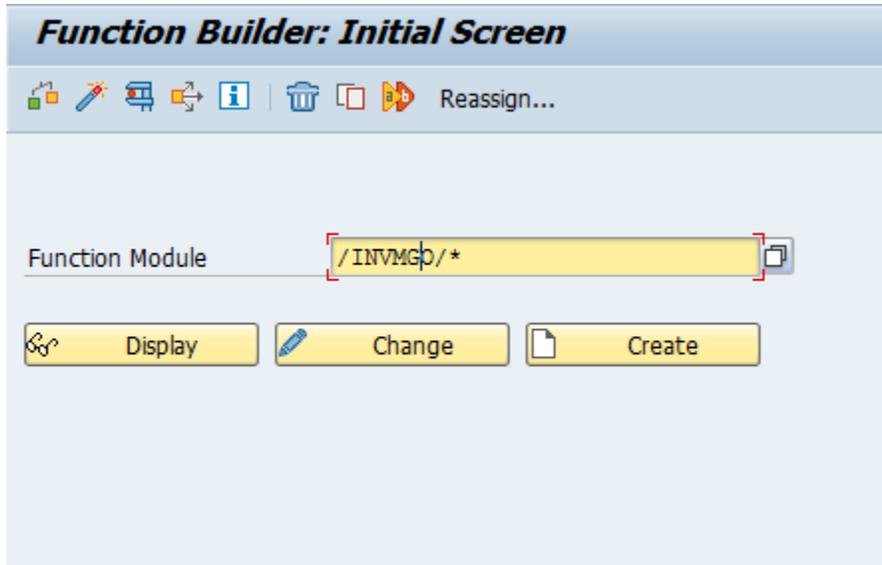
3.6.2. Verify SAP® ECC RACE™ Transport

If you have imported SAP® ECC RACE™ Transport, verify whether it was successful.

To verify the SAP® ECC Transport:

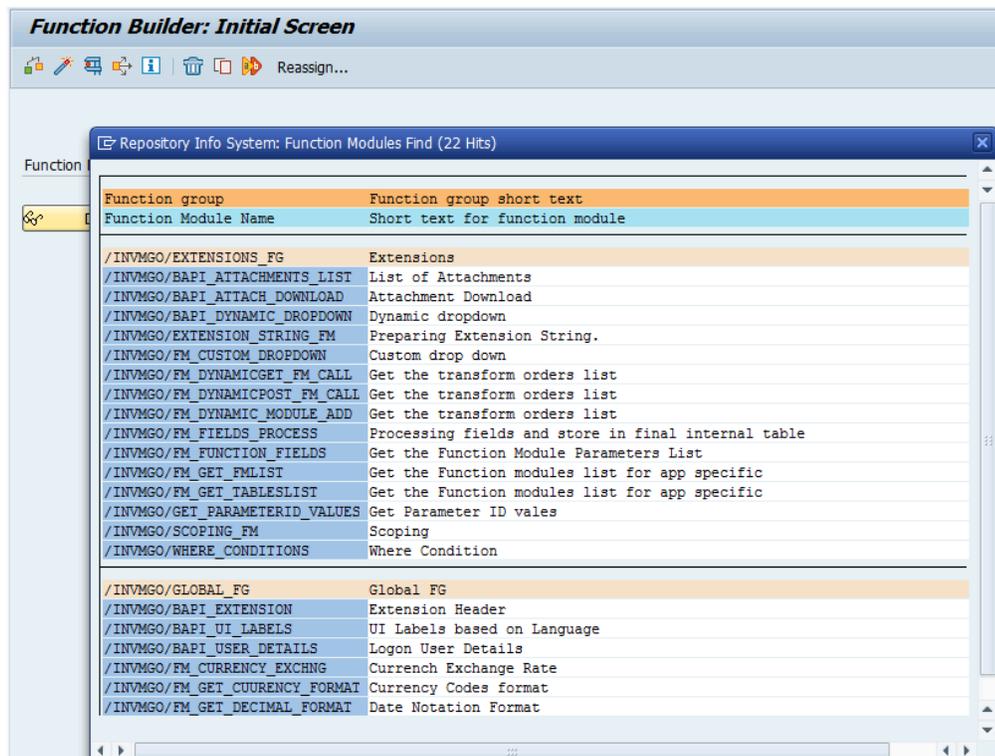
1. Run the transaction code **SE37**.
2. Enter **object type** to search for all objects **/INVMGO/***.

Figure 3–30 Function Builder Initial Screen



3. Press **<F4>** to view the list of classes and capture the screenshot(s).

Figure 3–31 Function Module Classes



3.6.3. Verify SAP® GW RACE™ Transport

If you have imported SAP® GW RACE™ Transport, verify whether it was successful

To verify the SAP® GW Transport:

1. Navigate to the transaction code **SE24**.
2. Enter **object type** to search for all objects **/INVCEC/***.
3. Press **<F4>** to view the list of classes and capture the screenshot(s) to share the results.

Figure 3-32 Object Classes

Object Type Name	Short Description
/INVCEC/CL_GW_DP_TRANSPORT	Gateway Data Provider: Interoperability 700
/INVCEC/CL_GW_MP_TRANSPORT	Gateway Model Provider: Interoperability
/INVCEC/CL_RACE_DPC	Data Provider Base Class
/INVCEC/CL_RACE_DPC_EXT	Data Provider Secondary Class
/INVCEC/CL_RACE_MPC	/INVCEC/CL_RACE_MPC
/INVCEC/CL_RACE_MPC_EXT	/INVCEC/CL_RACE_MPC_EXT
/INVCEC/IF_BAPI_ATTACH_DOWNLOAD	/INVCEC/IF_BAPI_ATTACH_DOWNLOAD
/INVCEC/IF_BAPI_ATTACHMENTS_LI	/INVCEC/IF_BAPI_ATTACHMENTS_LI
/INVCEC/IF_FM_CUSTOM_DROPDOWN	/INVCEC/IF_FM_CUSTOM_DROPDOWN
/INVCEC/IF_ZDYNSCREENCONF	/INVCEC/IF_ZDYNSCREENCONF

3.6.4. Activate RACE™ OData Service

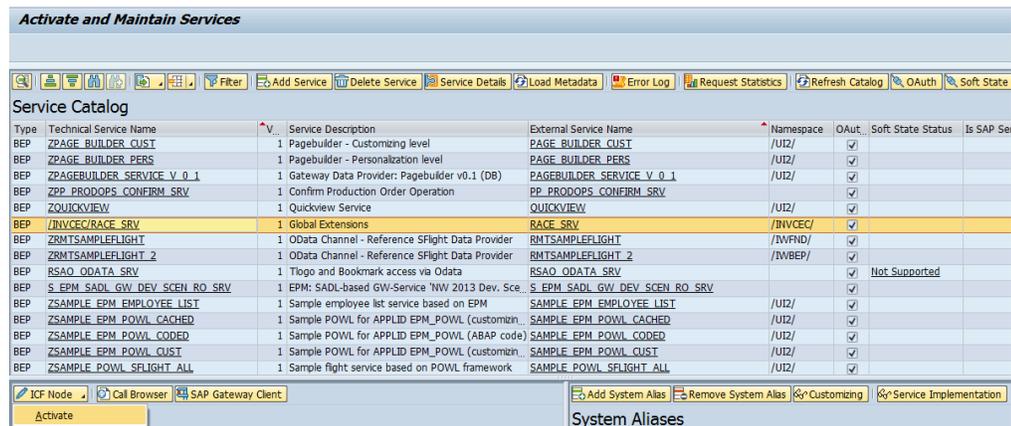
Once add-on and support packs are installed, activate RACE™ OData Service.

To activate the RACE™ OData:

1. Login to Gateway system.
2. Navigate to the transaction **/IWFND/MAINT_SERVICE**.
3. Select the service **/INVCEC/RACE_SRV**.
4. Click **Activate** from the drop-down list of **ICF Node** options.

A message appears notifying the package selection appears.

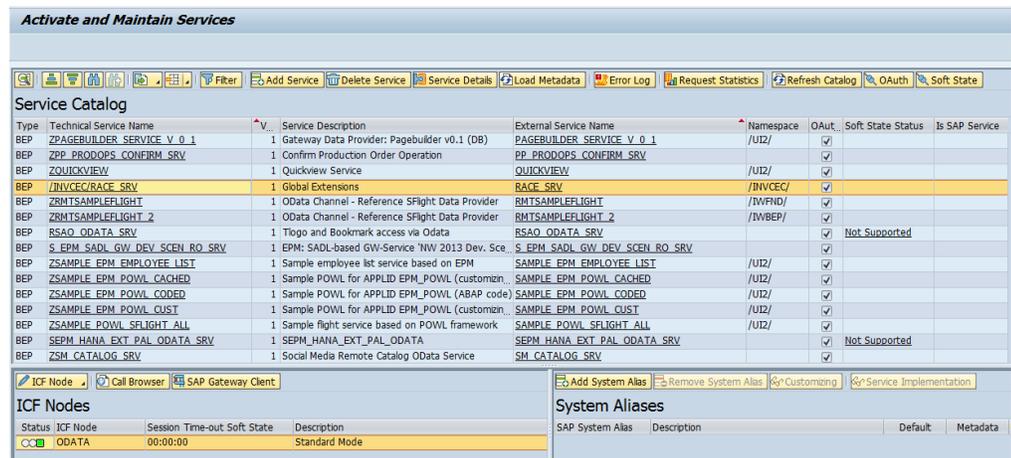
Figure 3–33 Activate and Maintain Services



5. Click the **Local Object** button and continue to activate the service.

The OData service is activated and the status turns **green**.

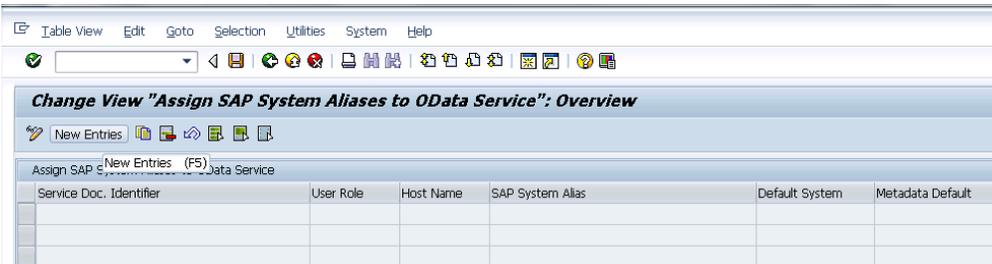
Figure 3–34 Service Status



6. Click **Add System Alias** above **System Aliases** on the right to add the SAP System alias for the selected service.

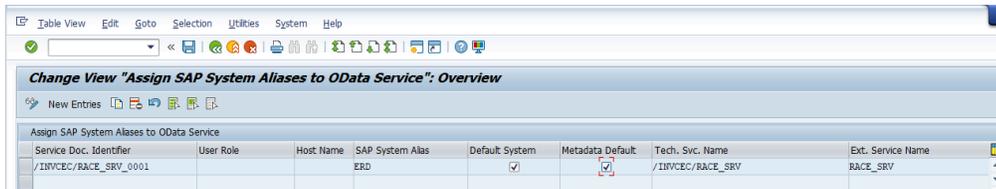
7. Click **New Entries**.

Figure 3–35 New Entries for System Alias



8. Assign the System Alias (ERD in this case) for the service and save changes.

Figure 3–36 Assign SAP System Alias to Service



3.6.5. Activate UI5 Service

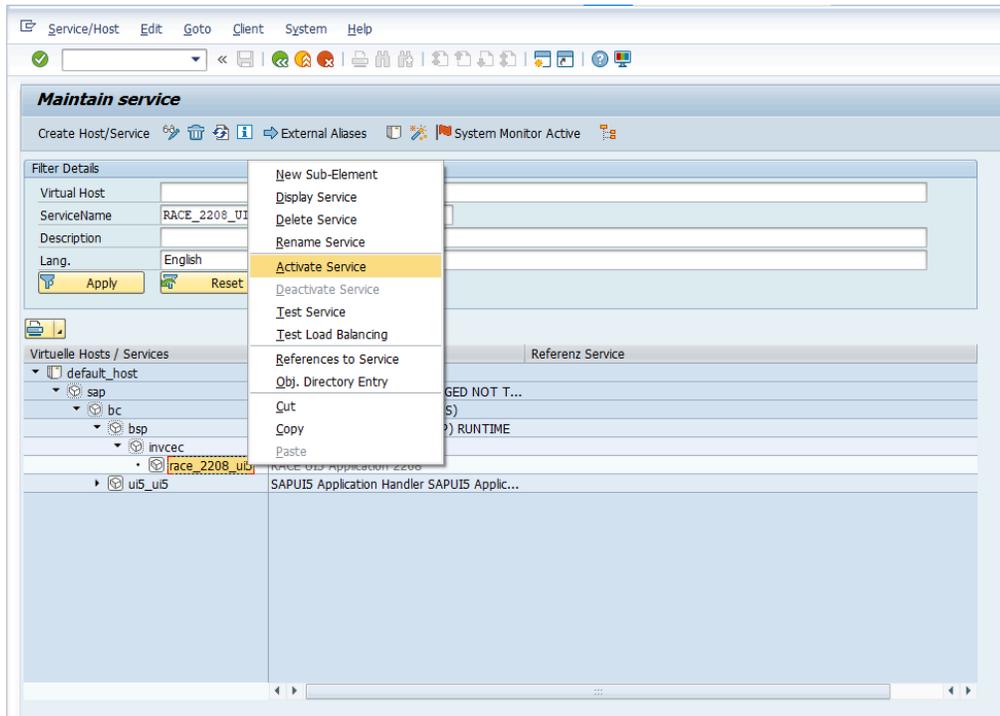
Activate UI5 Service once you have activated RACE™ OData Service.

To activate UI5 Service:

| 3 – Install RACE™ SAP® ECC and Gateway

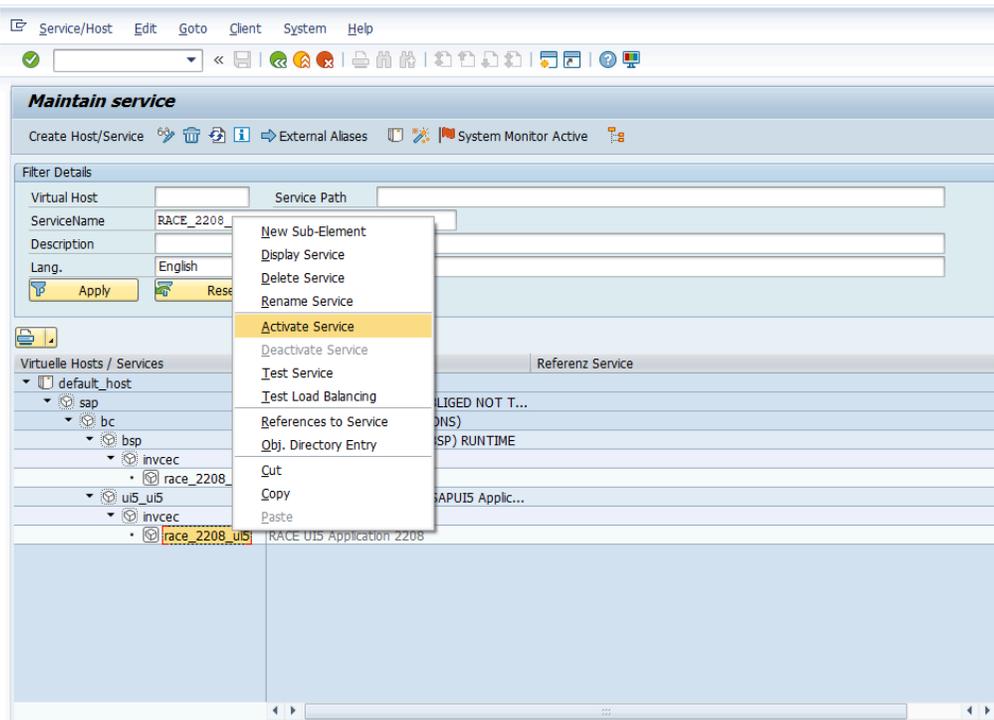
1. Go to the transaction code SICF and navigate to **/default_host/sap/bc/bsp/invcec/race_2208_ui5**.
2. Right-click **RACE 2208 UI5** and click **Activate Service**.

Figure 3–37 Activate RACE BSP Service



3. Click **Yes**.
4. Go to **/default_host/sap/bc/ui5_ui5/invcec/race_2208_ui5**.

Figure 3–38 Activate RACE UI5 service



5. Right-click **RACE 2208 UI5** and click **Activate Service**.
6. Click **Yes**.

Access the SAPUI5 web application by replacing the **host name**, **port number** and **client number** in the following template's URLs to match your SAP NetWeaver Gateway instance:

- `http://<hostname>:<port_number>/sap/bc/ui5_ui5/invcec/race_2208_ui5/index.html?sap-client=100`
- `http://<hostname>:<port_number>/sap/bc/ui5_ui5/invcec/race_2208_ui5/index.html?sap-client=100&sap-ui-language=EN&sap-ui-appcache=false`

3.6.6. Activate FIORI Service

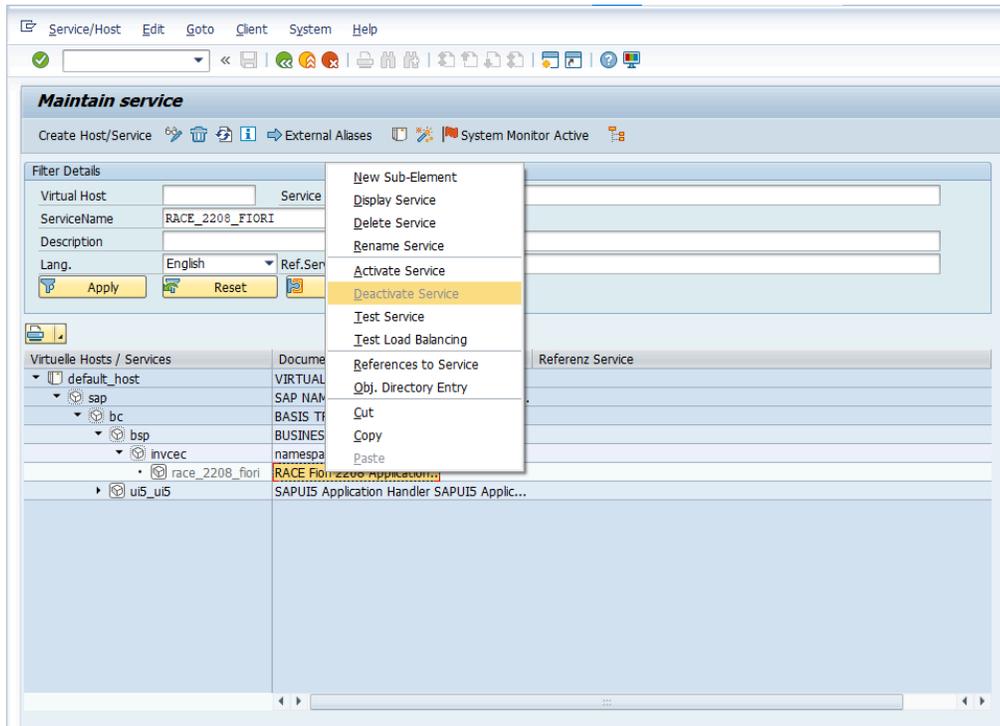
Activate FIORI service after you have activated UI5 service.

To activate FIORI Service:

| 3 – Install RACE™ SAP® ECC and Gateway

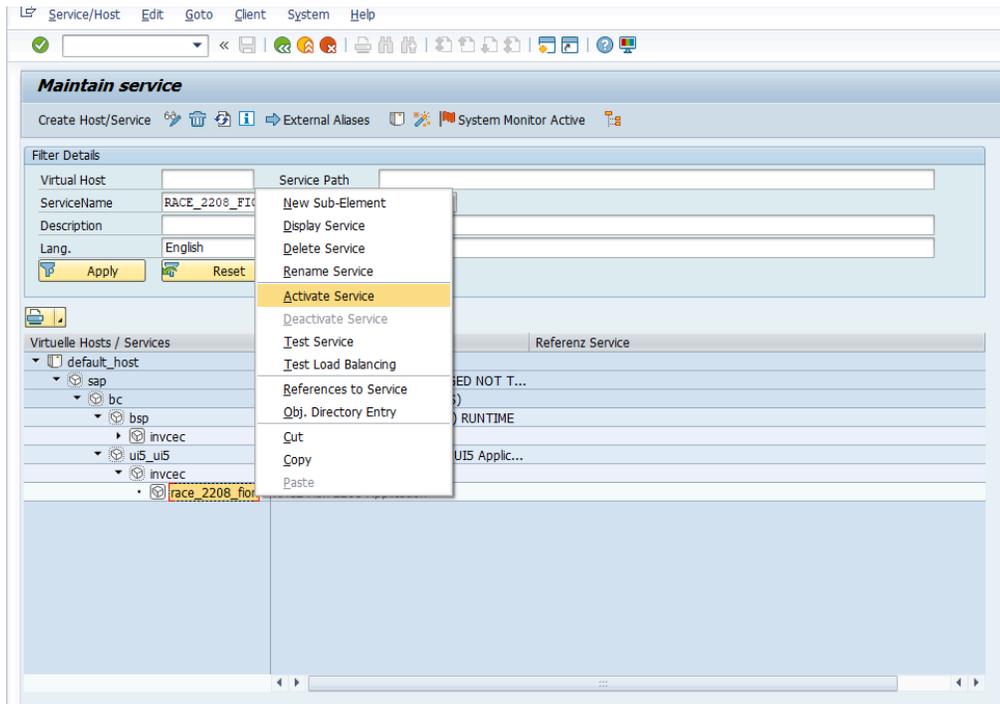
1. Go to the transaction code SICF and navigate to **/default_host/sap/bc/bsp/invcec/race_2208_fiori**.
2. Right-click **RACE 2208 FIORI** and click **Activate Service**.

Figure 3–39 Activate RACE FIORI Service



3. Click **Yes**.
4. Go to **/default_host/sap/bc/ui5_ui5/invcec/race_2208_fiori**.

Figure 3-40 Activate RACE Fiori service



5. Right-click **RACE 2208 FIORI** and click **Activate Service**.
6. Click **Yes**.

Access the SAP Fiori web application by transaction code **/N/UI2/FLP**. You are redirected to the below template URLs to match your SAP NetWeaver Gateway instance:

- `http://<hostname>:<port_number>/sap/bc/ui5_ui5/invcec/race_2208_fiori/index.html?sap-client=100`
- `http://<hostname>:<port_number>/sap/bc/ui5_ui5/invcec/race_2208_fiori/index.html?sap-client=100&sap-ui-language=EN&sap-ui-appcache=false.`

4. Install mWorkOrder SAP® ECC, Gateway, and UI5

Add-On: All the transports of previous releases and the transports of the current release are packaged into a single add-on for the main release. For example, 2003, 2006 and so on. Install the add-on for the current release that is provided by Innovapptive representative.

Transport: Only the changes for that HotFix are packaged into a transport. You MUST install all the transports till date and must install them in the order they are mentioned. Even a single misplaced installation of transport could result in installation errors.



Note:

Ask your Innovapptive contact for the latest add-ons and support-packs and these components will be provided in a compressed file format, such as .zip, .rar, and sent to you either through email or through FTP.

Table 4-1 MWO ECC Add-On and Support Packages

Type	Add-On	Description	Dependency
Add-On	EZY0021310268_-0000005.PAT	INNOV: MWO:2208 SP02 ECC Objects	Install RACE™ Add-On (EZY0021310268_-0000004.PAT) before installing the mWO Add-On (EZY0021310268_-0000005.PAT)

Table 4-2 MWO Gateway Add-On and Support Packages

Type	Add-On	Description	Dependency
Add-On	NZY0021310268_-0000007.PAT	INNOV MWO 2208 SP02 Gateway Objects	Install RACE™ Add-On (NZY0021310268_-0000006.PAT) before installing the mWO Add-On (NZY0021310268_-0000007.PAT)

Table 4-2 MWO Gateway Add-On and Support Packages (continued)

Type	Add-On	Description	Dependency
Support Pack - SP01	NZY0021310268_- 0000009.PAT	INNOV MWO 2208 SP01 UI5 Application	Install mWO Add-on (NZY0021310268_-0000007.PAT) before importing the support pack SP01
Support Pack - SP02	NZY0021310268_- 0000055.PAT	INNOV MWO 2208 SP02 FIORI Application	Install mWO Add-on (NZY0021310268_-0000052.PAT) before importing the support pack SP02

For steps to install Add-ons, see [Install mWorkOrder SAP® ECC, Gateway and UI5 Add-ons and support packs \(on page 48\)](#).

4.1. Install mWorkOrder SAP® ECC, Gateway and UI5 Add-ons and support packs

Install the add-ons and support packs at one go using the steps given below. However, if you have already installed add-ons and now you want to install the support packs (hotfixes), follow the procedure detailed in [Install mWorkOrder SAP® ECC, Gateway, and UI5 Support packs \(on page 55\)](#).

To install mWorkOrder SAP® ECC, Gateway, and UI5 add-ons:

1. Extract the zip or .rar files that you received from Innovapptive representative and save the files to your local machine.
2. Upload/copy the Add-On files and Support Packs from software deployment package to the `USR/SAP/TRANS/EPS/in` path on SAP ECC & GW systems.

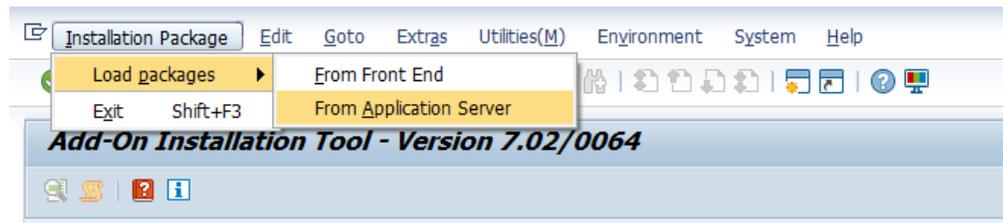


Note:

Upload all the add-ons and support packs that are mentioned in the tables.

3. Log in to **000** clients of SAP GW / ECC System (based on the Add-On being imported).
4. Navigate to the transaction code **SAINT**.
5. Navigate to **Installation Package, Load Packages, From Application Server**.

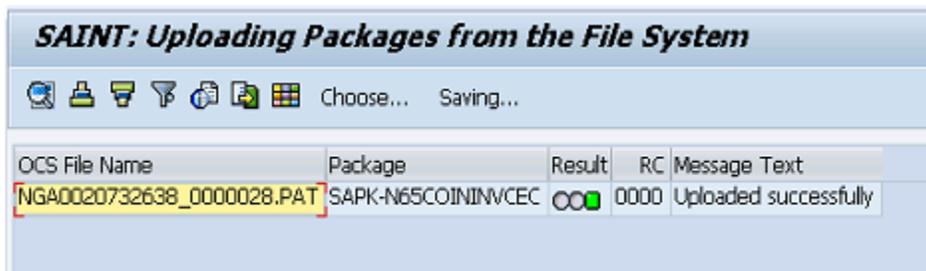
Figure 4-1 SAINT



6. Click **Yes** in the confirmation screen.

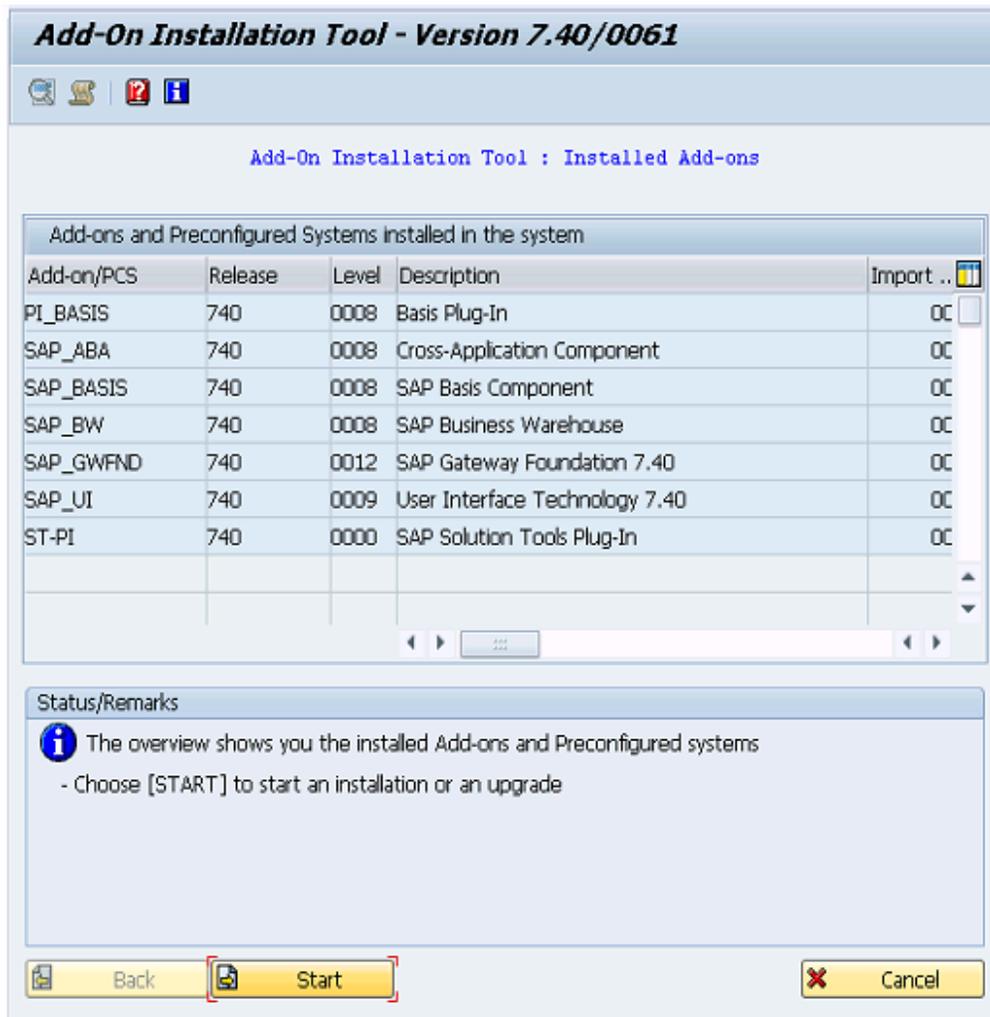
Packages are loaded in the file system

Figure 4-2 SAINT: Upload Packages



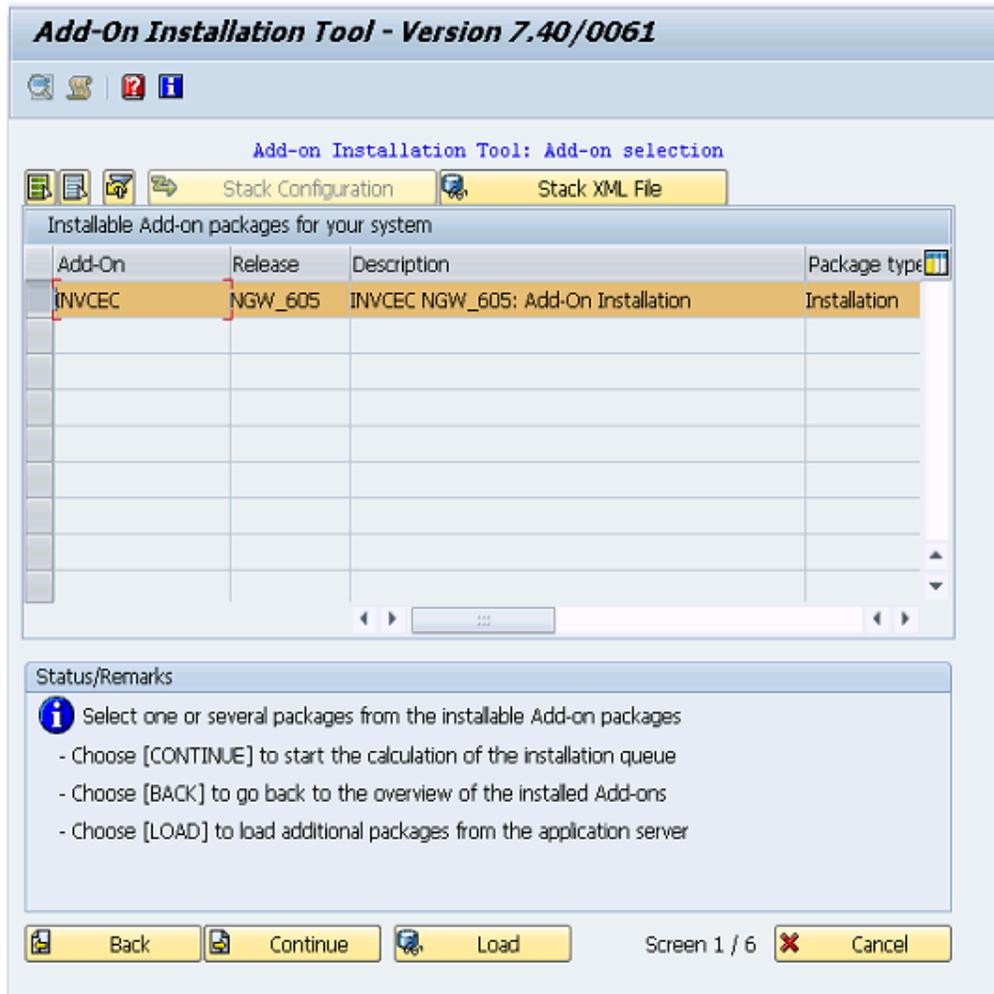
7. Once the packages are loaded, go back to the main screen, and click **Start**.

Figure 4-3 Installed Add-ons



8. Select the Add-On in the next screen and click **Continue**.

Figure 4-4 Select Add-on

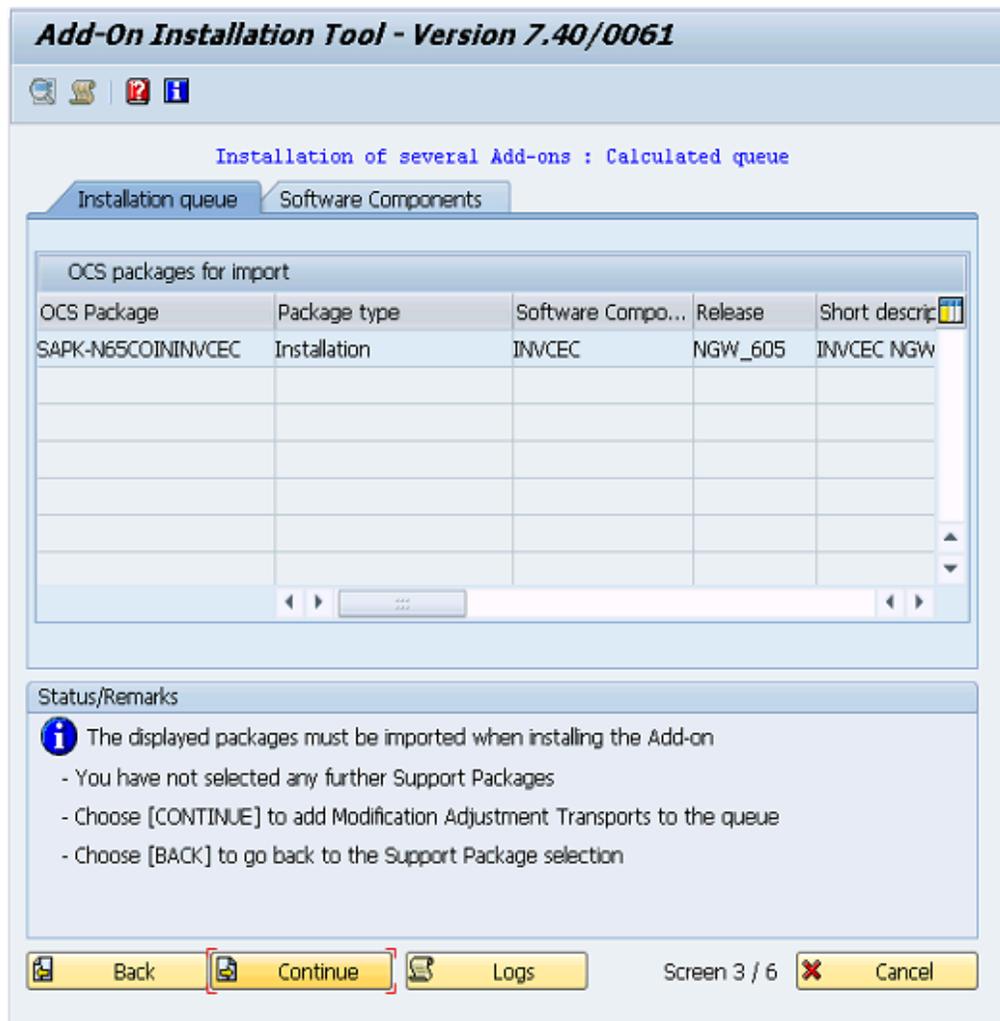


9. Click **Continue** in the next screen.

The OCS packages that are going to be imported are displayed in the next screen.

10. Click **Continue** to proceed to the next step.

Figure 4-5 Add-on Queue



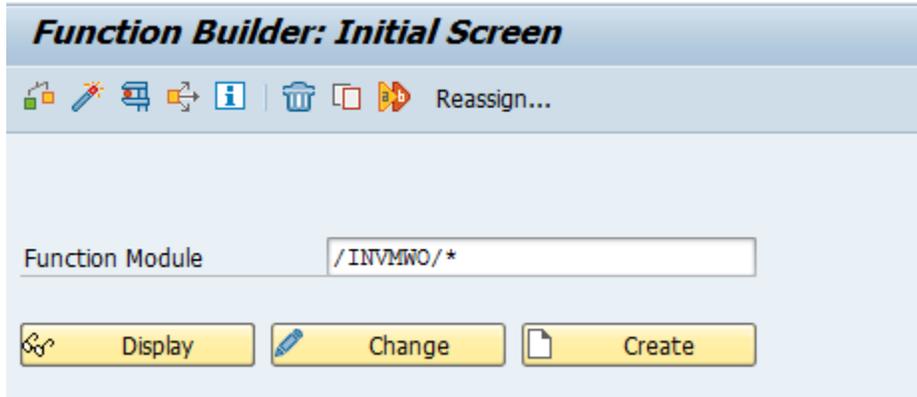
11. Click **No**, when asked to add Modification Adjustment Transports to the queue.
12. Click the **Import**  icon.
13. Click **Finish**.

4.1.1. Verify SAP® ECC MWO Add-On

To verify the SAP® ECC MWO add-on:

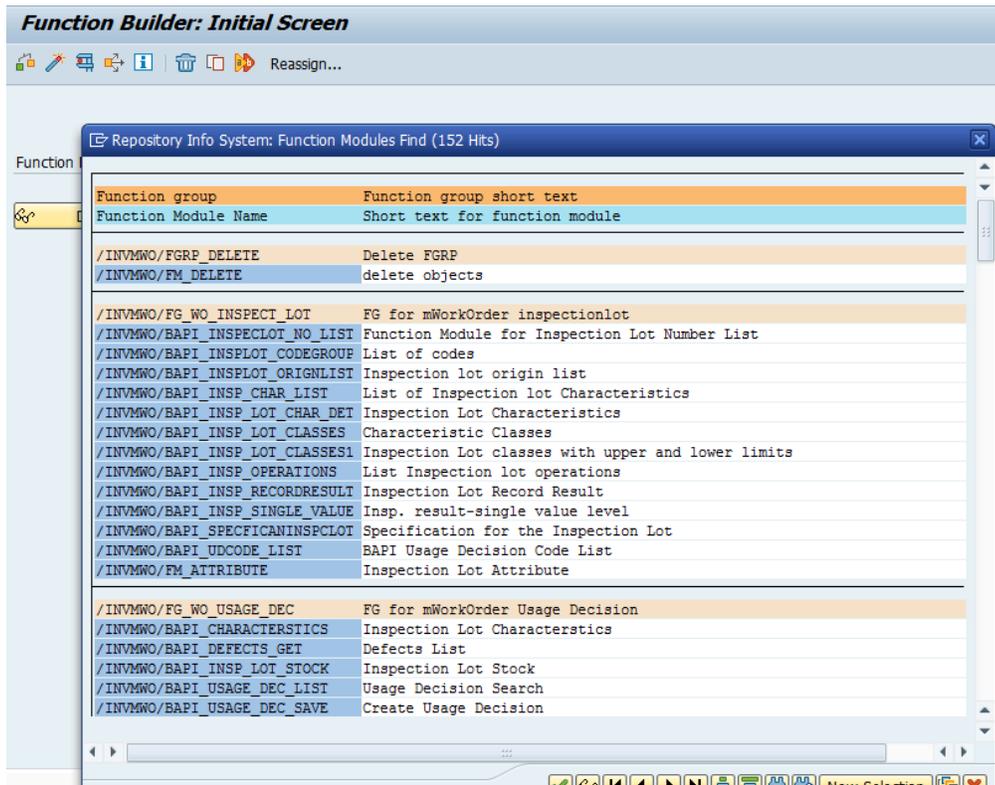
1. Run the transaction code **SE37**.
2. Enter the program name as **/INVMWO/*** in the **Function Module** field.

Figure 4-6 Function Builder Initial Screen



3. Press **<F4>** to view the list of functional modules and capture the screenshot(s) to share the results.

Figure 4-7 Function Modules

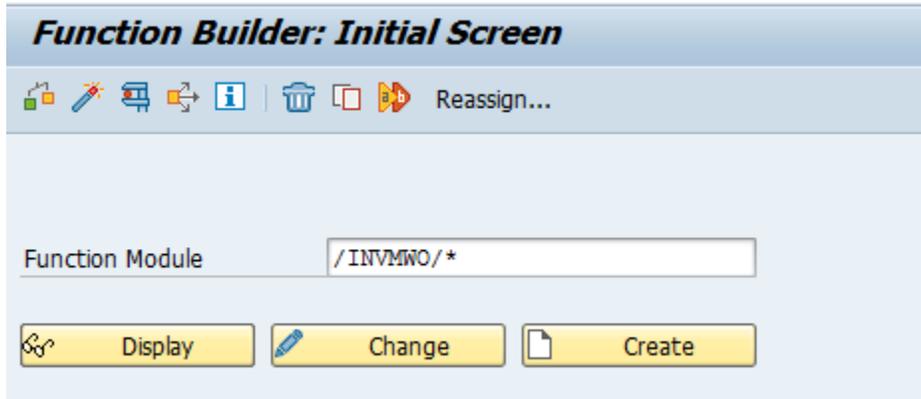


4.1.2. Verify SAP® GW MWO Add-On

To verify the SAP® GW MWO add-On:

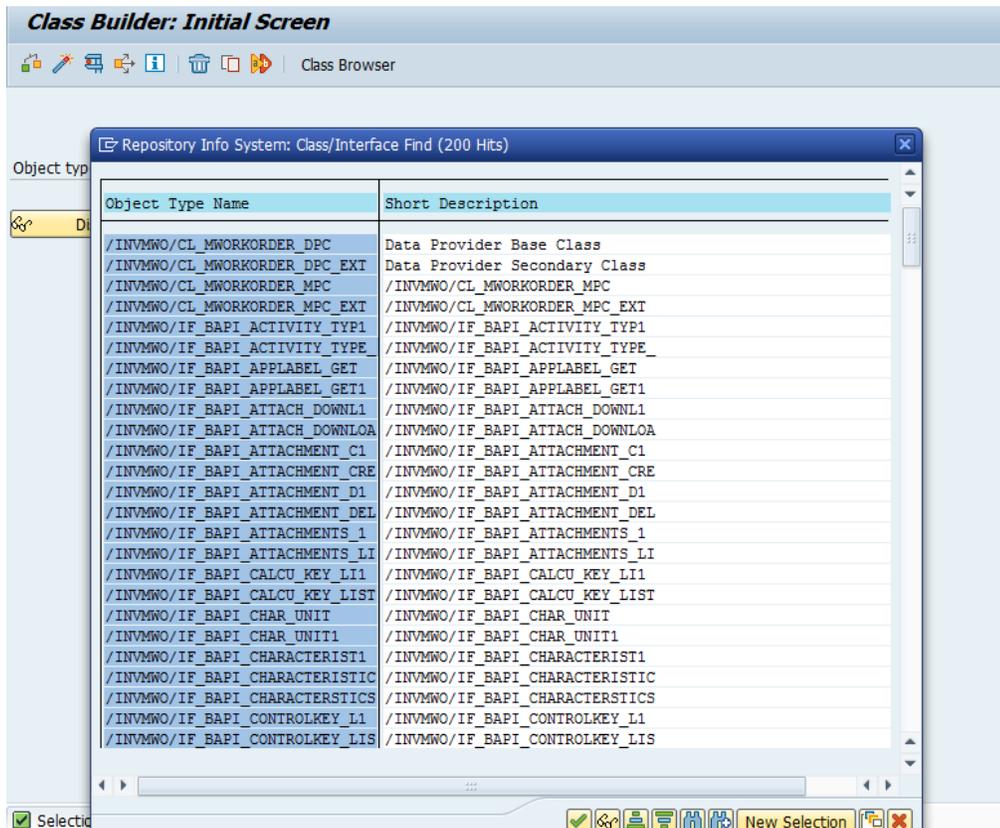
1. Navigate to the transaction code **SE24**.
2. Enter **object type** to search for all objects **/INVMWO/***.

Figure 4-8 Function Builder Initial Screen



3. Press **<F4>** to view the list of classes and capture the screenshot(s) to share the results.

Figure 4-9 Object Classes



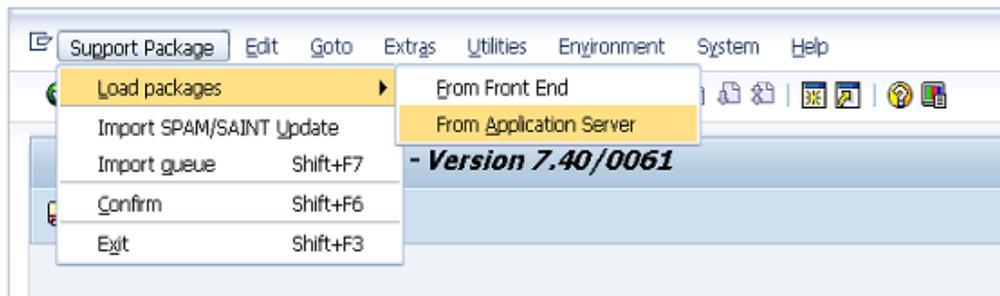
4.2. Install mWorkOrder SAP® ECC, Gateway, and UI5 Support packs

If you have installed the add-ons and are installing only the support pack (hotfixes), follow the steps described below.

To install the mWorkOrder SAP® ECC, Gateway and UI5 support pack:

1. Log in to **000** client of SAP GW & ECC System (based on the support pack being imported).
2. Navigate to the transaction code **SPAM**.
3. Navigate to **Support Package, Load Packages, From Application Server**.

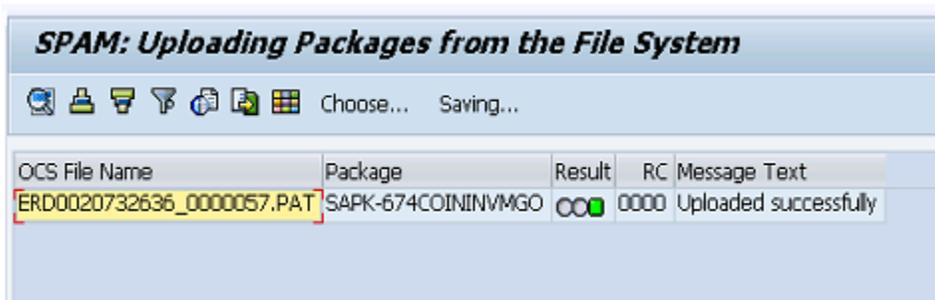
Figure 4-10 SAINT



4. Click **Yes** in the confirmation screen.

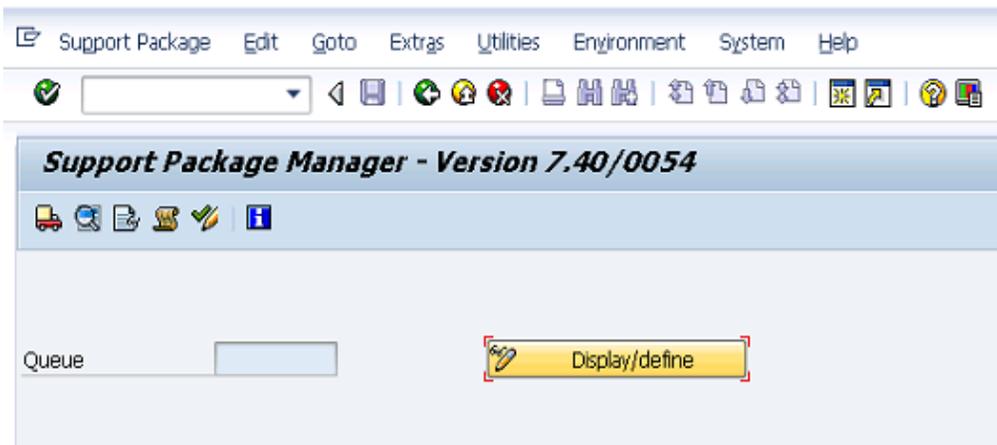
Packages are loaded in the file system

Figure 4-11 SAINT: Upload Packages



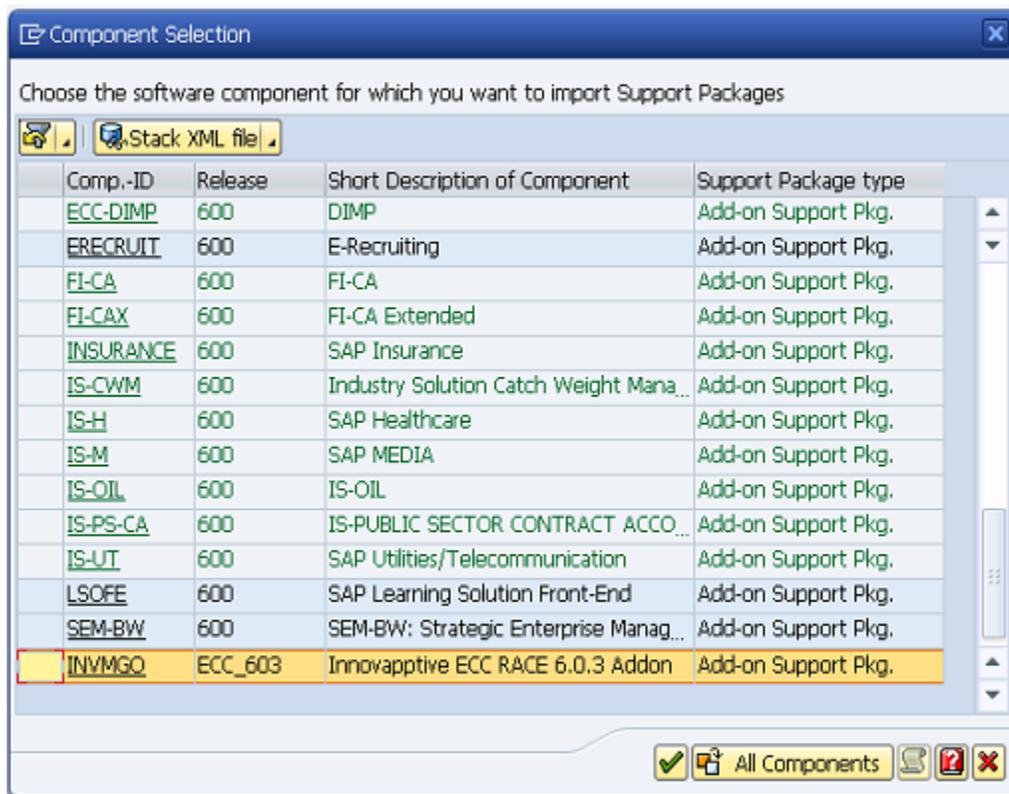
5. Once the packages are loaded, go back to the main screen, and click **Display/define**.

Figure 4-12 Support Package Manager



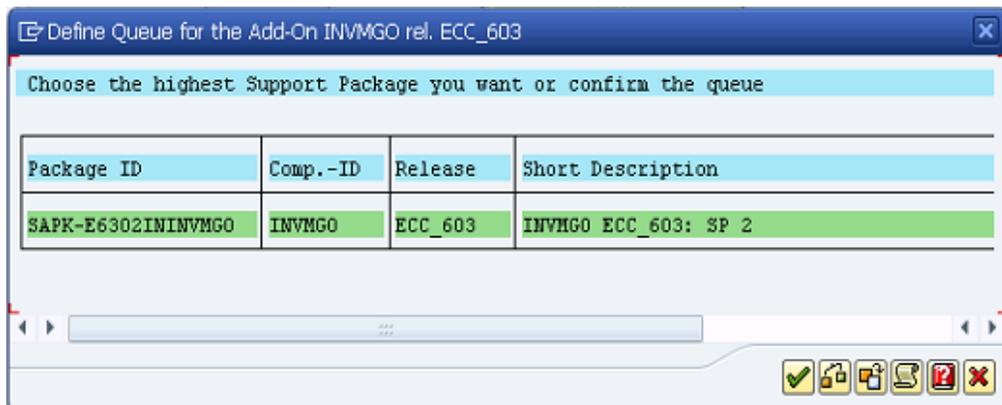
6. Choose the software component for which you want to import Support Packages and click .

Figure 4-13 Component Selection



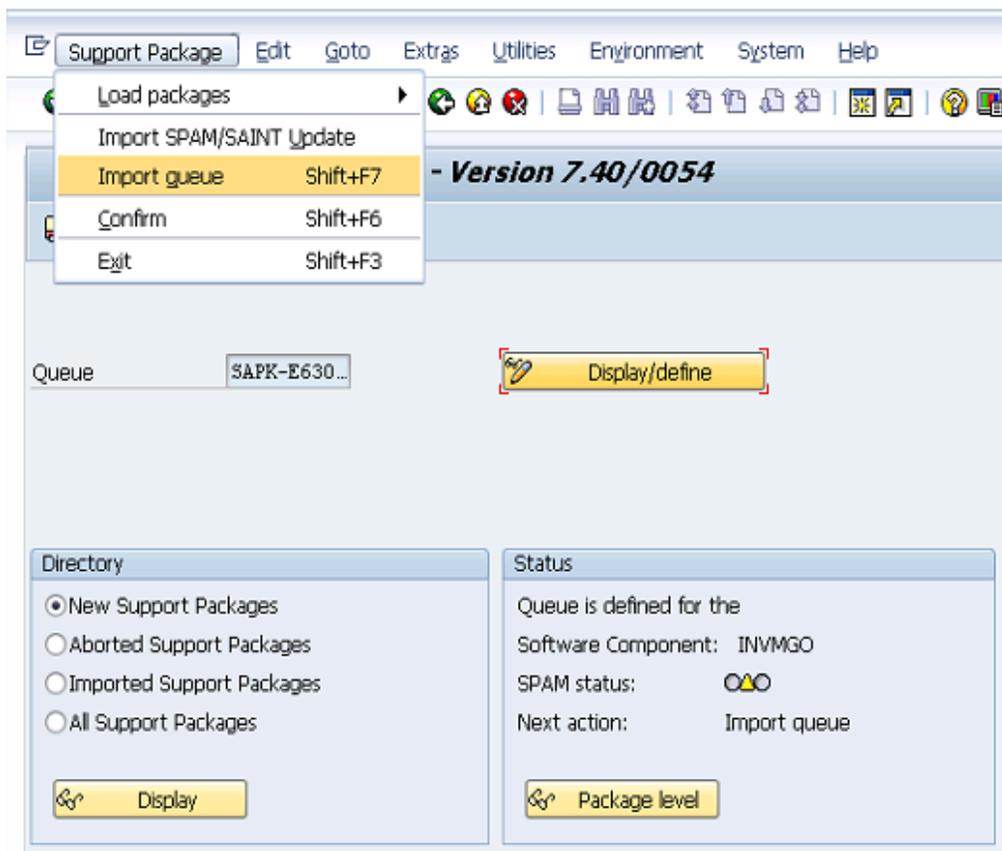
7. If all the conditions are met, and you get the package (**green**) click .

Figure 4-14 Confirm Queue



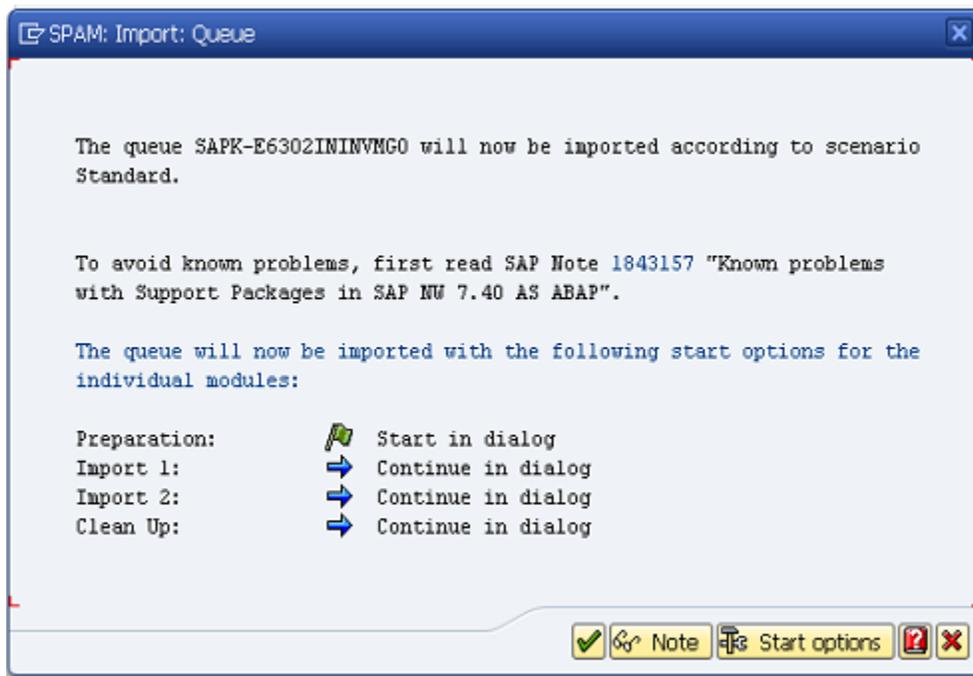
8. Click **No**, when asked to add Modification Adjustment Transports to the queue.
9. Go to **Support package** in the menu bar and click **Import Queue**.

Figure 4-15 Import Queue



10. Click  to start the import process.

Figure 4-16 Import Queue Confirm



11. Once the package is imported, a confirmation screen appears. Click in the screen.

12. Go to **Support Package** in the menu bar and click **Confirm**.

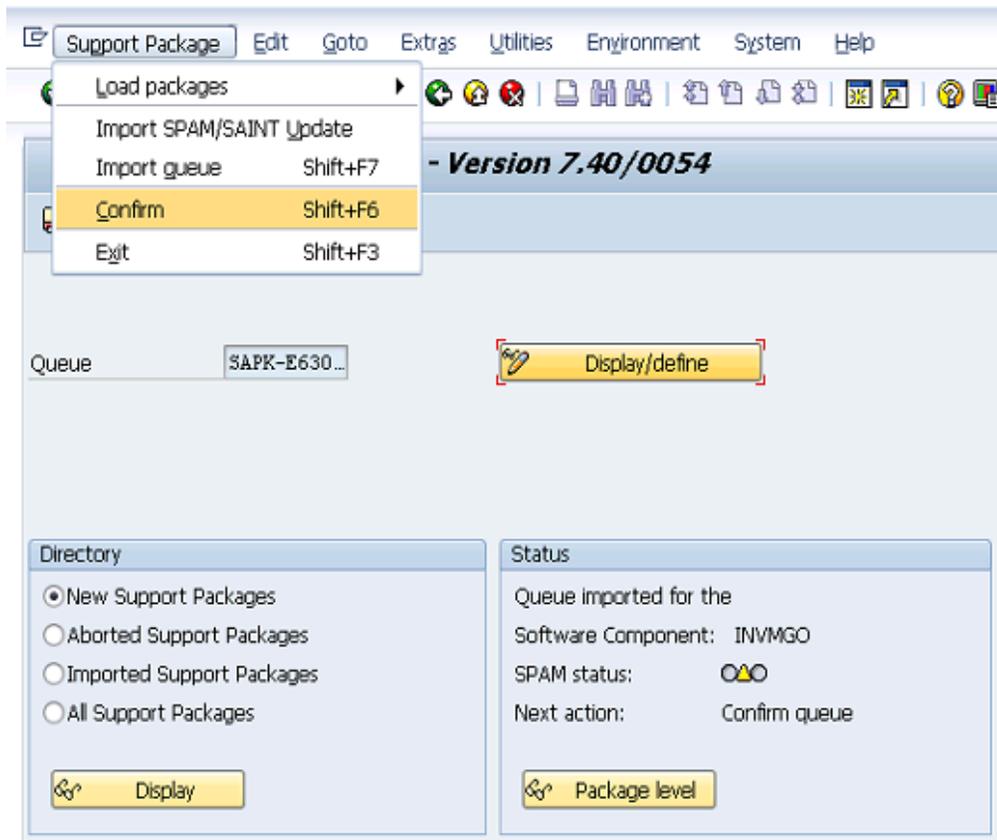
A confirmation message appears.



Note:

If you face any issues/errors while installing the Add-On/Support pack, send log files with screenshots and details of the error to your **Innovapptive SAP Basis team** contact assigned to your project.

Figure 4-17 Confirm Support Package



4.3. Activate mWorkOrder OData Service

Once add-on and support packs / transports are installed, activate OData services like Work Order, Equipment, Functional Location & Attachments in the SAP NetWeaver Gateway system.

To activate OData services for mWorkOrder:

1. Run transaction **/IWFND/MAINT_SERVICE**.
2. Select the service:

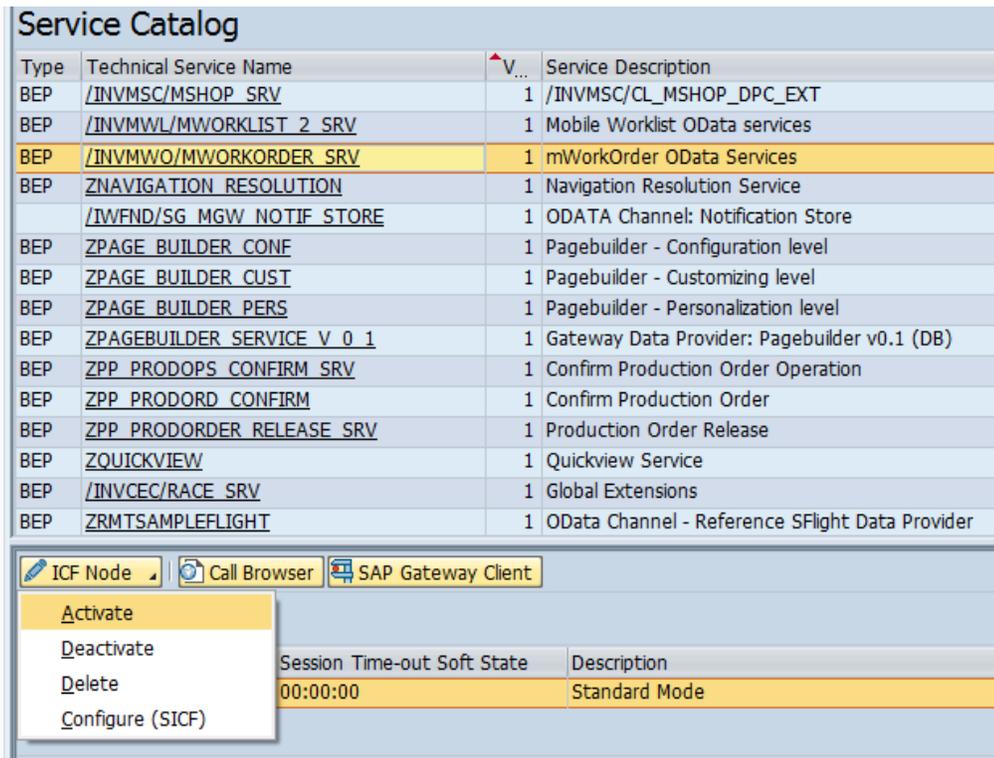
Table 4-3 oData Services

Service	Technical Service Name
Work Order	/INVMWO/MWORKORDER_SRV
Equipment	/INVMWO/MWOEQUIPMENT_SRV
Functional Location	/INVMWO/MWOFUNLOCATION_SRV
Attachments	/INVMWO/MWOATTACHMENTS_SRV
mWorkOrder Operator Round	/INVMWO/MWOOPERATORROUND_SRV

3. Click **Activate** from the drop-down list of **ICF Node** options.

A message appears notifying the package selection.

Figure 4-18 Activate and Maintain Services



4. Click the **Local Object** button and continue to activate the service.

The OData service is activated and the status turns **green**.

5. Click **Add System Alias** above **System Aliases** on the right to add the SAP System alias for the selected service.
6. Click **New Entries**.
7. Assign the System Alias for the service and save changes.

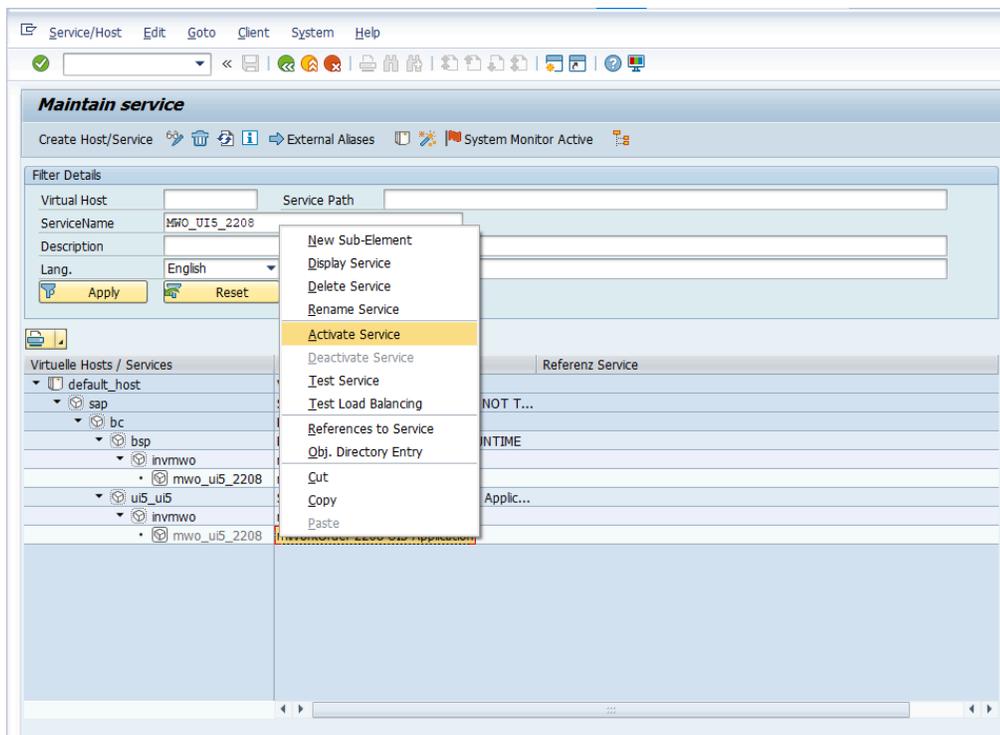
4.4. Activate Gateway UI5 Service

Activate gateway UI5 service, once mWorkOrder OData services are activated.

To activate Gateway UI5 Service:

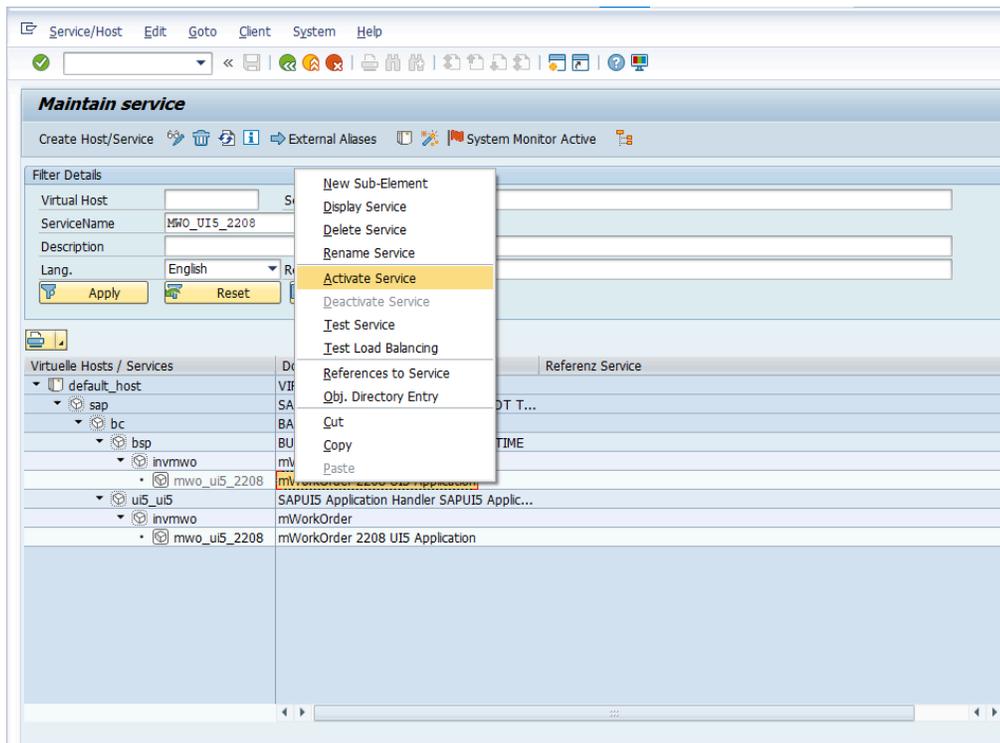
1. Go to transaction code SICF and search for the service **MWO_UI5_2208**.
2. Right-click the **mWorkOrder 2208 UI5** service under **default_host > sap > bc > ui5_ui5 > invmwo > mwo_ui5_2208** and click **Activate Service**.

Figure 4-19 Activate MWO UI5 Service



3. Right-click the **mWorkOrder 2208 UI5** service under **default_host > sap > bc > bsp > invmo > mwo_ui5_2208** and click **Activate Service**.

Figure 4-20 Activate MWO UI5 Service



4. Click **Yes**.

Access the SAPUI5 web application by replacing the **host name**, **port number** and **client number** in the following template URLs to match your SAP NetWeaver Gateway instance:

- `http://<hostname>:<port_number>/sap/bc/ui5_ui5/invmwo/mwo_ui5_2208/index.html?sap-client=100.`
- `http://<hostname>:<port_number>/sap/bc/ui5_ui5/invmwo/mwo_ui5_2208/index.html?sap-client=100&sap-ui-language=EN&sap-ui-appcache=false`

4.5. Activate Gateway Fiori Service

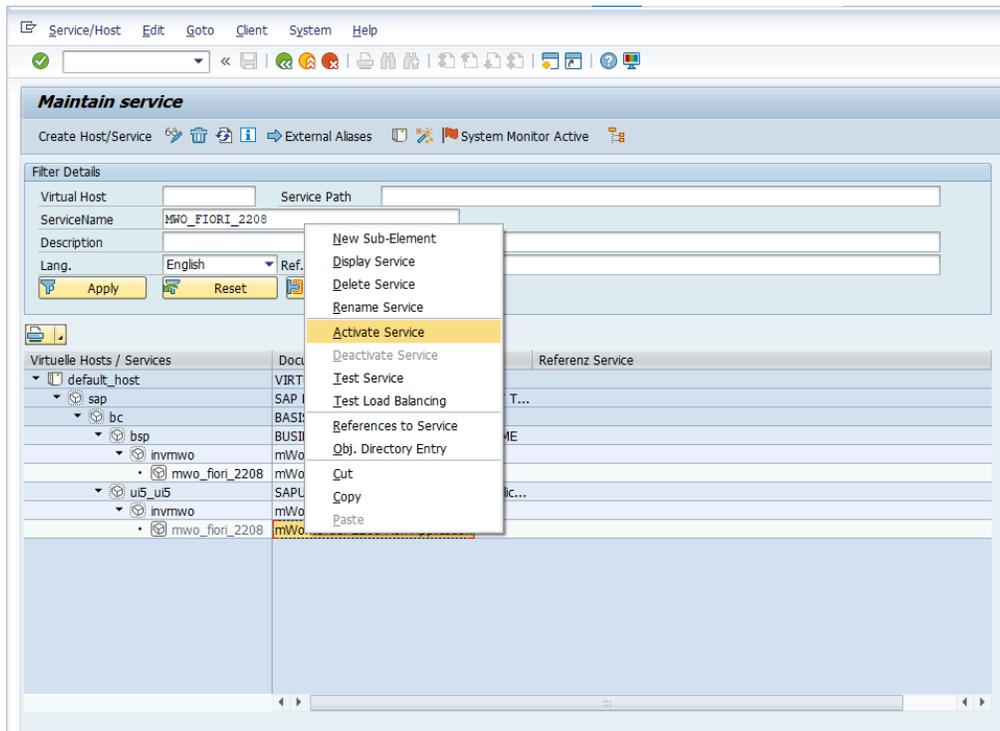
Activate gateway Fiori service, once gateway UI5 service is activated.

To activate the Gateway Fiori Service:

| 4 - Install mWorkOrder SAP® ECC, Gateway, and UI5

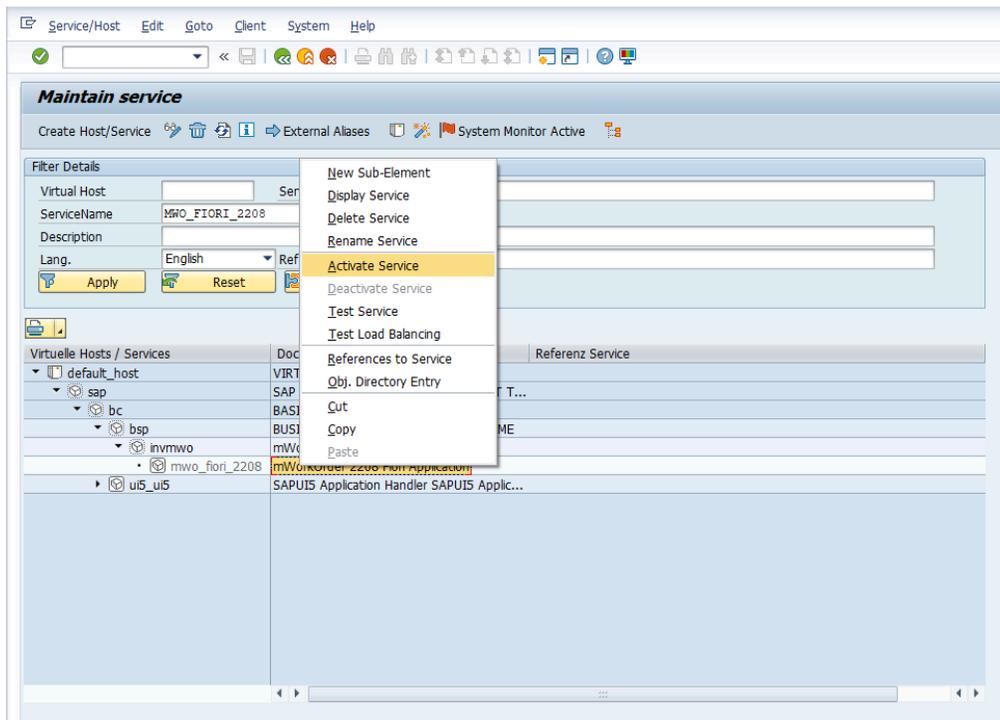
1. Go to transaction code SICF and search for the service **MWO_FIORI_2208**.
2. Right-click the **mWorkOrder 2208 FIORI** service under **default_host > sap > bc > ui5_ui5 > invmwo > mwo_fiori_2208** and click **Activate Service**.

Figure 4-21 Activate MWO FIORI Service



3. Right-click the **mWorkOrder 2208 FIORI** service under **default_host > sap > bc > bsp > invmwo > mwo_fiori_2208** and click **Activate Service**.

Figure 4-22 Activate MWO FIORI Service



4. Click **Yes**.

Access the SAPUI5 web application by replacing the **host name**, **port number** and **client number** in the following template URLs to match your SAP NetWeaver Gateway instance:

- `http://<hostname>:<port_number>/sap/bc/ui5_ui5/invmwo/mwo_fiori_2208/index.html?sap-client=100.`
- `http://<hostname>:<port_number>/sap/bc/ui5_ui5/invmwo/mwo_fiori_2208/index.html?sap-client=100&sap-ui-language=EN&sap-ui-appcache=false.`

4.6. Import mWorkOrder SAP® ECC, Gateway and UI5 Transports

Innovapptive recommends installing Add-ons instead of importing Transports for a smooth installation experience. However, if you prefer to import Transports, import them in the order listed in the table.



Note:

Ask your Innovapptive contact for the latest transports and these components will be provided in a compressed file format, such as .zip, .rar, and sent to you either through email or through FTP.

Table 4-4 MWO SAP® ECC Transports

Transport	Description	Dependency
ERDK913571	Innov MWO 2208 SP02 ECC Objects	Import ERDK913573 before importing ERDK913571

Table 4-5 MWO SAP® Gateway Transports

Transport	Description	Dependency
NGTK910560	Innov MWO 2208 SP02 Gateway Objects	Import NG5K903797 before importing NGTK910560

Table 4-6 MWO UI5 Application Transports

Transport	Description	Dependency
NGTK910555	Innov MWO 2208 SP02 UI5 Application	Import TR Number NGTK910560 before importing NGTK910555
NGTK912147	Innov MWO 2208 SP02 FIORI Application	Import TR Number: NGTK912192 before importing NGTK912147

For steps to import Transports, see [Import Transports \(on page 35\)](#).

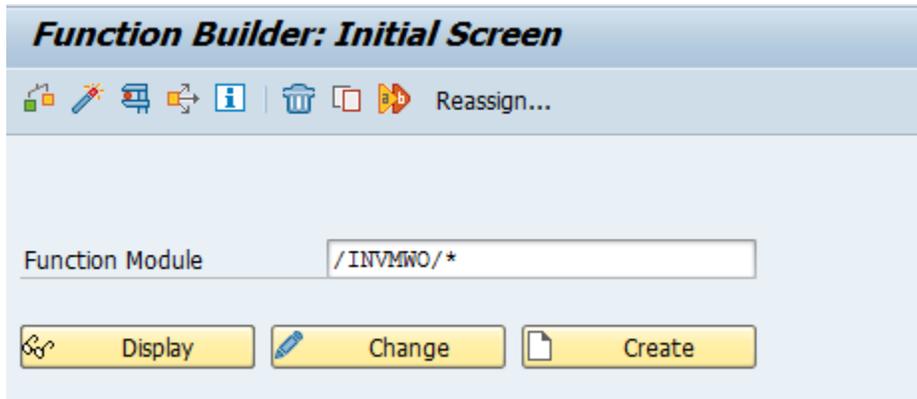
4.6.1. Verify SAP® ECC MWO Transport

If you have imported SAP® ECC MWO Transport, verify whether it was successful.

To verify the SAP® ECC Transport:

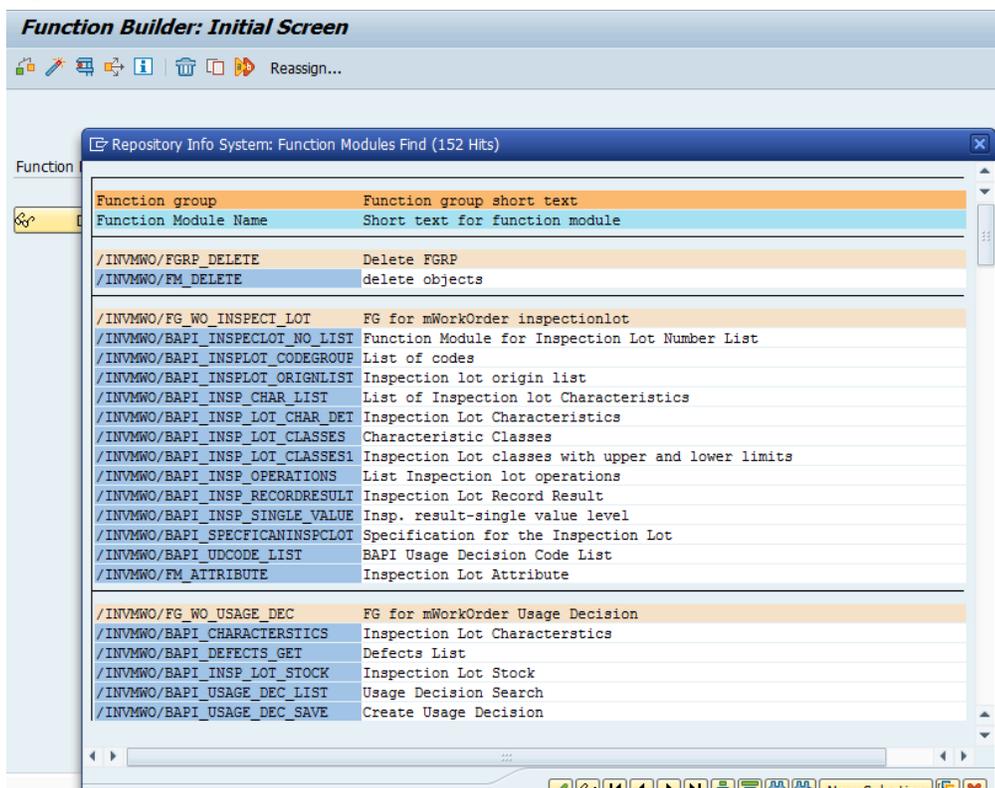
1. Run the transaction code **SE37**.
2. Enter the program name as **/INVMWO/*** in the **Function Module** field.

Figure 4-23 Function Builder Initial Screen



3. Press **<F4>** to view the list of functional modules and capture the screenshot(s).

Figure 4-24 Function Module Classes



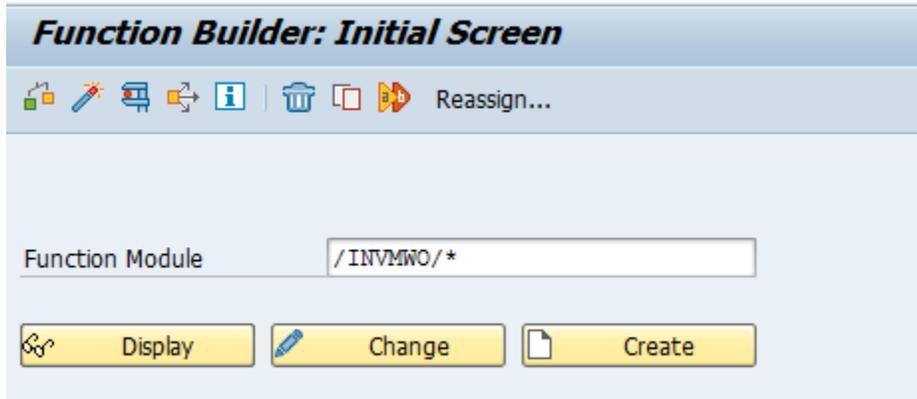
4.6.2. Verify SAP® GW MWO Transport

If you have imported SAP® GW MWO Transport, verify whether it was successful.

To verify the SAP® GW Transport:

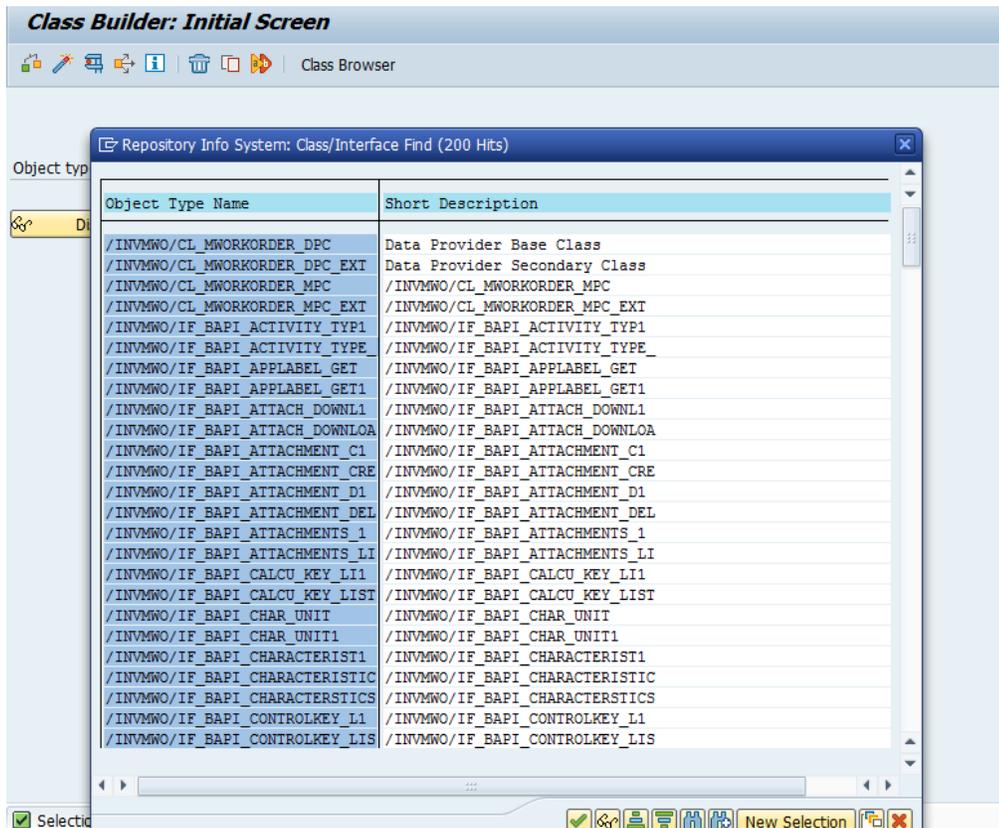
1. Navigate to the transaction code **SE24**.
2. Enter **object type** to search for all objects **/INVMWO/***.

Figure 4-25 Function Builder Initial Screen



3. Press **<F4>** to view the list of classes and capture the screenshot(s) to share the results.

Figure 4-26 Object Classes



4.6.3. Activate mWorkOrder OData Service

Once add-on and support packs / transports are installed, activate OData services like Work Order, Equipment, Functional Location & Attachments in the SAP NetWeaver Gateway system.

To activate OData services for mWorkOrder:

1. Run transaction **/IWFND/MAINT_SERVICE**.
2. Select the service:

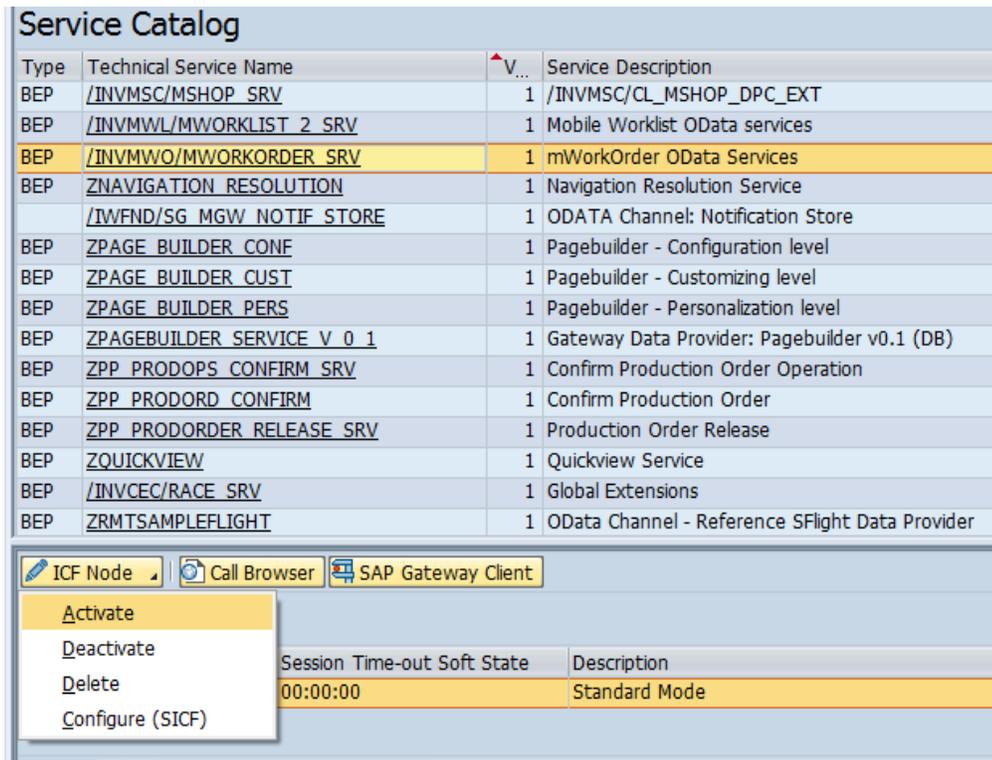
Table 4-7 oData Services

Service	Technical Service Name
Work Order	/INVMWO/MWORKORDER_SRV
Equipment	/INVMWO/MWOEQUIPMENT_SRV
Functional Location	/INVMWO/MWOFUNLOCATION_SRV
Attachments	/INVMWO/MWOATTACHMENTS_SRV
mWorkOrder Operator Round	/INVMWO/MWOOPERATORROUND_SRV

3. Click **Activate** from the drop-down list of **ICF Node** options.

A message appears notifying the package selection.

Figure 4-27 Activate and Maintain Services



4. Click the **Local Object** button and continue to activate the service.

The OData service is activated and the status turns **green**.

5. Click **Add System Alias** above **System Aliases** on the right to add the SAP System alias for the selected service.

6. Click **New Entries**.

7. Assign the System Alias for the service and save changes.

4.6.4. Activate Gateway UI5 Service

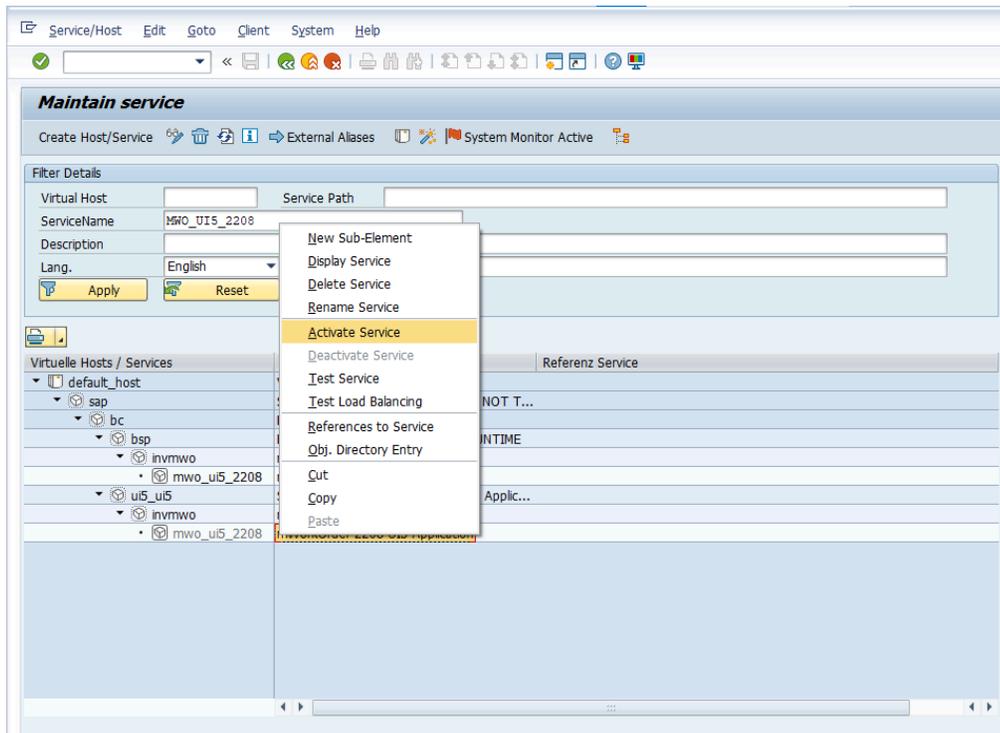
Activate gateway UI5 service, once mWorkOrder OData services are activated.

To activate Gateway UI5 Service:

| 4 - Install mWorkOrder SAP® ECC, Gateway, and UI5

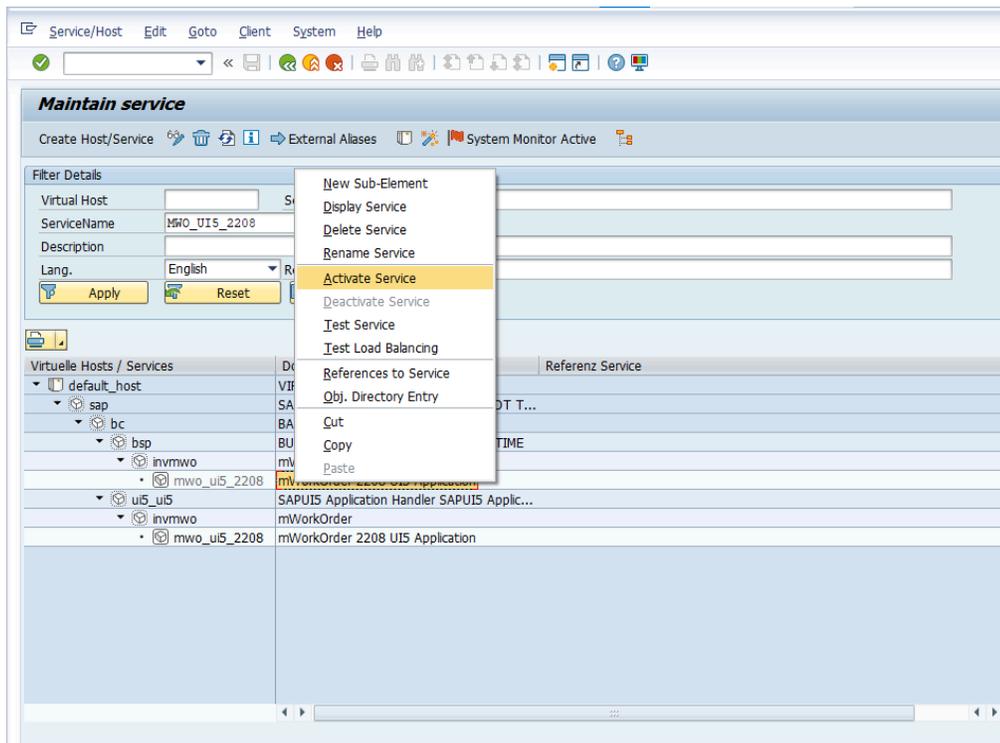
1. Go to transaction code SICF and search for the service **MWO_UI5_2208**.
2. Right-click the **mWorkOrder 2208 UI5** service under *default_host > sap > bc > ui5_ui5 > invmwo > mwo_ui5_2208* and click **Activate Service**.

Figure 4-28 Activate MWO UI5 Service



3. Right-click the **mWorkOrder 2208 UI5** service under *default_host > sap > bc > bsp > invmo > mwo_ui5_2208* and click **Activate Service**.

Figure 4-29 Activate MWO UI5 Service



4. Click **Yes**.

Access the SAPUI5 web application by replacing the **host name**, **port number** and **client number** in the following template URLs to match your SAP NetWeaver Gateway instance:

- `http://<hostname>:<port_number>/sap/bc/ui5_ui5/invmwo/mwo_ui5_2208/index.html?sap-client=100.`
- `http://<hostname>:<port_number>/sap/bc/ui5_ui5/invmwo/mwo_ui5_2208/index.html?sap-client=100&sap-ui-language=EN&sap-ui-appcache=false`

4.6.5. Activate Gateway Fiori Service

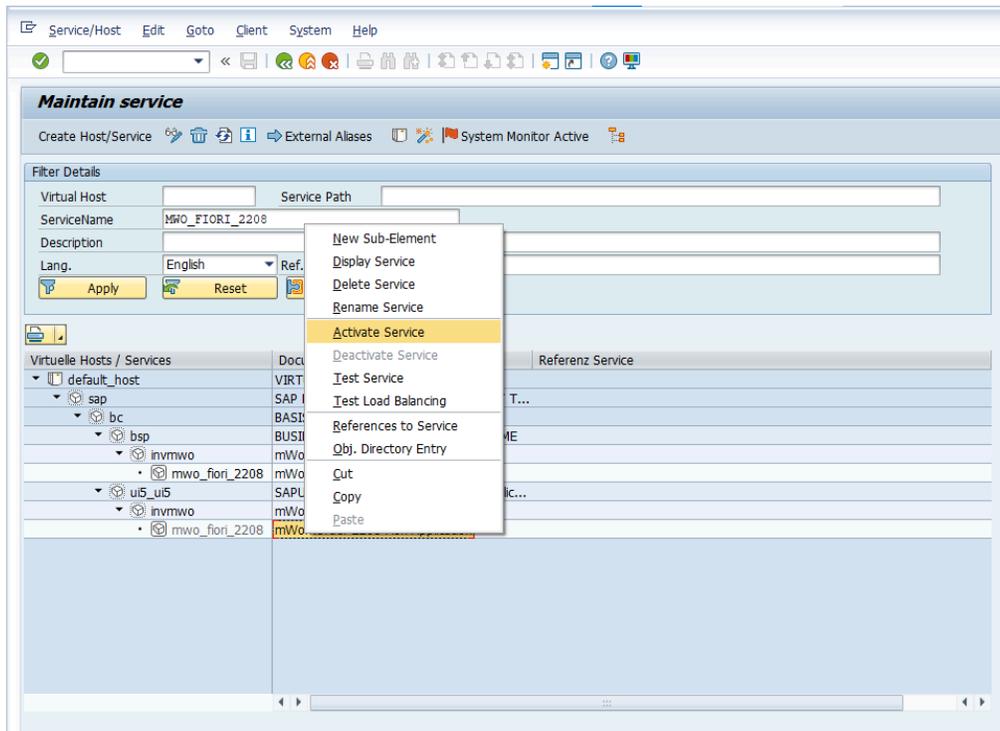
Activate gateway Fiori service, once gateway UI5 service is activated.

To activate the Gateway Fiori Service:

| 4 - Install mWorkOrder SAP® ECC, Gateway, and UI5

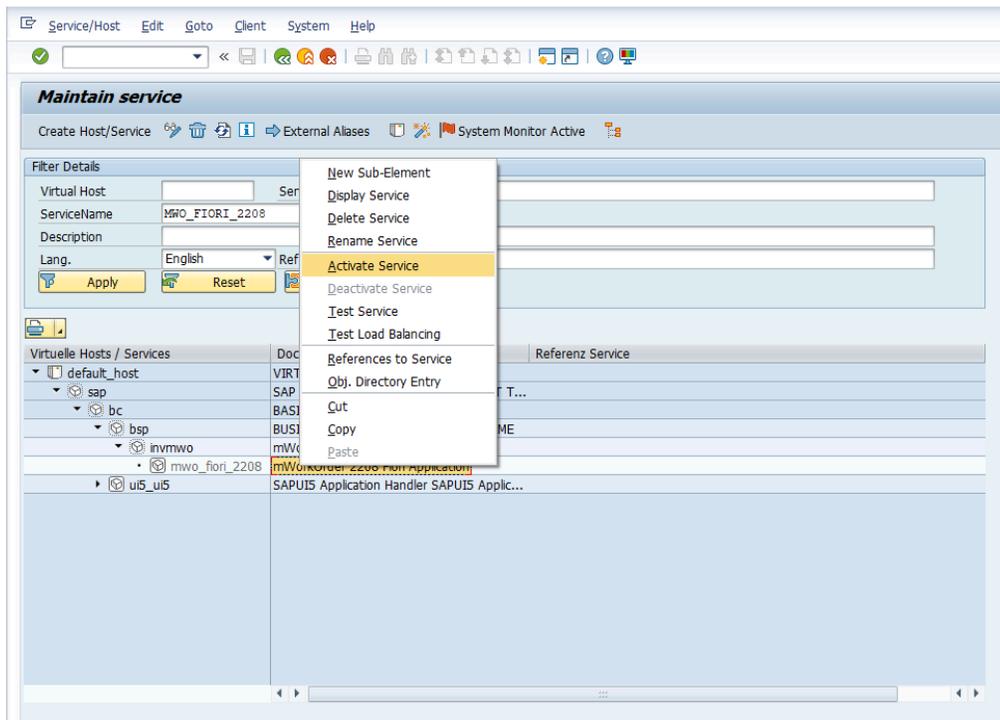
1. Go to transaction code SICF and search for the service **MWO_FIORI_2208**.
2. Right-click the **mWorkOrder 2208 FIORI** service under **default_host > sap > bc > ui5 > invmwo > mwo_fiori_2208** and click **Activate Service**.

Figure 4-30 Activate MWO FIORI Service



3. Right-click the **mWorkOrder 2208 FIORI** service under **default_host > sap > bc > bsp > invmwo > mwo_fiori_2208** and click **Activate Service**.

Figure 4-31 Activate MWO FIORI Service



4. Click **Yes**.

Access the SAPUI5 web application by replacing the **host name**, **port number** and **client number** in the following template URLs to match your SAP NetWeaver Gateway instance:

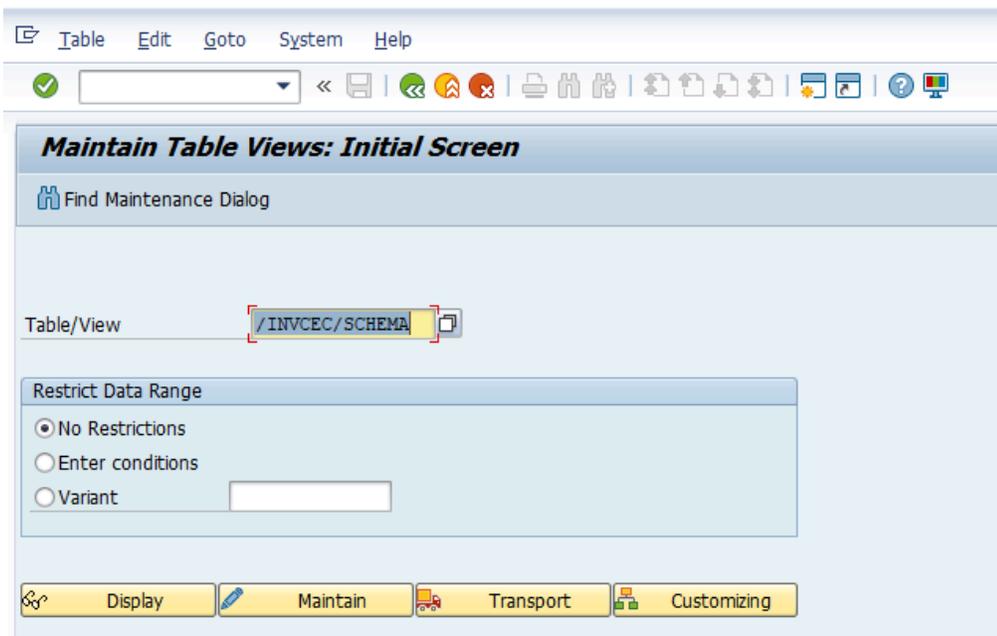
- `http://<hostname>:<port_number>/sap/bc/ui5_ui5/invmwo/mwo_fiori_2208/index.html?sap-client=100.`
- `http://<hostname>:<port_number>/sap/bc/ui5_ui5/invmwo/mwo_fiori_2208/index.html?sap-client=100&sap-ui-language=EN&sap-ui-appcache=false.`

5. Check Schema Change Indicator

After importing support packs into the systems, perform the following steps to check the Schema Change Indicator.

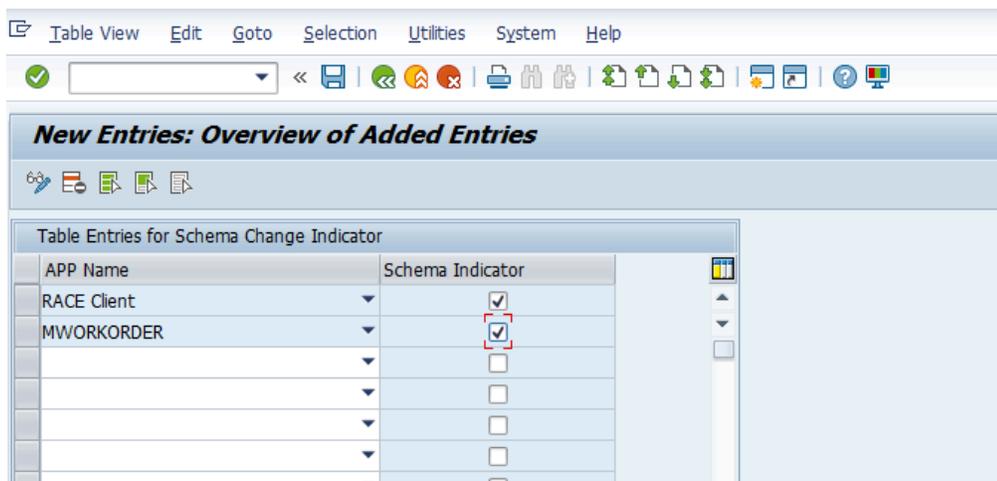
1. Login to SAP Gateway system.
2. Go to **tcode – SM30**.

Figure 5-1 SM30



3. Click **Maintain**.
4. Click **New Entries**.

Figure 5-2 Table Entries for Schema Change Indicator



5. Select RACE™ Client and mWorkOrder from App Name drop-down and select **Schema Indicator** checkbox.
6. Save the changes in Transport Request to move the changes to Quality and Production environment.

Table 5-1 Schema Details

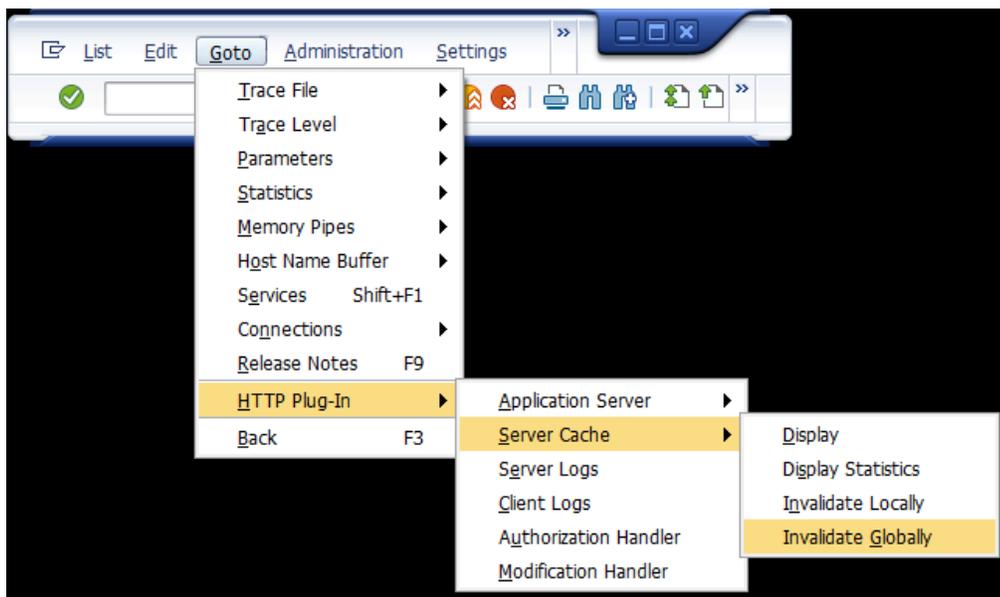
Base URL	Old Schema	New Schema
/INVCEC/RACE_SRV	/INVCEC/RACE_SRV	RACECLIENT
/INVMWO/MWORKORDER_SRV	/INVMWO/MWORKORDER_SRV	MWORKORDER
/INVMWO/MWOEQUIPMENT_SRV	/INVMWO/MWOEQUIPMENT_SRV	MWOEQUIPMENT
/INVMWO/MWOFUNLOCATION_SRV	/INVMWO/MWOFUNLOCATION_SRV	MWOFUNLOCATION
/INVMWO/WOATTACHMENTS_SRV	/INVMWO/WOATTACHMENTS_SRV	MWOATTACHMENTS
/INVMWO/MWOOPERATORROUND_SRV	/INVMWO/MWOOPERATORROUND_SRV	MWOOPERATORROUND

6. Clean SAP Gateway Cache

Clean up the SAP Gateway Cache after importing support packs into the systems.

1. Login to SAP Gateway system.
2. Go to transaction `/n/iwfnf/cache_cleanup` in the gateway system.
3. Select the **Cleanup Cache for all Models** checkbox and click **Execute**.
4. Go to transaction `/n/iwbep/cache_cleanup` in the gateway system.
5. Select the **Cleanup Cache for all Models** checkbox and click **Execute**.
6. Go to transaction `smicm` in the gateway system.
7. Navigate to **Goto, HTTP Plugin, Server Cache** and **Invalidate Globally** option.

Figure 6-1 smicm transaction



8. Click **Yes**.

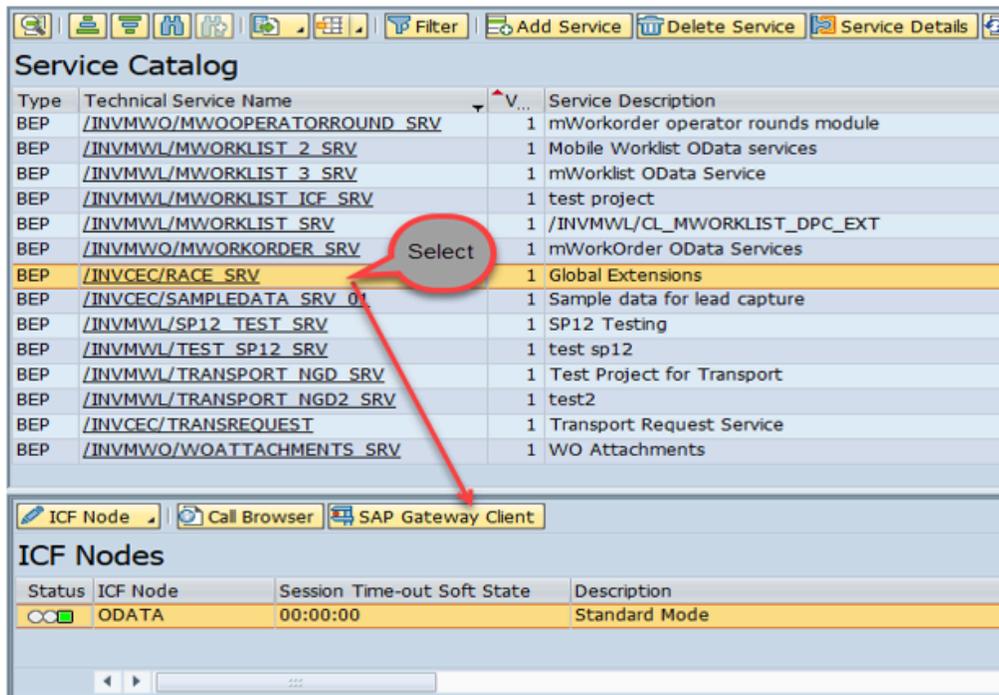
Validate SAP Gateway Cache Cleanup

1. Navigate to t-code: `/n/iwfnf/maint_service`

In HUB systems this step should be done in Gateway system

2. Filter **Technical Service Name** with `/INV*` to view the Innovapptive specific services.
3. Click each service & click **SAP Gateway Client**.

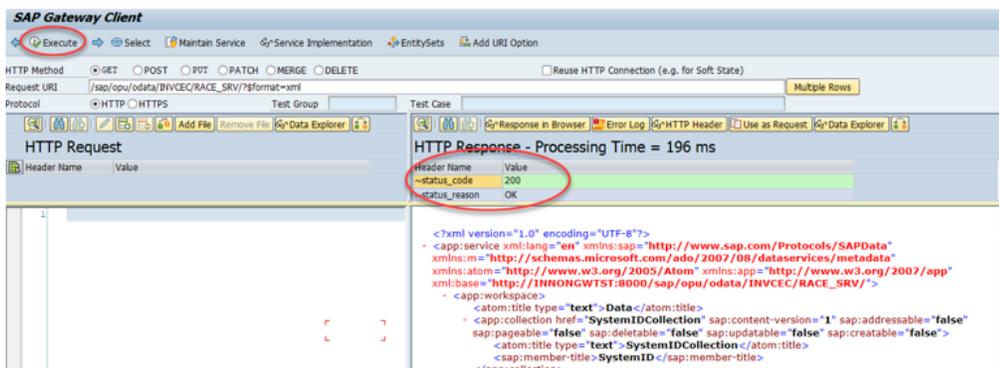
Figure 6-2 Validate Clean up of each service



4. Click **Execute** in the next screen.

You should see the value 200 in green.

Figure 6-3 Validate Clean up

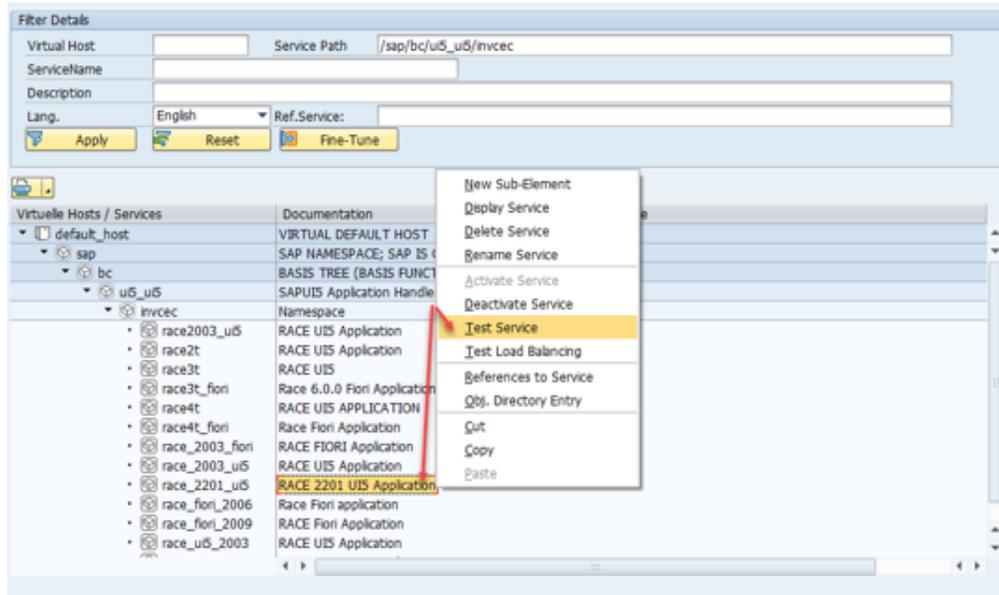


5. Navigate to t-code SICF: **/sap/bc/ui5_ui5/invcec/**

In the following steps you will validate RACE UI5 Application

6. Click **Test Service**.

Figure 6-4 Validate Clean up

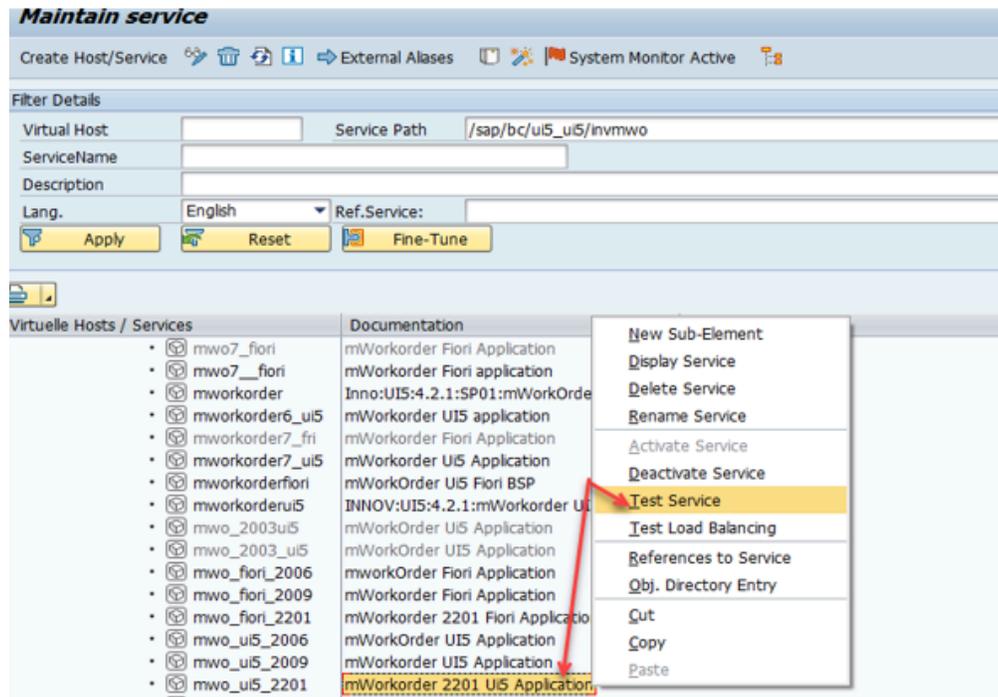


7. Enter user credentials in the RACE Screen (Gateway for HUB Systems) and authenticate.

8. Share the URL with the Innovapptive team. If there is web dispatcher, prefix the host and port to the path. For example, https://instst.testing.com:44100/sap/bc/ui5_ui5/incc/race_2203_ui5

9. Test **UI 5 application**.

Figure 6-5 Validate Clean up



10. Share the URL with the Innovapptive team. If there is web dispatcher, prefix the host and port to the path. For example, https://instst.testing.com:44100/sap/bc/ui5_ui5/invmwo/mwo_ui5_2203

7. Configure SAP Gateway for mWorkOrder

Plant maintenance workers can use mWorkOrder solution to do the following:

- Download work orders to mobile devices, view workorder history and assigned activities,
- Access asset information to facilitate diagnosis and repair, and issue and return parts
- Log timesheets, view documents, add images and attachments.
- Create personalized to-do lists that include the specific details for a task.
- Capture labor information accurately using start, stop, and pause controls.
- Print workorder reports with an ease.

7.1. Prerequisites for SAP Gateway Configuration

Ensure these components are installed and configured:

- Dependency
 - Innovapptive Add-Ons and Support Packs are installed successfully.
- Assumptions
 - The backend processes required for the app are enabled and related data is set up.
 - The Innovapptive mWorkOrder mobile solution Add-on for SAP ECC and SAP NetWeaver Gateway are installed and validated.
 - Mobile platform (SAP Mobile Platform or SAP Cloud Platform mobile services) is configured with the mobile application.

The mWorkOrder mobile solution helps you do the following with SAP Plant Maintenance (PM) module.

- Work Orders
 - Create Work Order
 - Create Emergency Work Order
 - Change Work Order
 - Release and Complete Work Order
 - Time Confirmation of Work Order Operation
 - Overall Completion Confirmation
 - Component Issue
 - Component Issue Reversal
 - Configurable Dashboard—Work Orders

- Notifications
 - Create Notification
 - Create Follow-up Notification
 - Change Notification
 - Complete Tasks and Activities
 - Complete Notification
 - Configurable Dashboard—Notifications
- Equipment
 - Create Equipment
 - Modify Equipment
 - Display Equipment
 - Create a Notification
 - Create a Work Order
 - Equipment Dashboard
- Functional Locations
 - Create Functional Location
 - Modify Functional Location
 - Display Functional Location
 - Create a Notification
 - Create a Work Order
- Time Sheets
 - Create Time Sheet
 - Change Time Sheet
 - Display Time Sheet
- Measuring Points
 - Rounds processing
 - Measurement Readings
 - Measurement Document creation
- Inspection Lots
 - Inspection Lot display and Characteristics overview
 - Results Recording
- Usage Decisions
 - View Results
 - Usage Decisions

7.2. Configure screens based on Order Types and Notification Types

Configure screens or tabs based on Plant Maintenance Work Order Types or Notification Types.

1. In SAP NetWeaver Gateway, run T-Code **/n/INVMWO/SCRCONFI**. Table is **/INVMWO/SCRCONFI**.
2. Add the following entries:

Figure 7-1 Screens based on Document Type - Notifications

Display View "Screen configuration based on Document Types": Overview					
Screen configuration based on Document Types					
Module Name	Document Type	Screen ID	Description	Screen Name	Offline Sync
NOTIFICATION	M1	NO_AC	Corrective Notification	Notification Activities	True
NOTIFICATION	M1	NO_AT	Corrective Notification	Notification Attachments	True
NOTIFICATION	M1	NO_CA	Corrective Notification	Notification Causes	True
NOTIFICATION	M1	NO_GIS	Notification GIS		True
NOTIFICATION	M1	NO_HD	Corrective Notification	Notification Header	True
NOTIFICATION	M1	NO_HI	Corrective Notification	Notification History	True
NOTIFICATION	M1	NO_IT	Corrective Notification	Notification Items	True
NOTIFICATION	M1	NO_TS	Corrective Notification	Notification Tasks	True
NOTIFICATION	M2	NO_AC	Breakdown Notificati	Notification Activities	True
NOTIFICATION	M2	NO_AT	Breakdown Notificati	Notification Attachments	True
NOTIFICATION	M2	NO_CA	Breakdown Notificati	Notification Causes	True
NOTIFICATION	M2	NO_HD	Breakdown Notificati	Notification header	True
NOTIFICATION	M2	NO_HI	Corrective Notification	Notification History	True
NOTIFICATION	M2	NO_IT	Corrective Notification	Notification Items	True
NOTIFICATION	M2	NO_TS	Corrective Notification	Notification Tasks	True
NOTIFICATION	S1	NO_AC	Corrective Notification	Notification Activities	True
NOTIFICATION	S1	NO_AT	Corrective Notification	Notification Attachments	True
NOTIFICATION	S1	NO_CA	Corrective Notification	Notification Causes	True
NOTIFICATION	S1	NO_HD	Corrective Notification	Notification Header	True

Figure 7-2 Screens based on Document Type - Work Orders

Display View "Screen configuration based on Document Types": Overview					
Screen configuration based on Document Types					
Module Name	Document Type	Screen ID	Description	Screen Name	Offline Sync
WORKORDER	EM01	WOHIER	Hierarchy	Hierarchy	True
WORKORDER	EM01	WO_AT	Maintenance Order	Work Order Attachments	True
WORKORDER	EM01	WO_CO	Maintenance Order	Work Order Components	True
WORKORDER	EM01	WO_GIS	Work Order GIS		True
WORKORDER	EM01	WO_HD	Maintenance Order	Work Order Header	True
WORKORDER	EM01	WO_HI	Maintenance Order	Work Order History	True
WORKORDER	EM01	WO_OP	Maintenance Order	Work Order Operations	True
WORKORDER	EM01	WO_PL	Maintenance Order	Work Order Planning view	True
WORKORDER	EM01	WO_SG	Work Order Form	Work Order Form	True
WORKORDER	EM02	WOHIER	Hierarchy	Hierarchy	True
WORKORDER	EM02	WO_AT	Maintenance Order	Work Order Attachments	True
WORKORDER	EM02	WO_CO	Maintenance Order	Work Order Components	True
WORKORDER	EM02	WO_HD	Maintenance Order	Work Order Header	True
WORKORDER	EM02	WO_HI	Maintenance Order	Work Order History	True
WORKORDER	EM02	WO_OP	Maintenance Order	Work Order Operations	True
WORKORDER	EM02	WO_PL	Maintenance Order	Work Order Planning View	True
WORKORDER	EM06	WOHIER	Hierarchy	Hierarchy	True
WORKORDER	EM06	WO_AT	Maintenance Order	Work Order Attachments	True
WORKORDER	EM06	WO_CO	Maintenance Order	Work Order Components	True
WORKORDER	EM06	WO_HD	Maintenance Order	Work Order Header	True

Table 7-1 Screen attributes

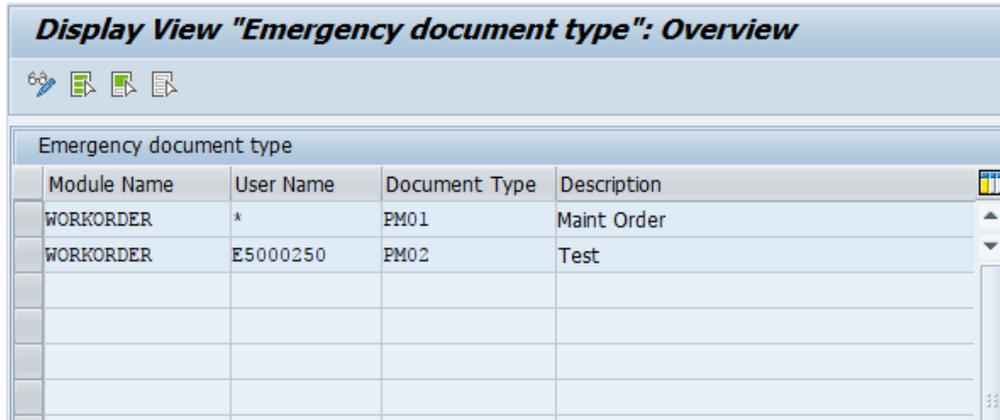
Field	Description
Module Name	Module in the mobile app like Notification or Work Order for which the Document Type is configured.
Document Type	Document Type (Work Order Type/Notification Type) for use on the mWorkOrder Mobile App.
Screen ID	Unique ID of the screen for the Document Type .
Description	Description of the Document Type .
Screen Name	Description to identify the Screen.
Offline Sync	To show/hide screen on the mobile application.

7.3. Configure Plant Maintenance Emergency Order Types

To configure plant maintenance emergency work order types:

1. In SAP ECC, run T-Code **/n/INVMWO/EMGDOC**. Table is **/INVMWO/EMGDOC**.
2. Add the following entries:

Figure 7-3 Emergency Document Type



Emergency document type				
Module Name	User Name	Document Type	Description	
WORKORDER	*	PM01	Maint Order	
WORKORDER	E5000250	PM02	Test	

Table 7-2 Emergency Order Document Type Attributes

Field	Description
Module Name	Name of the module where the Document Type is configured.
User Name	User to whom the Document Type is available in the application. <div style="border: 1px solid #0070C0; border-radius: 10px; padding: 10px; background-color: #E6F2FF;"> <p> Note: It is recommended to configure this field as '*' so that the Document Type is available to all the users.</p> </div>
Document Type	Indicates the Document Type like Work Order Type.
Description	Description of the Document Type.

7.4. Map Measuring Entry List to Mobile User

To map measuring entry list to users:

1. In SAP ECC, run SM30. Give the Table Name as /INVMWO/MPLIST.
2. Click **Maintain**.

Figure 7-4 SM30

The screenshot shows the SAP SM30 'Maintain Table Views: Initial Screen' for the table /INVMWO/MPLIST. The interface includes a title bar, a search field for the table name, a 'Restrict Data Range' section with radio buttons for 'No Restrictions', 'Enter conditions', and 'Variant', and a bottom toolbar with buttons for 'Display', 'Maintain', 'Transport', and 'Customizing'.

Maintain Table Views: Initial Screen

Find Maintenance Dialog

Table/View: /INVMWO/MPLIST

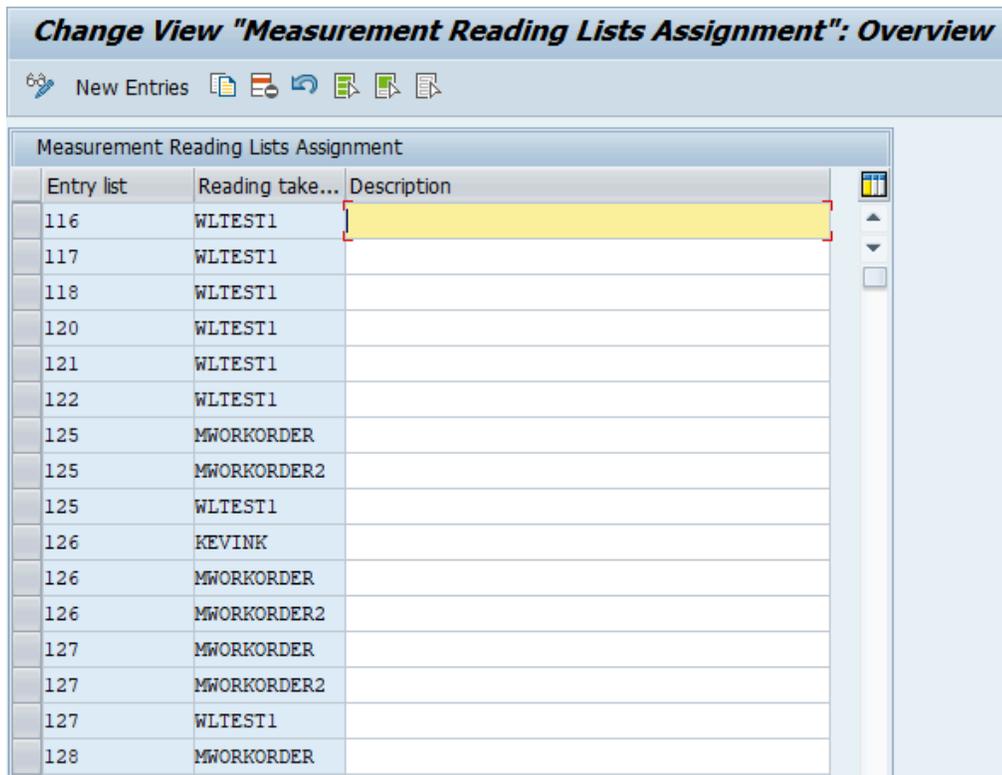
Restrict Data Range

No Restrictions
 Enter conditions
 Variant

Display Maintain Transport Customizing

3. Click **New Entries** and maintain new entries. Entry List is the Readings Task List and Reading Taken by is the Mobile user to whom the Task List will be assigned and sent to capture Readings.

Figure 7-5 Measurement Reading Lists Assignment



Change View "Measurement Reading Lists Assignment": Overview

New Entries [Icons]

Entry list	Reading take...	Description
116	WLTEST1	
117	WLTEST1	
118	WLTEST1	
120	WLTEST1	
121	WLTEST1	
122	WLTEST1	
125	MWORKORDER	
125	MWORKORDER2	
125	WLTEST1	
126	KEVINK	
126	MWORKORDER	
126	MWORKORDER2	
127	MWORKORDER	
127	MWORKORDER2	
127	WLTEST1	
128	MWORKORDER	

7.5. Configure Priority and System Status Color Coding

To configure priority and system status in Work Order and Notification Modules:

1. In SAP ECC, run T-Code SM30. Table is /INVMWO/PRICOLOU.
2. Add the following entries:

Figure 7-6 Priority Color

The screenshot shows the SAP Display View for the table /INVMWO/PRICOLOU. The title is "Display View 'Priority Colour': Overview". Below the title are icons for search, list, print, and refresh. The table has the following data:

App Id	Keys	value	Colour
APP01	IPHAS	CRTD	ff0000
APP01	IPHAS	REL	6DB580
APP01	IPHAS	TECO	B0BEC5
APP01	PRIOK	1	4F5EB0
APP01	PRIOK	2	FBC02D
APP01	PRIOK	3	161e14
APP01	PRIOK	4	B0BEC5
APP01	PRIOK	5	A020F0
APP01	PRIOK	A	FFA500
APP01	PRIOK	B	DC5F61
APP01	PRIOK	C	6F7BBE
APP01	PRIOK	D	619DCF
APP01	PRIOK	E	00A797
APP01	PRIOK	F	FFA500
APP01	PRIOK	Z	B0BEC5
APP02	IPHAS	NOCO	B0BEC5
APP02	IPHAS	NOPR	6DB580
APP02	IPHAS	OSNO	E8C86E
APP02	PRIOK	1	4F5EB0

Table 7-3 Priority and System Status configuration attributes

Field	Description
App ID	Unique application ID to identify the module where the priority color coding is configured.
Key	Standard SAP field (Priority/Status) key to configure color coding.

Field	Description
Value	SAP field (Priority/Status) value to configure color coding.
Colour	Indicates the hexa decimal code of the color for Priority/Status.

7.6. Configure Work Order Numbers Color Coding

To configure work order numbers color coding in work order module:

1. In SAP ECC, run T-Code **SM30**. Table is **/INVMWO/WO_CLRCD**.
2. Add the following entries:

Figure 7-7 Work Order Color Coding

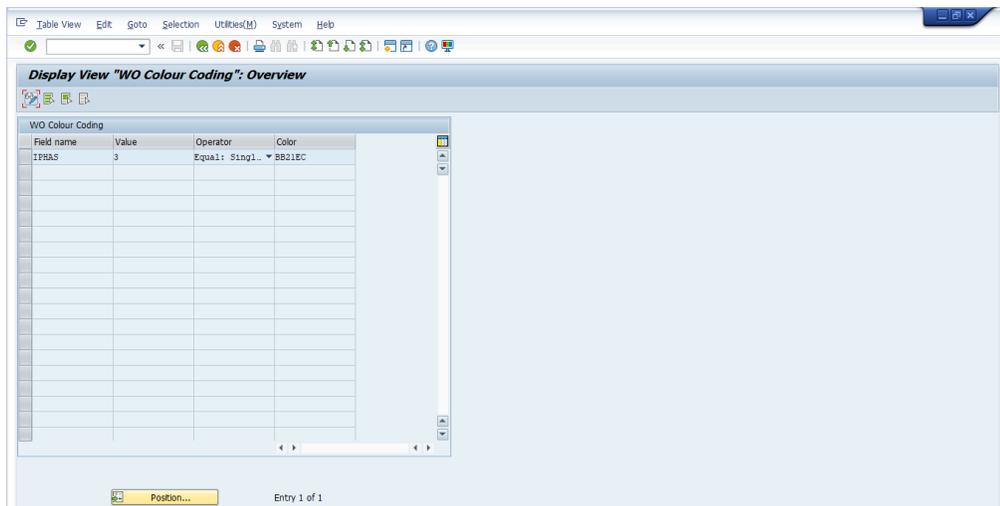


Table 7-4 Work Order Color Coding configuration attributes

Field	Description
Field Name	Work Order field key.

Field	Description
Value	Value of the field to be compared.
Operator	Formula (<, >, =, ≥, ≤)
Color	<p>This field allows you to enter desired color coding for Work Order Numbers.</p> <p>Use the HTML color codes to define the Work Order Number colors.</p>

7.7. Configure DMS Document Object Links

To configure DMS document object links:

1. In SAP ECC, run T-Code /n/INVMWO/OBJLINK. Table is /INVMWO/OBJLINK.
2. Add the following entries:

Figure 7-8 DMS Document Object Links

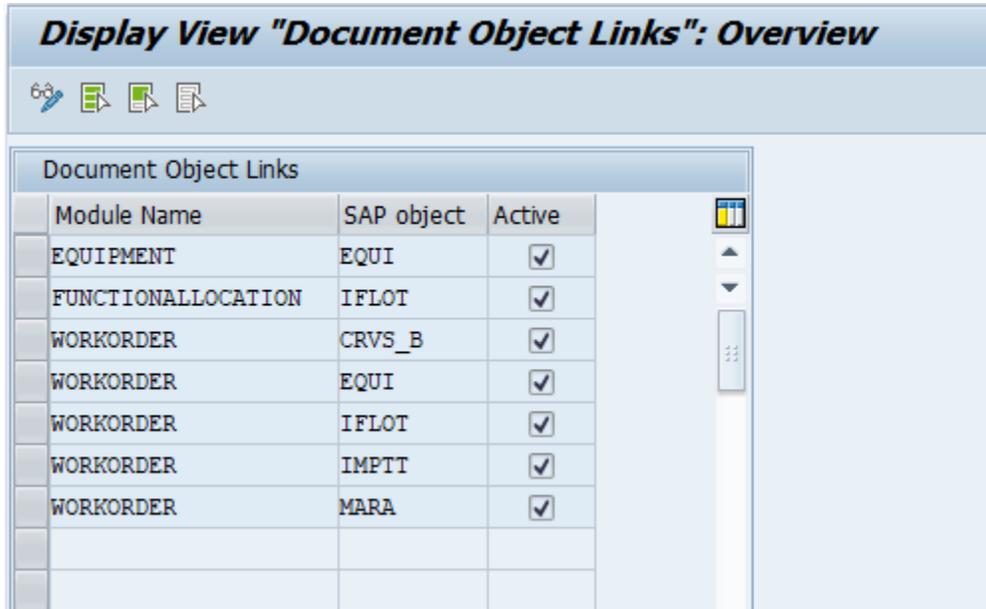


Table 7-5 DMS Document Object Links attributes

Field	Description
Module Name	Name of the module where the object link is configured.
SAP Object	Source field to configure DMS document object link.
ACTIVE	To enable/disable the object link.

7.8. Configure staging table for Equipment and Functional Location master

Learn how to configure staging table for standard tables of Equipment and Functional Location master.

This process is applicable only if the Scoping ID **APPSTG** is enabled in RACE™.

To configure staging table:

| 7 - Configure SAP Gateway for mWorkOrder

1. In SAP ECC, run T-Code **/n/INVMWO/EQ_STG**.
2. Enter selection criteria and execute.

Figure 7-9 Equipment Selection Criteria

Equipment List			
Equipment	<input type="text"/>	to	<input type="text"/>
Equipment description	<input type="text"/>	to	<input type="text"/>
Status	AVLB	to	<input type="text"/>
Equipment category	<input type="text"/>	to	<input type="text"/>
Type of Technical Object	<input type="text"/>	to	<input type="text"/>
Functional Location	<input type="text"/>	to	<input type="text"/>
Main work center	<input type="text"/>	to	<input type="text"/>
Created on	<input type="text"/>	to	<input type="text"/>
Created by	<input type="text"/>	to	<input type="text"/>
Maintenance Plant	1000	to	<input type="text"/>
Location	<input type="text"/>	to	<input type="text"/>
Plant Section	<input type="text"/>	to	<input type="text"/>
Work Center	MECHANIK	to	<input type="text"/>
ABC indicator	<input type="text"/>	to	<input type="text"/>
Sort field	<input type="text"/>	to	<input type="text"/>
Business Area	<input type="text"/>	to	<input type="text"/>
Cost Center	<input type="text"/>	to	<input type="text"/>
Planning plant	1000	to	<input type="text"/>
Planner group	<input type="text"/>	to	<input type="text"/>
Main Asset Number	<input type="text"/>	to	<input type="text"/>
Superordinate Equipment	<input type="text"/>	to	<input type="text"/>

3. Entries are shown in these tables:
 - a. /INVMWO/EQ_HIERA
 - b. /INVMWO/EQ_MEASU
 - c. /INVMWO/EQ_H_SUB
 - d. /INVMWO/EQ_LIST
 - e. /INVMWO/EQ_HEADR
 - f. /INVMWO/EQ_GEOLC
 - g. /INVMWO/EQ_CLSIT
 - h. /INVMWO/EQ_CLSHD
 - i. /INVMWO/EQ_PRTNR

Figure 7-10 Equipment Hierarchy table

Data Browser: Table /INVMWO/EQ_HIERA Select Entries 31

EQUNR	EQQTX	HEQUI	HEQUI_TXT	MATNR	MAKTX	MENGE	MEINS	FLAG	LA_FLAG	TPLNR	SNO
10008892		10000470				0,000					1
10008895						0,000		X	X	1000-100-AB-02	1
10008897						0,000		X		CF1-A309-0026	1
10009900						0,000		X		CF1-A309-0027	1
10009901						0,000		X		CF1-A309-0028	1
10009902						0,000		X		1000-101-AB-07	1
10009904						0,000		X		1000-100-AB-11	1
10009905						0,000		X		1000-100-AB-11	1
10009906		10003557				0,000					1
10009907						0,000		X	X	1000-100-AB-13	1
10009908		10009907				0,000			X		1
10009909						0,000		X	X	1000-100-AB-14	1
10009910						0,000		X		CF1-A309-0029	1
10009911						0,000		X		CF1-A309-0030	1
10009912						0,000		X	X	1000-100-AB-19	1
10009915						0,000		X		2108-AUT	1
10009918						0,000		X		CF1-A309-0031	1
10009919						0,000		X		CF1-A309-0032	1
10009920						0,000		X		CF1-A309-0033	1
10009921						0,000		X		CF1-A309-0034	1
10009922						0,000		X		CF1-A309-0035	1
10009923						0,000		X		CF1-A309-0036	1
10009924						0,000		X		CF1-A309-0037	1
10009925						0,000		X		CF1-A309-0038	1
10009927						0,000		X		CF1-A309-0039	1
10011273						0,000		X		CF1-A309-0041	1

4. In SAP ECC, run T-Code **/n/INVMWO/FL_STG**.

5. Enter selection criteria and execute.

Figure 7-11 Functional Location Selection Criteria

Functional Location Expand for Staging Table

Functional Location	<input type="text"/>	to	<input type="text"/>	
Description of functional lo	<input type="text"/>	to	<input type="text"/>	
Functional location category	<input type="text"/>	to	<input type="text"/>	
Main Work Center	MECHANIK	to	<input type="text"/>	
Type of Technical Object	<input type="text"/>	to	<input type="text"/>	
Status	<input type="text"/>	to	<input type="text"/>	
Created on	<input type="text"/>	to	<input type="text"/>	
Created by	<input type="text"/>	to	<input type="text"/>	
Maintenance Plant	1000	to	<input type="text"/>	
Location	<input type="text"/>	to	<input type="text"/>	
Plant Section	100	to	<input type="text"/>	
Work Center	<input type="text"/>	to	<input type="text"/>	
ABC indicator	<input type="text"/>	to	<input type="text"/>	
Sort field	<input type="text"/>	to	<input type="text"/>	
Business Area	1000	to	<input type="text"/>	
Cost Center	<input type="text"/>	to	<input type="text"/>	
Planning plant	1000	to	<input type="text"/>	
Planner group	<input type="text"/>	to	<input type="text"/>	
Main Asset Number	<input type="text"/>	to	<input type="text"/>	
WBS Element	<input type="text"/>	to	<input type="text"/>	
Construction type	<input type="text"/>	to	<input type="text"/>	
Authorization group	<input type="text"/>	to	<input type="text"/>	

6. Entries are shown in these tables:

- a. /INVMWO/FL_IFLO
- b. /INVMWO/FL_HI_DE
- c. /INVMWO/FCHEADER
- d. /INVMWO/FL_HIER
- e. /INVMWO/FL_MEAS
- f. /INVMWO/NOTF_GEO

Figure 7-12 Functional Location table

Data Browser: Table /INVMWO/FL_IFLO Select Entries 89

TPLNR	PLTXT	TPLKZ	FLTYP	IWERK	LGWID	INGRP	STTXT	FLTTX	STTXU	EXTENSION	ARBPL	LABELS	HERST
1000-100-AB-01	Production Area	A		1000		100					MECHANIK	("entries":{("TP...	Fgh1
1000-100-AB-02	Functional location edit	A		1000		100					MECHANIK		motors 12
1000-100-AB-03	Functional offline1	A		1000		100					MECHANIK		ABC.co
1000-100-AB-04	Suppository packing line	A		1000							MECHANIK		Moto
1000-100-BA-01	REGULATOR STATION R1000	A		1000									
1000-100-PS-41	Technical Spec	A		1000							MECHANIK		BMW
2108-AUT	Automation Servers & Hubs	A		1000		100							Automation Serve
2108-BLK	Bulk Storage	A		1000		100					ELEKTRIK		
2108-BLK-CH	Bulk Chemical Storage1	A											Automation serve
DL-EH	Primary Substation EHALLANDALE 1	WD101		1000									
DL-EH-01	Sub EHALLANDALE - Feeder EHALL 1	WD101		1000									
DL-EH-01-S01	THE DIPLOMAT 1	WD101		1000									
DL-EH-01-S02	THE DIPLOMAT 2	WD101		1000									
DL-EH-01-S03	THE DIPLOMAT 3	WD101		1000		103					ITSERV		
DL-EH-01-S04	THE DIPLOMAT 4	WD101		1000									
DL-EH-01-S05	THE DIPLOMAT 5	WD101		1000									
DL-EH-01-S06	THE DIPLOMAT 6	WD101		1000									
DL-EH-01-S07	THE DIPLOMAT 7	WD101		1000									
DL-EH-01-S08	THE DIPLOMAT GOLF RESORT	WD101		1000									
DL-EH-02	Sub EHALLANDALE - Feeder EHALL 2	WD101		1000		100					MECHANIK		teil
DL-EH-02-P01	PS3345	WD101		1000		100					MECHANIK		
DL-EH-02-P02	PS3346	WD101		1000		100					MECHANIK		
DL-EH-02-P03	PS3347	WD101		1000		100					MECHANIK		
DL-EH-02-P04	PS3348	WD101		1000		100					MECHANIK		
DL-EH-02-P05	PS3349	WD101		1000		100					MECHANIK		



Note:

Update the tables with background scheduled jobs regularly.

- Configure these filters in RACE™, to filter and populate data in the staging table when no value is entered for a field in the selection screen (/INVMWO/FM_EQ_EXPAND_STG).

Master	Filter
Equipment	EQSTG_FILTERs
Functional Location	FLSTG_FILTERs

- Configure these when using Staging process:

Table 7-6 Staging Configuration

Master	Filter	Table Name
Equipment	EQSTG_FILTER	/INVMWO/EQ_LIST
Functional Location	FLSTG_FILTER	/INVMWO/FCHEADER



Note:

Data is filtered only for the fields in tables /INVMWO/FCHEADER and /INVMWO/EQ_LIST.

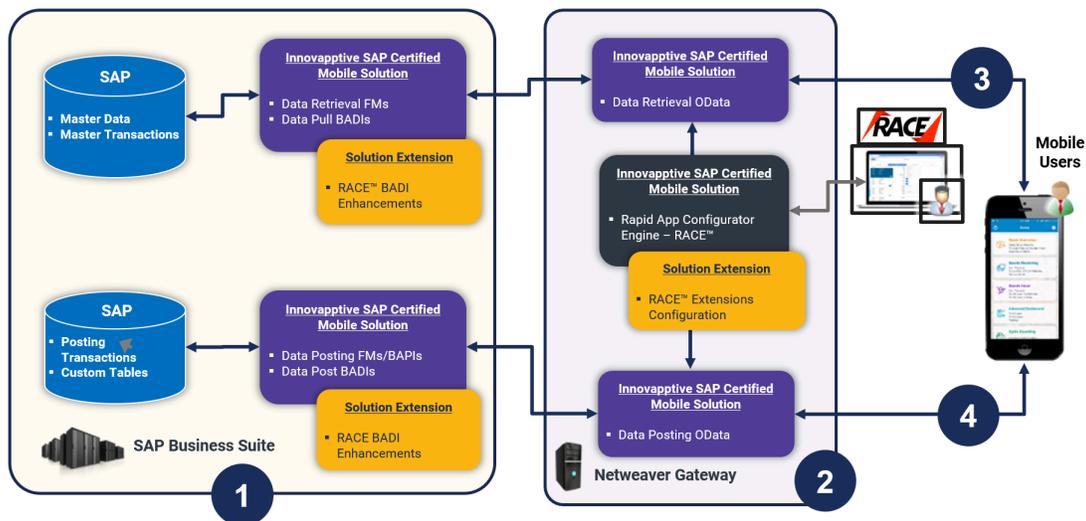
8. Configure RACE™ for mWorkOrder

Innovapptive's Connected Workforce Platform™ uses built-in integrations to connect your SAP®, IBM Maximo, and other back-office systems with mobile applications. This helps organizations bridge communication and information gaps between executive teams, field technicians, plant operators, warehouse operators, maintenance engineers, and back-office staff. Connect data points across cloud and on-premise networks to quickly and easily.

- Draw powerful insights
- Identify cost-savings opportunities
- Make calculated business decisions
- Respond quickly to trends or problems

To align our solutions with your operations, we built a Rapid App Configuration Engine (RACE™) directly into our mobile Connected Workforce Platform. This sophisticated configuration toolkit gives developers and non-developers complete freedom to customize mobile environments without any coding experience.

Figure 8-1 RACE™ Architecture



Deployment ecosystem consists of the following:

1. SAP ECC Integration Component (SAP Certified Add-On in Innovapptive Namespace):

This SAP-certified add-on is developed on ABAP. You can deploy this add-on on SAP ECC through an Add-On Package. You can make enhancements to this through BADI by developing those enhancements in ABAP. This add-on helps you manage Data retrieval and do posting to BAPI's or Function Modules.

2. SAP NetWeaver Integration Component with OData Web Services: Developed on ABAP and OData and offered as an SAP Certified Add-On. This add-on is deployed through an Add-On Package on SAP NetWeaver. You can make enhancements through RACE Configurations. This add-on helps manage the OData integration components (i.e. OData Web Services) to interface with the mobile app. The RACE™ Add-On has both the front-end components and the back-end data tables for the RACE™ Lite Configuration tool.

3. Native App Client + Desktop Web App: Application front-end solutions are offered on all three major mobile OS as a native application that can run on tablets and smartphones.

- iOS - Developed using native iOS (Swift SDK)
- Android - Developed using Android SDK on JAVA
- Windows OS - Developed using Windows development kits.
- Browser based App for desktop - Developed using SAPUI5 technology.

Changes on the application user interface is managed through the RACE™ Lite Admin tool.

4. Interface between Mobile App and NetWeaver Gateway: OData Web Services

5. Interface between NetWeaver Gateway and SAP ECC: RFC Connection

8.1. Features of RACE™

You can do the following with RACE™ in your mobile application:

- **Enable and Disable features:** Enable or disable modules on the fly; no additional development or deployments efforts.
- **Define Defaults:** Define default device and application values that you use every day at work like Default Plant or the type of peripherals that you use. When you do this, the fields for specifying those values are automatically populated.
- **Manage Filters:** Create, edit, or delete filters to define the transaction records that you want to view across the modules. For example, you can add a date filter for Purchase Orders to restrict a list of Purchase Orders displayed in a list screen.
- **Add/Modify fields:** Add new fields and modify existing field parameters, such as Field Types, UI Label, UI Positions and visibility. Define mandatory, optional or display/hidden fields.
- **Add and customize search criteria:** Add/modify search fields to filter records based on your work requirements.
- **Create modules and screens:** Create new modules and screens to address your specific business requirements.
- **Optimize Performance:** Enable or disable a collection for Offline storage and configure the page size on the list screen using Skip Token.
- **Localization:** Configure the UI labels in the language of your choice to cater to regional language requirements.
- Apply security access capabilities to modules and features.
- Configure security for newly added fields.
- Map newly added fields with SAP fields.

8.2. How to Configure RACE™ for mWorkOrder

RACE™ configurations are provided in spreadsheets. Upload these spreadsheets to your RACE application instance to enable the latest RACE™ features that are developed for mWorkOrder. Contact your Innovapptive representative for the RACE configuration spreadsheets for your release.

When you use the RACE™ preset configuration spreadsheets, you enable all the recommended features / configurations automatically.

Some non-standard features are developed for a few customers. These features are not enabled by default when you import the spreadsheets with configurations. You can enable these features if required by your business.

For detailed information on RACE configurations, see the *Upload Application Configurations Using RACE™* section in the *Configure mWorkOrder using RACE™* document.

9. SAP transactions and tables for mWorkOrder

The following table provides the list of key SAP transactions and tables that are relevant to the mWorkOrder mobile solution.

Table 9-1 SAP Transactions and Tables

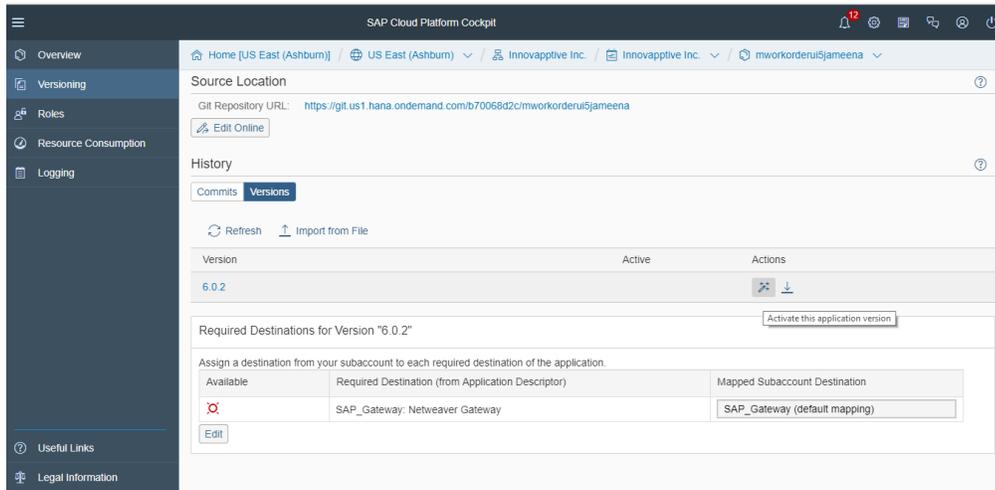
Module Name	Applicable Table	Transaction Code
Work Orders	AUFK, AFIH, AFKO, RESB, MARD, MARA	IW31, IW32, IW33, IW34, IW39,
	VIAUFKST	IW41, IW42, IW43, IW45, MIGO, MMBE
Notifications	QMEL, QMIH	IW21, IW22, IW23, IW29
	QMSM, QMUR	
	QMFE, QPCT	
Equipment	EQUI, EQUZ	IE01, IE02, IE03, IH08
	EQKT	
Functional Locations	IFLO, IFLOT	IL01, IL02, IL03, IH06
	ILOA	
Measuring Points	IMPTT	IK01, IK02, IK03, IK11, IK13, IK34
	IMRG	
Time Sheets	CATSDB	CAT2
Usage Decisions	QALS	QA03
	QAMV	
Inspection Lots	QALS	QA13
	QMFEL	

10. Deploy MWO UI5 package to SAP Cloud platform (SCP)

To deploy MWO UI5 package to SCP:

1. Login to SCP Cockpit.
2. Navigate to Applications, HTML5 Applications.
3. Click **Import From File**.
4. Browse and select the application (mWorkOrder) zip file.
5. Enter Version number.
6. Click on the deployed application and go to Versioning from the menu.
7. Click on Versions on the detail page.
8. Click on Activate.

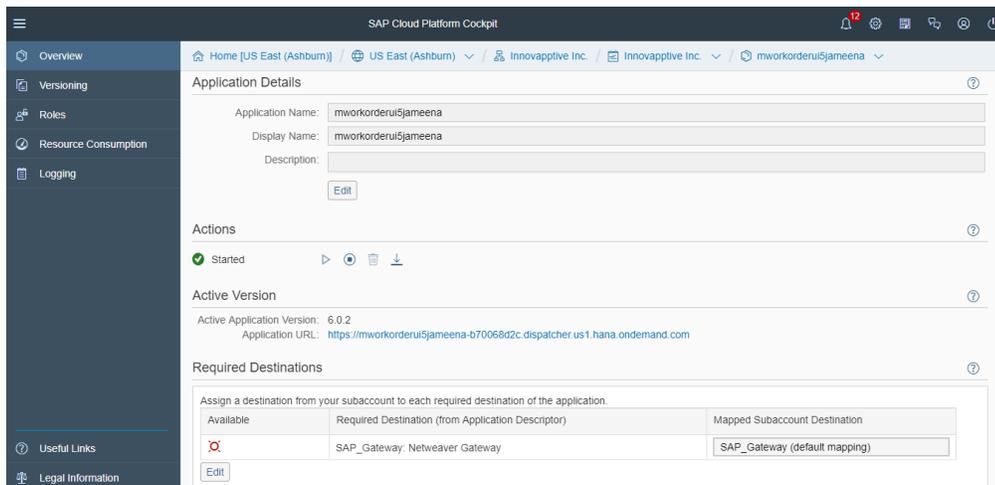
Figure 10-1 Application Details - Versions



9. Click **Yes** on the Activate Version confirmation pop-up.

10. Application URL is displayed in the Active Version section.

Figure 10-2 Application Details - Active Version - URL

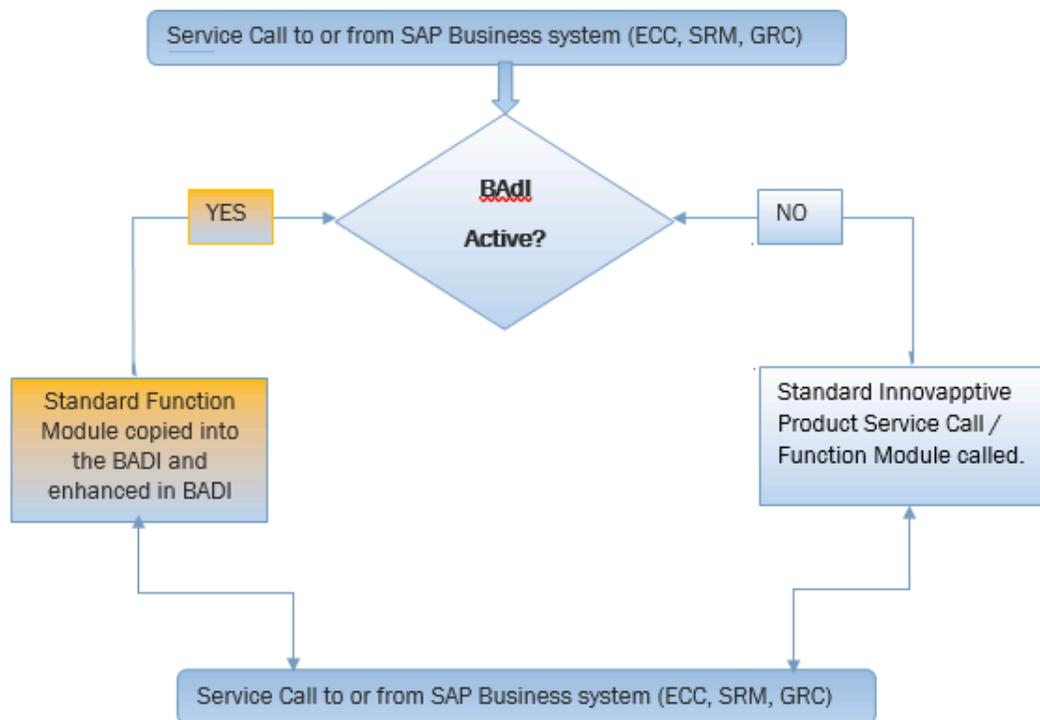


11. Implement BADIs

mWorkOrder uses SAP oDATA based on RESTful design. mWorkOrder performs service calls to read and post data from the SAP Business backend system. These service calls invoke remote enabled function modules in the backend systems to either get or post data depending on the direction of the call. Like Standard SAP code, Innovapptive Add-On code objects cannot be modified in customer systems.

Innovapptive’s solution provides the ability for customers to avail additional functionality through BADIs. The enhanced / modified service calls/function modules that are designed to meet special / additional requirements of customers are replaced in the customer environment BADI.

Figure 11-1 BADI Implementation



11.1. Prerequisites for BADI Implementation

Ensure you have the following:

- **Access**

- Access to the ECC system as ABAP Developer.

- **Dependency**

- Installation of ECC and Gateway Add-ons.
- BRD and Fit-GAP analysis has been performed. Gap resolution requires custom enhancement to be performed on the customer SAP system.

- **Assumptions**

- Person who performs the actions outlined has full knowledge and understanding of ABAP Development and has BADIs implementation experience.
- Standard SAP best practices are followed, and the business requirements are documented, the Fit-Gap analysis is performed, FS and TS are documented to ensure that the changes to the standard functionality are done using the SDLC process.
- All changes done in the BADI are owned by the customer and changes and support (during upgrades) are fully owned by the customer as these are enhancements to the Product and thus no longer part of the standard Innovapptive product Add-On code. This is in line with SAP standard methodology, all enhancements/BADIs are fully owned by the customer and need to evaluate during upgrades for impact or adjustments.

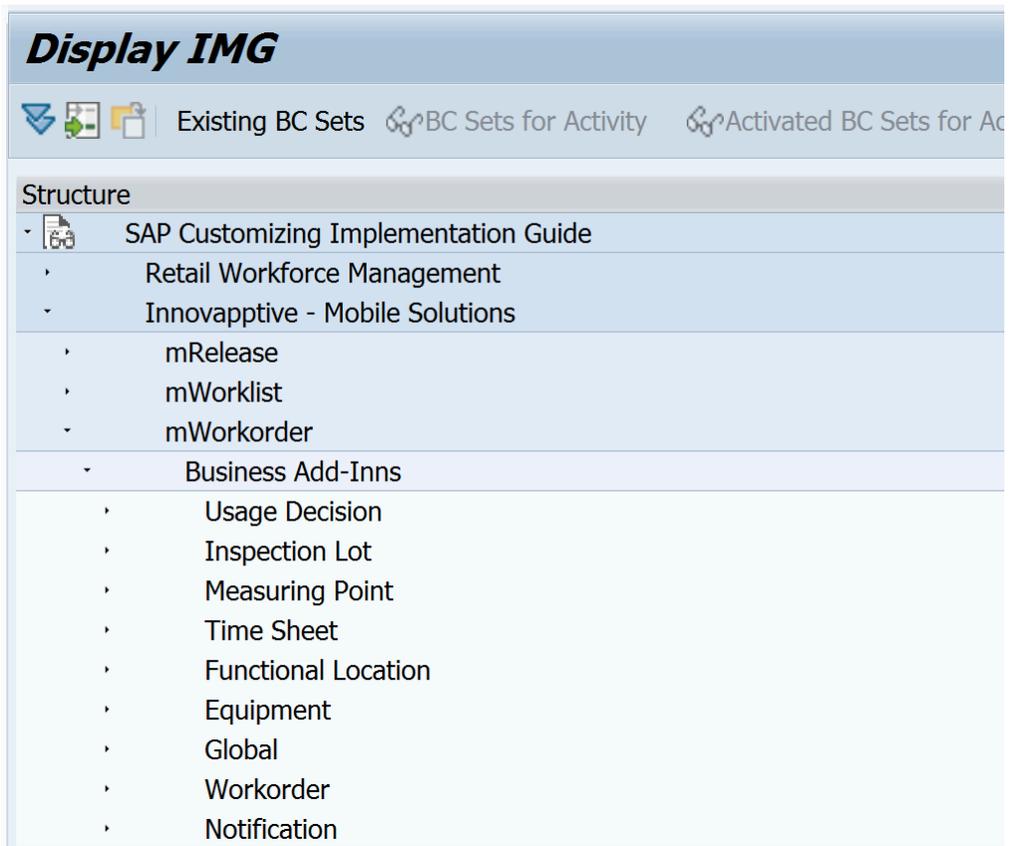
11.2. Activate and Implement BADI

To activate and implement BADI:

1. Log in to SAP.
2. Run transaction SPRO.
3. Click Innovapptive – Mobile Solutions, mWorkOrder and select BADI as shown in the image.

For the list of BADIs available for mWorkOrder, see [List of BADIs for mWorkOrder \(on page 108\)](#).

Figure 11-2 SPRO IMG Structure



4. Click Execute.
5. Alternatively, you can use transaction SE37 and view the function module /INVMWO/
BAPI_WO_CONFIG_DB. This FM is related to service call that gets WorkOrder
Configurable Dashboard.

Figure 11-3 FM: /INVMWO/BAPI_WO_CONFIG_DB

```

421 |-----*
422 | * Badi Ref Object Declaration
423 |-----*
424 | DATA : lo_badi_woconfigdb TYPE REF TO
425 | /invmwo/badi_woconfigdb.
426 |
427 |
428 | ** Check condition for initial BADI
429 | GET BADI lo_badi_woconfigdb.
430 | IF lo_badi_woconfigdb IS BOUND.
431 |   TRY.
432 |     CALL BADI lo_badi_woconfigdb->woconfigdb
433 |       EXPORTING
434 |         it_cockpit      = it_cockpit
435 |         it_filter       = it_filters
436 |         im_skip        = im_skip
437 |         im_top         = im_top
438 |         it_ui_labels   = lt_ui_labels
439 |       CHANGING
440 |         et_list        = et_list
441 |         ev_skiptoken   = ev_skiptoken
442 |         return         = return.
443 |     CATCH cx_badi_not_implemented.      "#EC NO_HANDLER
444 |   ENDMETHOD.
445 | ELSE.
  
```

6. Search the function module with the string GET BADI
7. Click GET BADI

Program/Enhancement	Found locs/short description
/INVMWO/LMWORKORDER_WOFGU39	429 GET BADI lo_badi_woconfigdb.

8. Double-click the BADI to navigate to the SE18 transaction

Figure 11-4 SE18

```

] *-----*
  * Badi Ref Object Declaration
  *-----*

  DATA : lo_badi_woconfigdb  TYPE REF TO
         /invmwo/badi_woconfigdb.
    
```

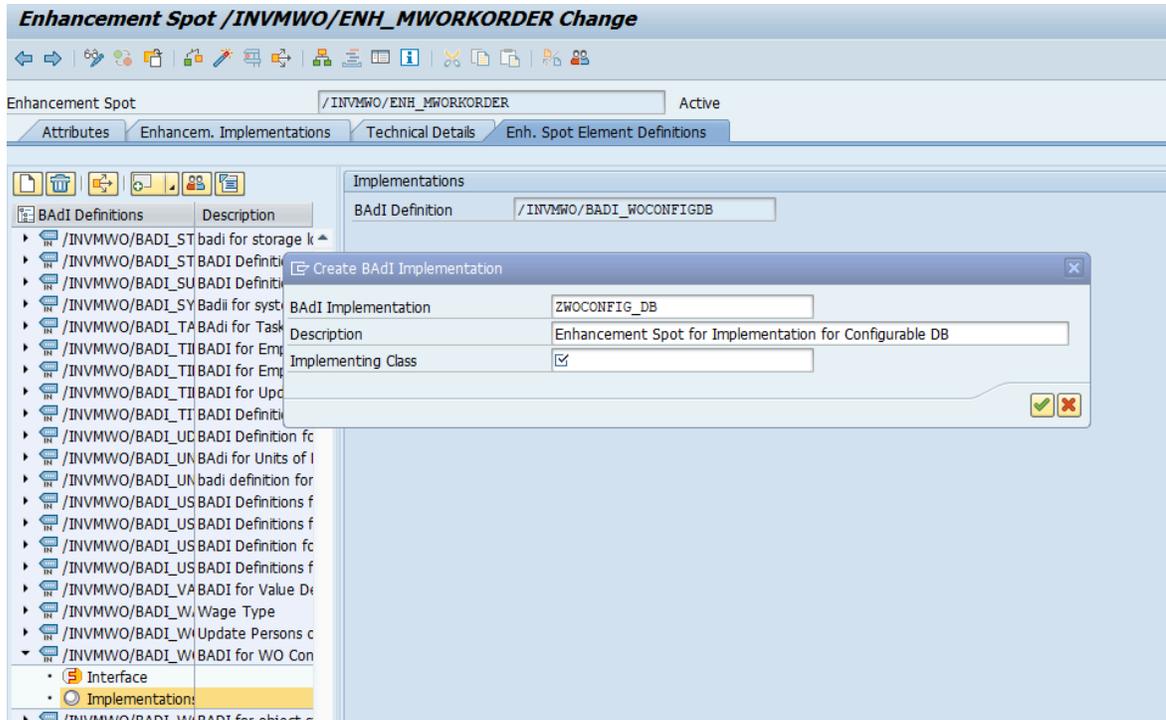


9. Click the Implementation icon for BADI.

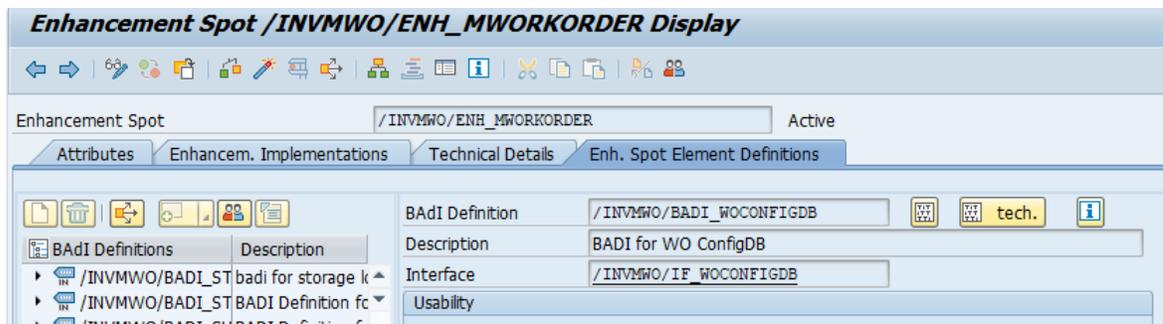
The screenshot shows the SAP SE18 interface for configuring an enhancement spot. The main window title is "Enhancement Spot /INVMWO/ENH_MWORKORDER Display". The "Enhancement Spot" is set to "/INVMWO/ENH_MWORKORDER" and is "Active". The "Enh. Spot Element Definitions" tab is selected, showing a list of BADI definitions on the left and configuration details on the right. The BADI definition shown is "/INVMWO/BADI_WOCONFIGDB" with the description "BADI for WO ConfigDB" and interface "/INVMWO/IF_WOCONFIGDB". The "Usability" section has "Multiple Use" checked. The "Instance Creation Mode" is set to "Newly Creating Instantiation".

10. Enter an appropriate name (starting with Y/Z) for enhancement of spot implementation. (Follow the naming conventions and standards as per the policies and procedures defined.)

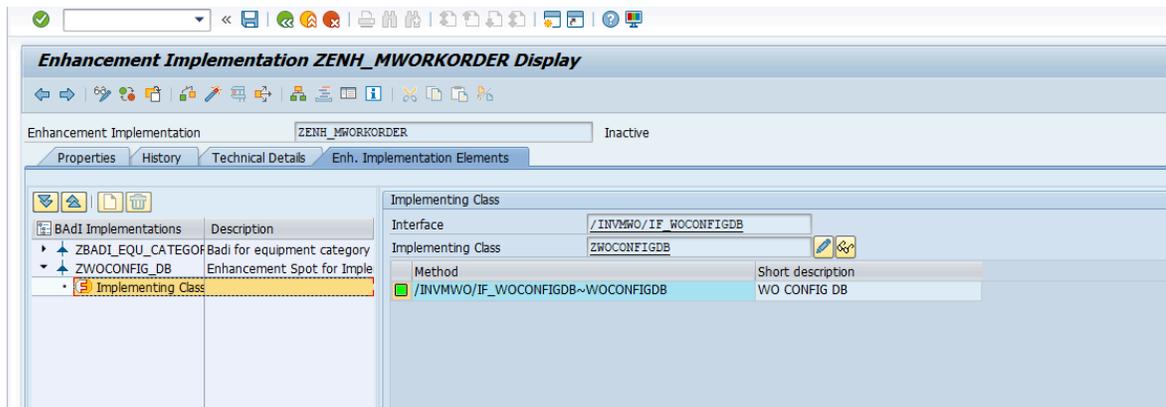
| 11 - Implement BADIs



11. Enter the package name.
12. Enter an appropriate name starting with Y/Z for BADI implementation and any Z/Y name for implementing a class.

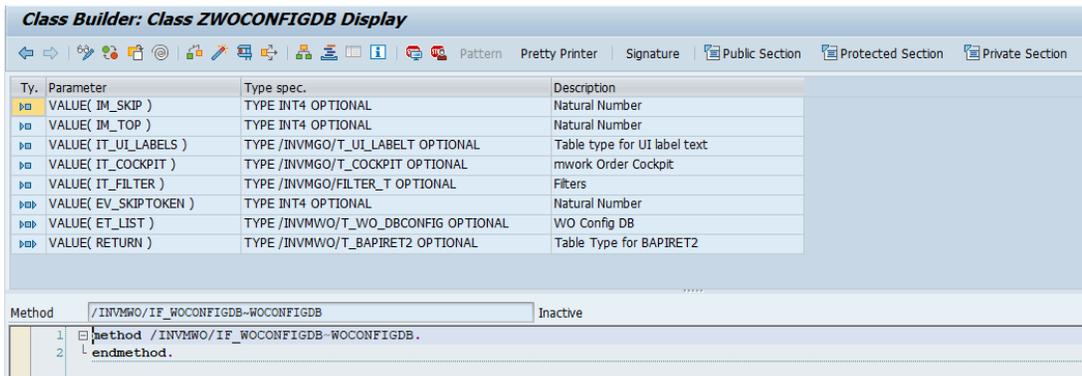


13. Click the method as shown in the following screenshot.



14. Click **Yes**.
15. Perform the development activity (code changes and enhancements) to meet the business requirements:
 - a. By default, the BADI is initially blank.
 - b. Copy all the lines of the code from the standard Innovapptive—delivered FM / INVMWO/BADI_WOCONFIGDB to this section.

The code can now be enhanced by following the standard ABAP development practices.

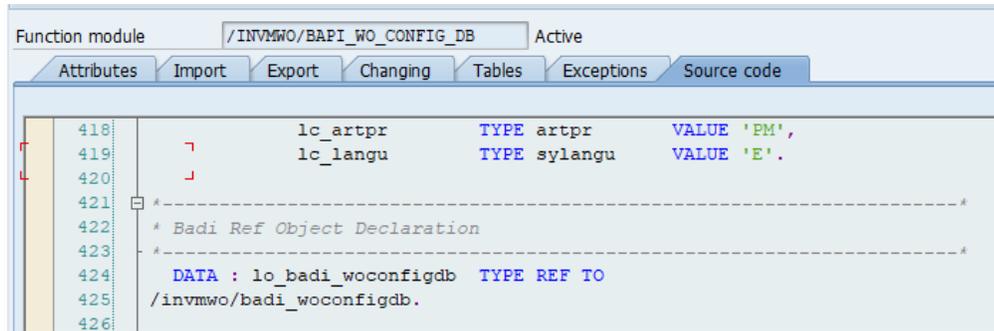


- c. Activate the BADI implementation (while activating, select all the relevant objects in the activation list).

11.3. Verify BADI Implementation

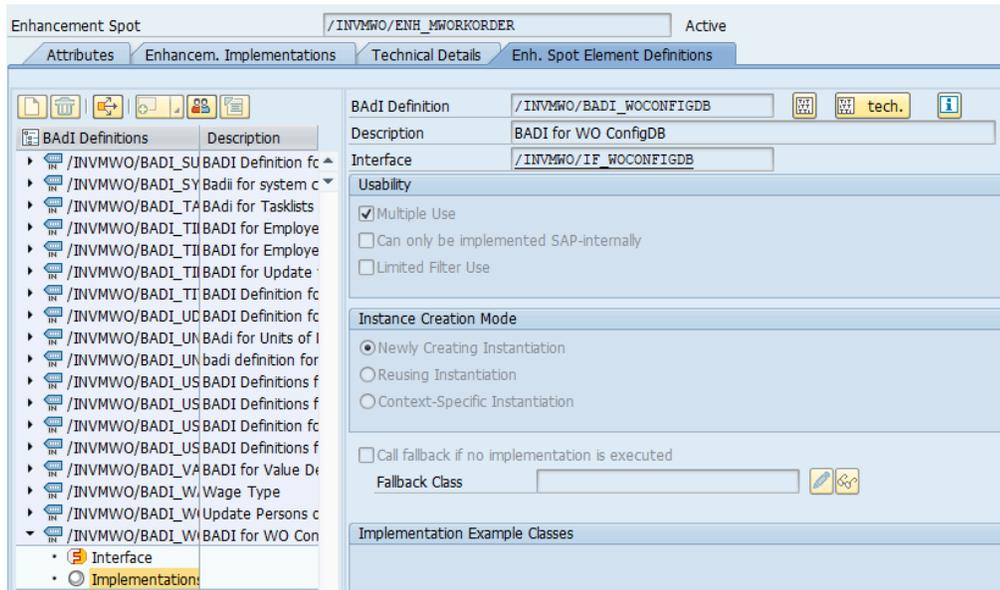
1. Run **SE37** and display the function module **/INVMWO/BAPI_WOCONFIGDB**.

Figure 11-5 Function Module: /INVMWO/BAPI_WOCONFIGDB



2. Double-click the BADI **//INVMWO/BADI_WOCONFIGDB**

Figure 11-6 BADI: //INVMWO/BADI_WOCONFIGDB



This displays the BADI implementation along with the active or inactive status.

3. Verify the **Implementation is active** check box.

11.4. List of BADIs for mWorkOrder

List of BADIs (Business Add-Ins) available as part of the mWorkOrder SAP ECC Add-on component to enhance the standard functionality with ABAP development.

Table 11-1 BADIs in mWorkOrder Application

MODULE NAME	BADI Name	BADI Description	Screen Description
EQUIPMENT	/INVMWO/BADI_AD- DRNO_CREATE	BADI Definition for Ad- dress Number Create and Update	Equipment Address Create
EQUIPMENT	/INVMWO/BADI_E- QUIPMENT_DETAIL	BADI Definition for Equipment List	Equipment General Display
EQUIPMENT	/INVMWO/BADI_E- QUIPMENT_LIST	BADI Definition for Equipment List	Equipment Header Display
EQUIPMENT	/INVMWO/BADI_E- QUI_CREATE	BADI definition for Equipment Create	Equipment Location Create
EQUIPMENT	/INVMWO/BADI_- MAINTENANCE_PLANS	Maintenance Plans	Equipment Display Maintenance plant
EQUIPMENT	/INVMWO/BADI_E- QUIPMENT_BOM	BADI Definition for Equipment BOM	Equipment Display Bill of Material
EQUIPMENT	/INVMWO/BADI_E- QUIP_ATTACHMENTS	BADI for Equip At- tachments	Equipment Filters
FUNCTIONAL LO- CATION	/INVMWO/BADI_- IFLO_CREATE	BADI Definition for Functional Location Create	Functional Location Header Display
FUNCTIONAL LO- CATION	/INVMWO/BADI_FL_- LAST_MEASPOINT	BADI Definition for Last MP List	Functional Location Measuring Counter
FUNCTIONAL LO- CATION	/INVMWO/BADI_E- QUIP_NEAR_ME	BADI Definition for Equipment Last Ac- tive Orders	Functional Location Near Me Notification Filters
FUNCTIONAL LO- CATION	/INVMWO/BADI_- PARTNER_LIST	BADI Definition for Partner List	Functional Location Partner Create
FUNCTIONAL LO- CATION	/INVMWO/BADI_- FUNCTIONAL_DETAIL	BADI Definition for Functional Location	Functional Location Search
INSPECTIONLOT	/INVMWO/BADI_- INSP_CHAR_LIST	BADI Definition for In- spection Lot List	Inspection Lot Char- acteristics Display

Table 11-1 BADIs in mWorkOrder Application (continued)

MODULE NAME	BADI Name	BADI Description	Screen Description
INSPECTIONLOT	/INVMWO/BADI_- INSP_OPERATIONS	BADI Definition for in- spection Lot Opera- tions	Inspection Lot Opera- tions Display
INSPECTIONLOT	/INVMWO/BADI_- INSPECLOT_NO_LIST	BADI Definition for In- spection Lot List	Inspection Lot Search
MEASURINGPOINT	/INVMWO/BADI_EN- TRYLIST	BADI for Entry list	Measuring Point Entry List Display
MEASURINGPOINT	/INVMWO/BADI_- MEASURING_POINT	BADI Definition for Get List of Measuring point	Measuring Point Range Limits Display
MEASURINGPOINT	/INVMWO/BADI_- MEASPOINT_CREATE	BADI Definition for Create Measuring Point	Measuring Point Header Create
MEASURINGPOINT	/INVMWO/BADI_- MEASDOC_HISTORY	BADI Definition for MP History	Measuring Point His- tory Display
NOTIFICATION	/INVMWO/BADI_- WO_NOTIF_LIST	BADI for Notification List	Notification Map
NOTIFICATION	/INVMWO/BADI_- NOTIF_ACTIVITY_LI	BADI for Notification Activity List	Notification Activities Create
NOTIFICATION	/INVMWO/BADI_- NOTIF_CREATE	BADI for Notification Create	Notification Header Create
NOTIFICATION	/INVMWO/BADI_- NOTIF_ITEM_UPDATE	BADI Definition for No- tify Item Update	Notification Items Create
NOTIFICATION	/INVMWO/BADI_- WO_NOTIF_DETAILS	BADI for Notification Details	Notification Header
NOTIFICATION	/INVMWO/BADI_- NOTIF_ITEMS_DISP	BADI for Notification Items List	Notification Items
NOTIFICATION	/INVMWO/BADI_- NOTIF_CAUSES_LIST	BADI for Notification Causes list	Notification Causes

Table 11-1 BADIs in mWorkOrder Application (continued)

MODULE NAME	BADI Name	BADI Description	Screen Description
NOTIFICATION	/INVMWO/BADI_- NOTIF_TASK_LIST	BADI for Notification Task List	Notification Tasks
NOTIFICATION	/INVMWO/BADI_- NOTIFTASK_REL_COM	Notification Release and Complete	Notification Task Cre- ate
NOTIFICATION	/INVMWO/BADI_- NOTIF_HISTORY	BADI Definition for No- tification History	Notification History
NOTIFICATION	/INVMWO/BADI_- NOTIF_CAUSES_UPD	BADI for Notification Causes Update	Notification Header Display
WORKORDER	/INVMWO/BADI_- WO_COMPONENT_- LIST	BADI for Components list	Work Order Compo- nents Create
WORKORDER	/INVMWO/BADI_- WORKORDERS_LIST	BADI for work order list	Work Order Header Create
WORKORDER	/INVMWO/BADI_- WO_OPERATION_LIST	Work Order Operation List	Work Order Opera- tions Create
WORKORDER	/INVMWO/BADI_- WORKORDER_CREATE	BADI Definition for Create Workorder	Work Order Header Display
WORKORDER	/INVMWO/BADI_- MATERIAL_GETLIST	BADI for Material List	Material Search
WORKORDER	/INVMWO/BADI_E- QUI_CREATE	BADI definition for Equipment Create	Work Order Header
WORKORDER	/INVMWO/BADI_- PLANNING_VIEW	BADI for PLANNING_- VIEW	Work Order Planning tasks Display
WORKORDER	/INVMWO/BADI_- WORKORDER_HISTORY	BADI Definitions for Workorder History	Work Order History Display
WORKORDER	/INVMWO/BADI_- WO_OPERATION_LIST	Work Order Operation List	Work Order Opera- tions
WORKORDER	/INVMWO/BADI_- WO_BOM_DETAILS	BADI definition for BOM details	Work Order Compo- nents

Table 11-1 BADIs in mWorkOrder Application (continued)

MODULE NAME	BADI Name	BADI Description	Screen Description
WORKORDER	/INVMWO/BADI_- OPECONF_DETAILS	BADI Definitions for WO Operations	Work Order Operation Confirmation Create
WORKORDER	/INVMWO/BADI_- ALM_CONF_CANCEL	BADI Definitions for Priority Count	Workorder DB search
WORKORDER	/INVMWO/BADI_AT- TACHMENT_CREATE	BADI Definition for at- tachment create	Workorder Attach- ments
WORKORDER	/INVMWO/BADI_- MATERIAL_STOCK	BADI Definition for Material Stock	Material Availability Filters
WORKORDER	/INVMWO/BADI_- WOTYPES_GETLIST	BADI for Work Order Types	WO DocType Filters
WORKORDER	/INVMWO/BADI_D- DWORKORDERS_LIST	BADI Definitions for DD Workorders List	Work Order Search
WORKORDER	/INVMWO/BADI_- NOTIF_EQUIPT_LIST	BADI for Notification Equipment list	DD Equipment Filters
WORKORDER	/INVMWO/BADI_- NOTIF_FUNLOC_LIST	BADI Notification function location list	DD Functional Loca- tion Filters
USAGEDECISION	/INVMWO/BADI_- USAGE_DEC_LIST	BADI Definitions for Usage Decision List	Usage Decision Header Display
USAGEDECISION	/INVMWO/BADI_DE- FECTS_GET	BADI Definitions for Defects List	Usage Decision De- fects Display
USAGEDECISION	/INVMWO/BADI_- USAGE_DEC_SAVE	BADI Definitions for Usage Decision Save	Usage Decision Save
TIMESHEET	/INVMWO/BADI_- TIME_ENTRY_OVRVIEW	BADI for Employee Time Entry Overview	Timesheet Filters
TIMESHEET	/INVMWO/BADI_- TIME_ENTRY_CREATE	BADI for Employee Time Entry Creation	Time Sheet Create
CREWMANAGEMENT	/INVMWO/BADI_W- C_PERSONS_UPD	Update Persons of Work Center	Pernr Search

Table 11-1 BADIs in mWorkOrder Application (continued)

MODULE NAME	BADI Name	BADI Description	Screen Description
CREWMANAGEMENT	/INVMWO/BADI_D- DEMP_LIST	BADI Definitions for Employee List	Pernr Search
WORKORDER	/INVMWO/BADI_- WO_ATTACH_DEL	BADI to delete WO at- tachments	Work Order
EQUIPMENT	/INVMWO/BADI_E- QUIP_ATTACH_DEL	BADI to delete Equip- ment attachments	Equipment
FUNCTIONALLOCATION	/INVMWO/BADI_FL_- ATTACH_DEL	BADI to delete FL at- tachments	Functional location
NOTIFICATION	/INVMWO/BADI_- NOTIF_ATTACH_DEL	BADI to delete Notifi- cation attachments	Notification
MEASURINGPOINT	/INVMWO/BADI_MP_- ATTACH_DEL	BADI to delete Mea- suring Points attach- ments	Measuring Points
WORKORDER	/INVMWO/BADI_- WOCONFIGDB	BADI Definition for WOCONFIGDB	Work Order
NOTIFICATION	/INVMWO/BADI_NO- CONFIGDB	BADI Definition for NOCONFIGDB	Notification
WORKORDER	/INVMWO/BADI_VAL- UE_DESC	BADI Definition for Value Descriptions	Work Order
WORKORDER	/INVMWO/BADI_- WOOBJ_STATUS_LIST	BADI for object status and individual status for an object	Work Order
NOTIFICATION	/INVMWO/BADI_- NOOBJ_STATUS_LIST	BADI for Object or In- dividual status for an object	Notification
WORKORDER	/INVMWO/BADI_- ALM_CONF_CANCEL	BADI for Confirmation Cancelation	Work Order

Table 11-1 BADIs in mWorkOrder Application (continued)

MODULE NAME	BADI Name	BADI Description	Screen Description
WORKORDER	/INVMWO/BADI_- MULTIOPER_CONF	BADI for Work Order Multi Operation con- firmation	Work Order
NOTIFICATION	/INVMWO/BADI_- NOTIF_UPDATE	BADI for Notif Update for overall conf	Notification
WORKORDER	/INVMWO/BADI_- WO_OPERATION_UPD	BADI for Updating the work order	Work Order
WORKORDER	/INVMWO/BADI_- UNIT_OF_WORK	BADI Definition for Unit of Work	Work Order
WORKORDER	/INVMWO/BADI_- WO_TLIST_COMP_- PRT	BADI Definition for Tasklists Components	Work Order
WORKORDER	/INVMWO/BADI_- TASKLIST_CREATE	BADI Definition for Tasklists Create	Work Order
WORKORDER	/INVMWO/BADI_- TASKLIST_CHANGE	BADI Definition for Tasklists Change	Work Order
WORKORDER	/INVMWO/BADI_- IFLO_UPDATE	BADI Definition for Functional Location Update	Work Order
WORKORDER	/INVMWO/BADI_- MEASDOC_CREATE	BADI Definition for Create Measuring Document	Work Order
WORKORDER	/INVMWO/BADI_- WO_PRT_DOCS	BADI Definition for WO Display PRT's Docu- ment	Work Order
WORKORDER	/INVMWO/BADI_- WO_TLIST_PRTS_DOC	BADI Definition for WO Create PRT's Docu- ment	Work Order

Table 11-1 BADIs in mWorkOrder Application (continued)

MODULE NAME	BADI Name	BADI Description	Screen Description
NOTIFICATION	/INVMWO/BADI_- NOTIF_CODEGR_LIST	BADI Definition for No- tification Code group List	Notification
WORKORDER	/INVMWO/BADI_- WO_OBJECTS_DETAIL	BADI Definition to get Object list	Work Order
WORKORDER	/INVMWO/BADI_- WO_OBJECTS_UP- DATE	BADI Definition to up- date object details	Work Order
WORKORDER	/INVMWO/BADI_- WO_OBJECTS_CRE- ATE	BADI Definition to cre- ate new object	Work Order
WORKORDER	/INVMWO/BADI_- MULTDFORM_DISPLAY	BADI Definition to get multiple form list of Workorder	Work Order
NOTIFICATION	/INVMWO/BADI_- MULTDFORM_DISPLAY	BADI Definition to get multiple form list of Notification	Notification
WORKORDER	/INVMWO/BADI_- MULDFORM_UPDATE	BADI Definition to up- date forms of worko- rder	Work Order
NOTIFICATION	/INVMWO/BADI_- MULDFORM_UPDATE	BADI Definition to up- date forms of Notifi- cation	Notification
TIMESHEET	/INVMWO/BADI_- TIME_ENTRY_CONFRM	BADI definition for timesheet confirma- tion	Timesheet
TIMESHEET	/INVMWO/BADI_- TIMESHEET_RELEASE	BADI for Timesheet Release	Timesheet

Table 11-1 BADIs in mWorkOrder Application (continued)

MODULE NAME	BADI Name	BADI Description	Screen Description
WORKORDER	/INVMWO/BADI_- WO_DASHBOARD	BADI Definition for Work Order and Op- erations Dashboard	Work Order Dash- board screen
WORKORDER	/INVMWO/BADI_- WO_DASHBOARD_- LIST	BADI Definition for Work Order and Op- erations Dashboard	Work Order Dash- board screen
WORKORDER	/INVMWO/BADI_- WO_WC_PERSONS	BADI Definition for Work Center and Per- sons Relation	Work Order Dash- board screen
WORKORDER	/INVMWO/BADI_- NOTIFSCODEGROUP	Badi for Notifications Code-group in offline.	Notification
WORKORDER	/INVMWO/BADI_- NOTIFICATIONCODE	Badi for Notification Codes	Notification
WORKORDER	/INVMWO/BADI_- WO_NO_EXPAND_- NEW	Badi for Workorder store(General store) in offline	Work Order

Table 11-2 BADIs for mWorkOrder

Module Name	BADI Name	BADI Description
WORKORDER	/INVMWO/BADI_WOORDER- ENTITYSET	BADI Definition for to get workorder details
WORKORDER	/INVMWO/BADI_WO- ORDEROPER	BADI Definition for to get op- eration details
WORKORDER	/INVMWO/BADI_WO- ORDEROPERDEL	BADI Definition for Workorder Operations delete
WORKORDER	/INVMWO/BADI_WO_DYND- DENTITYSET	Dynamic Dropdown
WORKORDER	/INVMWO/BADI_WO_DYN_- CREATE	Create Dynamic extension collection

Table 11-2 BADIs for mWorkOrder (continued)

Module Name	BADI Name	BADI Description
WORKORDER	/INVMWO/BADI_WO_HAN- DLCHANGESET	Workorder Handle change set
WORKORDER	/INVMWO/BADI_WO_OPER_- UPDATE	Work order Operation Update
WORKORDER	/INVMWO/BADI_WO_OR- DERSUPDATE	Work order update
WORKORDER	/INVMWO/BADI_WOORDER- COMPDEL	Work Order Component Delete
WORKORDER	/INVMWO/BADI_WOORDER- COMP	WorkOrder Component
WORKORDER	/INVMWO/BADI_WODYNEX- TUPDATESET	Dynamic Extension Update
WORKORDER	/INVMWO/BADI_WODYNEX- TENTITYSET	Dynamic Extension
WORKORDER	/INVMWO/BADI_WODYNEX- TUPDATESET	Dynamic Extension Update
WORKORDER	/INVMWO/BADI_WOORDER- COMP	WorkOrder Component
WORKORDER	/INVMWO/BADI_WOORDER- COMPDEL	Work Order Component Delete
WORKORDER	/INVMWO/BADI_WOORDER- ENTITYSET	Work order collection
WORKORDER	/INVMWO/BADI_WO- ORDEROPER	BADI Definition for Workorder Operations
WORKORDER	/INVMWO/BADI_WO- ORDEROPERDEL	BADI Definition for Workorder Operations delete
WORKORDER	/INVMWO/BADI_WO_DYND- DENTITYSET	Dynamic Dropdown

Table 11-2 BADIs for mWorkOrder (continued)

Module Name	BADI Name	BADI Description
WORKORDER	/INVMWO/BADI_WO_DYN_- CREATE	Create Dynamic extension collection
WORKORDER	/INVMWO/BADI_WO_HAN- DLCHANGESET	Workorder Handle change set
WORKORDER	/INVMWO/BADI_WO_OPER_- UPDATE	Work order Operation Update
WORKORDER	/INVMWO/BADI_WO_OR- DERSUPDATE	Work order update
WORKORDER	/INVMWO/BADI_WODYNEX- TENTITYSET	Dynamic Extension
WORKORDER	/INVMWO/BADI_WOCOUN- TENTITYSET	Count Entity
WORKORDER	/INVMWO/BADI_WOAT- TACHENTITYSET	Workorder Attachment
WORKORDER	/INVMWO/BADI_WOAPP- DATAENTITYSE	App Data Configuration
WORKORDER	/INVMWO/BADI_USER_DE- TAILS	User details
WORKORDER	/INVMWO/BADI_SEARCH_FIL- TER	Search and filters
WORKORDER	/INVMWO/BADI_OPER- ATION_LIST	Operation List
WORKORDER	/INVMWO/BADI_DD_DROP- DOWN	Dynamic drop down : sub
WORKORDER	/INVMWO/BADI_COMPONENT- T_UPDATE	Component update
WORKORDER	/INVMWO/BADI_COMPONENT- T_LIST	Get Component List

Table 11-2 BADIs for mWorkOrder (continued)

Module Name	BADI Name	BADI Description
WORKORDER	/INVMWO/BADI_ATTACHCRE- ATESET	Attachment creation

12. Generate Secondary Indices

To improve the application performance, for tables containing large amounts of data, generate secondary indices for key tables relevant for the product.



Note:

Ensure you have ABAP Developer access to ECC system with authorization to maintain tables and set up table indexes.

Table 12-1 Secondary Index - Table and Field

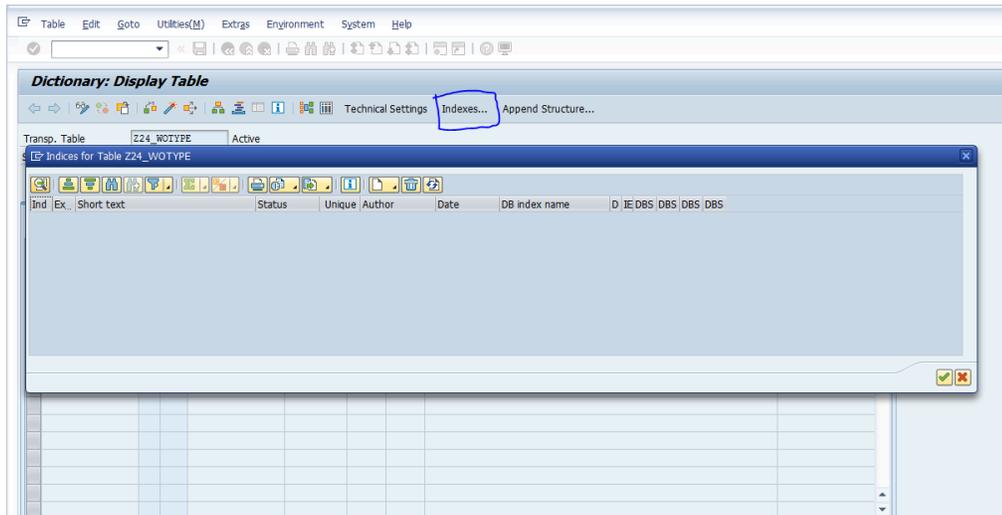
Table	Field for Secondary Index
PLKO	WERKS
AFIH	GEWRK
AUFK	WERKS

12.1. Create Secondary Index

To create secondary index:

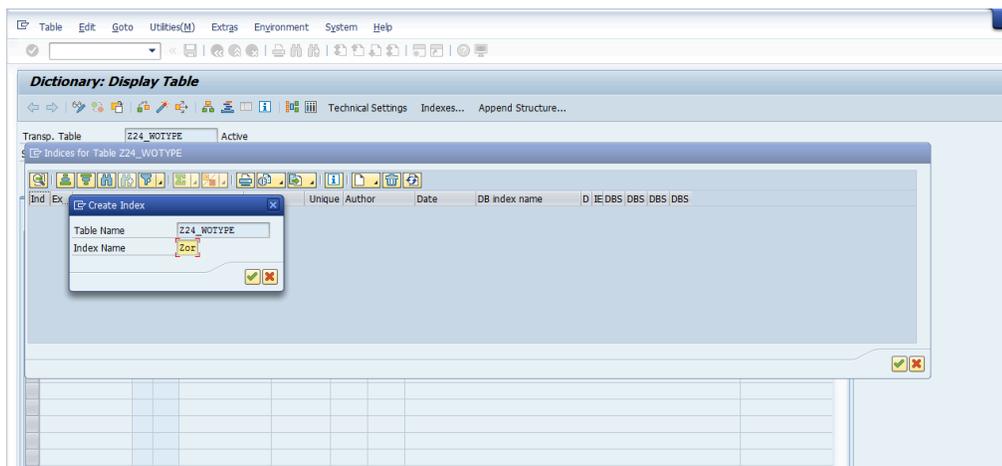
1. Log in to SAP ECC.
2. Go to transaction SE11.
3. Enter the Table name.
4. Click Display to view the table.
5. Click Indexes.

Figure 12-1 Display Table - Indexes



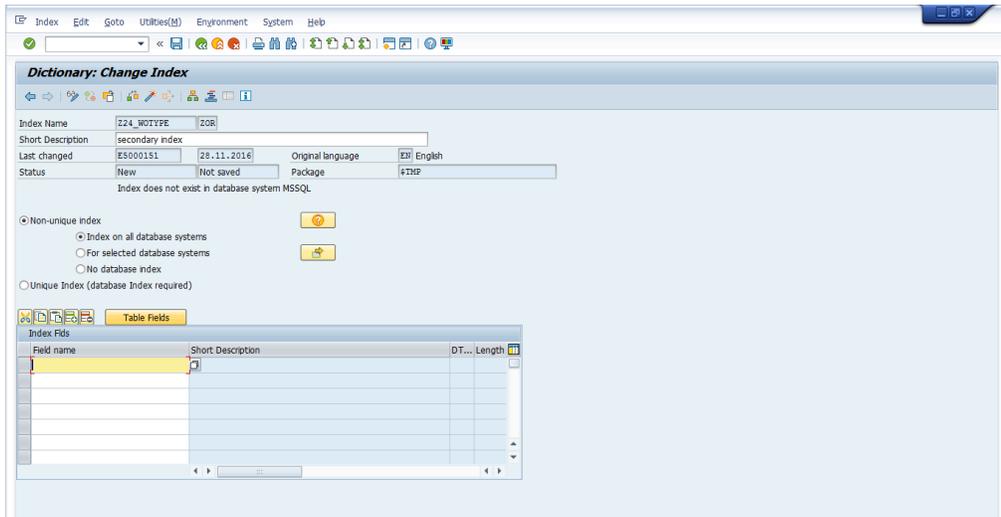
6. Click Create and select Create Index.
7. Enter the Index Name.

Figure 12-2 Create Index - Index Name



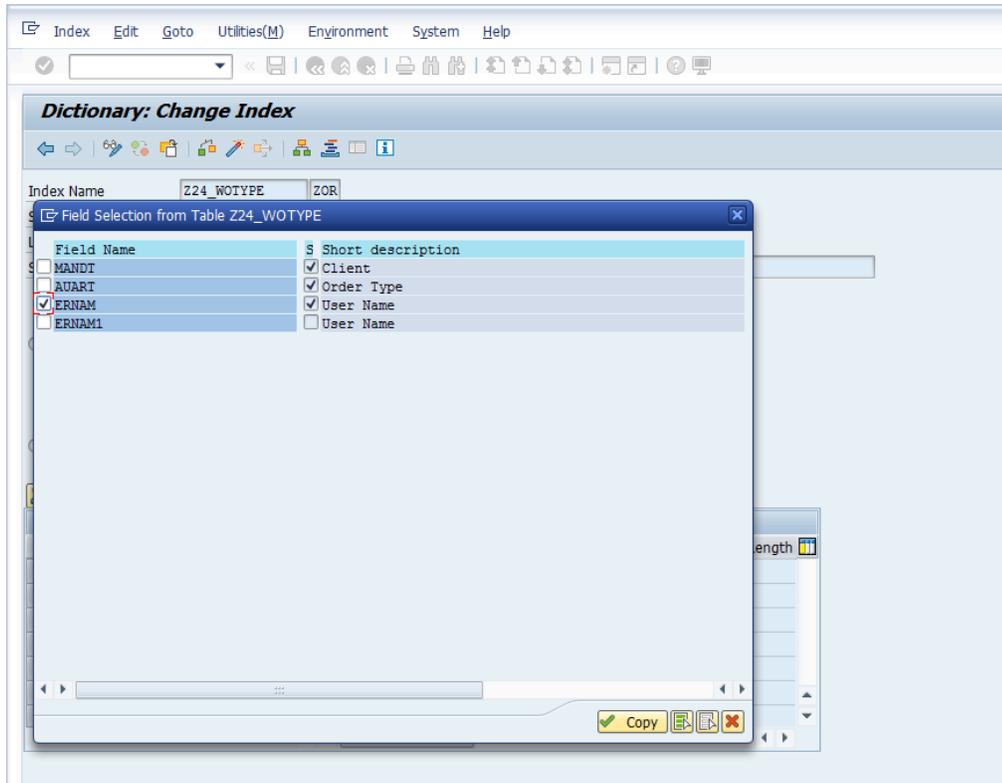
8. Enter description in the displayed fields.
9. Select **Table Fields** option to enter the Field name.

Figure 12-3 Table Fields



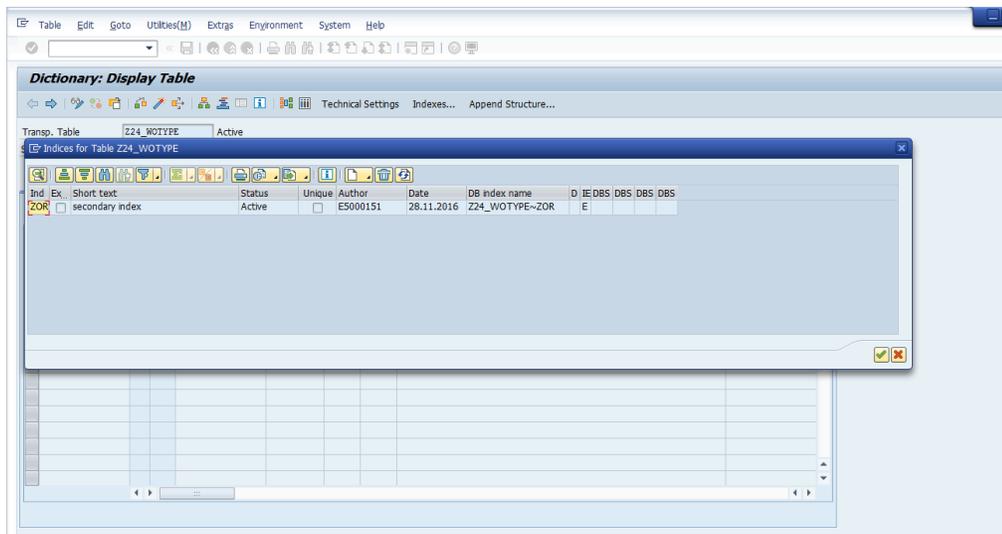
10. Select the required field for secondary index and click Copy.

Figure 12-4 Select Table Fields



11. Click **Activate**.

Figure 12-5 Activate Index



13. Update Resource File

This section describes the steps to view and modify the content, format, and structure of the Resources file.

As part of the initial product deployment, Innovapptive will provide a default zip file that needs to be updated to reflect your settings and branding needs.

mWorkOrder application resource file **resources_mworkorder.zip** on Windows platform is used as an example to demonstrate the steps and actions that are needed to be performed. The same steps can be followed for other products and platforms as well using the appropriate file and product names for other products.

To prepare and update the resource file:

1. Download the resources_mworkorder_zip file to the local drive.
2. Extract the resource_mmworkorder.zip file.

The folder structure: **resource_mworkorder, Dev, ios** is displayed after successful extraction:

3. Navigate to the iOS folder. (Same file and settings are applicable for iOS, Android, and Windows).

Standard images, logo, and the settings file are displayed in the folder.

4. Open the file **settings.json** in Notepad/Notepad++ (any standard text file editor).
5. Modify the default setting from **settings.json** file as required.

Table 13-1 json file attributes

Attribute	Description
AppName	This field is used to identify the Innovapptive product name. Conditions: Use uppercase alphabets. Possible Values: Based on the product, refer to the table Table 13-3 : AppName and App id (on page 130) . Example: MWORKORDER

Attribute	Description
Environment	<p>Identifies the landscape to which the mobile application is connected. This value is displayed on the Login page of the mobile app.</p> <p>Conditions: None</p> <p>Possible Values: Development/Quality/Production</p>
ShowDemoButton	<p>Set to True to display the Sample Data button on the application Login page. Upon clicking the sample data, the user can view the demo data.</p> <p>Conditions: Use lowercase alphabets.</p> <p>Possible Values: true/false</p>
hcolor	<p>Custom header color for application. Use this parameter to customize the app screen elements, such as the header bar, to meet your corporate branding needs. Work with your appropriate branding team to identify the color that meets your enterprise palette.</p> <p>Tip: Using the Google Hex color picker, you can identify the Hex color code value that needs to be set up. To find the hex color code, go to www.google.com and search for "hex color picker." Select the desired color and you will see the color code.</p> <p>Condition: Use the Hex color code value based on the color you would like to see on the mobile app screen elements.</p> <p>Possible Values: As per the requirement.</p>

Attribute	Description
	Example: #42c2f4
TouchId	Set the value as True to enable the Touch ID feature in application.
AppPassCode	Set the value as True to enable the App Passcode feature in application.
ForgotPwd	Set the value as True to enable the Forgot Password feature in application.
ForgotPwdLink	Set the value as True to display the website link to reset password.
ForgotPwdMsg	Set the value as True to display the message to reset password.
Languages	<p>Languages that are configured in the settings.json file are displayed to the user as a drop-down menu for selection. Additional languages can be added provided the language is available in SAP and the necessary translations are maintained.</p> <p>Syntax:</p> <pre data-bbox="873 1247 1414 1373">{"id":<SequenceNumber>,"key": "<SAPLanguageCode>","value": "<LanguageName>"}</pre> <p>Possible Values: Languages supported by SAP</p> <p>Example: {"id":1,"key":"E","value":"English"}</p> <div data-bbox="862 1591 1421 1766" style="border: 1px solid #00a0e3; border-radius: 10px; padding: 10px; background-color: #e6f2ff;"> <p> Note: For RACE™ Dynamic Forms, only English language is supported.</p> </div>

Attribute	Description
Timeout	Application idle Timeout (in minutes). This setting allows the administrator to specify the automatic time out when apps are left idle. Example: D30

- Review and update the content block for each environment (Development, Quality, and Production).



Note:

Values described in the following table are case sensitive and are recommended to be used in the same format as mentioned in the Description section. All the values are mandatory.

Table 13-2 json parameters

Parameter	Description
Server	The DNS/HostName of the SMP/SCPms servers, which will be used for mobile application connection. Example: smp.innovapptive.com
Port	The application establishes the communication to the server based on the specified port number. Possible Values: 8080, 8081, 443 Example: HTTP/HTTPs (SMP default HTTP port 8080, HTTPs 8081, SCPms HTTPs 443 and custom ports for proxy)

Parameter	Description
ApplicationID	<p>ApplicationID is the ID configured in SMP/ SCPms and the mobile application will use it to connect to server for the registration.</p> <p>Condition: Use the same application ID as defined in SMP/SCPms.</p> <p>Possible Values: Based on the product, refer to the table below.</p> <p>Example:..com.innovapptive.mworkorder</p>
SecurityType	<p>This field is used to identify the security type configured in SMP/SCPms server for the application. Security types are used based on authentication mechanism/login mechanism selected for the application.</p> <p>Condition: Use the same security profile name as defined in SMP/SCPms.</p> <p>Example: Basic Authentication (SSO2), SAML Authentication (SAML) and x509 authentication(x509) mechanisms.</p>
https	<p>This field is used to identify the protocol type. The default value should be set to false.</p> <p>Conditions: Use lowercase alphabets.</p> <p>Possible Values: true/false</p>

Parameter	Description
Whitelist [ApplicationID]	<p>All Innovapptive applications require connection settings for RACE™ services and may require other connection settings also.</p> <p>mWorkOrder application requires connection setting for RACE™, EQUIPMENT, FUNCTIONALLOCATION, and ATTACHMENT.</p> <p>Example. com.innovapptive.race, mwo.equipment, mwo.funloc and mwo.attach.</p>
Whitelist [StoreName]	<p>This field describes the name Offline stores for whitelist ApplicationIDs. RACE™ store is common for all Innovapptive applications.</p> <p>mWorkOrder application requires to configure for following StoreName – RACE™, EQUIPMENT, FUNCTIONALLOCATION, and ATTACHMENT.</p>

Figure 13-1 Sample JSON Settings file

```

{
  "Server": "smphost",
  "Port": "8080",
  "ApplicationID": "com.innovapptive.mworkorder",
  "SecurityType": "SSO2",
  "https": false,
  "AppName": "MWORKORDER",
  "Environment": "Development",
  "ShowDemoButton": true,
  "hcolor": "#449E79",
  "TouchId": true, "AppPassCode": true, "ForgotPwd": true, "ForgotPwdLink": false, "ForgotPwdMsg": "http://www.innovapptive.com/", "StoreName": "",
  "Languages": [{"id": 1, "key": "E", "value": "English"}, {"id": 2, "key": "D", "value": "German"}, {"id": 3, "key": "F", "value": "French"},
  {"id": 4, "key": "S", "value": "Spanish"}, {"id": 5, "key": "P", "value": "Portuguese"}, {"id": 6, "key": "I", "value": "Chinese"}, {"id": 7, "key": "M", "value": "Thai"}],
  "Timeout": "D30", "Whitelist": [{"ApplicationID": "com.innovapptive.mworace", "StoreName": "RACE"}, {"ApplicationID": "mwo.equipment", "StoreName": "EQUIPMENT"},
  {"ApplicationID": "mwo.funloc", "StoreName": "FUNCTIONALLOCATION"}, {"ApplicationID": "mwo.attach", "StoreName": "ATTACHMENT"}]
}

```

ApplicationID and **AppName** depend on the app that you configure. The following table will help to configure the details.

Table 13-3 AppName and App id

Name	APP ID	AppName
Mobile Asset Tag	com.innovapptive.masset-tag	MASSETTAG
Mobile Inventory	com.innovapptive.minventory	MINVENTORY
Mobile Service Order	com.innovapptive.msERVICEORDER	MSERVICEORDER
Mobile Shopping Cart	com.innovapptive.mSHOP	MSHOP
Mobile Worklist	com.innovapptive.mWORKLIST	MWORKLIST
Mobile Work Order	com.innovapptive.mWORKORDER	MWORKORDER
RACE™ Dynamic Forms	com.innovapptive.racedynamicforms	RACEDYNAMICFORMS

7. Save the **settings.json** file with the same name. (As a best practice, maintain a backup of the file with a different name)
8. Update the Image files.
The .png image files that are provided can be replaced with images to meet your branding needs. Ensure that the file format, image size, quality, resolution, and so on are aligned with the image that is being replaced.
9. Compress the following files with the updated files from Part 1 & 2 into a zip file with the name **resources_ios.zip**. Ensure that the content and filenames are exactly matching.
 - App_BG_iPad_Landscape.png
 - App_BG_iPad_Protrait.png
 - App_BG_iPhone.png
 - App_Logo.png
 - settings.json

14. Download App and Install

Before you download new version of the App, do the following:

- Complete all the transactions (Online and Offline),
- Unregister from the application

Download the latest version of mWorkOrder app from Apple App Store, Google Play or the Microsoft Store and install it.