



Installation & Configuration Guide

SAP NetWeaver Visual Composer

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SAP enhancement package 1 for
SAP NetWeaver 7.0

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Documentation on SAP Service Marketplace

You can find this documentation at
service.sap.com/instguidesNW04

Typographic Conventions

Icons

Type Style	Represents	Icon	Meaning
<i>Example Text</i>	Words or characters quoted from the screen. These include field names, screen titles, pushbuttons labels, menu names, menu paths, and menu options. Cross-references to other documentation.		Caution
Example text	Emphasized words or phrases in body text, graphic titles, and table titles.		Example
EXAMPLE TEXT	Technical names of system objects. These include report names, program names, transaction codes, table names, and key concepts of a programming language when they are surrounded by body text, for example, SELECT and INCLUDE.		Note / Tip
Example text	Output on the screen. This includes file and directory names and their paths, messages, names of variables and parameters, source text, and names of installation, upgrade and database tools.		Recommendation
Example text	Exact user entry. These are words or characters that you enter in the system exactly as they appear in the documentation.		Syntax
<Example text>	Variable user entry. Angle brackets indicate that you replace these words and characters with appropriate entries to make entries in the system.		
EXAMPLE TEXT	Keys on the keyboard, for example, F2 or ENTER.		

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SAP NetWeaver Visual Composer Installation & Configuration Guide

This guide provides step-by-step procedures for installing and configuring SAP NetWeaver Visual Composer. It is part of a full documentation set that describes system security, outlines administration procedures and explains all of the functionality of Visual Composer. For more information, see [Other Visual Composer Documentation \[Page 10\]](#).

1 Introduction

SAP NetWeaver Visual Composer provides a development environment for rapidly creating and adapting model-based transactional and analytical applications. It can be used by a range of users – from business analysts to experienced developers – to create enterprise applications using standardized components that meet SAP standards and quality criteria. As the organization's business objectives evolve, these applications can be subsequently customized and continuously changed using Visual Composer.

Visual Composer is delivered and installed as an integral part of the EP usage type that is part of SAP NetWeaver 7.0. The Visual Composer client accesses Visual Composer Storyboard through a web browser with network access to the Visual Composer server.

Also included in the Visual Composer installation – as part of the EP usage type – is the Adobe Flex service used to compile applications modeled in Visual Composer to Flash .swf files, for deployment to the portal. The Flex server must be installed on every J2EE server that will be used to compile and deploy applications modeled with Visual Composer.

Overview of the Installation and Configuration Process

1. Check that your system meets all the prerequisites outlined in the *SAP NetWeaver Master Guide* for the EP usage type. You can find the guide at SAP Service Marketplace at service.sap.com/installnw70 → *Master Guide* (in the *Planning* section at the top). Section 4 of the guide describes the prerequisites and implementation sequence needed for EP.
2. Check section 2 of this installation and configuration guide, [Prerequisites \[Page 2\]](#), which outlines the general prerequisites for installing Visual Composer.
3. Perform the installation, following the instructions in section 3, [Installing the EP Usage Type. \[Page 2\]](#)
4. Access the installed portal and:
 - a. Create the systems you need for application modeling. See [Defining Portal Systems and Aliases \[Page 3\]](#).
 - b. Define the access permissions for each security zone relevant to Visual Composer, and assign permissions to the relevant content. See [Configuring Permissions \[Page 4\]](#)
 - c. To configure an alert data service in Visual Composer Storyboard, see [Configuring Universal Worklist Connectivity \[Page 5\]](#).
 - d. Optionally, configure general Storyboard parameters in Visual Administrator. See [Configuring Optional Properties in the Visual Administrator \[Page 5\]](#).



Be sure to read SAP Note 1169887 for the latest information about limitations, known issues, and workarounds for SAP NetWeaver Visual Composer.

You can find the SAP Note at SAP Service Marketplace:
<http://service.sap.com/notes>

2 Prerequisites

The following hardware and software are required for installing this version of SAP NetWeaver Visual Composer:

- SAP enhancement package 1 for SAP NetWeaver 7.0
- EP usage type, installed as part of this NetWeaver installation
- Sun Java JDK, version 1.4.2 and above, installed on the same NetWeaver server

Before you install Visual Composer, do the following:

- Remove all older installations of Visual Composer from the machine on which you are installing the Visual Composer server.
- Review the *SAP NetWeaver Visual Composer Security Guide* to ensure that all security measures have been taken prior to the installation.

3 Installing the EP Usage Type

To install the NetWeaver EP usage type, which includes the Visual Composer installation, access the complete set of installation documentation from SAP Service Marketplace at service.sap.com/instguidesnw70.

1. In the *Planning* section, click *Master Guide* and review the NetWeaver overview information in the first three sections.
2. Carefully read and follow the instructions in the *Running an Enterprise Portal* section in the *IT Scenarios* section of section 4.
3. After the EP usage type is successfully installed, consult the *Technology Consultant's Guide* for post-installation configuration information.
4. Apply SAP enhancement 1 for SAP NetWeaver 7.0, according to the relevant documentation, found at SAP Service Marketplace at service.sap.com/maintenancenw70



When installing the EP usage type in a portal cluster, the Visual Composer server runs above all J2EE server nodes that exist in that cluster.

In a cluster, EP is always installed on the central instance (on which SDM runs), which may consist of more than one server node. On the first restart after installation, the applications are replicated and synchronized on all other server nodes.

4 Post-Installation Procedures

A portal user assigned Super Administrator permission should perform these procedures.

4.1 Assigning Authorizations

1. Assign the persons configuring Visual Composer Super Administrator roles and ensure that they have the required permissions to all back-end systems that must be accessed.
2. Be sure that you have the password of the user created by SAPINST when installing and starting the J2EE server. In cases where multiple portals have been installed on the server, be sure that you have the correct portal name and port number.

4.2 Defining Portal Systems and Aliases

In the portal, be sure that you have created each system required for application modeling, and assigned it a system alias accordingly.

For information about creating systems and aliases, see the *Portal Administration Guide* on SAP Help Portal at help.sap.com/nw70 → *SAP Library* → *SAP NetWeaver Library* → *SAP NetWeaver by Key Capability* → *People Integration by Key Capability* → *Portal* → *Portal Administration Guide* → *System Administration* → *System Configuration* → *System Landscape* → *Creating Systems*.

Map users with VC Role to a user with read permissions to the required back-end system.

Business Intelligence Systems

The Visual Composer installation includes the Business Intelligence (BI) extension kit for accessing and building queries against a wide range of data sources created with the BI Java Connectors and SAP BI Connector. These include SAP BI systems as well as non-SAP data sources. The BI functionality available in Visual Composer differs depending on which type of connector you use to define your system:

- Systems created with a BI Java Connector can access the BI Integration Wizard and the SQL or MDX Editors, or can be used as data services with a default relational or OLAP query.
- Systems created with the SAP BI Connector provide access to SAP BI queries, query views, and characteristics in Visual Composer. For more information on configuring a connection to an SAP BI system, see the following path in the *SAP Customizing Implementation Guide: SAP NetWeaver* → *Business Intelligence* → *Reporting-relevant Settings* → *BEx Web* → *Integration into the Portal* → *Create BI System in the Portal*.

See [Appendix: Visual Composer Connectivity \[Page 10\]](#) for details on the full range of systems you can create for use in Visual Composer.

4.3 Configuring Permissions

Use

During installation, a predefined role – the VC Role – is deployed in the portal as part of the initial Visual Composer content. This role has all the necessary permissions to allow a user to perform modeling tasks while working with Visual Composer Storyboard, such as create, develop, manage and deploy models to the portal. The role includes full permissions for the `Visual Composer` folder in the portal. Additionally, each user should be assigned **read** permissions in order to access data services located on the back-end systems accessed through the portal.

Procedure

1. Set permissions to security zones, to give *End User* control to the VC Role on all medium-safety content:
 - a. Choose *System Administration* → *Permissions* → *Portal Permissions*.
 - b. In the Portal Catalog, open the `Security Zones` folder and then the `sap.com/NetWeaver.Portal/medium_safety` folder.
 - c. For the following objects in the `medium_safety` folder, assign *End User* permissions:
 - `com.sap.vc.mmcompiler`
 - `com.sap.visualcomposer`
 - `com.sap.visualcomposer.portalconnector`

Information about security zones can be found in the *Portal Administration Guide on SAP Help Portal at help.sap.com/nw70* → *SAP Library* → *SAP NetWeaver Library* → *SAP NetWeaver by Key Capability* → *People Integration by Key Capability* → *Portal* → *Portal Administration Guide* → *System Administration* → *Permissions, Role/User Distribution and Object Locking* → *Portal Permissions* → *Security Zones*.
 - d. Use the *Setting Permissions* procedure accessed from the same *Portal Permissions* path: *Permissions Editor* → *Setting Permissions in the Permissions Editor*
2. Assign *End User* permissions to VC Role for the following content:
 - `pcd:portal_content/templates/pages/portalpagetemplate`
 - `pcd:portal_content/templates/pages/wdProxyPage`
 - `pcd:portal_content/templates/layouts/fullWidth`
 - `pcd:portal_content/templates/iviews/wdProxiyView`

For information about assigning initial permissions, see the *How To... Configure Permissions for Initial Content in SAP Enterprise Portal 6.0 SP9 and Higher* guide, accessed from the *SAP NetWeaver Portal* page of the SAP Community Network (SDN) at sdn.sap.com/irj/sdn/portal → *How-To Guides*.

4.4 Configuring Universal Worklist Connectivity

Use

To use an alert data service in Visual Composer Storyboard, you must first configure Universal Worklist (UWL) connectivity.

Procedure

1. Make sure that an SAP ERP or SAP BI system is configured on the portal as an *AlertConnector* (see the *SAP NetWeaver Technology Consultant's Guide* on SAP Help Portal at help.sap.com/nw70 → *SAP Library* → *SAP NetWeaver Library* → *Technology Consultant's Guide* → *Business Task Management* → *Universal Worklist Configuration*).
2. Configure your portal user with the additional Standard User Role required by the alerting framework. This adds the Universal Worklist to the portal in the *Home* → *Work* tab.
3. Make sure that you have conditions that lead to the broadcast of alerts in your system, and that the alerts are active and displaying in the Universal Worklist on the portal. To see if you have active alerts, log on to the portal and choose *Home* → *Work*, then select the *Alerts* tab. For more information, see the *SAP NetWeaver Developer's Guide* on SAP Help Portal at help.sap.com/nw70 → *SAP Library* → *SAP NetWeaver Library* → *SAP NetWeaver Developer's Guide* → *IT Scenario-Driven Enhancements to Applications* → *Business Task Management* → *Core Development Tasks* → *Triggering Alerts*.

Example

See *How to... Add an Alert Data Service* section in the *SAP NetWeaver Visual Composer Modeler's Guide*.

4.5 Configuring Optional Properties in Visual Administrator

Use

You can optionally configure a number of Visual Composer parameters in the J2EE server using Visual Administrator.

Procedure

1. Start the Visual Administrator.
2. On the *Cluster* tab, choose *Server x* → *Services* → *VisualComposer-Development Server*.
3. In the right frame, on the *Properties* tab, select the property you wish to configure:

Property	Description	Default Value
<i>vc.bi.igs</i>	URL for the Internet Graphics Server, required for using the Heatmap query template	URL to IGS server
<i>vc.bi.sqlEditorEnabled</i>	Switch that enables or disables SQL Editor and SQL statement on <i>Input</i> port	false
<i>vc.bi.mdxEditorEnabled</i>	Switch that enables or disables MDX Editor and MDX statement on <i>Input</i> port	false
<i>vc.installedDevices</i>	All deploy options	xgl flex
<i>vc.recommendedMetadataProps</i>	Recommended properties for model profile	Approved by: ;Collection: ;Date completed: ;Domain: ;Gro up: ;Language:EN;Projec t: ;Status: ;Responsible :
<i>vc.sessionTimeout</i>	Number of hours after which the session with the server finishes	8
<i>vc.verboseErrorMessage</i>	Flag used to prevent long messages from reaching the client when Flex compilation fails	False
<i>vc.virusScanner-Profile</i>	Name of profile used by the J2EE Virus Scan Provider server	visualcomposer

4. In the *Value* field, replace the default value with your own value.



- In most cases, for security reasons, the `vc.verboseErrorMessage` flag should remain set to `false` in order to prevent Flex information from being disclosed to the client.
- For security reasons, SQL Editor (`vc.bi.sqlEditorEnabled`) and MDX Editor (`vc.bi.mdxEditorEnabled`) functionality is off by default. See the *Security Risks with the SQL Editor and MDX Editor* section in the *SAP NetWeaver Visual Composer Security Guide* for important security recommendations before enabling this functionality.



You can use the `vc.recommendedMetaDataProps` property to define information used in the translation information file (`package_lang.info`).

- The *Language* attribute corresponds to the *ORGLAND* attribute in the translation information file.
 - The *Created by* or *Responsible* attribute corresponds to the *Responsible* attribute in the translation information file.
 - The *Domain* and *Collection* attributes correspond to the *Domain* and *Collection* attributes in the translation information file, respectively.
5. Click *Update*.
 6. Click the Save toolbar button.
 7. Restart the J2EE server.

5 Preparing the Visual Composer Client

Visual Composer Storyboard, operating on the Visual Composer server, is the design environment in which you create your portal content. It can be accessed from the Internet Explorer Web browser of any machine with network access to the Visual Composer server. See the *SAP NetWeaver Visual Composer Modeler's Guide* for instructions about logging on to Visual Composer Storyboard from a client machine.

Before you log on to and work with Visual Composer Storyboard, you should check that your Visual Composer client machine meets the following software requirements:

- Microsoft Internet Explorer 6.0 SP1 or higher
- Microsoft XML Parser 4.0
- Adobe SVG Viewer 3.0 or higher (downloadable from www.adobe.com/svg)
- Adobe Flash player 9.0.45 and above, for viewing models deployed to the Flash runtime

In addition, be sure that your system administrator has assigned you the VC user role (explained in the [Configuring Permissions \[Page 4\]](#) section of this manual).

6 Checking the Installation

Use

To ensure that you have successfully installed SAP NetWeaver Visual Composer, you can perform the following installation test.

Procedure

1. Open your Internet Web browser with network access to the Visual Composer server.
2. In the address bar, enter the URL to the Visual Composer server as follows:

```
http://<machine name with full domain>:<portnumber>/VC/default.jsp
```



For example: `http://dwdf041.wdf.sap.corp:54000/VC/default.jsp`
(where `dwdf041.wdf.sap.corp` is the fully-qualified domain name of the Visual Composer server host, and `54000` is the application port number on the J2EE engine in use by the Visual Composer Server installation).

3. Check that Storyboard is displayed, with an empty workspace and a Get Started task panel to the right.
4. From the main menu, choose *Model* → *New Model*. The Create a New Model dialog box is displayed.
5. In the *Name* field, enter a name for the new model and click *OK*. The workspace grid is displayed.
6. From the Compose Model task panel on the right, drag an element onto the workspace.
7. Click the Save button in the main toolbar to save your model.

7 Installation Logging and Troubleshooting

You can find information about log files and troubleshooting when installing components on Application Server Java at SAP Service Marketplace at service.sap.com/installnw70 and in the *Installation - SAP NetWeaver Systems* section, choose the *Java* link from the appropriate bullet.

The following sections provide assistance in troubleshooting problems that may arise after running Visual Composer for the first time after installing the EP usage type on a clean machine.

Prerequisites

- You have access to the following systems:
 - HTTP – connection to the J2EE Engine
 - J2EE Engine directly through terminal server, NetMeeting or PCAnywhere
- You have Content Administrator rights to the J2EE Engine

Main Tool

SDM remote GUI

Analysis

1. Check that the host can be reached when J2EE is running.

Open a command window on your machine and enter `ping <hostname>` to test if it is possible to reach the host (identified by hostname) on the J2EE machine. If an error occurs, contact your network administrator to fix the problem.

If you have no access to the machine on which the problem exists, refer to the relevant Problem Analysis Scenario (PAS) of the J2EE Engine, accessed on SAP Service Marketplace at service.sap.com/operationsnw70 → *Cross-NetWeaver* → *SAP NetWeaver Problem Analysis Guide (PAG)* → *J2EE Engine Problem Analysis Scenarios*.

2. Access the J2EE Engine.

Start your browser and in the address bar, enter:

```
http://<hostname>:<port>/index.html
```

where `port` is the application port number on the J2EE engine in use by the Visual Composer Server installation (default is 5<instance no.>00).

The start page of the J2EE Engine should be displayed. If it is not, the engine has not started. In this case, start the J2EE Engine.

3. Determine if the problem is a client or a server issue.

Because Visual Composer Storyboard is a client-server application, the failure may have occurred on the client machine and not in the main server. To ensure that the Visual Composer client can run Storyboard, check that the following has been installed on the client:

- Microsoft XML Parser 4.0
- Adobe SVG Viewer 3.0 or higher

Upon running Visual Composer, if an alert message is displayed indicating that `studio.ini` is not installed or that the `mxml` file is not updated, the relevant component has not been properly installed.

These are the main client errors that may arise. If other problems occur, the source is probably on the server side.

4. A Loading server failed message is received.

This message occurs when integration between several server components has failed. In this case:

- a. Redeploy the file `VisualComposerServerEar04`.
- b. Log on to the SDM remote GUI tool.
- c. Undeploy the file and then redeploy it.

5. Access is denied.

All users who access Visual Composer must be assigned the VC Role, which becomes available in the portal when Visual Composer is installed with the EP usage type. Add and assign the role through the User Management Engine (UME). The process is described fully in the *Portal Administration Guide* on SAP Help Portal at

help.sap.com/nw70 → SAP Library → SAP NetWeaver Library → Administrator's Guide → SAP NetWeaver by Key Capabilities → People Integration by Key Capability → Portal → User Administration → Role Assignment → Assigning Roles to Users and Groups.

6. Check logs.

If other errors occur, log on to the J2EE server and check the `defaultTrace` file in the log folder. Refer to the *Trace and Log Files* section of the *Administration of SAP NetWeaver Visual Composer Guide*.

8 Other Visual Composer Documentation

Once you have installed the Visual Composer server and checked the installation, you are ready to begin using it to model applications. This installation guide is part of the SAP NetWeaver Visual Composer documentation set, which includes:

- *SAP NetWeaver Visual Composer Modeler's Guide*
- *SAP NetWeaver Visual Composer Reference Guide*
- *SAP NetWeaver Visual Composer Security Guide*
- *Administration of NetWeaver Visual Composer*

9 Appendix: Visual Composer Connectivity

The following table describes the range of systems in the portal system landscape from which Visual Composer can import data, and the connectors that are required. The **Connector** (second column) indicates the name of the connector and portal system template (where applicable) used to install the system in the portal.

Visual Composer Connectors

	Connector	Back End	Data Service	Comments
Standard SAP	SAP_Connector	SAP systems, SAP BI systems	BAPIs	
	Web Services Connector		Web services	
	SAP_JDBC	SQL, Oracle, DB2	Stored procedures	
BI	BI XMLA Connector Use portal system template: <i>BI XMLA-Compliant OLAP System</i>	XML for Analysis providers, including SAP BW systems 3.1C or higher (for systems 3.5 and higher, SAP BI Connector is recommended)	Cubes with a default OLAP query and custom MDX queries. OLAP queries created with the BI Integration Wizard.	Supports the use of SAPLOGONTICKET

	<p>BI ODBO Connector</p> <p>Use portal system template: <i>BI ODBO-Compliant OLAP System</i></p>	<p>OLE DB for OLAP providers, including SAP BW 3.1C or higher (for systems 3.5 and higher, SAP BI Connector is recommended)</p>	<p>Cubes with a default OLAP query and custom MDX queries.</p> <p>OLAP queries created with the BI Integration Wizard.</p>	
	<p>BI JDBC Connector</p> <p>Use portal system template: <i>BI JDBC System</i></p>	<p>JDBC providers, such as SQL, Oracle, DB2</p>	<p>Tables with a default relational query and custom SQL queries.</p> <p>Relational queries created with the BI Integration Wizard.</p>	
	<p>BI SAP Query Connector</p> <p>Use portal system template: <i>BI SAP Query System</i></p>	<p>SAP systems with base component, version 4.6C or higher</p>	<p>Tables with a default relational query.</p> <p>Relational queries created with the BI Integration Wizard.</p>	
	<p>SAP BI Connector</p> <p>Use portal system template: <i>SAP system using dedicated application server</i></p>	<p>SAP BI systems (BW) from NetWeaver 2004 SP Stack 14 and greater</p>	<p>BI queries, query views, and characteristics.</p> <p>No support in the BI Integration Wizard.</p>	<p>Supports the use of SAPLOGONTICKET</p>