

DISCOVERY SYSTEM CONNECTIVITY

HOW TO DEVELOP A VC APPLICATION THAT CONSUMES AN EXTERNAL SERVICE SYSTEM



Introduction

Discovery System

SAP Discovery system (DS) is a complete learning and testing environment designed to offer customers and partners the opportunity to test-drive and experience the power of enterprise SOA in a familiar landscape.

While the Discovery system is a “self contained” environment, in some cases, the need to connect the DS with additional systems in the landscape is required. This document is part of a series of documents describing different aspects of the DS connectivity to the “outside world.”

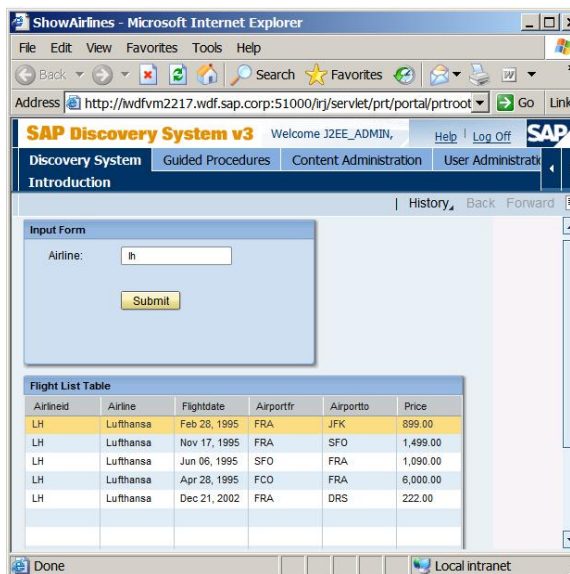
Use Case Description

This document describes how to develop a Visual Composer (VC) application on the DS that consumes RFCs and/or Enterprise Services from an external system.

This guide deals with real time connectivity between your Discovery System (DS) and an external SAP system. You will be guided through the process to build a Visual Composer application running on your DS and consuming services on an existing ERP system via RFCs. As the business scenario is quite simple and known from several classroom trainings, you can fully focus on the technical aspects and you will only need one up to two hours to complete the whole example. You can easily adapt the example to consume an Enterprise Service as well as to access your own business live data instead of the well-known flight list example data.



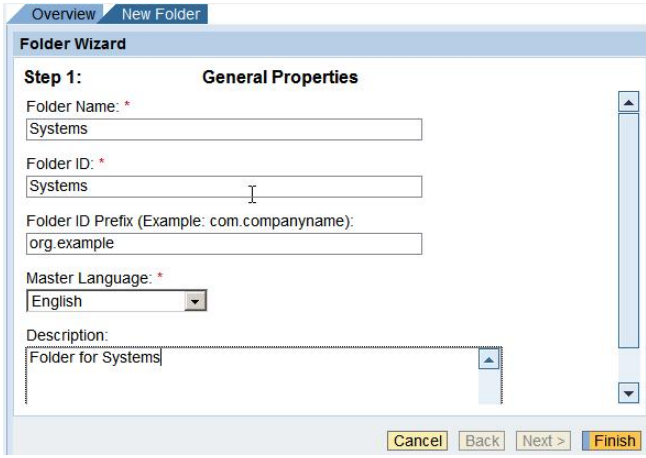
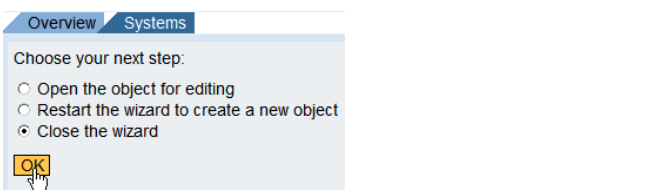
Roughly, the different systems interact as follows:

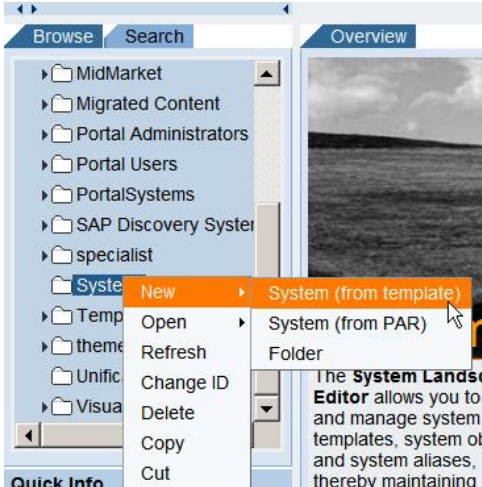
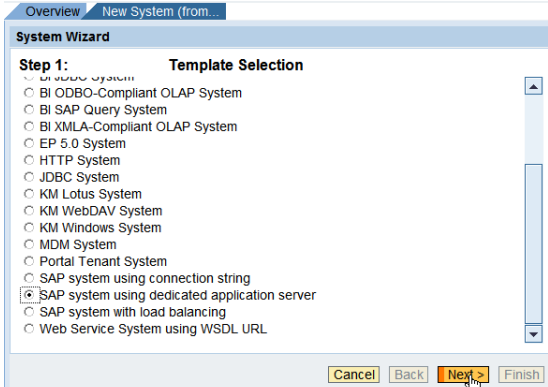
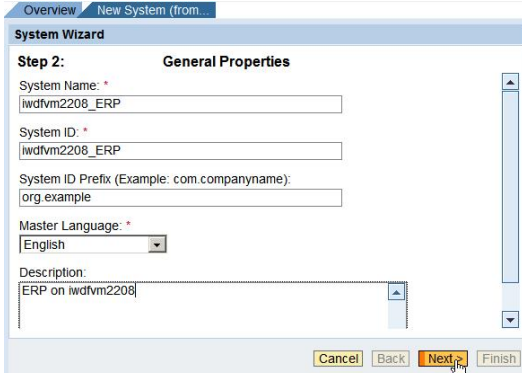

The Visual Composer - running on the JEE Engine of your DS – is used to develop the VC application and to deploy it onto the JEE Server on the Discovery system. The Browser calls the VC application that is deployed on the Discovery system. This fetches content from the external SAP system. To get the connectivity between the DS and the external system you have to register the external system in the portal of the DS.

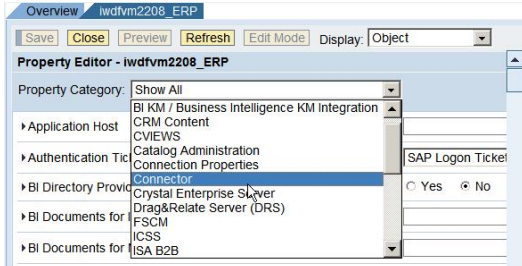
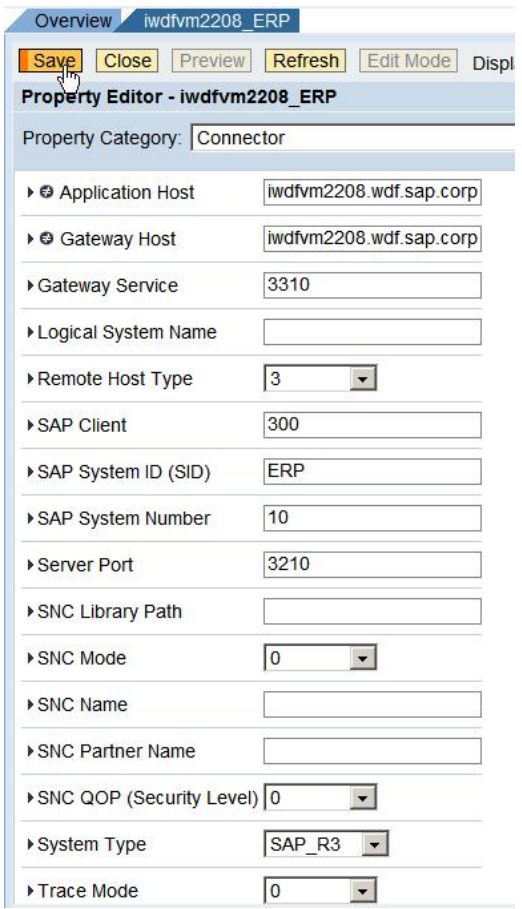
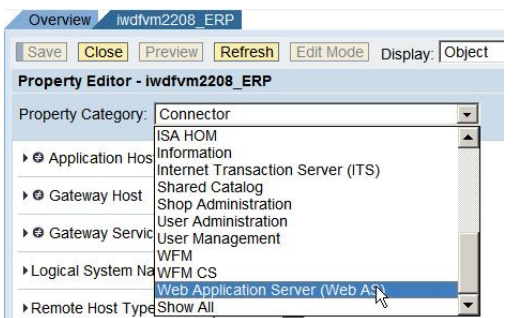


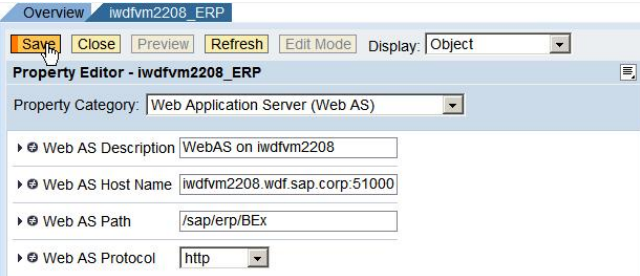
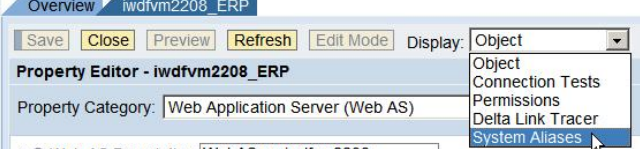
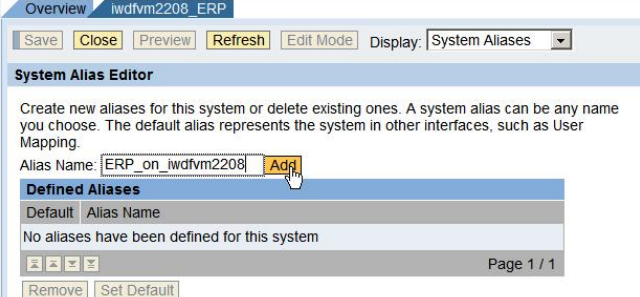
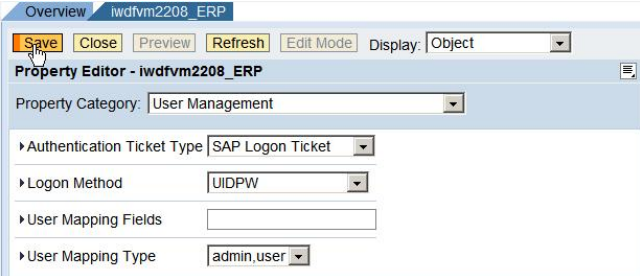
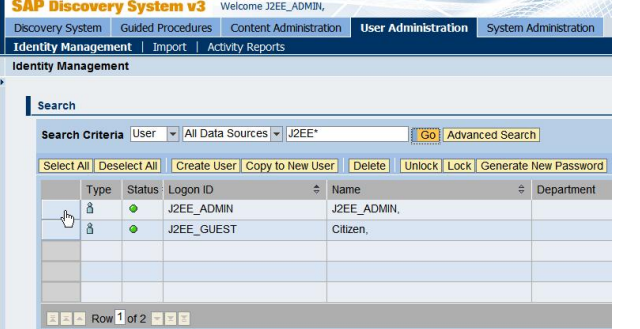
Register an External System via Portal

To show how to register a System in the Portal, we register the ERP of the server iwdfvm2208 (client 300).

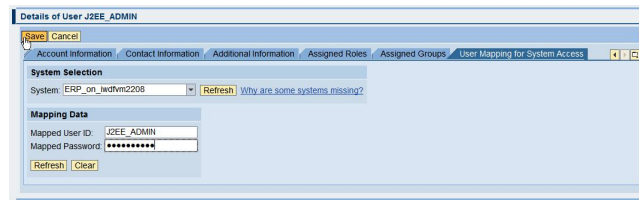
Register an external system via Portal	
<p>1. Open your Internet Web browser. 2. In the address bar, enter the URL to the Portal server as follows: http://<machine name with full domain>:<portnumber>/irj/portal For example: http://iwdfvm2217.wdf.sap.corp:51000/irj/portal (where iwdfvm2217.wdf.sap.corp is the fully-qualified domain name of the Portal server host, and 51000 is the application port number on J2EE engine in use by the Portal Server installation). Logon as j2ee_admin/sapides123</p>	
<p>Create a new Portal Content Folder: Choose → <i>System Administration</i> → <i>System Configuration</i> Create a new folder via right-click on Portal-Content and then → <i>New</i> → <i>Folder</i></p>	
<p>Fill out the General Properties form of the Folder Wizard as shown. For the Folder ID Prefix please choose org.<your Organisation> Click <i>Finish</i>.</p>	
<p>Confirm closing the Wizard with <i>OK</i>.</p>	

<p>Unfold the <i>Portal Content</i> folder. Add a new System via right-click on → <i>Systems</i> → <i>New</i> → <i>System (from template)</i>. The System Wizard opens.</p>	
<p>Choose <i>SAP System using dedicated application server</i> and click <i>Next</i>.</p>	
<p>Now type the System Name, System ID, System ID Prefix and Description.</p> <ul style="list-style-type: none"> System Name: <SAP System>_<Type> (e.g. iwdfvm2208_ERP) System ID: = System Name System ID Prefix: org.<your Organisation> <p>Choose <i>Next</i> and <i>Finish</i>.</p>	
<p>Confirm to open the object with <i>OK</i>.</p>	<p>Choose your next step:</p> <ul style="list-style-type: none"> <input checked="" type="radio"/> Open the object for editing <input type="radio"/> Restart the wizard to create a new object using the same template <input type="radio"/> Close the wizard 

<p>Choose <i>Connector</i> from the Property Category.</p>	 <p>Overview iwdfvm2208_ERP</p> <p>Save Close Preview Refresh Edit Mode Display: Object</p> <p>Property Editor - iwdfvm2208_ERP</p> <p>Property Category: Show All</p> <ul style="list-style-type: none"> BI KM / Business Intelligence KM Integration CRM Content CVIEWS Catalog Administration Connection Properties Connector Crystal Enterprise Server Drag&Relate Server (DRS) FSCM ICSS ISA B2B <p>SAP Logon Ticket</p> <p>Yes No</p>
<p>To find the proper settings see your SAPLogon properties.</p> <ul style="list-style-type: none"> Application host = Gateway host = machine name with full domain Gateway service: 33 concatenated to with the system number (e.g. 3310) Client, System ID and system number Server Port: 32 concatenated to with the system number (e.g. 3210) System Type: e.g. SAP_R3 Save your settings. 	 <p>Overview iwdfvm2208_ERP</p> <p>Save Close Preview Refresh Edit Mode Display: Object</p> <p>Property Editor - iwdfvm2208_ERP</p> <p>Property Category: Connector</p> <ul style="list-style-type: none"> Application Host iwdfvm2208.wdf.sap.corp Gateway Host iwdfvm2208.wdf.sap.corp Gateway Service 3310 Logical System Name Remote Host Type 3 SAP Client 300 SAP System ID (SID) ERP SAP System Number 10 Server Port 3210 SNC Library Path SNC Mode 0 SNC Name SNC Partner Name SNC QOP (Security Level) 0 System Type SAP_R3 Trace Mode 0
<p>Select <i>Web Application Server</i> from Property Category.</p>	 <p>Overview iwdfvm2208_ERP</p> <p>Save Close Preview Refresh Edit Mode Display: Object</p> <p>Property Editor - iwdfvm2208_ERP</p> <p>Property Category: Connector</p> <ul style="list-style-type: none"> ISA HOM Information Internet Transaction Server (ITS) Shared Catalog Shop Administration User Administration User Management WFM WFM CS Web Application Server (Web AS) Show All

<p>Configure the Web Application Server as shown and save your settings.</p>																
<p>Create a new alias for the ERP-System: Select <i>System Aliases</i> from Display dropdown box.</p>																
<p>Type in an alias and press the <i>Add</i> button. Visual Composer will refer to this alias. Save your settings.</p>																
<p>Select <i>Object</i> from Display dropdown box and choose <i>User Management</i> from Property Category. Configure the properties as shown. Save your settings.</p>																
<p>Check the User Mapping under → <i>User Administration</i> → <i>Identity Management</i>. Search for your User. If more than one user is found get yours by clicking on the correct entry.</p>	 <table border="1" data-bbox="730 1585 1299 1732"> <thead> <tr> <th>Type</th> <th>Status</th> <th>Logon ID</th> <th>Name</th> <th>Department</th> </tr> </thead> <tbody> <tr> <td></td> <td>●</td> <td>J2EE_ADMIN</td> <td>J2EE_ADMIN</td> <td></td> </tr> <tr> <td></td> <td>●</td> <td>J2EE_GUEST</td> <td>Citizen</td> <td></td> </tr> </tbody> </table>	Type	Status	Logon ID	Name	Department		●	J2EE_ADMIN	J2EE_ADMIN			●	J2EE_GUEST	Citizen	
Type	Status	Logon ID	Name	Department												
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	●	J2EE_GUEST	Citizen													

Select the *User Mapping for System Access* tab. Press *Modify* to map your Portal user to the user of the newly created system (in this case, the user of the ERP-system), and also configure your user name and password for your system. Save your settings. Now you can logoff the portal.

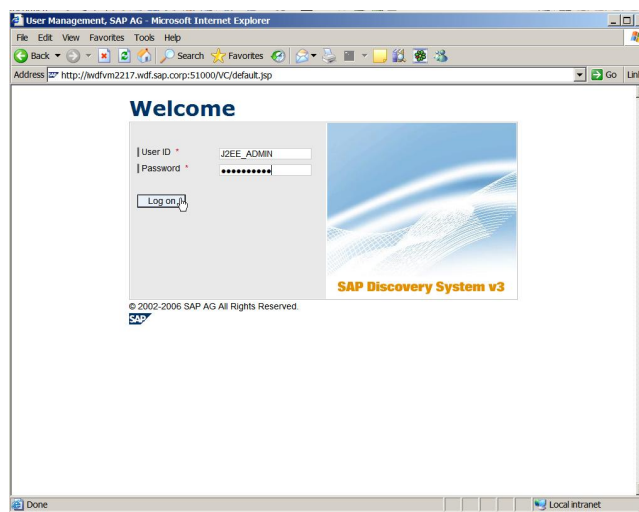


Developing the VC Application

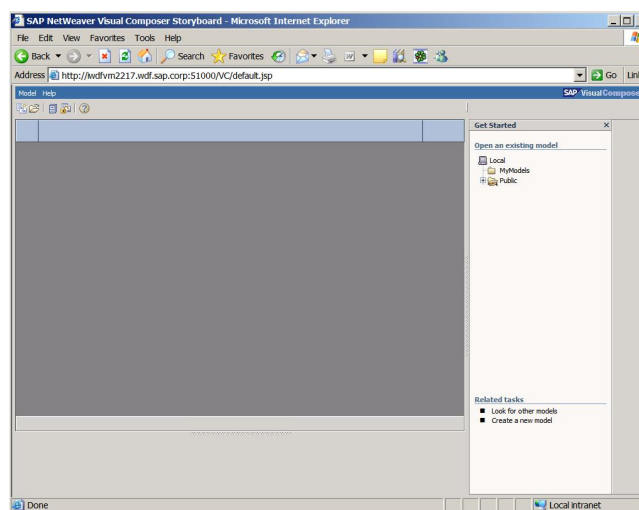
This chapter guides you through the development of a simple Visual Composer application that uses services offered by the ERP system you just added via Portal.

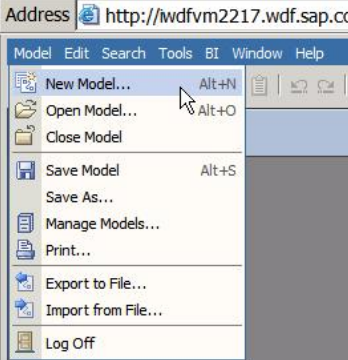
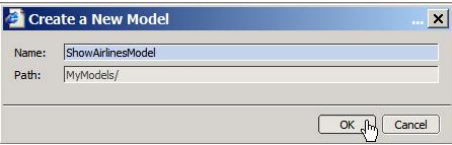
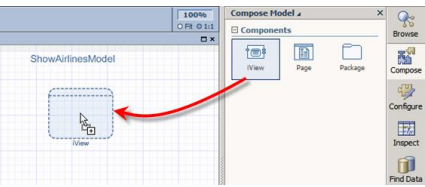
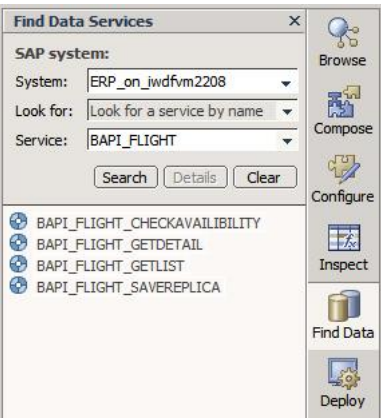
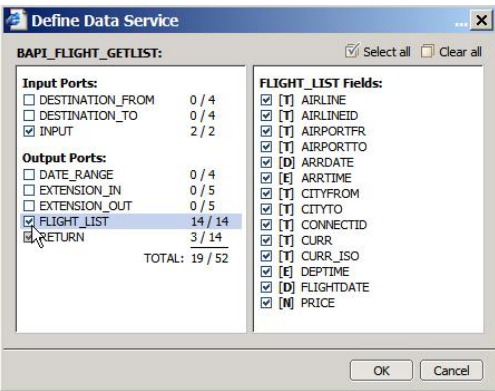
Developing the VC application

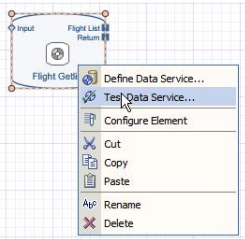
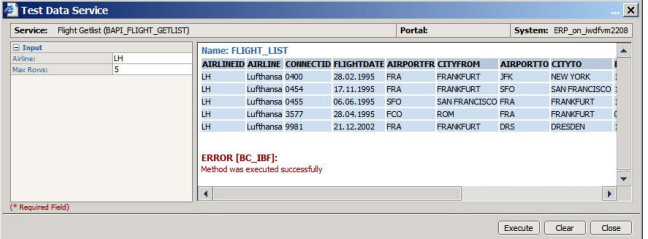
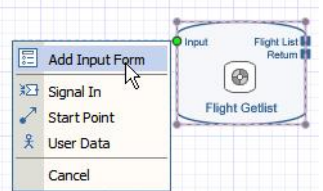
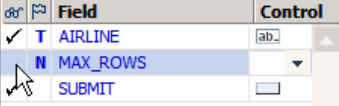
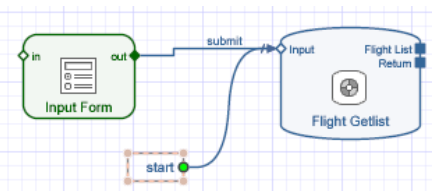
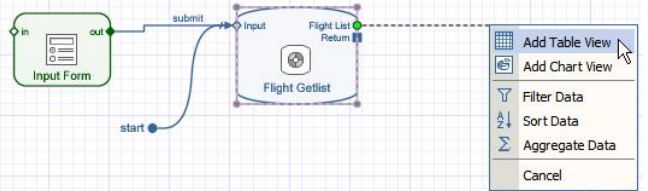
1. Open your Internet Web browser.
2. In the address bar, enter the URL to the Visual Composer server as follows:
`http://<machine name with full domain>:<portnumber>/VC`
 (case sensitive)
 For example:
`http://iwdfvm2217.wdf.sap.corp:51000/VC`
 (where iwdfvm2217.wdf.sap.corp is the fully-qualified domain name of the Visual Composer server host, and 50000 is the application port number on J2EE engine in use by the Visual Composer Server installation).
 Logon as j2ee_admin/sapides123

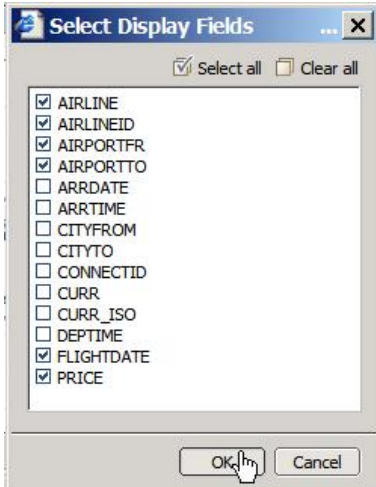
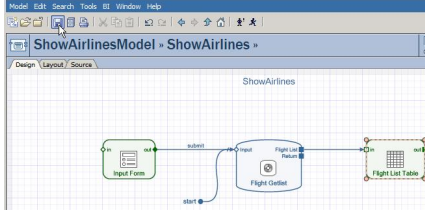

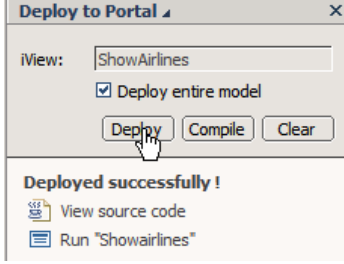
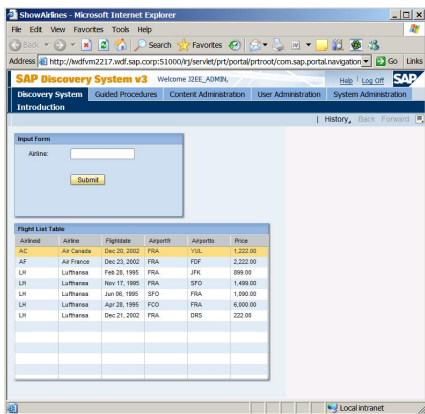


When you log on to Visual Composer Storyboard for the first time, the following screen appears, displaying an empty workspace and a Get Started task panel to the right.



<p>Create a model: a. Choose <i>Model</i> → <i>New Model</i></p>	
<p>b. In the Create a New Model dialog box, enter a name for the model, such as: <i>ShowAirlinesModel</i></p>	
<p>c. Click <i>OK</i>. The Design board is displayed. Click on the Design Board to activate it.</p> <p>2. Create an iView by dragging the iView icon from the Compose Model task panel and call it <i>ShowAirlines</i>.</p>	
<p>3. Import the data services: a. Open (double-click) the iView and click the <i>Find Data</i> button in the task-panel toolbar at the right. b. From the <i>System</i> drop-down list, choose the external system you just defined in the portal (the source of the data we need): c. In the <i>Service</i> field, enter: <i>BAPI_FLIGHT</i> and click <i>Search</i>. A list of all data services matching the search string is displayed.</p>	
<p>d. Drag <i>BAPI_FLIGHT_GETLIST</i> onto the workspace. The <i>Define Data Service</i> dialog box is displayed, listing the ports and the metadata of the data service. e. In the left pane of the <i>Define Data Service</i> dialog box, check the <i>FLIGHT_LIST</i> check box to have the flight list data available at the output port. Press <i>OK</i>.</p>	

<p>Test the newly created Data Service: Rightclick on the Data Service icon and choose <i>Test Data Service</i>.</p>	
<p>The Test Data Service dialog box is displayed. Fill in the required input parameters e.g. Airline: LH and Max Rows: 5 Press Execute. After the test close Test Data Service.</p>	
<p>4. Define the input: a. Drag out from the Input port of <i>Flight Getlist</i>, release, and from the context menu, choose <i>Add Input Form</i>. Confirm the name of the table <i>Input Form</i>.</p>	
<p>Select your input form to have its properties on the right hand. Deselect MAX_ROWS to have just the AIRLINE in the input form</p>	
<p>b. In order to define initialization values for the iView, drag out from the same Input port again and choose <i>Start Point</i>. The Select Input Fields dialog box is displayed, listing the metadata that can be input from the start point to the data service. Check <i>AIRLINES</i> and click <i>OK</i>.</p>	
<p>d. Save your model. 5. Define the output: a. Drag out from the <i>Flight List</i> output port of <i>Flight Getlist</i>, release and from the context menu, choose <i>Add Table View</i>.</p>	

<p>The <i>Select Display Fields</i> dialog box is displayed.</p> <p>b. Select the following fields to be displayed in the output table: <i>AIRLINE, AIRLINEID, AIRPORTFR, AIRPORTTO, FLIGHTPRICE</i> and <i>PRICE</i></p> <p>Click <i>OK</i>.</p>																																																	
<p>Confirm the name of the table <i>Flight List Table</i>.</p> <p>6. Save the model.</p>																																																	
<p>Deploy the model by clicking the <i>Deploy Model</i> button in the toolbar on the right side.</p>																																																	
<p>Check the field <i>Deploy entire model</i> and choose <i>Deploy</i>. The model gets compiled and deployed onto the DS the VC runs on. After the successful deployment a success message is displayed.</p>																																																	
<p>Click on <i>Run "Showairlines"</i> to execute your application.</p>	 <table border="1" data-bbox="698 1638 958 1795"> <thead> <tr> <th>Airline</th> <th>Airline</th> <th>Flightdate</th> <th>Airport</th> <th>Airport</th> <th>Price</th> </tr> </thead> <tbody> <tr> <td>AC</td> <td>Air Canada</td> <td>Dec 20, 2002</td> <td>FRA</td> <td>YUL</td> <td>1,222.00</td> </tr> <tr> <td>AF</td> <td>Air France</td> <td>Dec 23, 2002</td> <td>FRA</td> <td>DFP</td> <td>2,222.00</td> </tr> <tr> <td>LH</td> <td>Lufthansa</td> <td>Feb 28, 1995</td> <td>FRA</td> <td>JFK</td> <td>899.00</td> </tr> <tr> <td>LH</td> <td>Lufthansa</td> <td>Nov 17, 1995</td> <td>FRA</td> <td>SFO</td> <td>1,499.00</td> </tr> <tr> <td>LH</td> <td>Lufthansa</td> <td>Jun 06, 1995</td> <td>SFO</td> <td>FRA</td> <td>1,090.00</td> </tr> <tr> <td>LH</td> <td>Lufthansa</td> <td>Jul 28, 1995</td> <td>FOO</td> <td>FRA</td> <td>6,000.00</td> </tr> <tr> <td>LH</td> <td>Lufthansa</td> <td>Dec 21, 2002</td> <td>FRA</td> <td>DRS</td> <td>322.00</td> </tr> </tbody> </table>	Airline	Airline	Flightdate	Airport	Airport	Price	AC	Air Canada	Dec 20, 2002	FRA	YUL	1,222.00	AF	Air France	Dec 23, 2002	FRA	DFP	2,222.00	LH	Lufthansa	Feb 28, 1995	FRA	JFK	899.00	LH	Lufthansa	Nov 17, 1995	FRA	SFO	1,499.00	LH	Lufthansa	Jun 06, 1995	SFO	FRA	1,090.00	LH	Lufthansa	Jul 28, 1995	FOO	FRA	6,000.00	LH	Lufthansa	Dec 21, 2002	FRA	DRS	322.00
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