

# SAP Setup

Ver. 1.0.0

## Overview

Before proceeding with the lab, there are some configurations that need to be setup on your SAP instance.

If you don't have an SAP instance, you can leverage a hosted SAP demo system. [SandboxSAP](#) is one example and costs around \$30/month for a single user or \$13.50/7 days for a single user. You can leverage the ECC 6.0 EHP3 IDES system and configure it according to this guide.

Please use this guide as a reference. Your SAP instance may be configured differently and have restrictions that prevent you from completing the labs fully. If you run into issues on the SAP side, please leverage your SAP Administrator.

**Reminder:** This lab requires the use of your own SAP instance. If you don't have one, you can leverage a hosted SAP service. For the purposes of this lab, we utilized [Sandbox SAP](#).

[Overview](#)

[Steps](#)

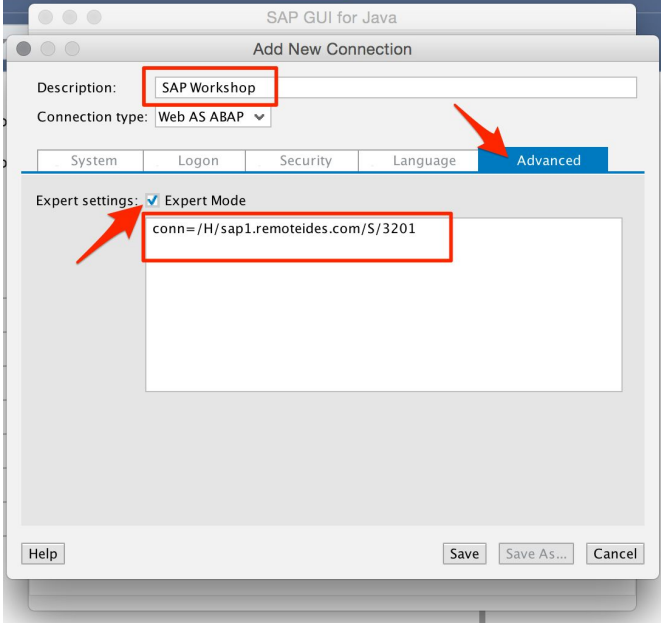
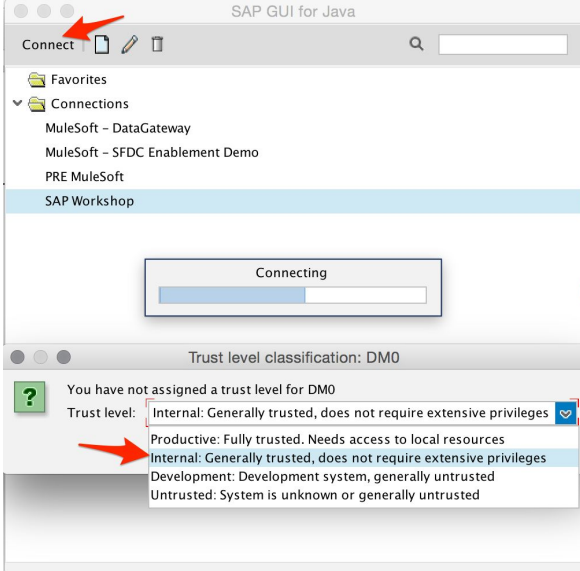
- [1. Create New Connection](#)
- [2. Create a RFC Destination - SM59](#)
- [3. Create Port for IDoc Processing - WE21](#)
- [4. Use or Create Two Logical Systems - SALE](#)
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[Summary](#)

## Steps


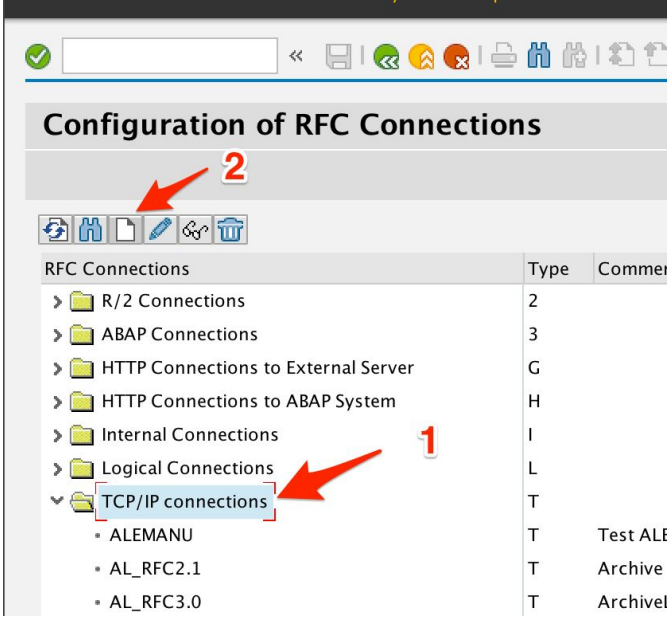
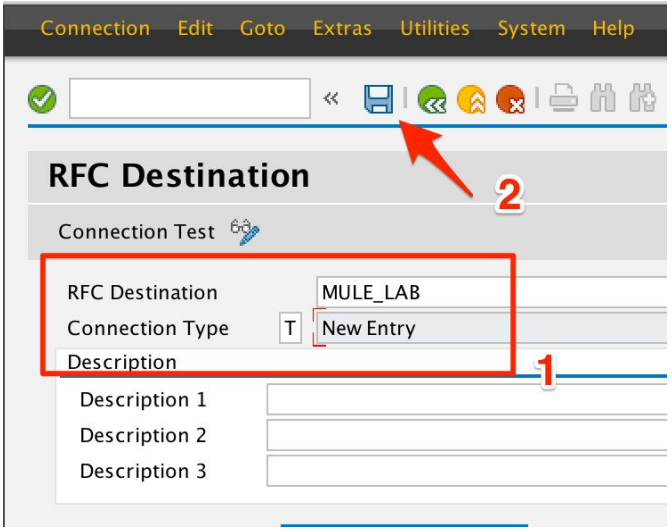
### 1. Create New Connection

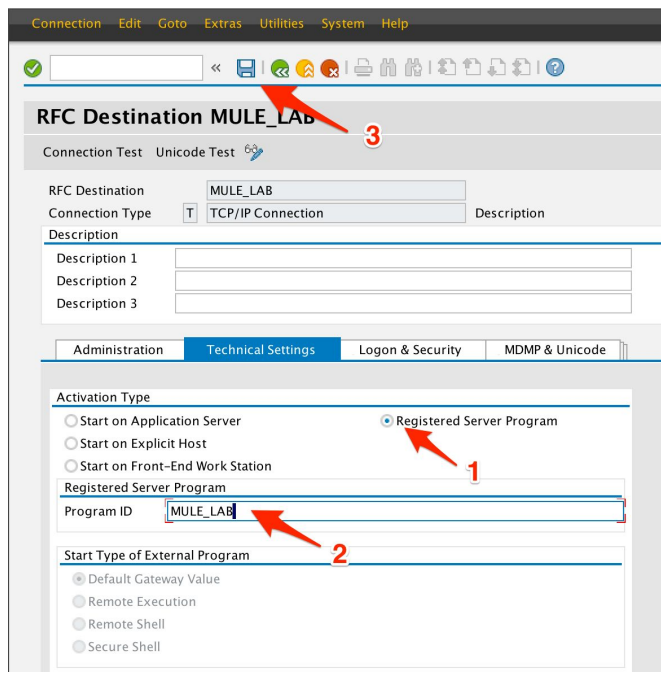
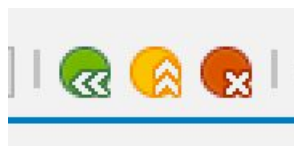
1.0	<p>Open SAP GUI and click on <b>New</b> to create a new connection.</p> <p>If you already have a connection to your own instance, skip to <a href="#">Step 2</a></p>	
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<p>1.1</p>	<p>Fill in the <b>Description</b></p> <p><b>e.g. SAP Workshop</b></p> <p>Click on the <b>Advanced</b> tab and then check the <b>Expert Mode</b> checkbox.</p> <p>Fill in the following connection string:</p> <p><b>e.g.</b></p> <p><b>conn=/H/sap2.remoteides.com/S/3201</b></p> <p>and then click on <b>Save</b></p>	
<p>1.2</p>	<p>Back in the Connections list, select the new connection and click on the Connect button.</p> <p>If the <b>Trust level classification</b> window shows up, select <b>Internal: Generally trusted, does not require extensive privileges</b></p>	

## 2. Create a RFC Destination - SM59

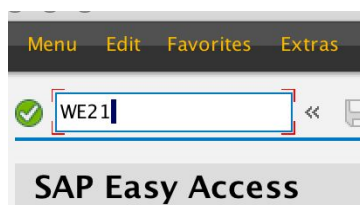
The first step is to create a RFC destination. The RFC destination is a symbolic name that is used to direct events to a target system masking the program ID. The target system in this case is the MuleSoft SAP Connector which acts as an inbound endpoint to receive IDocs and Functions over RFC. The Program ID is configured in both the SAP GUI and the SAP Connector.

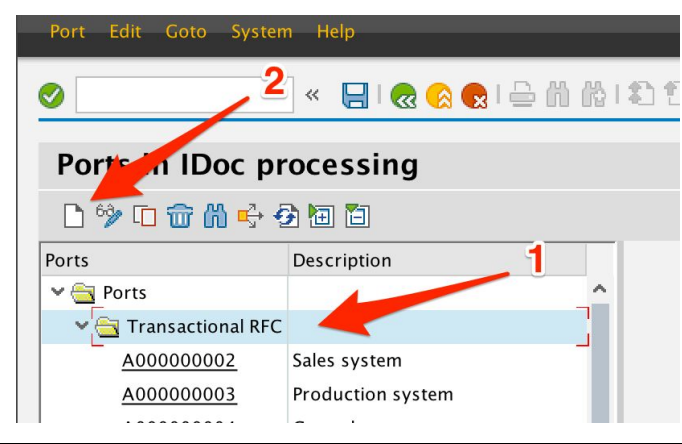
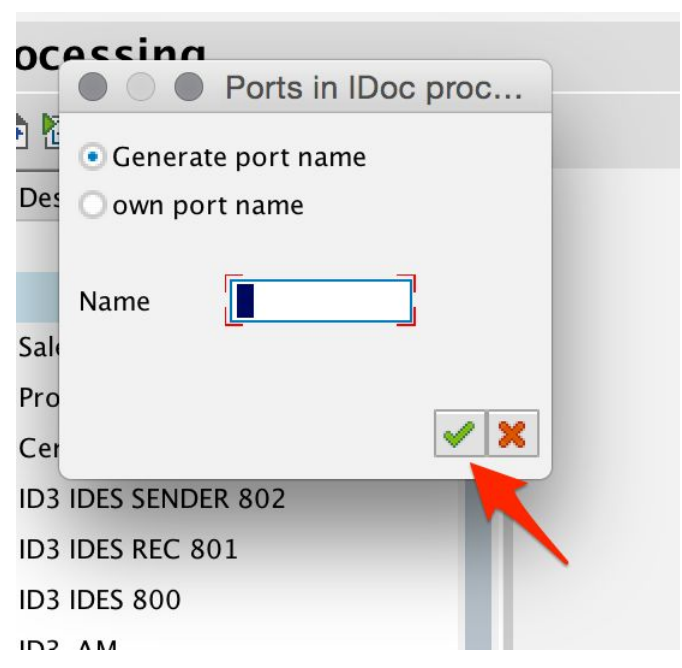
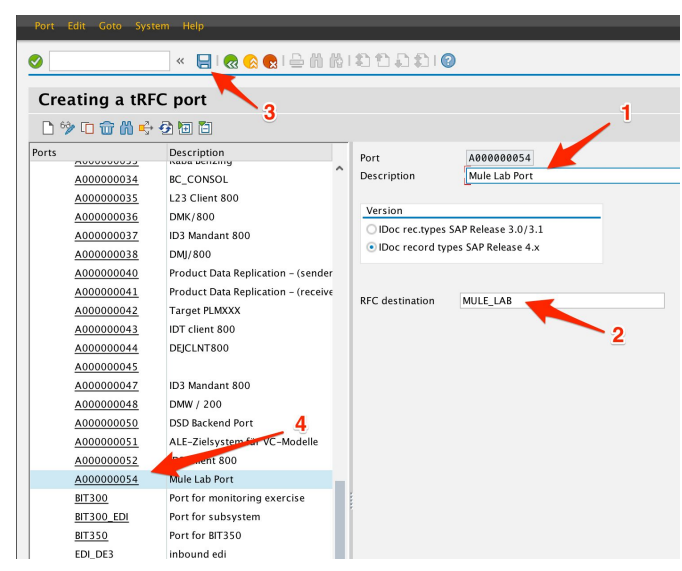
2.1	Enter in SAP transaction code <b>SM59</b>	
2.2	<p>1. Expand the <b>TCP/IP connections</b> node</p> <p>2. Click on the <b>New</b> icon.</p>	
2.3	<p>1. Enter a name in the <b>RFC Destination</b> field.</p> <p>e.g. MULE_LAB</p> <p>For the <b>Connection Type</b> field, enter a <b>T</b></p> <p>2. Click on the <b>Save</b> icon.</p>	


2.4	<p>1. Under the <b>Activation Type</b> section, check the <b>Registered Server Program</b> radio button.</p> <p>2. Under the <b>Registered Server Program</b> section, enter a program ID in the <b>Program ID</b> field.</p> <p>e.g. MULE_LAB</p> <p>3. Click on <b>Save</b></p>	
2.5	<p>Click on the yellow circle to exit and return to the SAP Easy Access screen.</p>	

### 3. Create Port for IDoc Processing - WE21

The next step is to create a port for IDoc processing. A port identifies where to send messages.

3.1	<p>Enter in SAP transaction code <b>WE21</b></p>	
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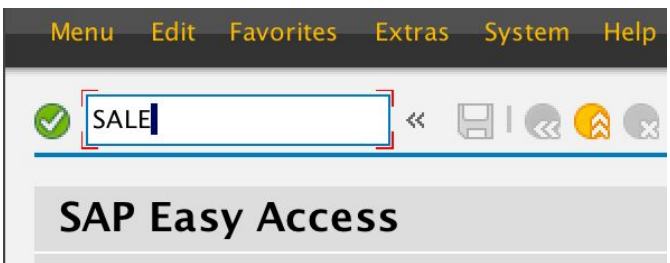

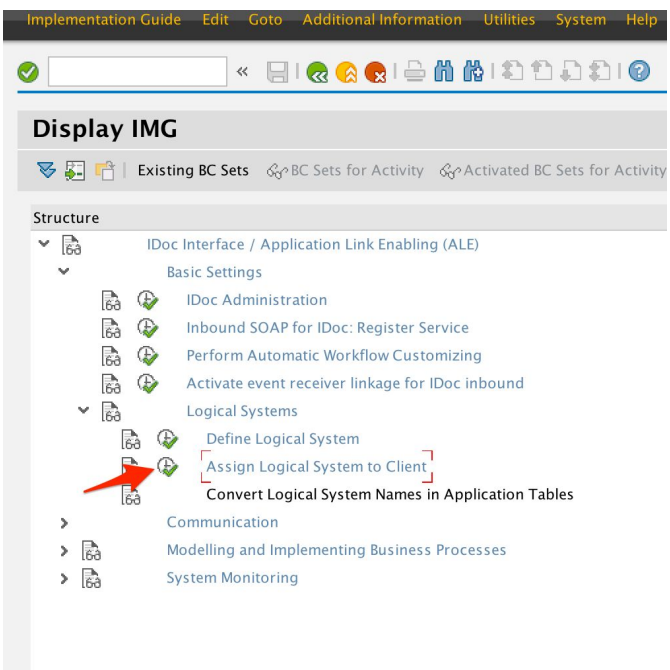
<p>3.2</p>	<ol style="list-style-type: none"> <li>1. Expand the <b>Transactional RFC</b> node.</li> <li>2. Click on the <b>New</b> icon.</li> </ol>	
<p>3.3</p>	<p>Leave the <b>Generate port name</b> radio button selected and click on the <b>Green</b> check mark button.</p>	
<p>3.4</p>	<ol style="list-style-type: none"> <li>1. Fill in the <b>Description</b> field</li> <li>2. Enter the <b>RFC destination</b> that was created in <a href="#">Step 2</a> e.g. MULE_LAB</li> <li>3. Click on the <b>Save</b> button at the top.</li> <li>4. Remember the port name that was created. You'll need this later in the setup. e.g. A000000054</li> </ol>	

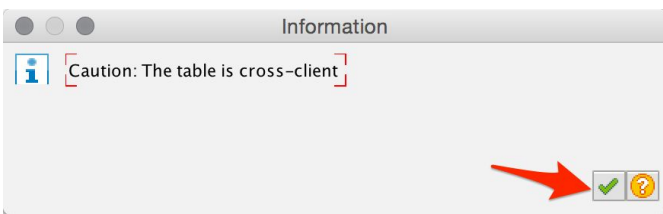

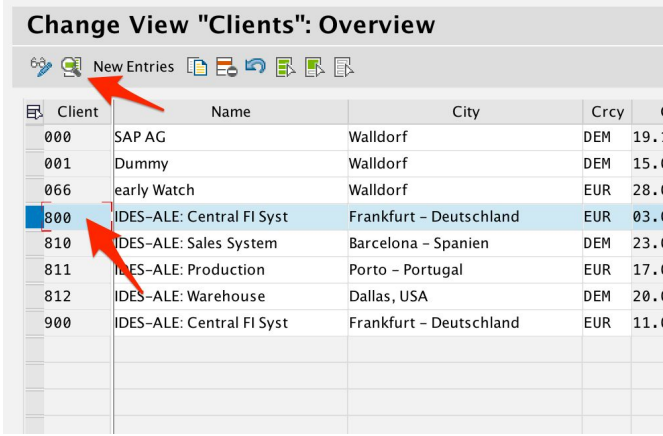
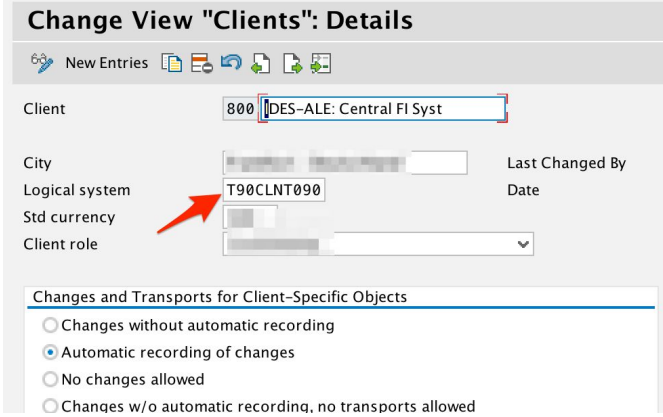
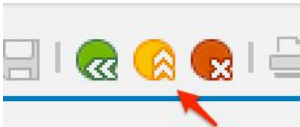
3.5	Click on the yellow circle to exit and return to the SAP Easy Access screen.	
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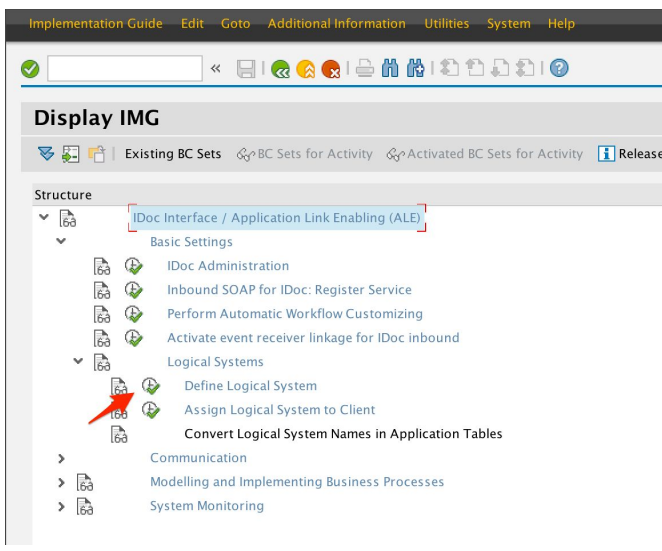
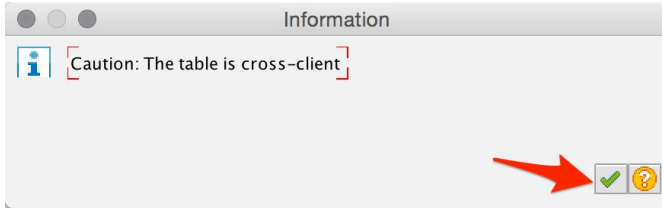
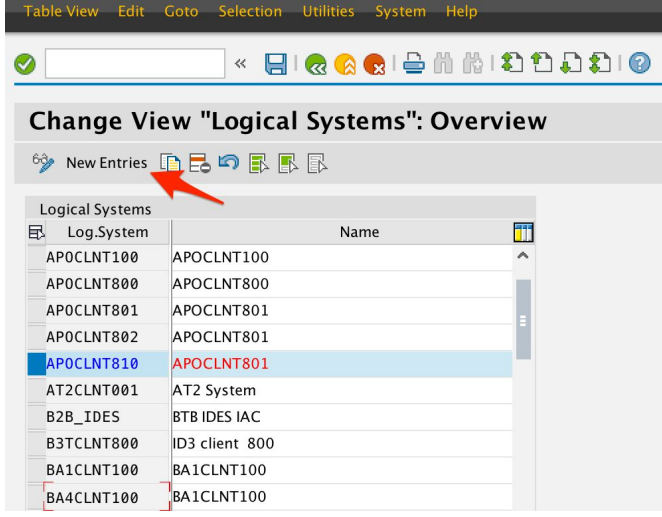
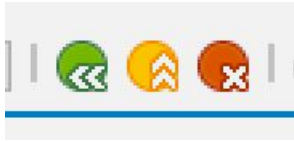
## 4. Use or Create Two Logical Systems - SALE

Logical Systems are the unique IDs that represent participating systems in a distributed environment.

In the case of this lab, you will either create a new Logical System or leverage one that already exists. This will represent the MuleSoft SAP Connector to either function as an inbound or outbound endpoint.

4.1	Enter in SAP transaction code <b>SALE</b>	
4.2	<p>Expand <b>Basic Settings &gt; Logical Systems</b></p> <p>Click on the  icon next to <b>Assign Logical System to Client</b></p>	

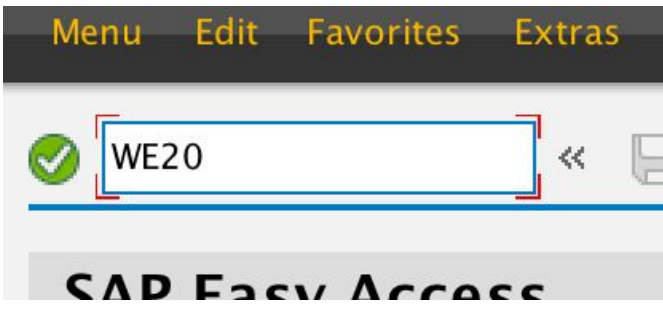
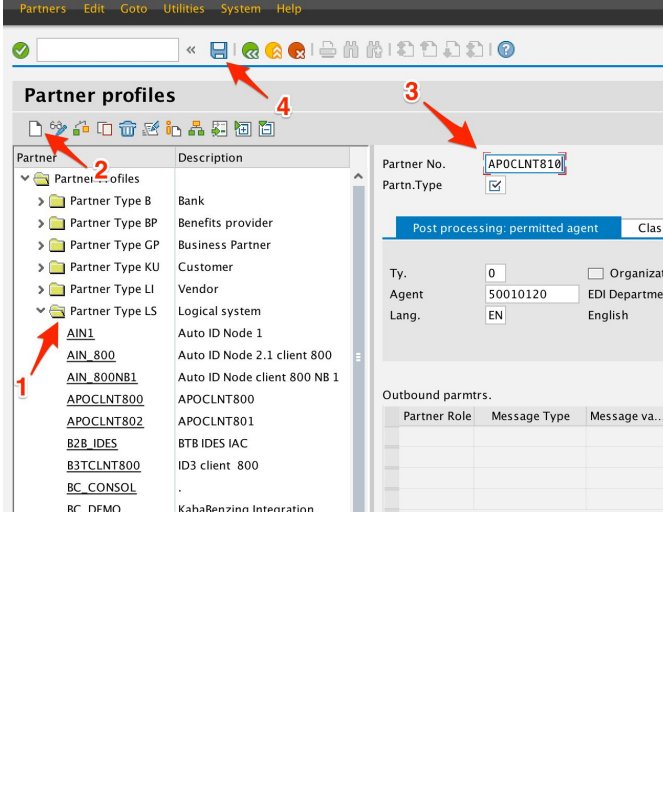
4.3	If the <b>Information</b> window pops up, click on the <b>Green</b> check mark button to proceed.																																														
4.4	Find your Client ID number in the list and click on the  Details icon.  e.g. 800	 <table><tr><th>Client</th><th>Name</th><th>City</th><th>Crcy</th><th>C</th></tr><tr><td>000</td><td>SAP AG</td><td>Walldorf</td><td>DEM</td><td>19.1</td></tr><tr><td>001</td><td>Dummy</td><td>Walldorf</td><td>DEM</td><td>15.0</td></tr><tr><td>066</td><td>early Watch</td><td>Walldorf</td><td>EUR</td><td>28.0</td></tr><tr><td>800</td><td>IDES-ALE: Central FI Syst</td><td>Frankfurt – Deutschland</td><td>EUR</td><td>03.0</td></tr><tr><td>810</td><td>IDES-ALE: Sales System</td><td>Barcelona – Spanien</td><td>DEM</td><td>23.0</td></tr><tr><td>811</td><td>IDES-ALE: Production</td><td>Porto – Portugal</td><td>EUR</td><td>17.0</td></tr><tr><td>812</td><td>IDES-ALE: Warehouse</td><td>Dallas, USA</td><td>DEM</td><td>20.0</td></tr><tr><td>900</td><td>IDES-ALE: Central FI Syst</td><td>Frankfurt – Deutschland</td><td>EUR</td><td>11.0</td></tr></table>	Client	Name	City	Crcy	C	000	SAP AG	Walldorf	DEM	19.1	001	Dummy	Walldorf	DEM	15.0	066	early Watch	Walldorf	EUR	28.0	800	IDES-ALE: Central FI Syst	Frankfurt – Deutschland	EUR	03.0	810	IDES-ALE: Sales System	Barcelona – Spanien	DEM	23.0	811	IDES-ALE: Production	Porto – Portugal	EUR	17.0	812	IDES-ALE: Warehouse	Dallas, USA	DEM	20.0	900	IDES-ALE: Central FI Syst	Frankfurt – Deutschland	EUR	11.0
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900	IDES-ALE: Central FI Syst	Frankfurt – Deutschland	EUR	11.0																																											
4.5	Take note of the <b>Logical system</b> field.  e.g. T90CLNT090	 <p>Client <input type="text" value="800"/> IDES-ALE: Central FI Syst</p> <p>City <input type="text" value=""/> Last Changed By <input type="text" value=""/></p> <p>Logical system <input type="text" value="T90CLNT090"/> Date <input type="text" value=""/></p> <p>Std currency <input type="text" value=""/></p> <p>Client role <input type="text" value=""/></p> <p>Changes and Transports for Client-Specific Objects</p> <p><input type="radio"/> Changes without automatic recording</p> <p><input checked="" type="radio"/> Automatic recording of changes</p> <p><input type="radio"/> No changes allowed</p> <p><input type="radio"/> Changes w/o automatic recording, no transports allowed</p>																																													
4.6	Click on the yellow circle to exit and go back up a level.																																														

4.7	<p>In the <b>Display IMG</b> screen, click on the  icon next to <b>Define Logical System</b></p>																							
4.8	<p>If the <b>Information</b> window pops up, click on the <b>Green</b> check mark button to proceed.</p>																							
4.9	<p>If you have permission to create new Logical System, click on <b>New Entries</b>.</p> <p>Otherwise, take note of a Logical System from the list.</p> <p>e.g. APOCLNT810</p>	 <table><tr><th>Log.System</th><th>Name</th></tr><tr><td>AP0CLNT100</td><td>AP0CLNT100</td></tr><tr><td>AP0CLNT800</td><td>AP0CLNT800</td></tr><tr><td>AP0CLNT801</td><td>AP0CLNT801</td></tr><tr><td>AP0CLNT802</td><td>AP0CLNT801</td></tr><tr><td><b>AP0CLNT810</b></td><td><b>AP0CLNT801</b></td></tr><tr><td>AT2CLNT001</td><td>AT2 System</td></tr><tr><td>B2B_IDES</td><td>BTB IDES IAC</td></tr><tr><td>B3TCLNT800</td><td>ID3 client 800</td></tr><tr><td>BA1CLNT100</td><td>BA1CLNT100</td></tr><tr><td>BA4CLNT100</td><td>BA1CLNT100</td></tr></table>	Log.System	Name	AP0CLNT100	AP0CLNT100	AP0CLNT800	AP0CLNT800	AP0CLNT801	AP0CLNT801	AP0CLNT802	AP0CLNT801	<b>AP0CLNT810</b>	<b>AP0CLNT801</b>	AT2CLNT001	AT2 System	B2B_IDES	BTB IDES IAC	B3TCLNT800	ID3 client 800	BA1CLNT100	BA1CLNT100	BA4CLNT100	BA1CLNT100
Log.System	Name																							
AP0CLNT100	AP0CLNT100																							
AP0CLNT800	AP0CLNT800																							
AP0CLNT801	AP0CLNT801																							
AP0CLNT802	AP0CLNT801																							
<b>AP0CLNT810</b>	<b>AP0CLNT801</b>																							
AT2CLNT001	AT2 System																							
B2B_IDES	BTB IDES IAC																							
B3TCLNT800	ID3 client 800																							
BA1CLNT100	BA1CLNT100																							
BA4CLNT100	BA1CLNT100																							
4.10	<p>Click on the yellow circle to exit and return to the SAP Easy Access screen.</p>																							

## 5. Use or Create a Partner Profile - WE20



Partner profiles are a prerequisite for data exchange. This involves defining who can exchange messages with the SAP system and using which port.

5.1	Enter in SAP transaction code <b>WE20</b>	
5.2	<p>1. Expand the <b>Partner Type LS</b> node.</p> <p>2. If you created a new Logical System in <b>Step 4</b>, click on <b>Create</b>. Otherwise, look to see if the Logical System Partner Profile already exists. It will have the same name as the Logical System.</p> <p>e.g. T90CLNT090</p> <p>If the Partner Profile doesn't exist, click on <b>Create</b>.</p> <p>3. In the <b>Partner No.</b> field, enter in the Logical System name of either the one you created or of one that already exists in the system.</p> <p>e.g. APOCLNT810</p> <p>4. Click on <b>Save</b></p>	

5.3

In the Partner Profile, click on **Create inbound parameter** in the **Inbound parmtrs.** section.

**Partner profiles**

Partner No. APOCLNT810 APOCLNT801  
Partn.Type LS Logical system

Post processing: permitted agent Classification

Ty. 0 ☐ Organizational unit  
Agent 50010120 EDI Department  
Lang. EN English

Outbound parmtrs.

Partner Role	Message Type	Message va...	MessageFu...	Test

Inbound parmtrs.

Partner Role	Message Type	Message va...	MessageFu...	Test

5.4

1. In the **Message type** field, enter the following:

**DEBMAS**

2. In the **Process code** field under the **Inbound options** tab, enter the following:

**DEBM**

3. Click on **Save**

4. Click on **Back**

Inbound parameters Edit Goto System Help

Partner profiles: Inbound parameters

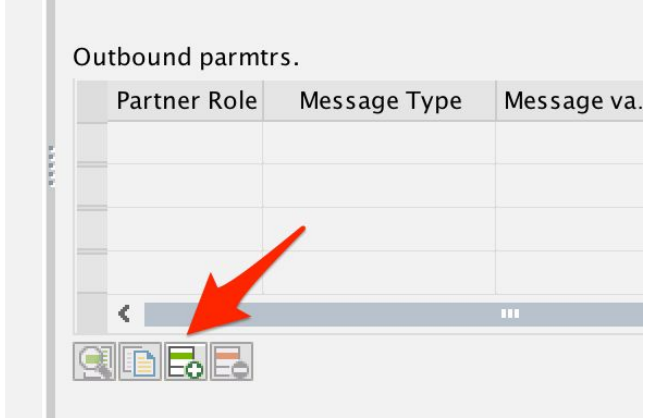
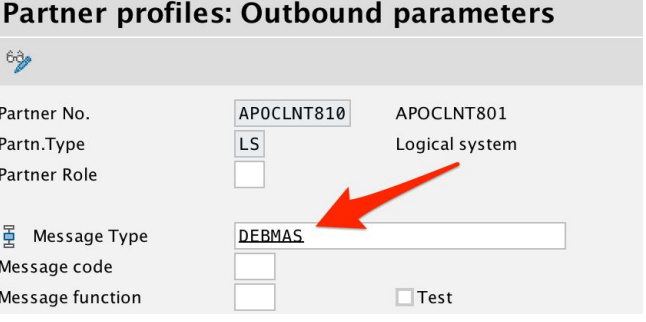
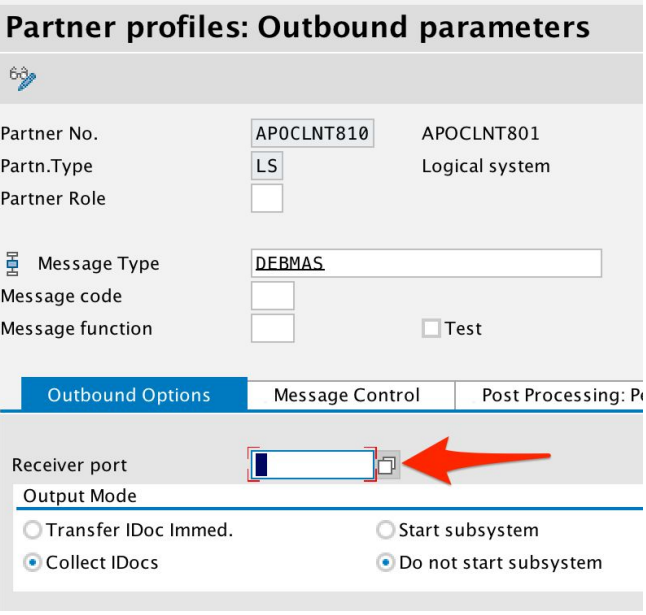
Partner No. APOCLNT810 APOCLNT801  
Partn.Type LS  
Partner Role

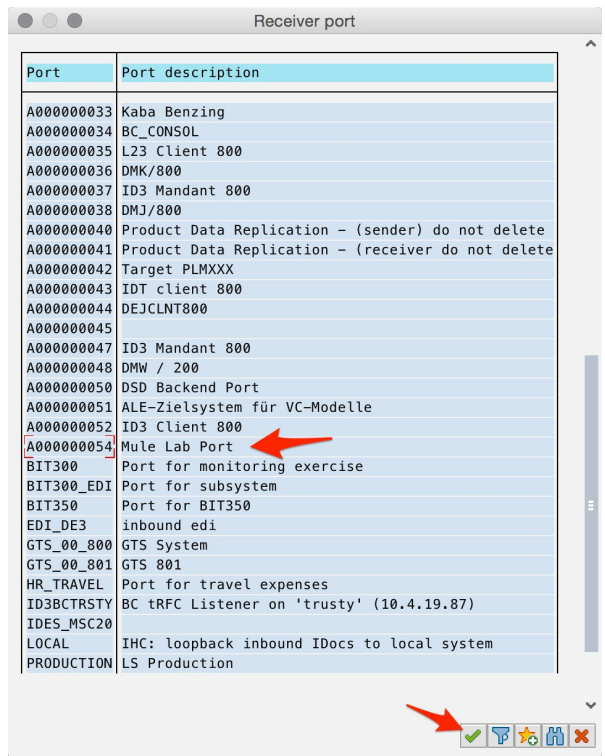
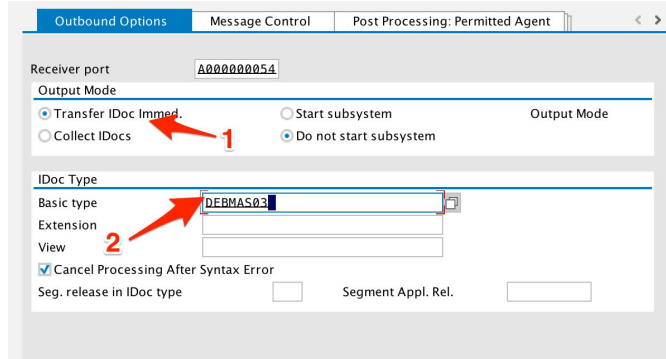


Message type DEBMAS Customer master data distribution  
Message code  
Message function ☐ Test

Inbound options Post processing: permitted agent Telephony

Process code DEBM DEBMAS Customer master data  
☒ Cancel Processing After Syntax Error

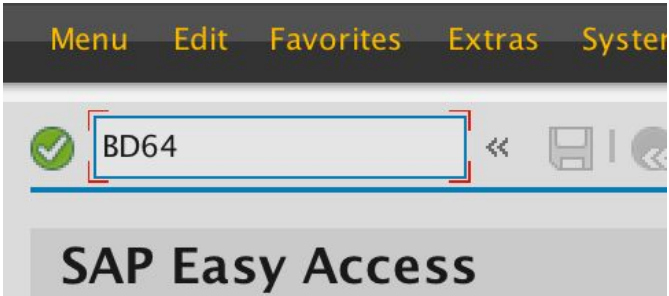

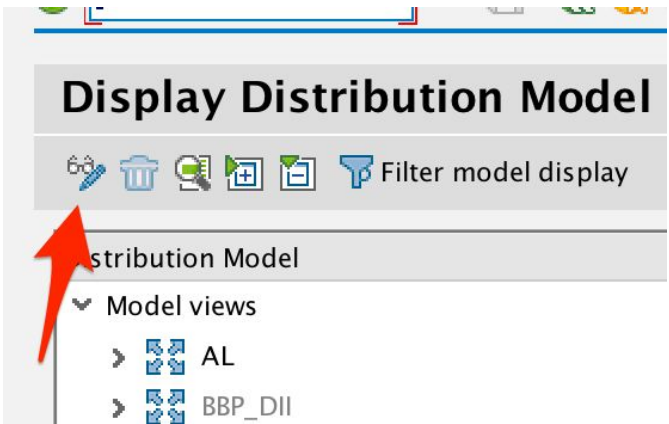
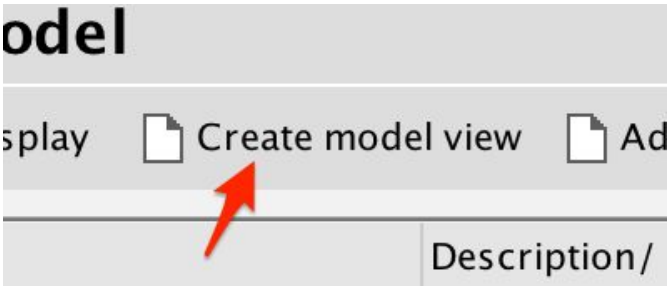
Processing by Function Module  
☐ Trigger by background program  
☒ Trigger Immediately

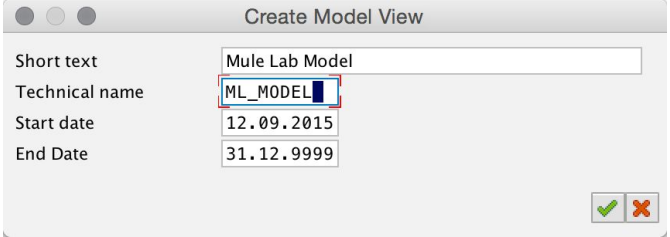

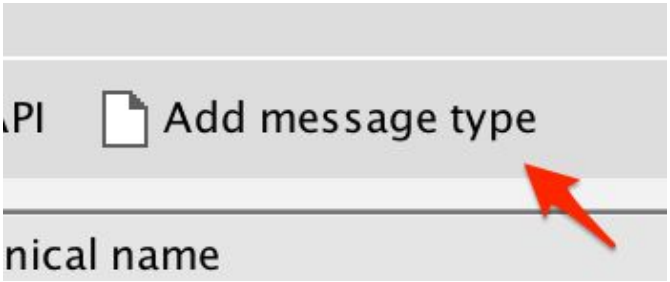
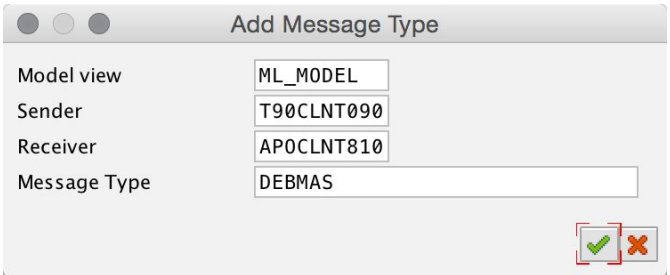
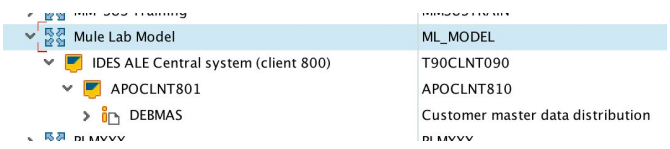
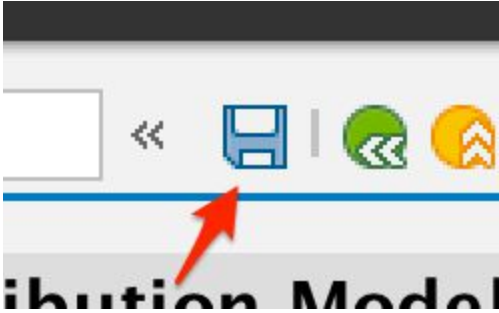
5.5	<p>Back on the Partner Profiles screen, click on <b>Create outbound parameter</b> under the <b>Outbound parmtrs.</b> section.</p>	
5.6	<p>In the <b>Message Type</b> field, enter the following:</p> <p><b>DEBMAS</b></p>	
5.7	<p>In the <b>Outbound Options</b> tab, click on the <b>Receiver port</b> field.</p> <p>You can either type in the <b>Port</b> you created in <b>Step 3</b> or click on the icon to the right of the field.</p>	


<p>5.8</p>	<p>If you clicked to search for the port, you'll be presented with the <b>Receiver port</b> screen.</p> <p>Find and select the port and click on the <b>Green</b> check mark.</p>	
<p>5.9</p>	<p>1. Under the <b>Output Mode</b> section, select the <b>Transfer IDoc Immed.</b> radio button.</p> <p>2. Under the <b>IDoc Type</b> section, enter the following in the <b>Basic type</b> field:</p> <p><b>DEBMAS03</b></p>	
<p>5.10</p>	<p>Click on <b>Save</b></p>	
<p>5.11</p>	<p>Click on the yellow circle to exit to the <b>Partner profiles</b> screen and then click it again to return to the SAP Easy Access screen.</p>	

## 6. Create a Distribution Model - BD64

A distribution model is used to describe the ALE message flow between logical systems. In the case of this workshop, the SAP Client and the MuleSoft SAP Connector. Business objects are distributed to connected recipients according to a unique distribution model that can contain rules of varying complexity depending on the type of business objects involved.

6.1	Enter in SAP transaction code <b>BD64</b>	
6.2	Click on the <b>Switch between display and edit mode</b> icon. 	
6.3	Click on <b>Create model view</b>	

6.4	<p>In the <b>Create Model View</b> window, fill in the <b>Short text</b> field and the <b>Technical name</b> field</p> <p>e.g. Mule Lab Model / ML_MODEL</p> <p>Click on the <b>Green</b> check mark to save your changes.</p>	
6.5	<p>Highlight the newly created model view at the bottom of the list.</p>	
6.6	<p>Click on <b>Add message type</b></p>	
6.7	<p>In the <b>Add Message Type</b> window, enter data in the following fields:</p> <p><b>Sender : &lt;Partner profile from 4.5&gt;</b> e.g. T90CLNT090</p> <p><b>Receiver : &lt;Partner profile from 4.9&gt;</b> e.g. APOCLNT810</p> <p><b>Message Type : DEBMAS</b></p>	
6.8	<p>The model view should look like the following screen.</p>	
6.9	<p>Click on <b>Save</b></p>	

6.10	Click on the yellow circle to exit and return to the SAP Easy Access screen.	
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## Summary

These setup steps are provided as a general guideline and can vary from system to system depending on your user permissions and pre-existing configurations that may already be applied. Below are the configuration examples that you will need to reference for this workshop.

Step	Field	Example	Labs
2.4	Program ID	MULE_LAB	Lab 1
4.5	Logical System - Sender	T90CLNT090	Lab 3
4.9	Logical System - Receiver	APOCLNT810	Lab 1, Lab 3