

CA API Developer Portal v3.0: Foundations 200

Lab Guide

04LSV2015S

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Note: All names used throughout this training content are fictitious and do not refer to any real company or person, living or dead.

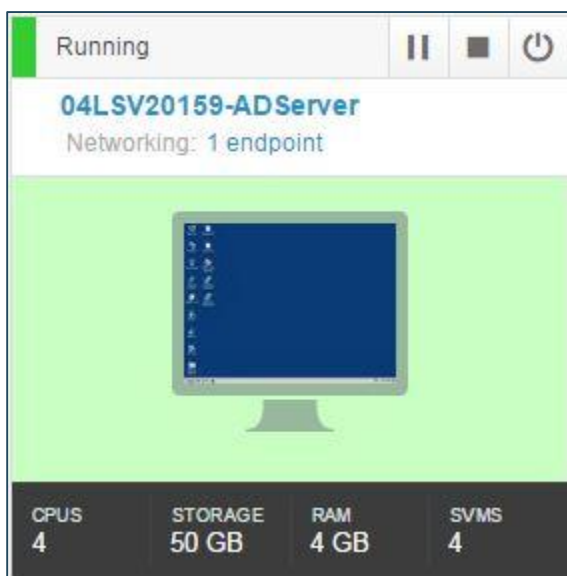
Lab 1-1 Prepare the Primary Gateway Node

Goals	The student will copy the CA API Developer Portal installation files to the primary Gateway node and execute them. Next, the student will create an API Portal admin account and publish the integration services within the Policy Manager. Finally, the student will verify all components have been installed.
Scenario	You will now act as Dylan to prepare the primary Gateway node for the addition of the CA API Developer Portal components.
Time	60 minutes

Instructions:

Copy the Installation File to the Primary Gateway Node

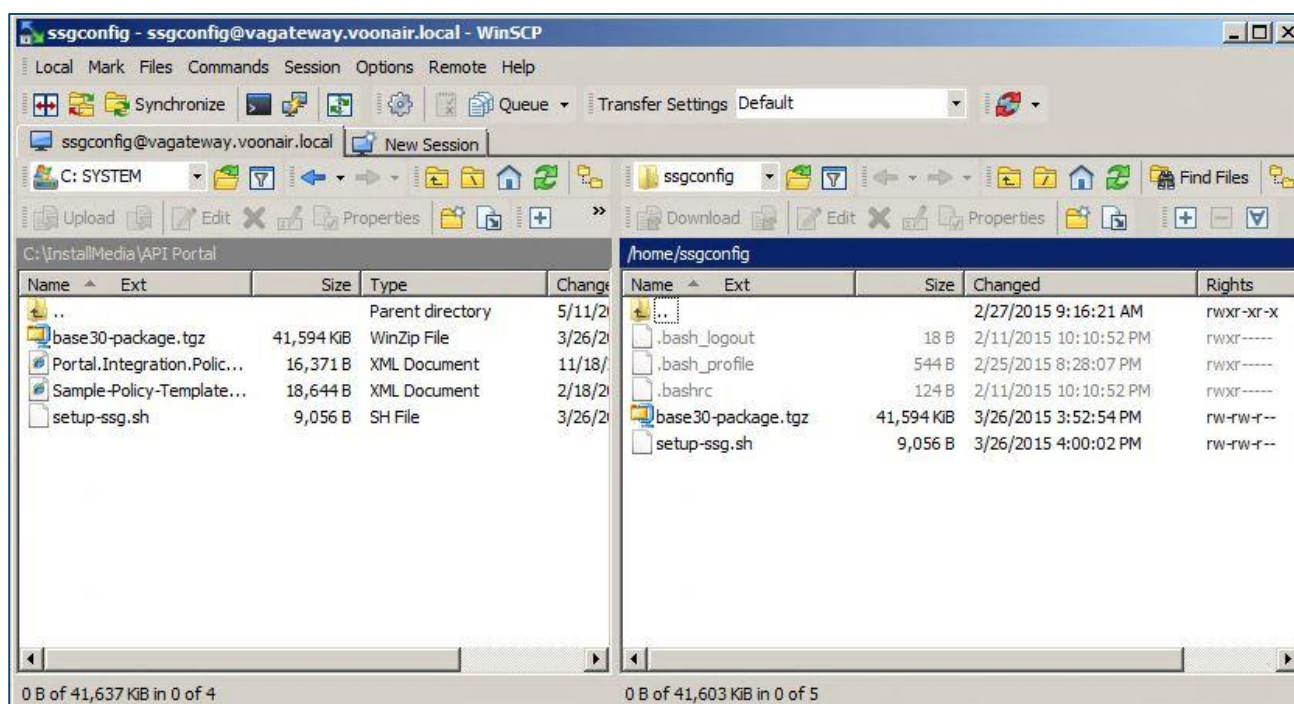
1. In the Dynamic Lab Environment, click the **ADSERVER** virtual machine.



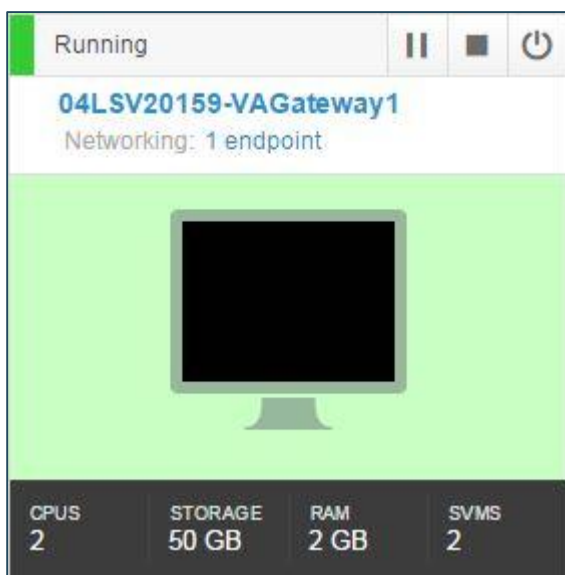
2. You should already be at the desktop of the **ADSERVER** virtual machine. If not, enter the following credentials:

ADSERVER User Name	Voonair\Administrator
Password	caeducation

3. To copy the integration files to the primary **VAGateway** cluster node (**VAGateway1**), on the **ADSERVER** Desktop, find the **WinSCP to VAGateway** shortcut and **Double-Click**.
4. The authentication banner should appear. Press **Continue**.
5. The WinSCP application appears. In the left pane, navigate to the following directory:
C:\InstallMedia\API Portal
6. The right pane should be logged into the following directory on the **VAGateway1** node:
/home/ssgconfig
7. Drag and drop the following files from the left pane to the right pane:
base30-package.tgz
setup-ssg.sh
8. If you receive an **Upload Confirmation** window, press **OK** to continue.
9. The integration files have now been uploaded to the primary Gateway node.



10. Close out of the **WinSCP** application.
11. In the Dynamic Lab Environment, switch to the primary **VAGateway** Node: **VAGateway1**.
 - a. Note: After connecting to the VAGateway1 virtual machine, the screen may appear blank. To interact with this machine, press **Ctrl+Alt** or **Enter** to bring up a prompt.



12. To log in to the **VAGateway1** virtual machine, enter the following credentials:

VAGateway1 Login	ssgconfig
Password	caeducation

13. To access the Linux privileged shell, type the following and press Enter:

3

14. To input the Gateway root password, type the following and press Enter:

caeducation

15. You should now be at the primary Gateway's command line interface. Type the following command and press **Enter**:

cd /opt/SecureSpan

16. To copy the files from the ssgconfig's home directory, type the following commands and press **Enter** each time:

mv /home/ssgconfig/base30-package.tgz /opt/SecureSpan

mv /home/ssgconfig/setup-ssg.sh /opt/SecureSpan

17. To run the integration setup scripts, type the following and press **Enter**:

sh setup-ssg.sh

```
[root@vagateway1 SecureSpan]# mv /home/ssgconfig/base30-package.tgz /opt/SecureSpan/
[root@vagateway1 SecureSpan]# mv /home/ssgconfig/setup-ssg.sh /opt/SecureSpan/
[root@vagateway1 SecureSpan]# sh setup-ssg.sh
API Developer Portal 3.0 Gateway Installation
=====

Checking version...
done
Found version 8.3.x

Pre-install checks are complete.

Do you want to proceed with the install [y/n]? _
```

18. Type **Y** to proceed with the install.

19. The **Gateway** services will stop and then start back up.

```
Starting installation...

Stopping gateway...
Shutting down Gateway Services: [ OK ]

Creating backup & copying new files...

Starting gateway...
Starting Gateway Services: Last login: Tue May 19 13:29:28 EDT 2015 [ OK ]

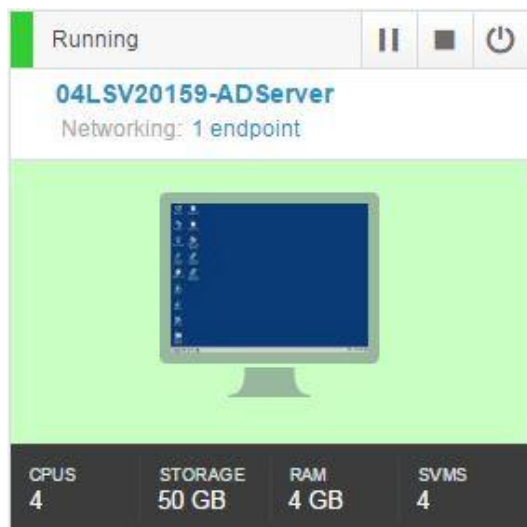
Setup complete.

Please see Setup Guide for configuring Portal Metrics

[root@vagateway1 SecureSpan]# _
```

Create the Developer Portal Administrator Account

20. In the Dynamic Lab Environment, switch back to the **ADSERVER** machine.



21. Access the **Layer 7 Policy Manager** shortcut from either the desktop or from **START MENU ► All Programs ► Layer 7 Policy Manager ► Layer 7 Policy Manager**.

22. Log into the Policy Manager with the following values:

- a. Note: The **services** may still be restarting from the previous section. If you fail to connect, wait 15 seconds and try again.

User Name	admin
Password	7layer
Gateway	VAGateway.voonair.local

23. To create the Developer Portal Administrator account, access **Tasks ► Create Internal User**.

24. The **Create Internal User** window appear. Fill in the following fields:

User Name	portaladmin
Password	7layer
Confirm	7layer

25. When finished, click **Create** to finish setting up the Administrator account.

26. To add **Administrative** rights to this account, access **Tasks ► Search Identity Provider**.

27. Ensure that the Search field has the **Internal Identity Provider** selected and click **Search**.

Search Identity Provider

Search users and/or groups in the Identity Provider:

Details

Search: Internal Identity Provider

Type: ALL

Name: Equals

Search

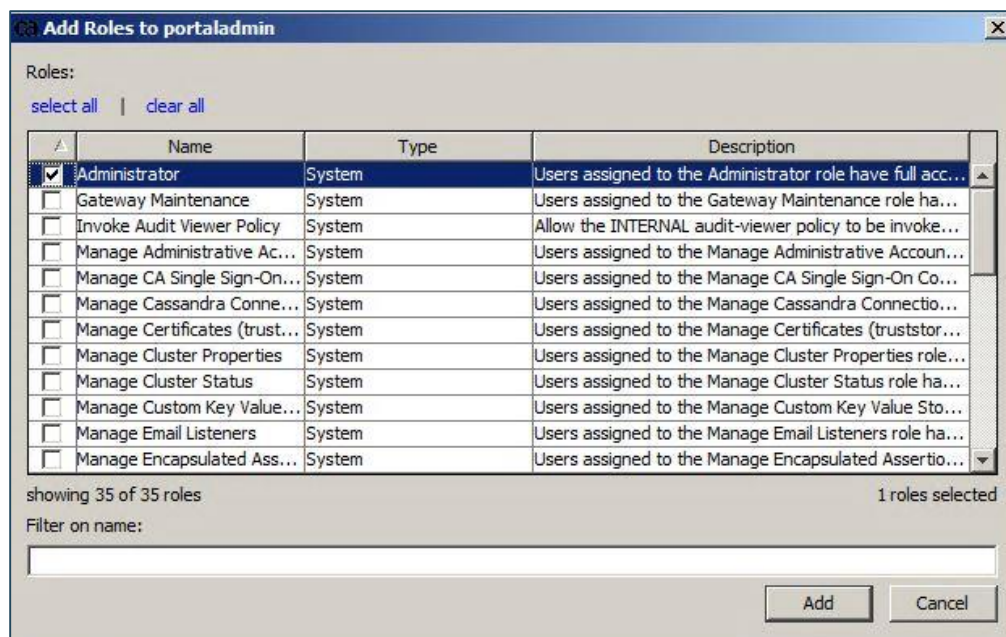
Stop

Close

Search Results:

Name	Login	Description
admin	admin	
portaladmin	portaladmin	

28. Highlight the **portaladmin** user and **Double-Click** on it.
29. The **portaladmin Properties** window appears. Access the **Roles** tab at the top of the window and click **Add**.
30. Select **Administrator** from the list and click **Add**.

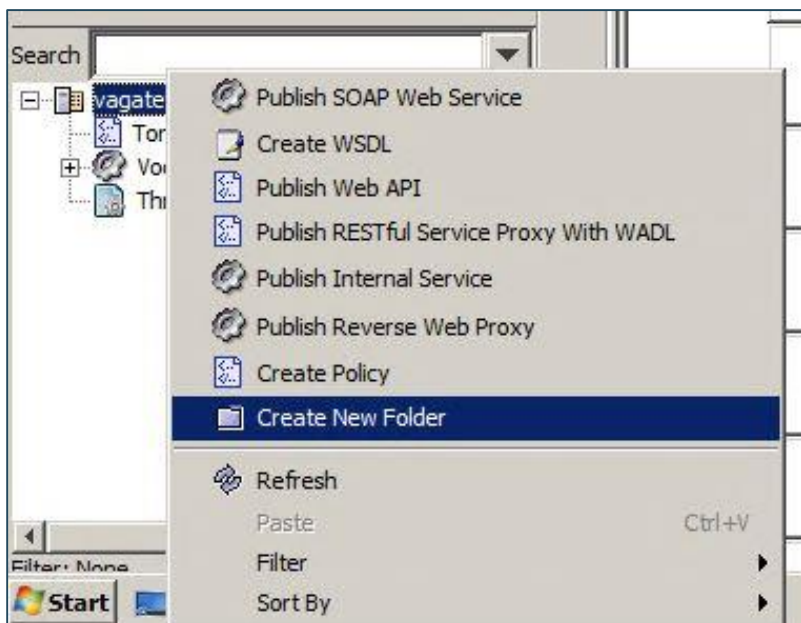


31. Click **OK** to continue.
32. **Close** out of the **Search Identity Provider** window.
33. **Disconnect** from your current session within the Policy Manager by clicking in the top left.
34. **Connect** using the following credentials:

User Name	portaladmin
Password	7layer
Gateway	VAGateway.voonair.local

Publish the Integration Services

35. In the **Services and Policies** list in the lower left panel, **Right-Click** on the Gateway name and choose **Create New Folder**.

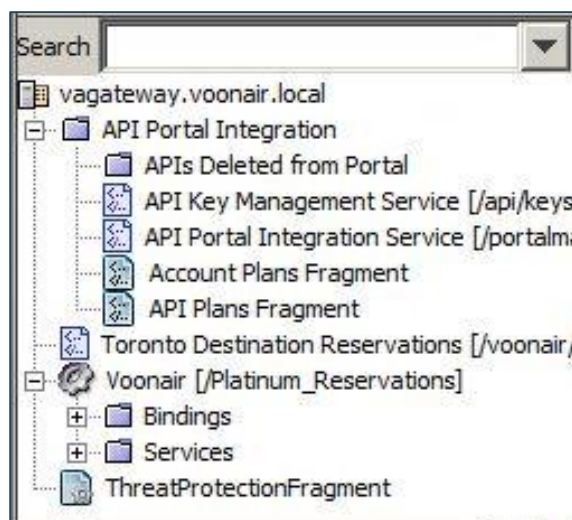


36. The **Folder Properties** window appears. Input the folder name **API Portal Integration** and click **OK** to continue.
37. The new folder appears in the **Services and Policies** list.
38. In the **Services and Policies** list, **Right-Click** on the Gateway name and choose **Publish Internal Service**.
39. The **Publish Internal Service Wizard** window appears.
40. In the **Select service to publish** field, select **API Portal Integration Service**.
41. Leave the **Routing URI** default and click **Finish** to continue.
 - a. Note: This service may take some time to publish and validate.
42. When the new policy has appeared and the Gateway has finished validating it, in the **Services and Policies** list, **Right-Click** on the Gateway name and choose **Publish Internal Service** again.
43. In the **Select service to publish** field, select **API Key Management Service**.
44. Leave the **Routing URI** default and click **Finish** to continue.
 - a. Note: This service may take a lot of time to publish and validate.
45. When the new policy has appeared and the Gateway has finished validating it, in the **Services and Policies** list, **Right-Click** on the Gateway name and click **Refresh**.
46. **Drag and Drop** the following new services into the **API Portal Integration** folder:
 - API Key Management Service**
 - API Portal Integration Service**

Account Plans Fragment

API Plans Fragment

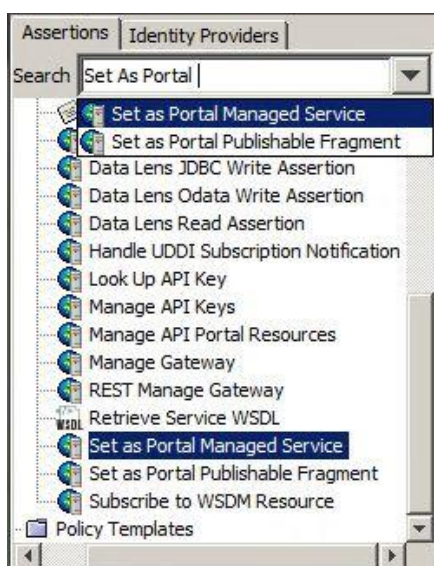
APIs Deleted from Portal Folder



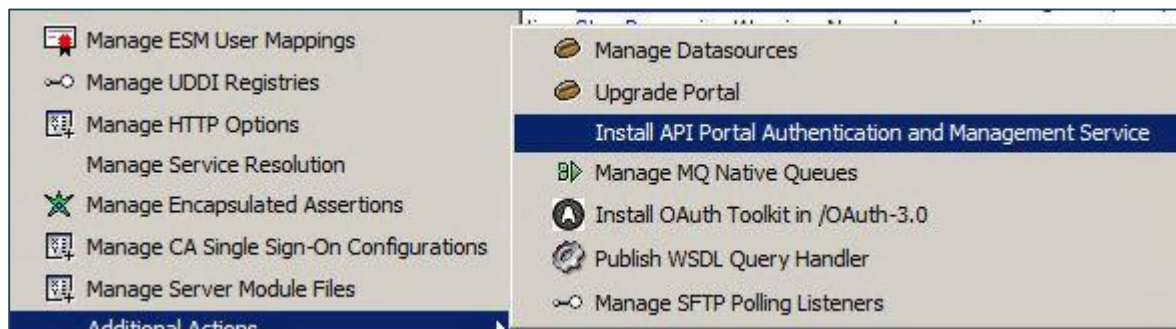
Verify the Integration Components Exist

47. First, verify that new policy assertions have been added to the Policy Manager. In the **Assertions** tab, verify the following new assertions are available for use:

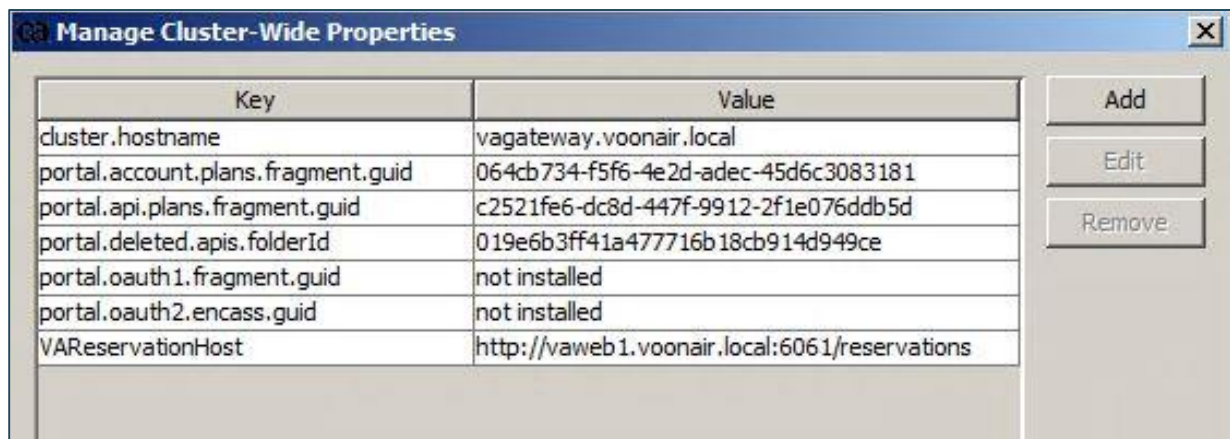
Policy Logic	Generate UUID
Internal Assertions	Look Up API Key
Internal Assertions	Manage API Keys
Internal Assertions	Set as Portal Managed Service
Internal Assertions	Set as Portal Publishable Fragment



48. Next, verify that the installer now exists for the **API Portal Authentication and Management Service**. Access **Tasks ► Additional Actions** and simply verify that the **Install API Portal Authentication and Management Service** option appears. Close out of the menu.



49. Now, verify that the API Developer Portal cluster properties exist. Access **Tasks ► Manage Cluster-Wide Properties** and ensure the following new portal cluster properties are present:
- portal.account.plans.fragment.guid**
 - portal.api.plans.fragment.guid**
 - portal.deleted.apis.folderID**
 - portal.oauth1.fragment.guid**
 - portal.oauth2.fragment.guid**



50. Finally, verify that the API key generation service is working. Open **Chrome** and navigate to the following URL:
<https://vagateway.voonair.local:8443/api/keys/generate>
51. If **Chrome** warns you about a potentially unsafe connection or that is not private, click **Advanced** and click Proceed to vagateway.voonair.local.
52. An authentication box should appear. Log in with the **portaladmin** user.
53. You should see an XML document tree with a proper key and key secret generated with a **SUCCESS** message embedded within the tree. It will looks something like this:

```

▼<l7:ApiKeyResponse xmlns:l7="http://ns.l7tech.com/2011/08/portal-api-keys">
  <l7:Operation>generate</l7:Operation>
  <l7:Timestamp>06032015-11:25:02.517</l7:Timestamp>
  <l7:Status>200</l7:Status>
  <l7:Message>success</l7:Message>
  <l7:Detail>{message details}</l7:Detail>
  <l7:ApiKey>l7xx48d901722e284c1a9d13b5420a98ff38</l7:ApiKey>
  ▼<l7:Properties>
    <!-- zero or more Property elements, for e.g. -->
    ▼<l7:Property key="issuer">
      <l7:StringValue>vagateway.voonair.local</l7:StringValue>
    </l7:Property>
    ▼<l7:Property key="correlId">
      <l7:StringValue>0000014db62caa7c-7</l7:StringValue>
    </l7:Property>
    ▼<l7:Property key="key">
      <l7:StringValue>l7xx48d901722e284c1a9d13b5420a98ff38</l7:StringValue>
    </l7:Property>
    ▼<l7:Property key="keySecret">
      <l7:StringValue>3282be477afe45f4a6ee26032ddfa7e5</l7:StringValue>
    </l7:Property>
  </l7:Properties>
</l7:ApiKeyResponse>

```


Lab 1-2 Enable SSL with Mutual Authentication

Goals	The student will create SSL keys and certificates and then export them. The student will then set up the preferred method of authentication for a production enabled environment.
Scenario	You will now act as Dylan to create SSL certificates and keys to enable mutual authentication between the Gateway and the Developer Portal.
Time	20 minutes

Instructions:

Generate SSL Key and Certificate for the VAPortal1 Appliance

1. You should be on the **ADSERVER** virtual machine with the Layer 7 Policy Manager open.
2. If not, log into the **ADSERVER** virtual machine and access the **Layer 7 Policy Manager** shortcut.
3. In the Policy Manager, access **Tasks ► Manage Private Keys**.
4. The **Manage Private Keys** window appears. Click **Create** to begin creating a certificate for the API Developer Portal.
5. In the **Create Private Key** window, input the following values for the API Developer Portal:

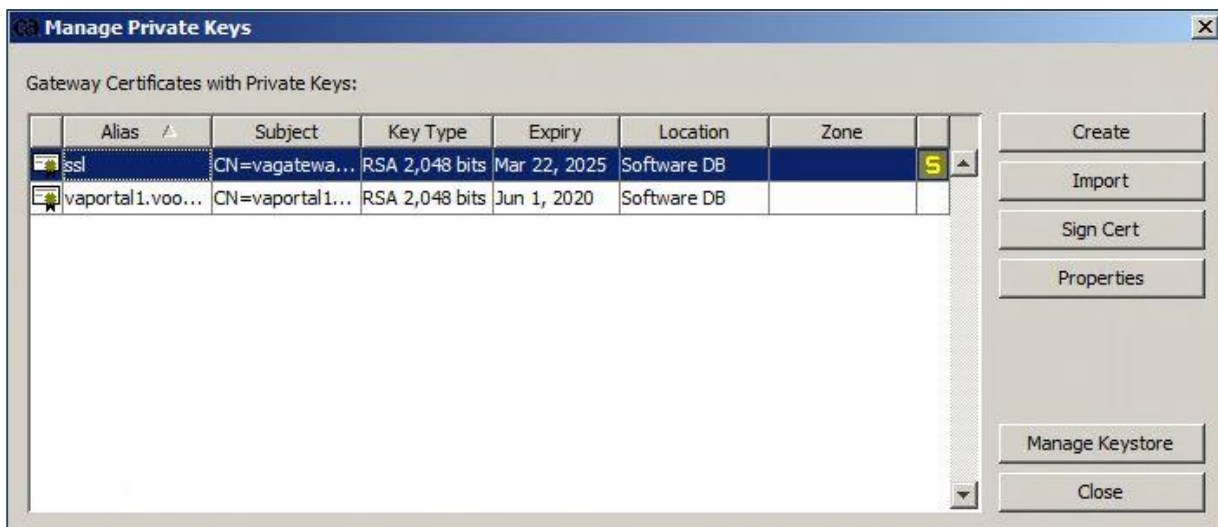
Alias	vaportal1.voonair.local
Subject DN	(Auto Populated)
Key Type	(Default 2048 bit RSA)
Days Until Expiry	(Default 1825)
CA Capable Checkbox	UNCHECKED



6. When finished, click **Create**.
7. In the **Manage Private Keys** window, select the newly created **vaportal1** key and click **Properties**.
8. The **Private Key Properties** window appears. To export this new key, click the **Export Key** button.
9. Input the following password for this private key and verify it a second time:
caeducation
10. Click **OK** to continue.
11. To save the file, in the **Save As** dialog window, navigate to the following directory:
C:\InstallMedia\API Portal SSL Keys
12. In the **File Name** field, type **vaportal1_key** and click **Save**.
13. You should be back at the **Private Key Properties** window for the vaportal1 key. Click the **View Certificate** button.
14. The **Certificate Properties** window appears. Click the **Export** button.
15. To save the file, in the **Save As** dialog window, ensure your current directory is:
C:\InstallMedia\API Portal SSL Keys
16. Change the **Files of Type** input box to the **(* .pem)** extension.
17. In the **File Name** field, type **vaportal1_cert** and click **Save**.
18. To continue, click **Close**.
19. **Close** out of the **Private Key Properties** window by clicking **OK**.

Export the Gateway Private Key

20. You should have the **Manage Private Keys** window currently open. If not, access the task from the main menu.
21. Select the Alias **ssl** with the subject **CN=vagateway.voonair.local**. Click the **Properties** button to continue.

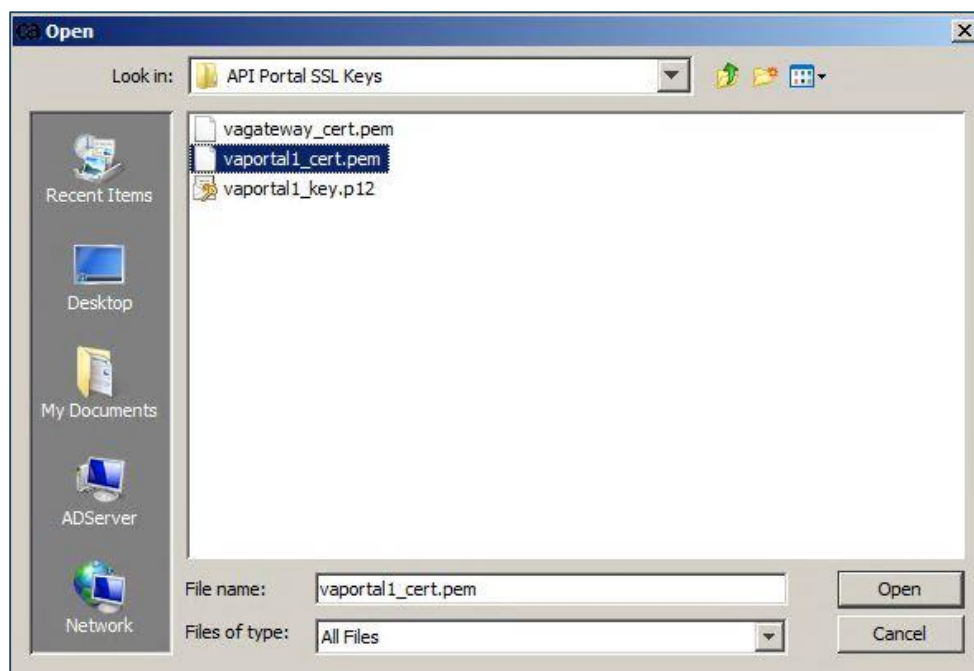


22. The **Private Key Properties** window appears. Click the **View Certificate** button.
23. **Export** the **vagateway.voonair.local** certificate.
24. Save the file in the **API Portal SSL Keys** directory and ensure the file type is set to **PEM**. Save the file as **vagateway_cert**.
25. **Close** out of all open dialog boxes.

Enable SSL with Mutual Authentication

26. In the Policy manager, access **Tasks ► Create Internal User**.
27. In the user name field, enter the fully qualified domain name of the Developer Portal:
vaportal1.voonair.local
28. In the password and confirm field, enter:
7layer
29. When finished, click **Create** to continue.
30. Access **Tasks ► Search Identity Provider**.
31. In the **Search** field, ensure that the **Internal Identity Provider** is selected.

32. Click **Search** and select the **vaportal1.voonair.local** user.
33. **Double-click** the user to bring up the user **Properties** window.
34. On the **Roles** tab, add the **Administrator** role to the current user.
35. On the **Certificate** tab, click the **Import** button.
36. The **Import from a File** option should be selected by default. Click the **Browse** button.
37. Navigate to the **API Portal SSL Keys** directory and select the **vaportal1_cert.pem** file.



38. Click **Open** to continue.
39. To complete the process, click **Next** and then click **Finish**.
40. The certificate appears with **Status = Imported**.
41. Click **OK** to continue.
42. **Close** out of any open dialog boxes.

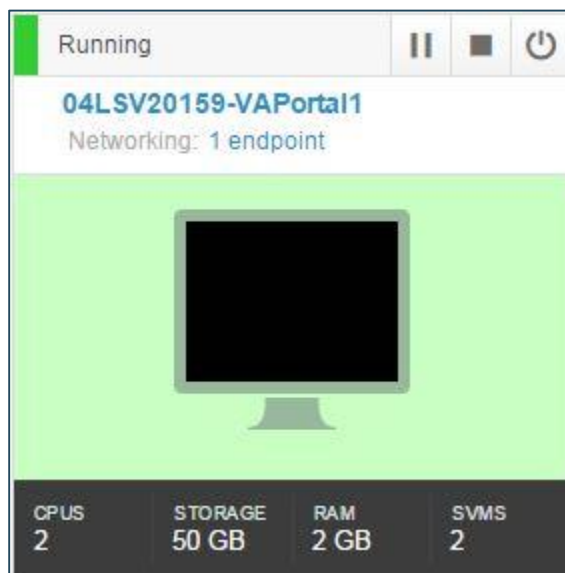
Lab 1-3 Configure the CA API Developer Portal Appliance

Goals	The student will configure the CA API Developer Portal appliance network settings to bring the appliance on to the Voonair Airlines network. The student will then copy the relevant private keys to the appliance and run the final initialization scripts.
Scenario	You will now act as Dylan to configure the CA API Developer Portal appliance and run the final installation scripts to initiate the services.
Time	45 minutes

Instructions:

Configure the VAPortal1 Appliance

1. In the Dynamic Lab Environment, click the **VAPortal1** virtual machine.
 - a. Note: After connecting to the VAPortal1 virtual machine, the screen may appear blank. To interact with this machine, press Ctrl+Alt or Enter to bring up a prompt.



2. To log in to the **VAPortal1** virtual machine, enter the following credentials:

VAPortal1 Login	ssgconfig
Password	7layer

3. You are required to change your password immediately. Enter the following credentials:

Current Password	7layer
New Password	caeducation
Retype Password	caeducation

4. To configure the system settings, type **1** and press **Enter**.
5. To continue, type **1** and press **Enter**.
6. Complete the following steps to finish the network configuration:

Configure the basic Network Interface	<ul style="list-style-type: none"> a. To select the network interface eth0 to configure, type 1 and press Enter. b. To enable the interface on boot, type y and press Enter. c. To configure IPv4 networking, type y and press Enter. d. To select a networking protocol, type static and press Enter. e. To enter the IPv4 address of our Developer Portal, type 192.168.1.50 and press Enter. f. To enter the IPv4 netmask, type 255.255.255.0 and press Enter. g. To enter the IPv4 gateway, type 192.168.1.10 and press Enter. h. To skip configuring IPv6 networking at this time, type n and press Enter. i. To skip configuring another network interface, type n and press Enter. j. To skip changing the default IPv4 gateway and interface, type n and press Enter.
Configure the Fully Qualified HostName	<ul style="list-style-type: none"> a. To enter the fully qualified hostname for our Portal, type VAPortal1.voonair.local and press Enter.
Configure the Gateway Name Server	<ul style="list-style-type: none"> b. To input the name server of our Active Directory machine, type 192.168.1.10 and press Enter. c. To input the search domain, type voonair.local and press Enter.
Configure Time Synchronization	<ul style="list-style-type: none"> d. To change the current time zone, type y and press Enter. e. First, the initial ten time zones are displayed. <ul style="list-style-type: none"> i. If your time zone is not listed, press Enter to view the next page of zones. ii. Otherwise, enter the number of your time zone. f. First, the initial ten cities within the time zone selected will be displayed. <ul style="list-style-type: none"> i. If your nearest city is not listed, press Enter to view the next page of cities.

	<p>ii. Otherwise, enter <i>the number of your nearest city.</i></p> <p>g. To change the current timeserver configuration, type y and press Enter.</p> <p>i. To input the correct timeserver, type pool.ntp.org and press Enter.</p>
--	--

7. Review your configuration settings:

```
Networking
  Enable Networking      : true
  Hostname               : UAPortal1.voonair.local
  Default Gateway       :
  Default Gateway Device :
  Enable IPv6            : false
  Default IPv6 Gateway   :
  Default IPv6 Gateway Device :

Network Interfaces
  eth0
    Boot Protocol: STATIC
    Address: 192.168.1.50
    Netmask: 255.255.255.0
    Gateway: 192.168.1.10
  DNS
    Name servers: 192.168.1.10
    Search domains: voonair.local

Time Settings
  Timezone: America/New_York
  Time servers: pool.ntp.org

Do you wish to apply the changes above (y/n)?_
```

8. To apply the network changes above, enter the following and press **Enter**:

y

a. Note: It may take several minutes for the configuration to be applied successfully.

9. Press **Enter** to continue after the changes have been applied. You should now be at the **Gateway Configure System Settings** menu.

10. To return to the main menu, type the following and press **Enter**:

x

11. To access the Linux **privileged shell**, type the following and press **Enter**:

3

12. To input the default API Developer Portal root password, type the following and press **Enter**:
7layer

13. On first login, you must change your password. To accomplish this, you must first enter the current and new passwords:

Current UNIX Password	7layer
New UNIX Password	caeducation
Retype Password	caeducation

14. To edit the API Developer Portal virtual machine hosts file, type the following and press **Enter**:
vi /etc/hosts
15. To begin inputting new IP addresses using the built in screen editor, enter the following commands:
 - a. Press **Down**
 - b. Type the letter **O**
16. The vi screen editor should now say -- **INSERT** -- at the bottom of the editor. Input the following values:

```
192.168.1.10    ADSERVER.voonair.local    ADSERVER
192.168.1.20    VAGateway1.voonair.local  VAGateway1
192.168.1.40    VAWeb1.voonair.local     VAWeb1
192.168.1.50    VAPortal1.voonair.local   VAPortal1
```

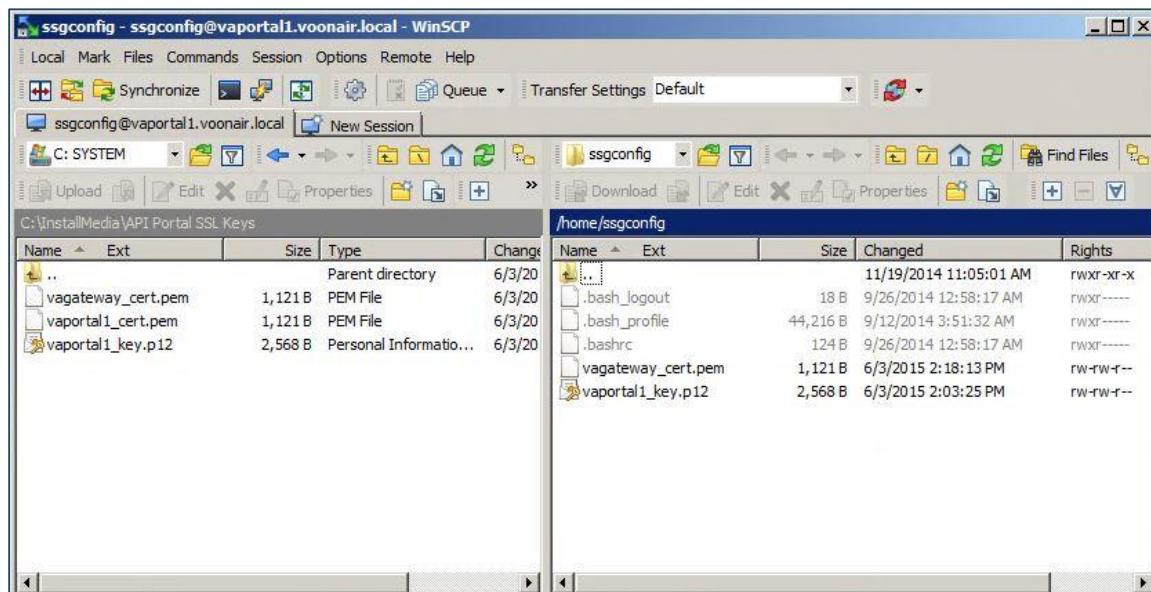
```
127.0.0.1      localhost localhost.localdomain localhost4 localhost4.localdomain4
::1            localhost localhost.localdomain localhost6 localhost6.localdomain6
192.168.1.10    adserver.voonair.local    adserver
192.168.1.20    VAGateway1.voonair.local  VAGateway1
192.168.1.40    VAWeb1.voonair.local     VAWeb1
192.168.1.50    VAPortal1.voonair.local   VAPortal1_
```

17. To save and write to the file, enter the following commands:
 - a. Press **ESC**
 - b. Type **:wq**
 - c. Press **Enter**
18. To return to the main menu, type the following and press **Enter**:
exit
19. To reboot the API Developer Portal and apply the network settings, type the following and press **Enter**:
r
 - a. Confirm that you want to reboot the Gateway by typing the following and pressing **Enter**:
y
20. When the API Developer Portal has rebooted, ensure that you can log into the **VAPortal1** virtual machine with the following credentials:

VAPortal1 Login	ssgconfig
Password	caeducation

Copy SSL Keys and Run the Integration Script

21. In the Dynamic Lab Environment, click the **ADSERVER** virtual machine.
22. On the Desktop, find the **WinSCP to VAPortal1** shortcut and **Double-Click** it.
23. The **WinSCP** application opens. In the left pane, navigate to the **API Portal SSL Keys** directory.
24. Drag and drop the following files from the left pane to the right pane:
vagateway_cert.pem
vaportal1_key.p12



25. Close out of the **WinSCP** application.
26. In the Dynamic Lab Environment, click on the **VAPortal1** virtual machine.
27. You should be currently logged into the **VAPortal1** appliance. If not, do so now with the **ssgconfig** user account.
28. Access and log into the privileged shell by selecting option **3**.
29. Within the **VAPortal1** privileged shell, input the following command to change to the scripts directory:
cd /opt/Deployments/lrs

30. To execute the integration script, type the following and press **Enter**:

sh config_portal.sh

31. A welcome message appears. Press **Enter** to continue.

```
Welcome to the API Portal Configuration script. I'm going to ask you a
few questions then modify files and update the trust store. This script
is referenced in the Configure the Initial Settings of the API Portal
subsection of Chapter 3: Installing the API Portal of the CA API Developer
Portal v3.0 Setup and Integration Guide.

Press Enter to continue...
Checking if catalina is running...
done.

=> Verifying environment
-> Checking for site-configuration.xml file: OK
-> Checking for jforum-custom.conf file: OK
-> Checking for cmsbootstrap.properties file: OK
-> Checking for lrsgateway_config.xml file: OK
-> Checking for trust store file: OK
-> Checking for server.xml file: OK
=> Environment checked out OK

=> Checking files for changes

Enter your Gateway version: [8.2] _
```

32. Complete the API Portal Configuration script as follows:

Gateway Version	8.3
API Portal Host Name	Verify it says VAPortal1.voonair.local and press Enter
API Portal Repository	(Accept Default: VAPortal1)
Locating Private Key	Verify it has selected /home/ssgconfig/vaportal1_key.p12
Locating Certificate File	Verify it has selected /home/ssgconfig/vagateway_cert.pem
Alias for Gateway Cert	(Accept Default: ssl)
Gateway Host Name	vagateway.voonair.local
Gateway Port Number	(Accept Default: 8443)
Gateway Admin User	portaladmin
Configure API Explorer	no

33. Review your **VAPortal1** configuration settings:

```
Gateway Version: 8.3
API Portal host name: vaportal1.voonair.local
API Portal repository identifier: vaportal1
API Portal private key file: /home/ssgconfig/vaportal1_key.p12
Gateway SSL certificate file: /home/ssgconfig/vagateway_cert.pem
Gateway SSL certificate file alias: ssl
Gateway host name: vagateway.voonair.local
Gateway port: 8443
Gateway admin user: portaladmin

Do you wish to proceed with the setup and configuration [y/n]? _
```

34. Type **Y** to continue.

35. To start the API Portal now, type **Y**.

36. The API Developer Portal configuration is now complete.

37. Remain in the command line interface for **VAPortal1** for an upcoming lab.

Lab 1-4 Use the CMS to Finalize the Integration

Goals	The student will log into the CMS to input the final integration configuration between the Gateway and the Developer Portal. The student will then stop and start the Portal services and then sync the data.
Scenario	You will now act as Dylan to access the Content Management System and finalize the integration between the Gateway and the Developer Portal.
Time	20 minutes

Instructions:

Access the Content Management System for Integration

1. In the Dynamic Lab Environment, click the **ADSERVER** virtual machine.
2. Open the Chrome web browser and navigate to the following URL:
http://vaportal1.voonair.local/admin
3. Log into the admin console with the following default user name and password:

API Portal Login	admin
Password	7layer

4. Make sure to read and **Accept** the **Eula** agreement to continue.
5. Click **Login** when ready.
6. The **Admin** portal appears.
7. To change the default password of the **admin** user, access the **Administration Tools** within the left column and select **User Administration**.
8. In the same left column, select **Manage Users**.
9. Select the **Admin** account from the list and access the **Password** tab.

Found 6 users. ☐ Refine Search

☐ All users on this page Viewing page 1 of 1 | [Retrieve all users](#) Actions on Checked Users

Username	Last Name	First Name	Email
<input type="checkbox"/> AccountManager		Account Manager	acctManager@ca.com
<input checked="" type="checkbox"/> Admin		Admin	admin@ca.com
<input type="checkbox"/> ApiOwner		API Owner	apiOwner@ca.com
<input type="checkbox"/> BusinessManager		Business Manager	businessManager@ca.com
<input type="checkbox"/> WebAdmin		Web Admin	webAdmin@ca.com
<input type="checkbox"/> replicator	replicator	replicator	

General	Details	Roles	Organizations	Password
Old Password		<input type="password"/>		
New Password		<input type="password"/>		
Retype New Password		<input type="password"/>		
Password Reminder Question		<input type="text"/>		
Password Reminder Answer		<input type="text"/>		

[Apply All Changes](#)

Admin

User key Admin-149

Domain User key INTERNAL\Admin

Secure Password true

Last Login 03-JUN-15 15:14

Last Login IP 192.168.1.10

Accepted EUA false

Created 25-JAN-12 02:15

Last Modified 30-JAN-14 09:09

[Delete This User](#)

10. Complete the form as follows:

Old Password	7layer
New Password	caeducation
Retype New Password	caeducation

11. When finished, click **Apply All Changes**.

12. In the left column, to create a backup **Administrator** account, click **Create New User**.

13. A **User Properties** window appears. On the General tab, input the following:

Account Enabled	Checked
Username	ddavies
Email	ddavies@voonair.local
Domain	(leave default)
First Name	Dylan
Last Name	Davies

14. On the **Roles** tab, select **Administrator**.
15. On the **Password** tab, input **caeducation**.
16. When finished, click **Apply All Changes**.
17. **Close** out of the User Properties window.
18. In the left column, click the **Plugin Administration** menu item.
19. Find the **Layer 7 Gateway** entry in the left column and select it.
20. Scroll down and find the **SSG Actions** area.

The screenshot shows a web form titled "SSG Actions". It contains four distinct sections, each for updating a different password:

- Update Gateway Password:** Includes a "Password" label and a text input field, followed by a "Submit" button.
- Update Portal Keystore Password:** Includes a "Password" label and a text input field, followed by a "Submit" button.
- Update Truststore Password:** Includes a "Password" label and a text input field, followed by a "Submit" button.
- Update API Explorer Keystore Password:** Includes a "Password" label and a text input field, followed by a "Submit" button.

21. In the **Update Gateway Password** field, type **7layer** as the password for the **portaladmin** user.
22. Click **Submit** before continuing.
23. Scroll back down. In the **Update Portal Keystore Password** Password, type **caeducation** as the password for the private SSL key we exported previously.
24. Click **Submit** before continuing.
25. Scroll back down. In the **Update Truststore Password** field, type **changeit** as the password for the Gateway's default SSL certificate store.
26. Click **Submit** before continuing.
27. In the Dynamic Lab Environment, click the **VAPortal1** virtual machine.

28. You should be at the command line interface of the **VAPortal1** machine. Ensure your current directory is the **/opt/Deployments/lrs** location.
29. Stop the services with the following command:
server/bin/catalina.sh stop
30. Wait 30 seconds for the services to fully shut down.
31. Start the services back up by using the following command
server/bin/catalina.sh start
32. In the Dynamic Lab Environment, click back to the **ADSERVER** virtual machine.
33. Log back into the **Admin** console and access the **Plugin Administrator** menu item.
 - a. Note: You may need to wait a few minutes for the Developer Portal services to start up.
34. Scroll down to the bottom and find the **Sync SSG Data** section.

Sync SSG Data	
Sync API Plans	syncs API plans from portal to gateway
Sync API Keys	syncs API keys from portal to gateway
Sync Account Plans	syncs Account Plans from portal to gateway
Sync Portal Published APIs	syncs Portal Published APIs from portal to gateway
Check Gateway Configuration	
Check OTK values	check OTK values in the gateway

35. Click the following:
Sync API Plans
Sync Account Plans
36. Each time you should see a **<Success code="200"/>** message.

Sync SSG Data	
Account Plans: <Success code="200"/>	
Sync API Plans	syncs API plans from portal to gateway
Sync API Keys	syncs API keys from portal to gateway
Sync Account Plans	syncs Account Plans from portal to gateway
Sync Portal Published APIs	syncs Portal Published APIs from portal to gateway
Check Gateway Configuration	
Check OTK values	check OTK values in the gateway

37. The integration between the **Gateway** and the **Developer Portal** is now complete.

Lab 1-5 Configure the Metrics Synchronization Utility

Goals	The student will log into the Gateway's root access and configure the metrics synchronization utility using the command line tool.
Scenario	You will now act as Dylan to configure the Metrics Synchronization Utility.
Time	10 minutes

Instructions:

Set up the Metrics Sync Utility

1. In the Dynamic Lab Environment, click the **VAGateway1** virtual machine.
2. Log into **VAGateway1** and access a privileged shell.
3. Change your directory to the following:
/opt/SecureSpan/ApiPortal
4. Type the following command to view the contents of this folder:
ls -l

```
[root@vagateway1 ~]# cd /opt/SecureSpan/ApiPortal
[root@vagateway1 ApiPortal]# ls -l
total 128
-rw-r--r-- 1 layer7 layer7 49 Mar 17 11:51 apiportal.cron
-r-xr-xr-x 1 layer7 layer7 242 Mar 17 11:51 encrypt.sh
-rw-rwxrwx 1 layer7 layer7 0 Mar 17 11:51 lastGoid
-rw-r--r-- 1 layer7 layer7 97488 Mar 17 11:51 layer7-portal-metrics.jar
drwxr-xr-x 2 layer7 layer7 4096 Mar 17 11:51 lib
-rw-r--r-- 1 layer7 layer7 923 Mar 17 11:51 metrics.properties
-r-xr-xr-x 1 layer7 layer7 553 Mar 17 11:51 portal.sh
-r-xr-xr-x 1 layer7 layer7 225 Mar 17 11:51 test-portal.sh
-r-xr-xr-x 1 layer7 layer7 234 Mar 17 11:51 upgrade2_1.sh
[root@vagateway1 ApiPortal]# _
```

5. We are looking for the metrics.properties file located here. Type the following command to edit the file:
vi metrics.properties
6. There is one host name that needs to be updated in this file. Notice on the sixth line there is a generic host name inserted into the file:

```
# properties file used to execute PortalMetricsSyncUtilityMain
source.url=jdbc:mysql://localhost:3306/ssg
source.username=gateway
source.password=7layer

dest.url=jdbc:mysql://localhost:3306/lrsdata
dest.username=lrs
dest.password=lrs
```

7. Use the insert key to edit the file. Change localhost to **vaportal1.voonair.local**.

```
# properties file used to execute PortalMetricsSyncUtilityMain
source.url=jdbc:mysql://localhost:3306/ssg
source.username=gateway
source.password=7layer

dest.url=jdbc:mysql://vaportal1.voonair.local:3306/lrsdata
dest.username=lrs
dest.password=lrs
```

8. Save and write to the file.
9. Test the configuration by running the following command:
sh test-portal.sh
10. The database connections should return **OKAY**.

```
[root@vagateway1 ApiPortal]# sh test-portal.sh
Last login: Wed Jun  3 15:49:32 EDT 2015 on tty1
03 Jun 2015 15:49:58,366 DEBUG PortalMetricsSyncUtilityMain - test selected
03 Jun 2015 15:49:58,368 INFO  PortalMetricsSyncUtilityMain - Testing database c
onnections.
03 Jun 2015 15:49:58,606 INFO  PortalMetricsSyncUtilityMain - Database connectio
ns okay.
[root@vagateway1 ApiPortal]# _
```

Set up a Cron Job for Regular Sync Intervals

11. Schedule a cron job to sync every 15 minutes with the following command:
crontab -u gateway apiportal.cron
12. Verify the crontab has been updated with the following command:
crontab -u gateway -l
13. The portal.sh command will run every 15 minutes.
14. The installation and integration of the Developer Portal is now complete.

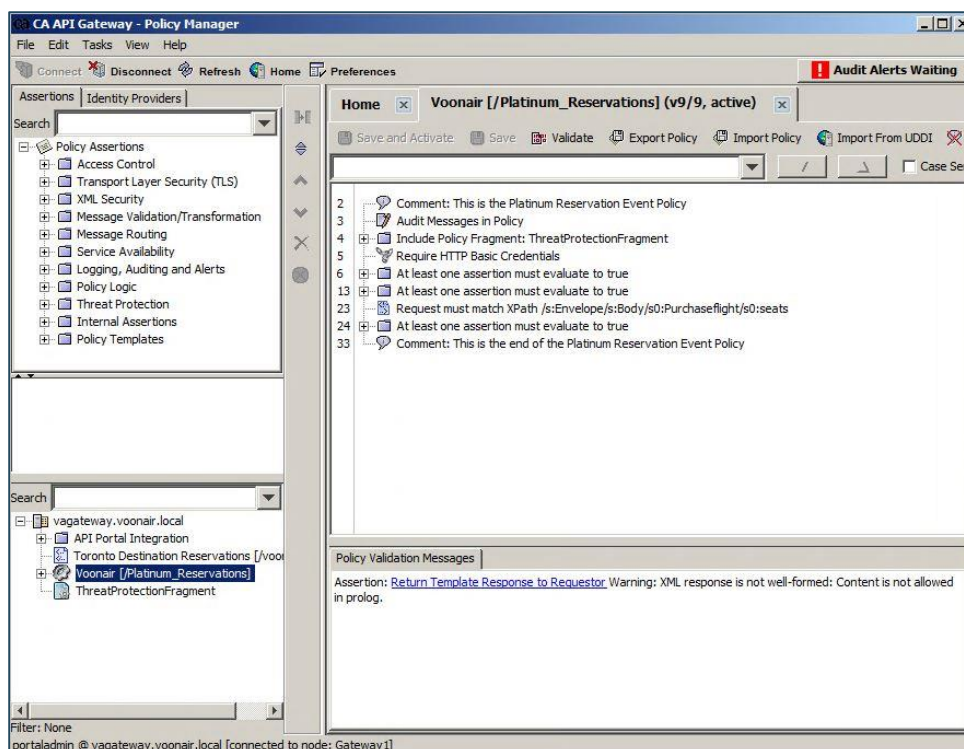
Lab 2-1 Manage API Owner Tasks

Goals	The student will publish APIs for developers to use and create API Plans to make those APIs available. The student will then create custom EULAs and assign APIs to those EULAs. Finally, the student will enable each API and then assign those APIs to groups.
Scenario	You will now act as Dylan to assume the role of an API Owner and execute the tasks necessary to publish APIs for use.
Time	45 minutes

Instructions:

Add an API as Portal Managed through the Policy Manager

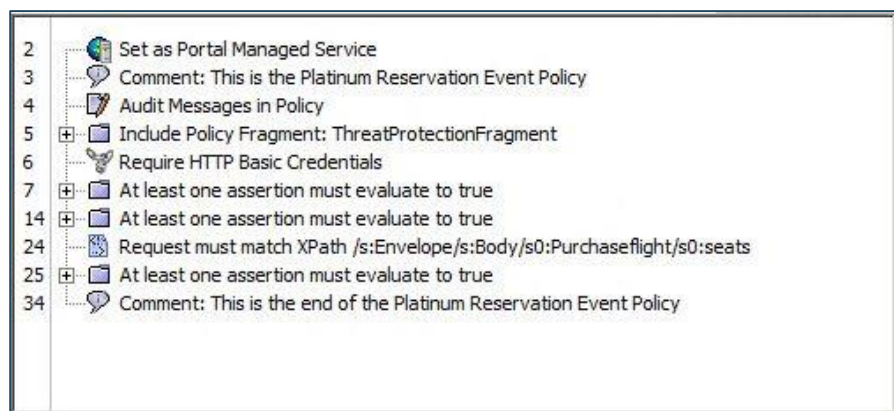
1. In the Dynamic Lab Environment, access the **ADSERVER** virtual machine and open the Layer 7 Policy Manager. Log in as the **portaladmin** user.
2. In the Policy Manager, in the **Services and Policies** list, **Double-Click** the **Voonair [/Platinum_Reservations]** policy to bring it into the **Policy Development** window.



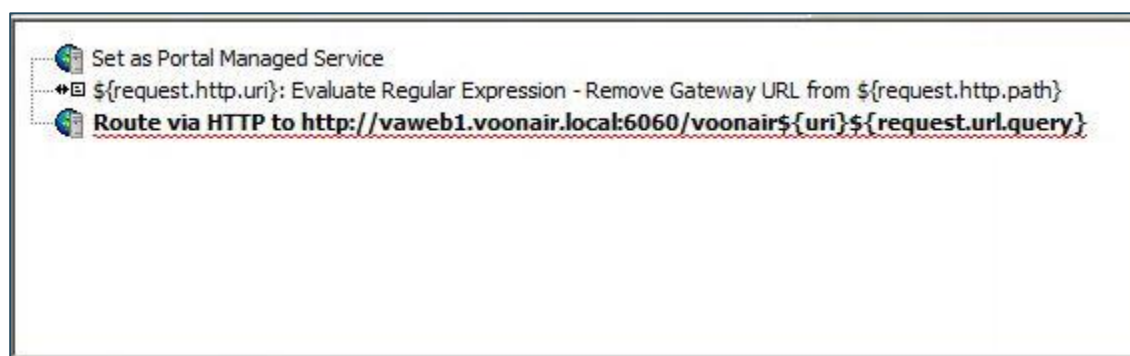
- In the **Assertions** tab, find the **Set as Portal Managed Service** assertion.



- Drag and drop the **Set as Portal Managed Service** to the top of your **Platinum Reservations** policy.
- When the properties dialog box appears, click **OK** to continue.
- Save and Activate** the policy.



- Repeat the same process for the **Toronto Destination Reservations** policy.



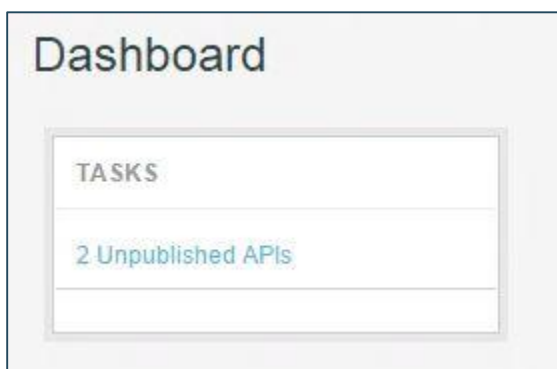
View the APIs within the Developer Portal

8. Open Chrome and access the following URL:
<http://vaportal1.voonair.local/dashboard>

9. Log in with the following account:

User Name	ApiOwner
Password	7layer

10. The API Owner **Dashboard** appears. Notice within **Tasks** that there are currently two **Unpublished APIs** available.






11. In the left column, select the **APIS** navigation item.

12. There are two available APIs here from our Policy Manager. We will enable these APIs after performing more configuration steps.

Create API Plans

13. In the left column, under **APIS**, select the **API Plans** navigation item.

14. Find the **Production Plan** and **Edit** the plan by selecting the **Settings** drop down box to the right of the name.

<input type="checkbox"/> API Plan		APIs	Apps	Organizations
<input type="checkbox"/> Production Plan		0	0	0
<input checked="" type="checkbox"/> Sandbox		0	0	0
<input type="checkbox"/> Test Plan		0	0	0

15. The **Production Plan** properties window appears. Fill in the following information:

Title	VA Production Plan
Enable Quotas	Checked
Hits...Per	75000 per Day
Enable Rate Limits	Checked
Requests Per Second	750
Restrict Time of Day	Unchecked
Restrict Day of Week	Checked
Start Day	Monday
End Day	Friday

Title *

VA Production Plan

☒ Enable Quotas for this plan?

Hits (max 2000000000) per

75000 day

☒ Enable Rate Limits for this plan?

750 requests per second

☐ Restrict time of day - based on your time zone

☒ Restrict Day of Week

Start day End day

Monday Friday

16. When finished, click **Save** to continue.

17. Find the **Test Plan** and **Edit** it.

18. The **Test Plan** properties window appears. Fill in the following information:

Title	VA Development Plan
Enable Quotas	Checked
Hits...Per	50000 per Day
Enable Rate Limits	Checked

Requests Per Second	50
Restrict Time of Day	Checked
Start Time	6:00:00 AM
End Time	7:00:00 PM
Restrict Day of Week	Checked
Start Day	Monday
End Day	Friday

Title *

VA Development Plan

☒ Enable Quotas for this plan?

Hits (max 2000000000) per

50000 day

☒ Enable Rate Limits for this plan?

50 requests per second

☒ Restrict time of day - based on your time zone

Start time End time

Hour Minute Second Hour Minute Second

06 00 00 19 00 00

☒ Restrict Day of Week

Start day End day

Monday Friday

- When finished, click **Save** to continue.
- You should be back to the Manage API Plans page. Find and click the **Add API Plan** button.
- The **New API Plan** properties window appears. Fill in the following information:

Title	VA Internal Plan
Enable Quotas	Checked
Hits...Per	1000000 per Day
Enable Rate Limits	Checked
Requests Per Second	2000
Restrict Time of Day	Unchecked
Restrict Day of Week	Unchecked

22. When finished, click **Save** to continue.

Create API EULAs

23. In the left column, under **APIS**, select the **API EULAs** navigation item.

24. Find the **Standard EULA** and **Delete** the plan by selecting the **Settings** drop down box to the right of the name.

25. Confirm you want to delete the EULA by clicking **OK**.

26. **Close message** to continue.

27. On the Manage API EULAs page, find and click the **Create New EULA** button.

28. In the Title field, type the following:
Internal EULA Agreement

29. In the description box, type the following:
I agree to abide by the rules and regulations of Voonair Airlines and will not do anything to harm the company or violate the company's goals and message.

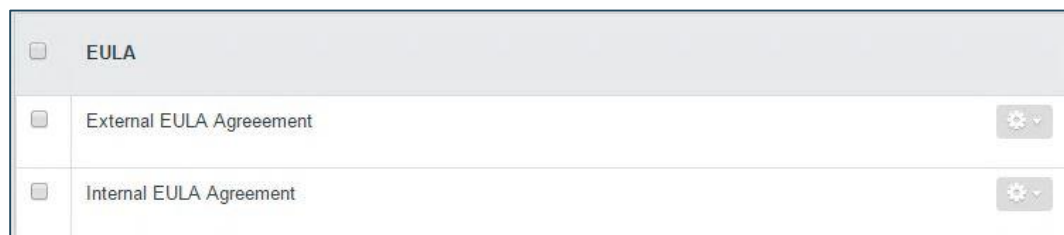
30. When finished, click **Save** to continue.



31. On the Manage API EULAs page, find and click the **Create New EULA** button.

32. In the Title field, type the following:
External EULA Agreement

33. In the description box, type the following:
I agree to abide by the rules and regulations of Voonair Airlines and agree to full Non-Disclosure of all new features, ideas and intellectual property held within.

34. When finished, click **Save** to continue.



<input type="checkbox"/>	EULA	
<input type="checkbox"/>	External EULA Agreement	
<input type="checkbox"/>	Internal EULA Agreement	

Enable APIs within the Developer Portal

35. In the left column, select the **APIS** navigation item.

36. Find the **Toronto Destination Reservations** API and **Enable** it by selecting the **Settings** drop down box to the right of the name.

37. The **Toronto Destination Reservations** API properties window appears. Fill in the following information:

API Name	Toronto Destination Reservations
API Type	REST
Authentication Method	None
Version	1.0
Create/Update Documentation	Click Choose File ► Navigate to C:\InstallMedia\Voonair Services ► select the Voonair Airlines REST.wadl file
URI for Documentation	toronto
EULA	Internal EULA Agreement
Applicable Plan(s)	Sandbox, VA Internal Plan, VA Development Plan

38. When finished, click **Save** to continue.

39. On the Manage APIs page, find and click the **Voonair** API and **Enable** it by selecting the **Settings** drop down box to the right of the name.

40. The **Voonair** API properties window appears. Fill in the following information:

API Name	VA Platinum Reservations
API Type	SOAP
Authentication Method	None
Version	1.0
EULA	External EULA Agreement
Applicable Plan(s)	Sandbox, VA Production Plan, VA Development Plan

41. When finished, click **Save** to continue.

Create API Groups

42. In the left column, select the **API Groups** navigation item.

43. On the Manage API Groups page, find and click the **Add API Group** button.

44. The **Add New API Group** properties window appears. Fill in the following information:

Name	Internal Only APIs
EULA	Internal EULA Agreement
Available APIs	Select Toronto Destination Reservations
API Group Members	Click the Add button to add Toronto Destination Reservations API to the Group

45. When finished, click **Save** to continue.

46. On the Manage API Groups page, find and click the **Add API Group** button.

47. The **Add New API Group** properties window appears. Fill in the following information:

Name	External Facing APIs
EULA	External EULA Agreement
Available APIs	Select VA Platinum Reservations
API Group Members	Click the Add button to add Voonair Platinum Reservations API

48. When finished, click **Save** to continue.

49. **Logout** of the Dashboard when finished.

Lab 2-2 Manage Business Manager Tasks

Goals	The student will create account plans for use by developers. In addition, the student will create and modify organizations created within the Portal itself.
Scenario	You will now act as Dylan to assume the role of a Business Manager and execute the tasks necessary to create account plans and manage organizations.
Time	15 minutes

Instructions:

Create Account Plans

1. In the Dynamic Lab Environment, access the **ADSERVER** virtual machine.
2. Access the Developer Portal dashboard and log in with the following account:

User Name	BusinessManager
Password	7layer

3. In the left column, select the **ORGANIZATIONS** navigation item.
4. Select the **Account Plans** navigation item.
5. Find the **Internal Plan** and **Edit** the plan by selecting the **Settings** drop down box to the right of the name.
6. The **Internal Plan** properties window appears. Fill in the following information:

Title	Internal Developer Plan
Available APIs	Toronto Destination Reservations
Enable Quotas	Unchecked
Enable Rate Limits	Unchecked
Include in Registration	Unchecked

7. When finished, click **Save** to continue.

8. Find the **Partner Plan** and **Edit** the plan by selecting the **Settings** drop down box to the right of the name.
9. The **Partner Plan** properties window appears. Fill in the following information:

Title	Voonair Partners Plan
Available APIs	VA Platinum Reservations
Enable Quotas	Checked
Hits...Per	100000 per Day
Enable Rate Limits	Checked
Requests Per Second	100
Include in Registration	Checked

10. When finished, click **Save** to continue.
11. On the Manage Account Plans page, find and click the **Create New Plan** button.
12. The **Create New Plan** properties window appears. Fill in the following information:

Title	External Developer Plan
Available APIs	VA Platinum Reservations
Enable Quotas	Checked
Hits...Per	50000 per Day
Enable Rate Limits	Checked
Requests Per Second	50
Include in Registration	Checked

13. When finished, click **Save** to continue.

<input type="checkbox"/> Plan	
<input checked="" type="checkbox"/> Bronze Account Plan	
<input type="checkbox"/> External Developer Plan	
<input type="checkbox"/> Internal Developer Plan	
<input type="checkbox"/> Voonair Partners Plan	

Create an Organization

14. Log out of the **BusinessManager** account within the Dashboard.
15. Within Chrome, navigate to the following URL:
http://vaportal1.voonair.local/admin
16. When prompted to login, use the **admin** user account.
17. Find the Administration Tools navigation area in the left column. Select the **User Administration** navigation item.
18. Find and select the **Manage Organizations** navigation item.
19. Find and click the **Create New Organization** item.
20. The **Create New Organization** properties window appears. Fill in the following information:

Name	Jedmere Travel
Description	Partner company for Mobile Apps

21. When finished, click **Apply all Changes** to continue.

Modify an Organization

22. Navigate back to the **Dashboard** and log out of the **admin** account.
23. Log back into the **Dashboard** with the **BusinessManager** account.
24. In the left column, select the **ORGANIZATIONS** navigation item.
25. The Jedmere Travel organization has appeared with the default **Bronze Account** plan.
26. Find the **Jedmere Travel** organization and **Edit** the organization by selecting the **Settings** drop down box to the right of the name and selecting **Account Plan**.
27. On the **Choose an Account Plan** window, select the **Voonair Partners Plan** and select **Assign**.

28. The Jedmere Travel organization has been updated with more access.

29. **Logout** of the Dashboard when finished.

Lab 2-3 Rebrand the API Portal Site

Goals	The student will rebrand the API Portal site by changing the logo and company name, edit the available widgets, change the web error messages, change the navigation order of the site and finally, edit the default email templates.
Scenario	You will now act as Dylan to assume the role of a Web Administrator and rebrand the API Portal website.
Time	30 minutes

Instructions:

Change the Appearance of the Site

1. In the Dynamic Lab Environment, access the **ADSERVER** virtual machine.
2. Access the Developer Portal dashboard and log in with the following account:

User Name	WebAdmin
Password	7layer

3. In the left column, select the **Site Settings** navigation item.
4. Select the **Appearance** navigation item.
5. Under Portal Title, type the following:
Developer Hub
6. Under Company Name, type the following:
Voonair Airlines
7. Under Logo, select **Choose File** and navigate to the **C:\InstallMedia\Rebranding** directory.
8. Select the **Voonair.png** file and click **Open**.


Manage Appearance

Changes will not be applied until you click Save.

General

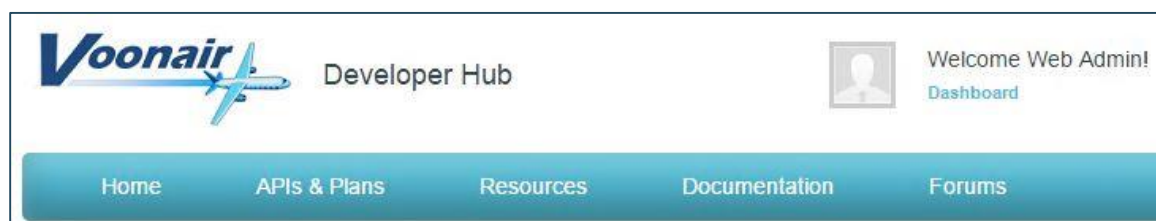
Portal title * Appears to the right of the logo

Company name * Used wherever the company name is required

Logo  Voonair.png

The following extensions are supported: jpg, jpeg, gif, png.
For best results, ensure your image is 162px by 65px.

9. When finished, scroll to the bottom and click **Save** to continue.
10. **Refresh** the site within the Chrome browser to see your changes.



Edit the Default Widgets

11. In the left column, select the **Dashboard Widgets** navigation item.

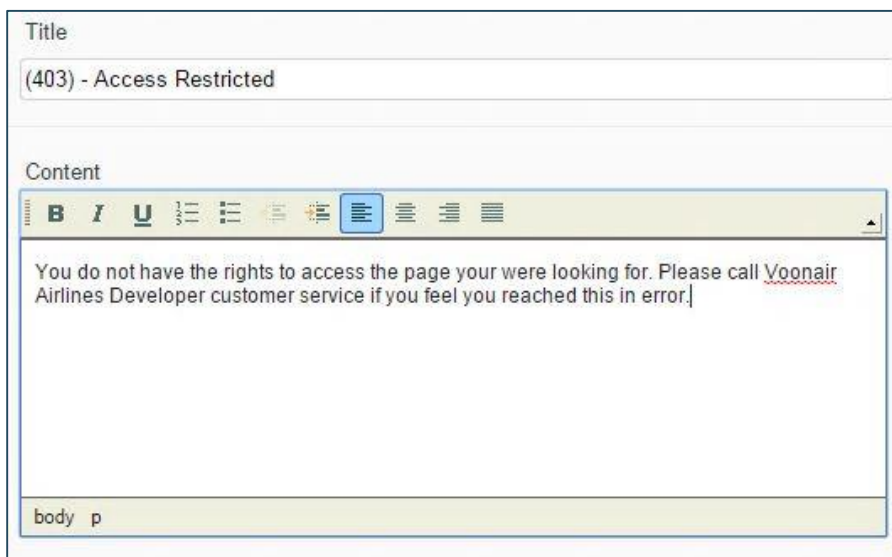
Dashboard Widget	
API Status	
Latest API Docs	
Messages	
My Apps	
Tasks	

12. Find the **API Status** widget and **Edit** it by selecting the **Settings** drop down box to the right of the name.
13. Select the **Always Enabled on Dashboard by Default** checkbox.
14. In the **Who should see this widget** selections, uncheck **Web Admins**.

15. When finished, click **Save** to continue.
16. Find the **Latest API Docs** widget and **Edit** it by selecting the **Settings** drop down box to the right of the name.
17. Select the **Always Enabled on Dashboard by Default** checkbox.
18. In the **Who should see this widget** selections, uncheck **Web Admins**.
19. When finished, click **Save** to continue.
20. Find the **My Apps** widget and **Edit** it by selecting the **Settings** drop down box to the right of the name.
21. Select the **Always Enabled on Dashboard by Default** checkbox.
22. When finished, click **Save** to continue.

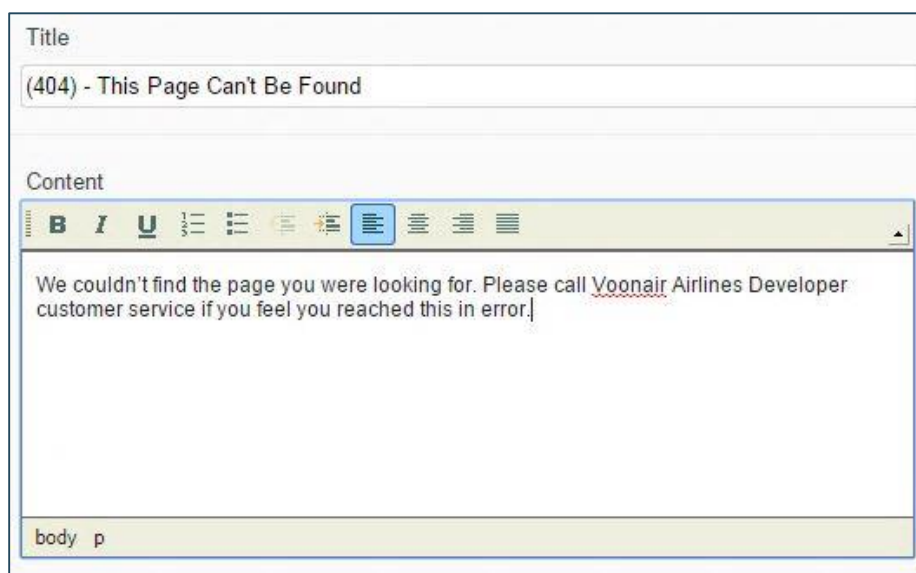
Edit the Default Web Error Messages

23. In the left column, select the **Web Error Messages** navigation item.
24. Find the **403 Error** message and **Edit** it by selecting the **Settings** drop down box to the right of the name.
25. In the Title field, edit the contents as follows:
(403) – Access Restricted
26. In the Content field, edit the contents as follows:
You do not have the rights to access the page you were looking for. Please call Voonair Airlines Developer customer service if you feel you reached this in error.



The screenshot shows a web form for editing error messages. It has two main sections: 'Title' and 'Content'. The 'Title' section has a text input field containing '(403) - Access Restricted'. The 'Content' section has a rich text editor with a toolbar showing various formatting options like bold, italic, underline, and list. The text area contains the message: 'You do not have the rights to access the page your were looking for. Please call Voonair Airlines Developer customer service if you feel you reached this in error.' At the bottom of the form, there is a small status bar that says 'body p'.

27. When finished, click **Save** to continue.
28. Find the **404 Error** message and **Edit** it by selecting the **Settings** drop down box to the right of the name.
29. In the Title field, edit the contents as follows:
(404) – This Page Can't Be Found
30. In the Content field, edit the contents as follows:
We couldn't find the page you were looking for. Please call Voonair Airlines Developer customer service if you feel you reached this in error.



The screenshot shows a configuration window for a 404 error message. The 'Title' field contains '(404) - This Page Can't Be Found'. The 'Content' field contains the text 'We couldn't find the page you were looking for. Please call Voonair Airlines Developer customer service if you feel you reached this in error.' The content is displayed in a rich text editor with a toolbar above it. The status bar at the bottom indicates 'body p'.

31. When finished, click **Save** to continue.
32. Find the **500 Error** message and **Edit** it by selecting the **Settings** drop down box to the right of the name.
33. In the Title field, edit the contents as follows:
(500) – Danger Danger Danger
34. In the Content field, edit the contents as follows:
Something went horribly wrong and we apologize for the inconvenience. Please call Voonair Airlines Developer customer service.
35. When finished, click **Save** to continue.

Change the Navigation Ordering

36. In the left column, select the **Navigation Ordering** navigation item.
37. Drag and drop the ordering until you are satisfied.

38. When finished, click **Save** to continue or exit without **Saving**.

Edit the Email Template Responses

39. In the left column, select the **Email Templates** navigation item.

40. On the Manage Email Templates page, in the **Display Per Page** drop down, select **All**.

41. Find the **Account Plan Approved Notification** template and **Edit** it by selecting the **Settings** drop down box to the right of the name.

42. The **Account Plan Approved Notification** properties window appears. Fill out the following information:

Sender	VA Developer Hub
Subject Line	VA Dev Hub: Account Plan Change Approved
Content	(Leave Default)

Account Plan Approved Notification

Sender
 < @ca.com >

Subject Line

Content

43. When finished, click **Save** to continue.

44. Complete the same changes to the following email templates:

Template	Application Approved Notification (Begin)
Sender	VA Developer Hub
Subject Line	VA Dev Hub: Application Approved
Content	(Leave Default)

Template	New Application Notification (Begin)
Sender	VA Developer Hub
Subject Line	VA Dev Hub: Application Details
Content	(Leave Default)

Template	Invited Developer Approved Notification
Sender	VA Developer Hub
Subject Line	VA Dev Hub: Account Registration Approved
Content	Your VA Developer Hub account has been approved. Please click on the following link to activate your account:

Template	New Registration Notification – Approval Required
Sender	VA Developer Hub
Subject Line	VA Dev Hub: Account Registration Notification
Content	Thank you for registering for the VA Developer Hub. Your registration is currently under review. You will be notified shortly.

Template	Registration Approved Notification – No Approval Required
Sender	VA Developer Hub
Subject Line	VA Dev Hub: Account Registration Approved
Content	Your VA Developer Hub account has been approved. Please click on the following link to activate your account:

45. **Logout** of the Dashboard when finished.

Lab 2-4 Enable Developer Forums

Goals	The student will modify the existing developer forums to make them more user friendly to employees, customers and partners.
Scenario	You will now act as Dylan to create and manage forums.
Time	15 minutes

Instructions:

Add a Forum Group for Jedmere Travel

1. In the Dynamic Lab Environment, access the **ADSERVER** virtual machine and navigate to the Developer Portal dashboard.
2. Log in with the **admin** account.
3. Find the navigation for **Forums** at the top of the page and select it.
4. Notice default forums have been created for our **Toronto Destination Reservations** API and our **VA Airlines Reservations** API.
5. Scroll to the bottom and click the **Admin Control Panel** link.
6. In the left column, select **Forums**.
7. If the **API 1 Discussion Forum** is present, select it with a checkbox and then click **Delete Selected**.
8. In the left column, select the **Groups** navigation item.
9. The list of current groups are shown. Click the **Insert New** button.
10. The **Group Management** properties window appears. Fill in the following information:

Group Name	Jedmere Travel Developers
Parent Group	Top Level Group
Description	This is for Jedmere Travel developers.



Group Management

Group Name: Jedmere Travel Developer

Parent Group: Top level Group

Description: This is for Jedmere Travel developers.

Update

11. When finished, click **Update** to continue.

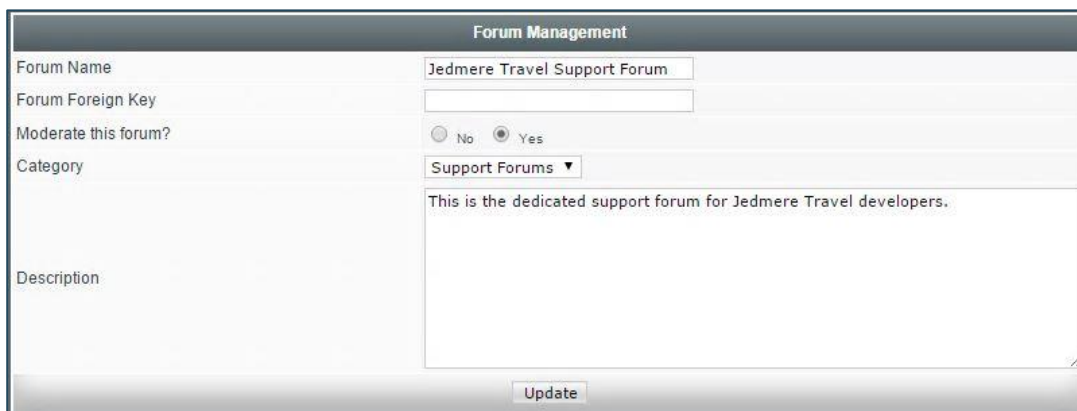
Add More Forums

12. In the left column, select the **Forums** navigation item.

13. The list of current forums is shown. Click the **Insert New** button.

14. The **Forum Management** properties window appears. Fill in the following information:

Forum Name	Jedmere Travel Support Forum
Forum Foreign Key	(Blank)
Moderate this Forum	Yes
Category	Support Forums
Description	This is the dedicated support forum for Jedmere Travel developers.
Permissions	(Leave Default)



Forum Management

Forum Name: Jedmere Travel Support Forum

Forum Foreign Key:

Moderate this forum? ☐ No ☒ Yes

Category: Support Forums

Description: This is the dedicated support forum for Jedmere Travel developers.

Update

15. When finished, click **Update** to continue.

16. Click the **Insert New** button again.

17. The **Forum Management** properties window appears. Fill in the following information:

Forum Name	API General Discussion
Forum Foreign Key	(Blank)
Moderate this Forum	Yes
Category	API Forums
Description	This is for general discussion on APIs.
Permissions	(Leave Default)

18. When finished, click **Update** to continue.

19. On the forum listing page, find the **API General Discussion** forum and click the **UP** button until it is listed at the top of the **API Forums** category.

Forums listing					
Announcements					
Recent Announcements	Click to edit	<input type="checkbox"/>			
API Forums					
API General Discussion	Click to edit	<input type="checkbox"/>			Down
Toronto Destination Reservations	Click to edit	<input type="checkbox"/>	Up		Down
VA Platinum Reservations	Click to edit	<input type="checkbox"/>	Up		
Support Forums					
Developer Support Forum	Click to edit	<input type="checkbox"/>			Down
Community Support Forum	Click to edit	<input type="checkbox"/>	Up		Down
Jedmere Travel Support Forum	Click to edit	<input type="checkbox"/>	Up		
<input type="button" value="Insert new"/> <input type="button" value="Delete selected"/>					

Edit Permissions of Forums

20. In the left column, select the **Groups** navigation item.

21. Find the **General** group and click **Permissions** to the right.

22. Scroll down and find the **Reply Only** properties area.

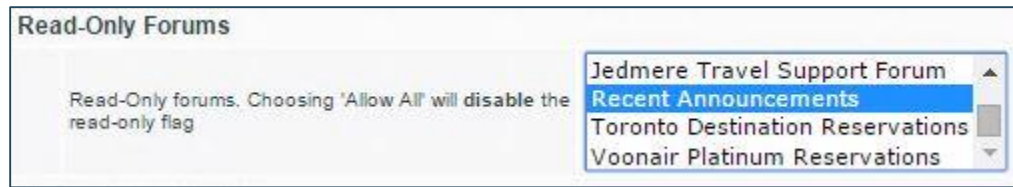
23. Change the selections so that only **Recent Announcements** forum is selected.

a. Note: De-select all items except the **Recent Accountments** forum.

Reply Only	
Deny create new Topics but allow replying to existing messages (e.g. Announcement Forums)	<div> Jedmere Travel Support Forum Recent Announcements Toronto Destination Reservations Voonair Platinum Reservations </div>

24. Scroll down further and find the **Read-Only Forums** properties area.

25. Change the selections so that only **Recent Accountments** forum is selected.
- a. Note: De-select all items except the **Recent Accountments** forum.



26. When finished, scroll to the bottom and click **Save** to continue.
27. Repeat the process for the **Jedmere Travel Developers** group.
28. **Logout** of the Dashboard when finished.

Lab 3-1 Register and Use Developer Accounts

Goals	The student will register two accounts as a developer and begin to create applications against the existing published APIs.
Scenario	You will now act as Dylan to help Anita Hirsch and Brian Mendoza to onboard themselves to the API Portal site.
Time	60 minutes

Instructions:

Register for a Developer Account

1. In the Dynamic Lab Environment, access the **ADSERVER** virtual machine and navigate to the Developer Portal dashboard.
2. At the top right of the page, click the **Signup** link.
3. The **Register New Account** window appears. Fill in the following information:

First Name	Anita
Last Name	Hirsch
Email Address	ahirsch@voonair.local
Username	ahirsch
Password	Password01
Re-Type Password	Password01

4. When finished, **Accept the Disclaimer** and click **Register Now** to continue.

Personal Information

Additional Info

First Name *

Anita

Last Name *

Hirsch

Email Address *

ahirsch@voonair.local

Username *

ahirsch

Password *

.....

Re-Type your password *

.....

1.4 We reserve the right to limit, replace, delete or otherwise change, at any time, the features, structure or any other aspects of your API Portal Account, API Portal, the Portal, the Software, the APIs or the Portal Content (as defined below) upon notice to you. If you do not accept any such change, your sole remedy is to terminate your access and/or use of your API Portal Account, the API Portal and/or the Portal within thirty (30) days of our notice of change, by providing us with advance notice of termination. If you fail to provide us with any such notice we may restrict your access to and/or use of the API Portal, the Portal and/or remove your API Portal Account from the API Portal or the Portal at any time after such thirty (30) day period.

☒ I accept the disclaimer *

Cancel

Next Step

Register Now

- A message appears that your registration will be pending approval. Click **Close** to continue.
- Repeat the above process for **Brian Mendoza**. Fill in the following information:

First Name	Brian
Last Name	Mendoza
Email Address	bmendoza@voonair.local
Username	bmendoza
Password	Password01
Re-Type Password	Password01

Personal Information

Additional Info

First Name *

Brian

Last Name *

Mendoza

Email Address *

bmendoza@voonair.local

Username *

bmendoza

Password *

Re-Type your password *

1.4 We reserve the right to limit, replace, delete or otherwise change, at any time, the features, structure or any other aspects of your API Portal Account, API Portal, the Portal, the Software, the APIs or the Portal Content (as defined below) upon notice to you. If you do not accept any such change, your sole remedy is to terminate your access and/or use of your API Portal Account, the API Portal and/or the Portal within thirty (30) days of our notice of change, by providing us with advance notice of termination. If you fail to provide us with any such notice we may restrict your access to and/or use of the API Portal, the Portal and/or remove your API Portal Account from the API Portal or the Portal at any time after such thirty (30) day period.

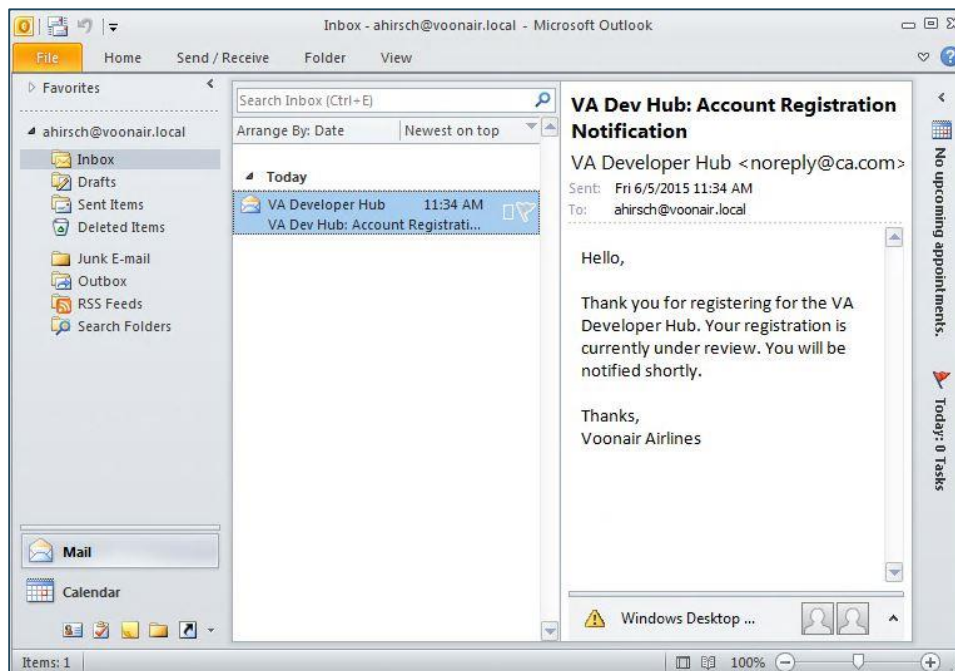
☒ I accept the disclaimer *

Cancel

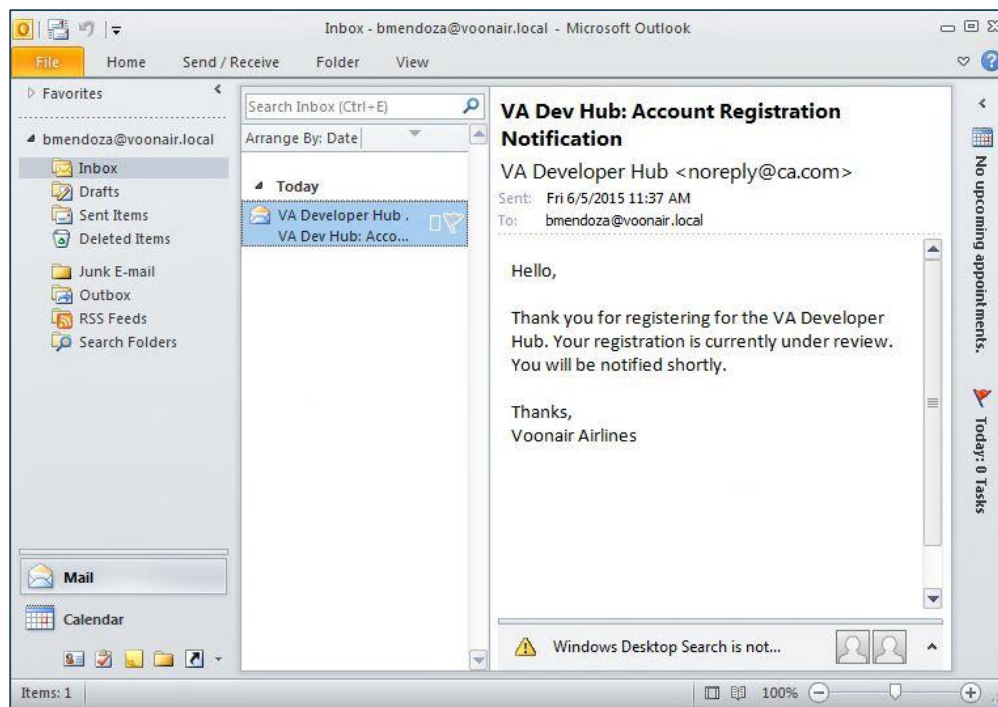
Next Step

Register Now

7. Open up **Microsoft Outlook 2010** from the Desktop shortcut or from the Start Menu.
8. The **Choose Profile** window appears. First, select **Anita Hirsch**.
9. A new email has appeared from the VA Developer Hub.



10. Exit **Microsoft Outlook 2010** and re-open the program. This time, select **Brian Mendoza** from the **Chose Profile** window.
11. Brian Mendoza has also received an email about registration.





Approve New Developer Registrations


12. Navigate back to the Developer Portal dashboard and log in using the **BusinessManager** account.
13. Under Tasks, we can see **2 Pending Accounts** that require our attention.

TASKS
2 Pending Accounts
0 Account Plan Change Requests
0 API Plan Change Requests
0 Application Requests

14. To approve these account requests, click the link in the **Tasks** widget or navigate to **Requests** ► **Registration**.

<input type="checkbox"/>	Account		Email	Type
<input type="checkbox"/>	Anita Hirsch		ahirsch@voonair.local	New Registration
<input type="checkbox"/>	Brian Mendoza		bmendoza@voonair.local	New Registration

15. Find **Anita Hirsch** and **Approve** the account by selecting the **Settings** drop down box to the right of the name.

<input type="checkbox"/>	Account		Email
<input type="checkbox"/>	Anita Hirsch	 View Approve Reject	ahirsch@voonair.local
<input type="checkbox"/>	Brian Mendoza		bmendoza@voonair.local

16. **Confirm** you want to approve the account and then click **Close** to continue.
17. Repeat the process for **Brian Mendoza's** account.
18. There are no new pending registrations.
19. **Logout** of the Dashboard when finished.
20. Switch to the **Microsoft Outlook 2010** application. It should still be open and logged in with **Brian Mendoza's** account.
21. An email has arrived notifying you that your account has been approved.
- Note: You may need to press **Send/Receive** to view the message.
22. In the email message, click the link to **Verify** and **Activate** your account.
- Note: Make sure the link opens in Chrome. If not, copy the link and open it within Chrome.
23. Enter the following credentials to **Verify** and **Activate** your account:

User Name	bmendoza
Password	Password01

24. The Developer Portal dashboard appears.

Create an Application

25. In the left column, select the **Applications** navigation item.
26. On the Manage Applications page, find and click the **Add Application** button.
27. In the **Application Name** field, type the following:
Mobile App for Toronto Destinations
28. In the **Platform** drop down field, select the following:
Android
29. Click the **Next Step** button to continue.
30. In the Add APIs drop down field, select the following:
Toronto Destination Reservations
31. **Accept the Terms and Conditions** and then click the **Next Step** button to continue.
32. Review the fields on this page and click **Save** to continue.
33. Your application will now be pending approval. Switch to the **Microsoft Outlook 2010** application. It should still be open and logged in with **Brian Mendoza's** account.
34. An email has arrived notifying you that your application request has been received.
 - a. Note: You may need to press **Send/Receive** to view the message.

Approve the Application Request

35. Switch back to the Developer Portal dashboard and log out of **Brian Mendoza's** account.
36. Log into the dashboard with the **BusinessManager** account.
37. Under Tasks, we can see **1 Application Request** that requires our attention.
38. To approve the application request, click the link in the **Tasks** widget or navigate to **Requests Applications** ►
39. Find the **Mobile App for Toronto Destinations** application and **Approve** the app by selecting the **Settings** drop down box to the right of the name.
40. Click **Close Message** to continue.
41. Check **Brian Mendoza's Outlook** account and notice a new email has arrived noting the application approval.

Request Account Plan Change

42. Switch back to the Developer Portal dashboard and log out of the **BusinessManager** account.
43. Log into the dashboard with **Brian Mendoza's** account.
44. In the left column, select the **Applications** navigation item.
45. On the Manage Applications page, notice the **Current Account Plan** is set to the **Bronze** plan.

The screenshot shows the 'Applications' management interface. At the top, there's a section for 'Current Account Plan' which is currently set to 'Bronze Account Plan'. Below this, there's a table of applications. The first application listed is 'Mobile App for Toronto Destinations' with an 'API Key' of '17xxa308cda4397c4612a51e6e99713ca658' and a status of 'Active'. The platform is 'Android'. There's an 'API Usage' button below the application name.

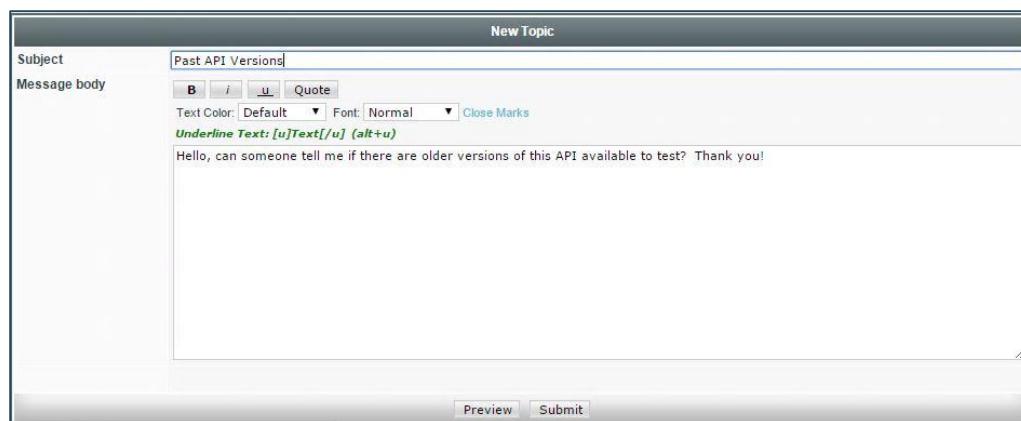
46. In the **Current Account** plan drop down field, select the **Internal Developer Plan** and click the **Submit** button.
47. Your **account plan change** is pending approval.
48. Log into the Developer Portal dashboard as the **BusinessManager** and approve **Brian Mendoza's** request.
49. Access **Brian Mendoza's** email account to notice the account change has been approved.

Post to the Forums

50. Log into the Developer Portal dashboard with **Brian Mendoza's** account.
51. At the top of the page, find and click the **Forums** navigation item.
52. Find and access the **Toronto Destination Reservations** forum.
53. Click **Please Log in to Post**.
54. The new forum topic message profile appears. In the **Subject** field, type the following:
Past API Versions

55. In the Message Body field, type the following:

Hello, can someone tell me if there are older versions of this API available to test? Thank you!



56. When finished, click **Submit** to continue.

57. Your message now appears in the forum for others to post and reply to.

58. At the bottom left of the page, click the **Watch This Topic** to be emailed when someone replies to the message.

Appendix: Dynamic Lab Environment Access and User Guide

Getting Started

Dynamic Lab Environment is the name of the CA Education virtual environment for labs and practice activities. The technology behind the Dynamic Lab Environment is provided by Skytap and some of the instructions in this document reference Skytap.

This appendix provides the following information:

- System and network requirements
- Self-Directed Learning login and usage information
- Setting up an environment (other than Self-Directed Learning)
- Instructor-Led classroom set up
- Best practices
- Troubleshooting
- Escalating unresolved issues

System Requirements

The minimum system requirements for an individual client machine accessing the Dynamic Lab Environment are listed below. Please check that you meet the minimum requirements and that you have the equipment you need before attempting to use the environment.

Operating Systems	Windows XP/2003/Vista/2008/Windows 7/2008 R2/Windows 8/2012 Mac OS X 10.7 or higher (Lion or Mountain Lion) Linux variants with supported browser and Java versions
Browsers	Internet Explorer 8, 9, or 10 Mozilla Firefox Google Chrome Mac OS X Safari

Java Version

The acceptable Java versions are Java 1.6, 1.7, or newer.

If you are unsure which version of Java you are running, simply click the following link and it will auto-detect: <http://java.com/en/download/installed.jsp> or type “java -version” in the terminal for Linux.

If you are running OS X, please see [Running Java on Mac OS X](#).

For information on installing Java on your local Linux machine, see [How to install Java on my local Linux machine](#).

Network Requirements

We recommend a minimum download speed of **1.16 Mb/sec (150 KB/sec) per client connection** (i.e., each individual user). In addition, we **recommend latency of 250ms or less**.

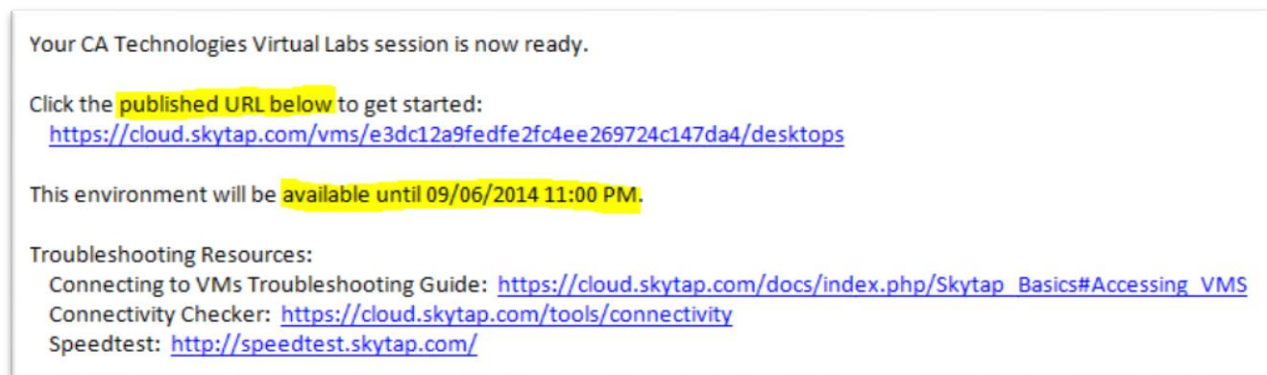
Self-Directed Learning Access and Instructions

After you register for the course, you will receive a system-generated email that includes two important pieces of information:

- A published URL to access your assigned lab environment
- The date and time on which your access to that environment expires

Keep this email as you will need to use the URL whenever you access your lab environment.

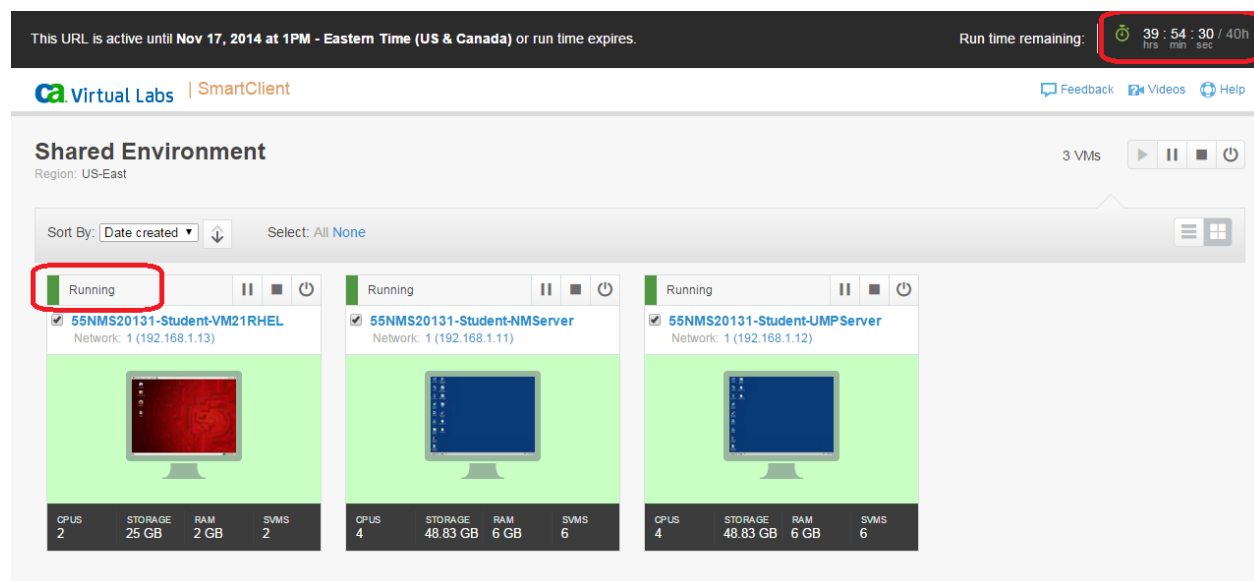
Here is a sample email with the two pieces of information highlighted:



Access Your Assigned Lab Environment

Click on the published URL from the email or paste the link in your web browser to access your assigned lab environment. Use this same link each time you access your dynamic lab environment.

A sample environment with multiple Virtual Machines (VMs) is shown below:



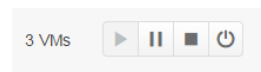
The above sample environment includes three VMs. Your particular environment will be appropriate for the course activities for which you have registered.

NOTE: When you initially access your environment, you may see a Java prompt, asking if you want to run this application. Click Run if you see this prompt. It will enable you to properly connect into the environment and enable the keyboard to work correctly.

Manage Your Assigned Lab Environment

You are allocated a certain amount of lab session time to complete all of the activities associated with a given course. That time starts once you access your environment and continues to run until the end date and time specified in the email. The clock continues to run even if you are not actively working in the environment *unless* you manage your environment.

Use the Suspend and Run buttons to manage your lab environment. These buttons are shown below:



Using Suspend to Preserve Your Lab Time

Click the Suspend button to stop the Run Time clock. Do this any time you are not working on course activities to preserve your remaining time. You can suspend any or all of the VMs in your environment by clicking in the check box in each VM window and then clicking the Suspend button.

The Suspend button is called out in the following sample where all three VMs have been checked:

This URL is active until **Nov 17, 2014 at 1PM - Eastern Time (US & Canada)** or run time expires. Run time remaining: 39 : 54 : 30 / 40h

Virtual Labs | SmartClient
Feedback Videos Help

Shared Environment
Region: US-East

3 VMs ▶ || ■ 🔌

Sort By: Date created ⌵ Select: All None

Running
▶ || ■ 🔌

☒

55NMS20131-Student-VM21RHEL
Network: 1 (192.168.1.13)

CPU: 2
STORAGE: 25 GB
RAM: 2 GB
SVMS: 2

Running
▶ || ■ 🔌

☒

55NMS20131-Student-NMServer
Network: 1 (192.168.1.11)

CPU: 4
STORAGE: 48.83 GB
RAM: 6 GB
SVMS: 6

Running
▶ || ■ 🔌

☒

55NMS20131-Student-UMPServer
Network: 1 (192.168.1.12)

CPU: 4
STORAGE: 48.83 GB
RAM: 6 GB
SVMS: 6

Ensure all the virtual machines are selected and click on the suspend button.

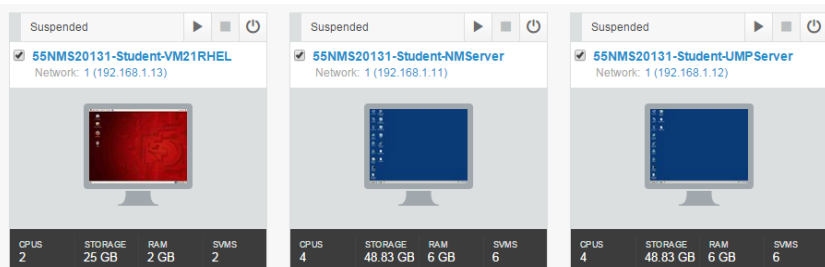
CA Technologies

CA API Developer Portal v3.0: Foundations 200

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COMPANY CONFIDENTIAL AND PROPRIETARY INFORMATION—DUPLICATION IS PROHIBITED

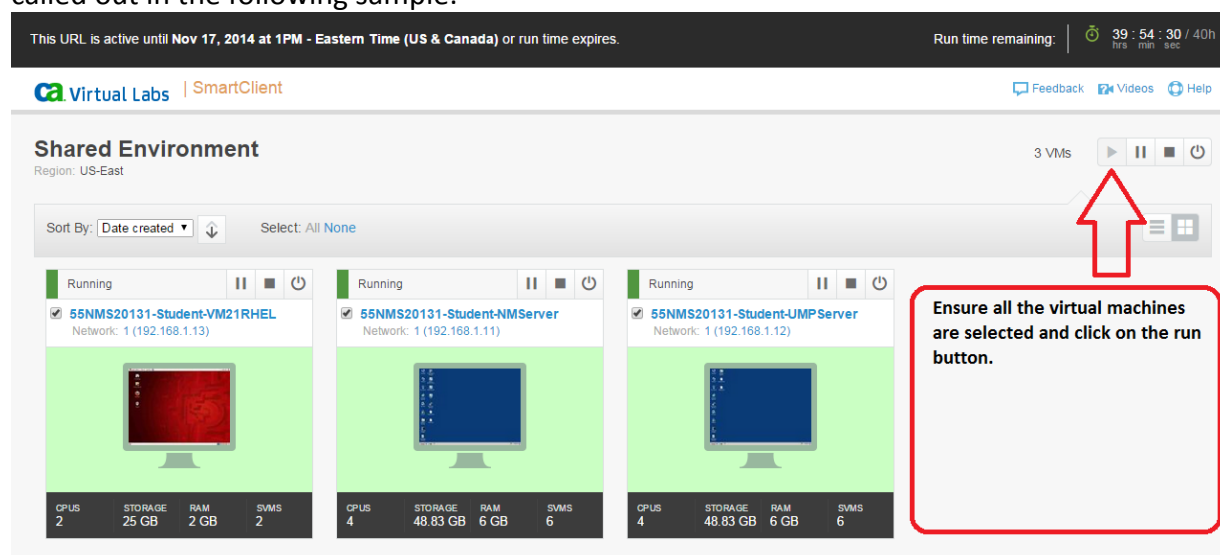
When you click Suspend, your allocated lab time is preserved and the time clock remains paused until you change the status to Run. The VMs in a suspended environment display that status as shown in the following image:



Once you have suspended your environment, you can minimize or close the browser window in which the environment has been running. Use the same URL you were sent in email to re-open your environment when you are ready to resume.

Using Run to Resume Running Your Lab Time

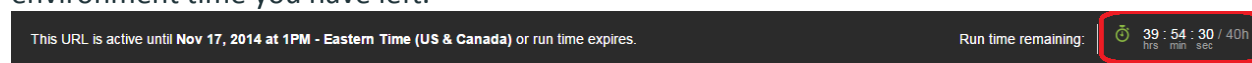
Click the Run button to start up suspended VMs and restart the Run Time clock. The Run button is called out in the following sample:



This may take several minutes. The environment is ready the when VMs are highlighted in green and display a Running status. Click on the machine(s) you want to directly access to start or resume your lab activities.

Tracking Lab Time Using the Run Time Clock

The Run Time clock in the upper right corner of your set of VMs tracks how much dynamic lab environment time you have left.



Network Requirements

We recommend a minimum download speed of **1.16 Mb/sec (150 KB/sec) per client connection** (i.e., each individual user). In addition, we **recommend latency of 250ms or less**.

If you have a group of 15 users, each connecting to their own client session from the same physical location concurrently, the recommended amount of bandwidth required is **1.16Mb/sec per user x 15 or 17.5Mb/sec**.

Connection Test

If you are connecting for the first time, or connecting from a computer you have never used before, run the connection and speed tests to make sure that your browser supports a connection to the Dynamic Lab Environment. These tests are hosted by Skytap directly.

Use the following URL to use the Skytap Connectivity Checker to run connection and speed tests:
<https://cloud.skytap.com/tools/connectivity>

Skytap Connectivity Checker

The **Skytap Connectivity Checker** will verify your connection to Skytap Cloud and ability to access virtual machines using Skytap SmartClient. To use SmartClient, you will need a supported internet browser and java version as well as meet minimum connection speed requirements. For more information, see the [Skytap Connectivity Checker documentation](#).

If accessing the internet via a proxy server, you may be prompted to enter a username and password. If this is not entered promptly, the connection test may time out and fail. Consult your company help desk if you have questions about your proxy

Finally, you'll want to make sure your firewall does not block the ports Skytap uses. For information on these port ranges, see [this article](#).

To begin the test, click the Test Connectivity to Skytap button below.

Most connectivity problems indicated by the Skytap Connectivity Checker can be solved by following the steps in the [Skytap Connectivity Checker documentation](#).

Region: US-West

Start Skytap Connectivity Checker

Skytap Speed Test

The **Skytap Speed Test** will test the quality of your network connection and provide detailed statistics on upload and download speeds as well as information on latency and network traffic.

Click the button below to go to the Skytap Speed Test

Go to Skytap Speed Test

Best Practices and Troubleshooting

Use the following list of best practices to help you avoid potential issues with the Dynamic Lab Environment:

- Ensure that you are connected to a dedicated hardwired network connection on a broadband internet connection.
- Do not use Wi-Fi connection because it is more susceptible to higher latency issues impacting performance.
- Close all applications and documents you are not using for your virtual training; applications running in the background may use up your computer's bandwidth and affect system performance.
- You should not be connected to a corporate VPN while connecting to the virtual training class.
- Run both Connectivity Checker and Speed Test from appropriate application regions and submit results to educationlabs@ca.com. Before the start of class, make sure your browser supports a connection to the remote labs.

Contact CA Support if you run into any issues during your labs:

- CA Technologies Employees:
 - Go to [Servicedesk.ca.com](https://servicedesk.ca.com)
 - Click on the Request Category for Specialized Services
 - Choose Education Classroom Services
 - Fill in the required fields and choose “Virtual Lab Support” in the drop-down
 - Submit your ticket
- Customers and Partners:
 - Contact your local CA Support Line
 - US Only: 1 800 225-5224
 - Visit support.ca.com