

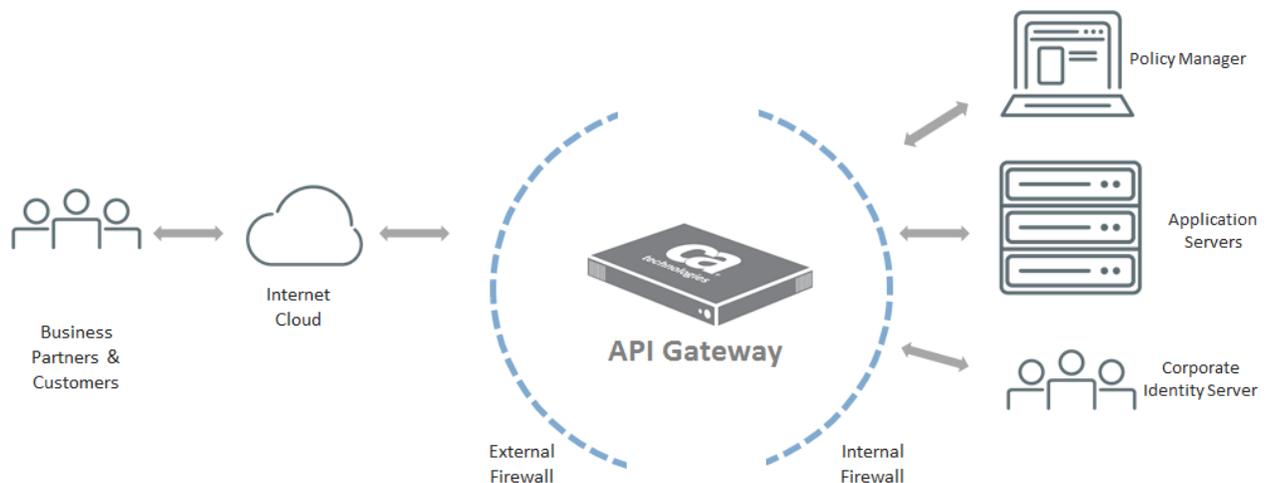
Configuring the API Gateway v8.3

Description Stand-Up the Gateway Virtual Machine and connect it to the Policy Manager. This is an ideal guide to use if you wish to locally configure a Gateway and Policy Manager on your machine. It is also used when receiving any instructor led training. There are 5 unique stages to this process, detailed below. There is also a **cheat sheet** at the end of this guide should you wish to print for reference.

Time 60 minutes

Stage Description

- 1 Setup your Virtual Machine.**
This allows you to access an instance of the Gateway. This step assumes you have access to the Gateway .ova file and you have downloaded various tools to support your training, including VMWare Player, SoapUI, WinSCP, and Putty.
- 2 Configure your Gateway Settings.**
This allows you to configure network settings and other preferences like time zones.
- 3 Edit the Local Host and Create your Gateway Database.**
This allows you to create a database.
- 4 Install the Policy Manager and the Gateway License.**
The Policy Manager is the GUI where you use services and assertions to write policies. The license key 'unlocks' various features of the Gateway.
- 5 Install the back-end services.**
This allows you to route requests from the Gateway to various back-end services.



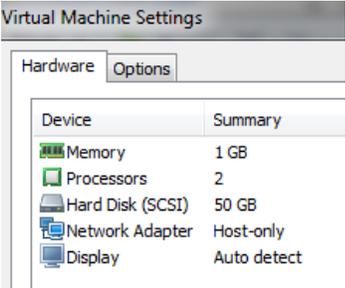
Stage 1 – Setup your Virtual Machine

Description The VM allows you to access an instance of the Gateway. This step assumes you have downloaded the latest Gateway .ova file as well as a number of supporting tools, outlined below. Note: you must have ‘service virtualization’ enabled on your system’s BIOS also.

- Details**
- VMWare Player
 - SOAP UI
 - WinSCP
 - Putty

Time 5 minutes

Process Overview

Step	Description
<p>Import your Image</p>	<ol style="list-style-type: none"> From the start menu, open the VMWare program and select the option titled Open a Virtual Machine. Browse to and select the Gateway .ova from your local or shared drive. Assign a name for your machine and click <import>. Wait for the import to complete. This may take several minutes. 
<p>Edit your Virtual Machine Settings</p>	<ol style="list-style-type: none"> Once the .ova is imported, it will appear in the menu on the left side. Select it, then choose <edit virtual machine settings>. There are 4 edits you need to make. They are: <ul style="list-style-type: none"> Edit 1: remove the CD/DVD Edit 2: remove the Floppy Edit 3: Edit the memory from 2GB (default) to 2GB Edit 4: Change the Network Adaptor settings from Bridget to NAT Click <OK> once you see the following settings.

Stage 2 – Configure your Networking and Time Zone Settings

Description The work you do in this stage allows you to configure your VM network and set system preferences like time-zone, name server etc. The steps you perform in this stage only need to be performed once.

Time 10 minutes

Process Overview

Step	Description
<p>Login to the Gateway for the first time.</p>	<ol style="list-style-type: none"> From your VM Player, select the machine you recently edited, then choose the option titled Play Virtual Machine. <p><i>Note: Once the script has run, you will now have two machines running. Your regular laptop/desktop, and the Virtual Machine. To toggle between the two, press the ctrl + alt key.</i></p> A login prompt will appear. Since this is the first time you are logging in, you will need to change your password. Please use the credentials below. <p><i>Note: the new password has a 'zero' between the \$ and @ signs. We recommend you write this down on your cheat sheet. If you take too long to reset your password, the system will bounce you back to the main login menu.</i></p> <ul style="list-style-type: none"> Localhost login: ssgconfig Default/Current UNIX Password: 7layer New UNIX Password: L7SecureS0@
<p>The Main Menu</p>	<pre> 1) Configure system settings 2) Display Layer 7 Gateway configuration menu 3) Use a privileged shell (root) 4) Change the Master Passphrase 5) Display Remote Management configuration menu 6) Manage HSM 7) Display Enterprise Service Manager configuration menu 8) Display Patch Management menu 9) Display Log Viewing menu R) Reboot the SSG appliance (apply the new configuration) X) Exit (no reboot) Please make a selection: _ </pre>
<p>Configure Networking Settings</p>	<ol style="list-style-type: none"> Select option 1, then press <enter> Select option 1 again, then press <enter> Select option 1 for the eth0 option, then press <enter> Press <enter> to accept the default setting of enabling interface on boot (y)

	<ol style="list-style-type: none"> 5. Press <enter> to accept the default setting of configuring IPv4 networking (y) 6. Press <enter> to confirm the default protocol of dhcp 7. For the dhcp hostname: <ol style="list-style-type: none"> a. Option 1: press <enter> for no dhcp server name b. Option 2: To specify dhcp hostname, type the host name; press <enter> <ol style="list-style-type: none"> i. We recommend test.ca.com 8. Press <enter> to accept the default of (n) to not configure IPv6 networking 9. Type <n> at the next prompt as you do not want to enter another network interface. Press <enter> 10. Type <n> than <enter> to confirm that you would not like to change the current default IPv4 gateway 11. Type in the fully qualified hostname. We recommend gateway1.l7tech.com. Press <enter>. Write this down on your cheat sheet. 12. Name Server(s): <ol style="list-style-type: none"> a. Option 1: press <enter> for no name server (use this option for training) b. Option 2: Type the name server and press <enter> 13. Search Domain <ol style="list-style-type: none"> a. Option 1: Press <enter> for no search domain b. Option 2: Type the search domain and press <enter>
<p>Configure Time Zone Settings</p>	<ol style="list-style-type: none"> 1. Type <y> to change the current time zone configuration. Press <enter> 2. Select your first time zone option and press <enter> 3. Select your more localized time zone option and press <enter> 4. Type <n> to change current time servers configuration. Press <enter>. <ol style="list-style-type: none"> a. Type <y> to accept a comma separate list. Press <enter>. <i>Wait for changes.</i> 5. Type <y> then <enter> to accept the changes and continue. Type <Quit> to discard all changes and restart the configuration. 6. Select <x> at the configure system settings menu. Press <enter>. <i>You will return to the main menu.</i>

Stage 3 – Configure Localhosts and Database

Description At the root menu, in the vi tool, you will configure your localhost. You also set up your Database.

Time 10 minutes

Process Overview

Step	Description
Get to root menu	<ol style="list-style-type: none"> From the main system menu, select option <3> then press <enter> You will need to change the password for the 'root' user. Use credentials below. <p>Note: at this stage, characters do not appear as you type them.</p> <ul style="list-style-type: none"> Default / Current Password: 7layer New UNIX/root Password: L7SecureS0@ <p>Tip: If you are not familiar with vi, there is a list of common commands located on your cheat sheet, and in appendix A of this configuration guide.</p> Finding your IP address. <ol style="list-style-type: none"> Type ifconfig Option 1: Ethernet <ol style="list-style-type: none"> Pull the inet addr from the eth0. Option 2: WiFi <ol style="list-style-type: none"> Pull the inet addr from the wlan0 <p>Write this down on your cheat sheet and at this next prompt in the configuration process. Press <enter>.</p> At the root@ prompt, type vi /etc/hosts. Then press <enter>. <p>Note: there is a space between vi and the /etc/hosts</p>
Enter your IP Address and FQDN into vi	<ol style="list-style-type: none"> Move your mouse to the empty line of text in vi. To do this, press the lowercase 'o' a couple of times. Once at the empty line, press 'l' type in your IP address. Follow it with a couple of spaces, then type in your qualified hostname. Hit the <esc> key, then <:wq> then press <enter> to save your changes Type <exit> to get to the main menu Type <r> to reboot with the new configuration. Type <y> to confirm reboot. <i>Wait while the script runs.</i>
Create the API Gateway Database	<ol style="list-style-type: none"> After the reboot, you will be prompted to sign in again with your new credentials. Remember them from your cheat sheet.

	<ol style="list-style-type: none"> 2. Select <option 2> from the main menu to display the configuration menu. Press <enter> 3. Select <option 2> again to create a new database. Press <enter> 4. Press <enter> to accept the default MySQL database. 5. Press <enter> to accept localhost as the hostname. 6. Press <enter> to accept the default port 3306. 7. Press <enter> to accept the default database name ssg 8. Press <enter> to accept the default database username gateway 9. Enter a password for the database user and then retype to confirm. Tip: record on your cheat sheet! 10. Press <enter> to accept the default administrative database username root. 11. Enter the administrative database password. The default is 7layer.
<p>Setup the Gateway Failover Database.</p>	<ol style="list-style-type: none"> 1. Press <enter> to skip setting up a Gateway Failover Database
<p>Setup the Policy Manager Administrator</p>	<ol style="list-style-type: none"> 1. Enter the user name for the administrator. For example: admin. <i>Tip:</i> provide these credentials later when asked for SSM Admin details. 2. Enter the password for the administrator and then retype to confirm. For ex: 7layer.
<p>Setup the Gateway Cluster</p>	<ol style="list-style-type: none"> 1. Press <enter> to accept the cluster hostname offered as the default. 2. Enter a passphrase to protect the cluster. Retype to confirm. Ex: 7layer
<p>Setup the Gateway Node</p>	<ol style="list-style-type: none"> 1. Press <enter> to enable the node.
<p>Configuration Summary</p>	<ol style="list-style-type: none"> 2. Review the settings. If everything is correct, press <enter> to apply the settings. If you are not ready, type 'quit' to exit the wizard.
<p>Check the status of the Gateway</p>	<ol style="list-style-type: none"> 1. From the Gateway configuration menu, check the status of the Gateway by selecting <option 7>. It may be in 'starting' mode for a while before it shows as 'running'. 2. Keep it up and running for the following stages.

Stage 4 – Install and License the Policy Manager

Description The Policy Manager is the GUI that controls the actions within the Gateway. The Gateway is in ‘running’ status, but relies on the policies you write in the Policy Manager to tell it what to do during runtime requests.

Time 3 minutes

Process Overview

Step	Description
<p>Edit the hosts file on your Windows PC</p>	<ol style="list-style-type: none"> On your <i>windows PC</i>, type <code><edit\windows\System32\drivers\etc\hosts></code> Enter your IP and hostname so services are visible locally by DNS as needed. Note: User your IP and Gateway information – see sample below: <pre>192.168.xxx.xxx yourhost.com yourhost 19.2168.xxx.xxx sde.l7tech.com sde</pre> <p>Note: to check connections open a windows command line and type in ping 192.168.xxx.xxx and ping FQDN</p>
<p>Install the Policy Manager</p>	<ol style="list-style-type: none"> Locate the most recent Policy Manager .exe file from your instructor or local or shared folder. Run the program. If it is the <i>first time</i> you are running this program, you will need to agree to the license agreement. Read through and select “I Agree” and follow the rest of the setup prompts.
<p>Login to the Policy Manager</p>	<ol style="list-style-type: none"> From the start menu, select the API Gateway Policy Manager Enter the User Name and Password suggested for you in Step 2. It should be on your cheat sheet and is typically admin/7layer Leave the Client Certificate section blank In the Gateway section, type in your IPv4 or qualified hostname that you set up in stage 2. This should be on your cheat sheet. Select <OK> at the certificate warning.
<p>License the Gateway</p>	<ol style="list-style-type: none"> Select <yes> to install a license if this is your <i>first time</i> logging into the Policy Manager. Select <install license> at the prompt Browse to and select the .xml license you would have received from your instructor or support. Note: if you received a license file via email with a .lic extension, you will need to save it, rename to a .zip file, and then extract the .zip file and import the license as

	<p>an .xml format only.</p> <p>4. The license should show as 'valid'.</p>
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Stage 5 – Install Back-End Services

Description Installing the back-end services allows you to route requests from the Gateway to various back-ends (i.e. LDAP, JMS). Ensure your Gateway SDE VM is up and running.

Time 10 minutes

Process Overview

Step	Description
Upload the Demo Environment	<ol style="list-style-type: none"> Log into WinSCP <ol style="list-style-type: none"> for the hostname type the FQDM username and password from your cheatsheet With your ssgconfig user account, upload the latest demo environment (.tgz) file Place this .tgz package into the default folder /home/ssgconfig
Login to the Gateway as 'root' through the system menu	<ol style="list-style-type: none"> From the <i>main configuration menu</i> select <option 3> to get to the root menu Login as the root user From the <i>root menu</i>, type <cd /home/ssgconfig> Type <ll> then press <enter>. This should list the .tgz file that you loaded Type <tar -xvzf L7_demo_environment-vx.x.tgz> Type <cd ./L7_demo_environment-vx.x> <p>Tip: after keying in the first couple of letters or numbers, if you hit the <tab> key, it will auto-complete the information for you</p>
Run the script	<ol style="list-style-type: none"> Run the script ./install_sde.sh Type <y> at the prompt to confirm you wish to install the environment. <i>Wait while the script runs.</i>
Edit the hosts file on your Windows PC	<ol style="list-style-type: none"> On your <i>windows PC</i>, type <edit\windows\System32\drivers\etc\hosts> Enter your IP and hostname so services are visible locally by DNS as needed. <p>Note: User your IP and Gateway information – see sample below:</p> <pre>192.168.xxx.xxx yourhost.com yourhost 19.2168.xxx.xxx sde.l7tech.com sde</pre>

Cheat Sheet

Description Use this to record information that you will refer to throughout the training and configuration. Please use the default credentials if they are listed. You can also choose to print only this page for reference.

Gateway Credentials	
Localhost Login:	ssgconfig
Default Password	7layer
New ssgconfig password assigned:	L7Secure\$0@ (note: a zero)
Root username	root
Root default Password	7layer
New root password assigned	L7Secure\$0@
Network Setup and Configuration	
Your server IPv4 address	
Your fully qualified hostname (FQDN)	
Database Credentials	
My SQL database admin user	root
My SQL database admin password	7layer
Cluster hostname	
Cluster passphrase	7layer
Policy Manager Credentials	
SSM Username (Policy Manager Username)	admin
SSM Password (Policy Manager Password)	7layer

vi commands

- Insert: <i>
- Quit: <esc> <:q> <enter>
- Save & Quit: <esc> <:wq> <enter>
- Next line: <o> (lower case 'o')

Unix Commands

- **ifconfig** retrieves the system IP settings and configuration
- **cd** changes directories for installing the backend services
- **cp** copy files or directories from one location to another
- **tar** to untar files
- **su** to switch users
- scrolling command line shift + PgUp/PgDn
- pressing tab while on command line will complete a word in unique, or give all suggestions on with the partial that's typed
- Pressing **arrow keys up and down** will recall a single command commands
- **History** will print all commands used in that session.
- **ping** will run forever ... use ctrl + c to stop!
- **man** [command] – access the manual page for a command