Web Client Quick Start Guide

Alcatel·Lucent

VitalQIP®

Infrastructure setup for IPv4

To set up the initial infrastructure of the VitalQIP® Management system after VitalQIP has been installed, perform the following basic functions in the order shown. You can refine the steps later or configure them to manage any size network.

Note: *The variable QIPHOME is used in this document as shorthand for the VitalQIP path set in the Directory Name window during installation.*

Step 1: Log into VitalQIP

a. Open a web browser and enter the VitalQIP web client URL in the following format:

– For a nonsecure Tomcat server:

`http://<machine name` or `IP address>:<Tomcat web server port>/qip`

– For a secure Tomcat server:

`https://<machine name` or `IP address>:<secure Tomcat web server port>/qip`

Note: *If the VitalQIP web client was installed with the nonsecure Tomcat web server port assigned to the default port 80, the URL format is* **`http://<machine name` *or* `IP address>/qip`***. The default secure port is 743.*

b. Enter a **User ID** and **Password** and click **Login**. The VitalQIP opens with all the menu items.

Step 2: *(Optional)* Define the organization

Note: *VitalQIP has a default organization already defined called "VitalQIP Organization". Follow this step if you wish to add an additional organization to your infrastructure.*

a. Click the **Infrastructure** tab and select **Manage Organization**.

b. Click the **Add** menu and select **Add Organization**.

c. Enter a name (such as the company name) in the **Organization Name** field and click **Save**. The organization created successfully.

d. Click the **Actions** menu and select **Switch Organization** or select the organization from the drop-down list of organizations.

e. Click **OK** in the confirmation dialog box.

Step 3: Define a domain

a. Select **DNS ▸ Zones**. The Zone Hierarchy opens.

b. Click the **Add** menu and select **Add Zone**.

c. Enter a domain name in the **Name** field. *Note the domain name for reuse later.*

d. Enter an email address in the **Email Address** field. This address is entered in the Start of Authority (SOA) record. *Note the email address for reuse later.*

e. Leave the time settings at their default values and click **Save**. The Zone saved successfully.

Step 4: Create a DNS server

a. Select **DNS ▸ DNS Servers.** The DNS Servers Hierarchy opens.

b. Click the **Add** menu and select **Add Server**.

c. Select a server type, such as **Lucent DNS 5.X,** from the **Server Type** list. A set of parameters opens.

d. Enter a name (of up to 63 alphanumeric characters) for the DNS server in the **Host Name** field. *Note the host name for reuse later.*

e. Select the domain from the **Domain Name** list. A set of parameters open.

f. Required server parameters appear in the server parameters list. Select the parameter and enter values as follows:

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– **Default Directory**. Enter either **`%QIPHOME%\named`** on Windows, or **`$QIPHOME/named`** on UNIX.

– **Email address for local and reverse zones**. Enter the same address you entered in Step 3d.

– **RNDC Key**. ***BIND-9.X, LUCENT DNS 4.X, and LUCENT DNS 5.X only***. Enter the value of the key to be placed in *named.conf*.

g. Click **Save**. The DNS server saved successfully.

Step 5: Assign primary DNS server to zone

a. Select **DNS ▸ DNS Servers.** The DNS Servers Hierarchy opens.

b. Expand the **Servers** hierarchy and select the DNS server that you created in Step 4. The Server properties page opens.

c. Click the **Manage Zones** tab and then click the Add as Primary icon. The Add as Primary screen opens.

d. Click the **Search** button next to the **Zone Search** field. available zones appear in the list.

e. Select the zone that you created in Step 3. Click **Add=>** to add the selected zones to the Selected Zones list and then click **OK**.

f. Click **Save**. The DNS server is now set up, but an address must be assigned later after a network and a subnet are set up

Step 6: Define a network and subnet

a. Select **Address Management ▸ IPv4 ▸ Networks**. The IPv4 Hierarchy opens.

b. Click the **Add** menu and select **Add Network**.

c. In the **Network Address** field, enter the address of the network. 0, 127 and greater than 239 are not allowed in the first octet since these numbers are reserved.

d. Enter a name for the network in the **Network Name** field.

e. Select the server from the **Reverse Zone Server** field. The **Contact Email** field is automatically populated.

f. Click **Save**. Network added successfully.

g. In the Network Properties page, click the **Manage Subnets** tab and then click Add subnet(s) icon.

h. Select a subnet length from the **Length** field (the network size is the default).

i. Click the **...** button beside the **Domain Name** field.

j. Click **Search**, select the domain you created in Step 3 from the list**,** and then click **Add=>** so it appears in the **Associated Domain** list.

k. Click **Apply** and verify that the managed domain appears in the **Domain Name** field.

l. Check **Ping Before Assign** field. VitalQIP will later ping the address when each object is created.

m. Click **Calculate**. The **Search Results** list is populated with a foldered list of all possible subnets for the network and length/mask.

n. Place a checkmark beside the subnet you want to create.

o. Click **Save** and click **OK** in response to the confirmation message. The Subnet save successfully.

Step 7: Assign the DNS server an address

a. Select the subnet that you created in Step 6. The subnet properties page opens.

b. Click the **Manage Objects** tab. The Manage Objects in Subnet page opens.

c. In the IP Address column, double-click an unused IP address. The Add Object page opens.

d. Select **Server** from the **Object Class** field.

e. Enter same DNS server name as you entered in Step 4d in the **Object Name** field.

f. Click **Save**.

Step 8: Define the DHCP server

a. Select **DHCP ▸ IPV4 ▸ DHCP Servers**. The DHCP Servers Hierarchy opens.

b. Click the **Add** menu and select **Add Server**. The Server Properties screen opens.

c. Select a server type, such as **Lucent DHCP 6.0,** from the **Server Type** list. A set of server parameters opens.

d. To install the DHCP Server software on the same server as the DNS server, enter the host name you entered in Step 4d in the **Host Name** field. Otherwise, enter a different host name and add an object for it (as described in "Step 7: Assign the DNS server an address").

e. Select the domain from the drop-down list. Select the domain you entered in Step 3c, or select the domain that you want.

f. Required server parameters appear in italics. Select the parameter and enter values (if necessary) as follows:

– **Default Directory**. Enter either **`%QIPHOME%\dhcp`** on Windows, or **`$QIPHOME/dhcp`** on UNIX.

– **DHCP Template**. Select **general**.

g. Click **Save.**

Step 9: Verify the subnet profile

a. Select **Address Management ▸ IPv4 ▸ Subnets**. The IPv4 Hierarchy opens.

b. Expand the subnet hierarchy and select the subnet you created in Step 6. The Subnet Properties screen opens.

c. Enter a name in the **Subnet Name** field.

d. Ensure the domain is correct.

e. In the **Preferred DNS Server** field, select the DNS server defined in Step 4.

f. Select the DHCP server you created in Step 8 from the **DHCP Server** drop-down list.

g. Select **general** from the **DHCP Option Template** drop-down list.

h. Click **Save.**

Step 10: Test the environment

a. To test the environment, create three dynamic objects. Click **Managed Objects**.

b. Select three unused IP addresses and click Define Scope icon. The Define Scope(s) screen opens with the range added to the scope list.

c. Select **Workstation** from the **Object Class** field. Note that the 0ther required fields already display the default values you want.

d. Click **Create** and click **OK** in response to the confirmation message.

e. Select **DNS ▸ DNS Servers**. The DNS Servers Hierarchy opens.

f. Expand the Servers hierarchy and select the DNS server you added in Step 4. The DNS Properties screen opens.

g. Click **Actions** menu and select **DNS Generation**. The DNS Generation screen opens.

h. In the **Type** field, select the **Configuration and Data** option.

i. In the **Generate To** field, select the **Preview** option.

j. Click **Submit** and click **OK** in response to the **Scheduled the Job. Job ID is:** *nnn***.** message. Click **Cancel**.

k. Select **Tasks ▸ Scheduler**.

l. Double click on the completed status. The QIP DNS Generation screen opens.

m. Click **Select All** followed by **View Selected**. Check the DNS configuration files on the screen and check that the infrastructure is configured as intended.

n. Click the **Return to file list** link. To download files so you can review and/or print them, select them again and choose one of the download functions. Close the screen.

Step 11: Verify services are started

a. Verify that all services are started:

- On Windows, click **Start** and select **Programs ▸ VitalQIP ▸ VitalQIP Service Controller**.
- On UNIX, list all currently running VitalQIP processes by running **ps -ef | grep qip**.

b. If the services are not running, start the VitalQIP Services. See "VitalQIP services on Windows" or "VitalQIP services on UNIX" in Chapter 2 of the *VitalQIP Administrator Reference Manual* for information on starting services.

Note: *You can find additional help troubleshooting VitalQIP services in Chapter 20 of the VitalQIP Administrator Reference Manual.*

c. If any services cannot be started:

- For Windows, select the **Event Viewer** tab in the Service Controller to see if there are any error messages.
- For UNIX, refer to "Troubleshooting services/daemons on UNIX" in Chapter 20 of the *VitalQIP Administrator Reference Manual* for information on troubleshooting services.

Step 12: Initialize the DHCP server

a. Select **DHCP ▸ IPV4 ▸ DHCP Servers**. The DHCP Servers Hierarchy opens.

b. Expand **Standalone/Primary** and select the DHCP server you added in Step 8. The DHCP Server Properties screen opens.

c. Click **Actions** menu and select **DHCP Generation**. The DHCP Generation screen opens.

d. Check that the **Type** field is set to **Server** and that the **Generate to Directory** field is correct.

e. Click **Submit** and click **OK** in response to the confirmation message.

Step 13: Initialize the DNS Server

a. Select **DNS ▸ DNS Server.** The DNS Server Hierarchy opens.

b. Expand the Servers hierarchy and select the DNS server you added in Step 4. The DNS Properties screen opens.

c. Click **Actions** menu and select **DNS Generation**. The DNS Properties screen opens.

d. Check that the **Type** field is set to **Update** and that the **Generate To** field is set to **Server**.

e. Click **Submit** and click **OK** in response to the confirmation message.

Step 14: Final test

a. Turn on a PC on the subnet that is configured to obtain an address from a DHCP server (DHCP compliant).

b. The PC will broadcast and receive one of the addresses created from the VitalQIP server. The PC name (Host name) will be registered in DNS. The VitalQIP database will be updated with the PC name and its MAC address.

c. Select **Address Management ▸ IPv4 ▸ Subnets**. The IPv4 Hierarchy opens.

d. Expand the subnet hierarchy and select the subnet you created in Step 6. The Subnet Properties screen opens.

e. Click **Manage Objects**. The address assignment list for the subnet opens.

f. Double-click on the IP address of the PC and check the information in the Add Object screen.

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Infrastructure setup for IPv6

To set up the initial infrastructure of the VitalQIP® Management system after VitalQIP has been installed, perform the following basic functions in the order shown. You can refine the steps later or configure them to manage any size network.

Note: *The variable QIPHOME is used in this document as shorthand for the VitalQIP path set in the Directory Name window during installation.*

Step 1: Log into VitalQIP

a. Open a web browser and enter the VitalQIP web client URL in the following format:

– For a nonsecure Tomcat server:

`http://<machine name` or `IP address>:<Tomcat web server port>/qip`

– For a secure Tomcat server:

`https://<machine name` or `IP address>:<secure Tomcat web server port>/qip`

Note: *If the VitalQIP web client was installed with the nonsecure Tomcat web server port assigned to the default port 80, the URL format is* **`http://<machine name` *or* `IP address>/qip`***. The default secure port is 743.*

b. Enter a **User ID** and **Password** and click **Login**. The VitalQIP opens with all the menu items.

Step 2: *(Optional)* Define the organization

Note: *VitalQIP has a default organization already defined called "VitalQIP Organization". Follow this step if you wish to add an additional organization to your infrastructure.*

a. Click the **Infrastructure** tab and select **Manage Organization**.

b. Click the **Add** menu and select **Add Organization**.

c. Enter a name (such as the company name) in the **Organization Name** field and click **Save**. The organization created successfully.

d. Click the **Actions** menu and select **Switch Organization** or select the organization from the drop-down list of organizations.

e. Click **OK** in the confirmation dialog box.

Step 3: Define a domain

a. Select **DNS ▸ Zones**. The Zone Hierarchy opens.

b. Click the **Add** menu and select **Add Zone**.

c. Enter a domain name in the **Name** field. *Note the domain name for reuse later.*

d. Enter an email address in the **Email Address** field. This address is entered in the Start of Authority (SOA) record. *Note the email address for reuse later.*

e. Leave the time settings at their default values and click **Save**. The Zone saved successfully.

Step 4: Create a DNS server

a. Select **DNS ▸ DNS Servers.** The DNS Servers Hierarchy opens.

b. Click the **Add** menu and select **Add Server**.

c. Select a server type, such as **Lucent DNS 5.X,** from the **Server Type** list. A set of parameters opens.

d. Enter a name (of up to 63 alphanumeric characters) for the DNS server in the **Host Name** field. *Note the host name for reuse later.*

e. Select the domain from the **Domain Name** list. A set of parameters open.

f. Required server parameters appear in the server parameters list. Select the parameter and enter values as follows:

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– **Default Directory**. Enter either **`%QIPHOME%\named`** on Windows, or **`$QIPHOME/named`** on UNIX.

– **Email address for local and reverse zones**. Enter the same address you entered in Step 3d.

– **RNDC Key**. ***BIND-9.X, LUCENT DNS 4.X, and LUCENT DNS 5.X only***. Enter the value of the key to be placed in *named.conf*.

g. Click **Save**. The DNS server saved successfully.

Step 5: Assign primary DNS server to zone

a. Select **DNS ▸ DNS Servers.** The DNS Servers Hierarchy opens.

b. Expand the **Servers** hierarchy and select the DNS server that you created in Step 4. The Server properties page opens.

c. Click the **Manage Zones** tab and then click the Add as Primary icon. The Add as Primary screen opens.

d. Click the **Search** button next to the **Zone Search** field. available zones appear in the list.

e. Select the zone that you created in Step 3. Click **Add=>** to add the selected zones to the Selected Zones list and then click **OK**.

f. Click **Save**. The DNS server is now set up, but an address must be assigned later after a network and a subnet are set up

Step 6: Add a seed pool

a. Click **Address Management ▸ IPv6 ▸ Pools**. The IPv6 Address Hierarchy page opens.

b. Click **Add Seed Pool**. The Seed Pool Properties page opens.

c. Enter a name for the pool in the **Name** field. No other seed pool should have the same name.

d. From the **Block Requests** drop-down list, select one of the following options:

– Approval Required

– Automatic Assignment

e. From the **Notification** drop-down list, select one of the following options:

– Requests and Assignments

– Requests Only

– Assignment Only

– None

Note: *If you select* **None**, *the* **Contact** *field will not be displayed.*

f. In the **Contact** field, enter a valid e-mail id. You will receive the notifications (to this e-mail id) corresponding to your notifications selected from the **Notification** drop-down list.

g. From the **Default Algorithm** drop-down list, select one of the following options:

– Best Fit From Start

– Best Fit From End

– Sparse

h. Select a value for the **Minimum Prefix Length** field either by entering or using the upward and downward arrows. Allowable values are from 8 to 128.

i. Select a value for the **Maximum Prefix Length** field either by entering or using the upward and downward arrows. Allowable values are from 8 to 128. This value should be numerically less than the value selected in the **Minimum Prefix Length** field.

j. Select a value for the **Default Prefix Length** field either by entering or using the upward and downward arrows. Allowable values are from 8 to 128. This value should fall between the value selected in **Minimum Prefix Length** field and **Maximum Prefix Length** field.

k. Select the **Create Reverse Zone(s)** option to create a reverse zone for the seed block.

Note: *This option is selected by default if the global policy* **Create Reverse Zones with V6 Seed Blocks** *is set to* **True**.

l. Click **Save**. The seed pool is added to the IPv6 address hierarchy.

Step 7: Add a seed block

a. Click **Address Management ▸ IPv6 ▸ Pools**. The IPv6 Address Hierarchy page opens.

b. In the IPv6 Address Hierarchy, select the seed/child pool name to which you need to add a seed block. The Pool Properties page opens.

c. Click the **Blocks** tab. The Blocks page opens.

d. Click the **Add Seed Block** icon at the bottom of the page. The Add Seed Block window opens.

e. Enter a name for the seed block in the **Name** field.

f. Enter a valid IPv6 address in the **Address** field.

g. Select a value for the **Prefix Length** field either by entering the value or by using the upward and downward arrows. Allowable values are from 8 to 128. The default value is 48.

h. Select the **Create Reverse Zone(s)** option to create a reverse zone for the seed block.

Note: *This option is selected by default if the global policy* **Create Reverse Zones with V6 Seed Blocks** *is set to* **True**.

i. From the **Default Algorithm** drop-down list, select one of the following items:

– Best Fit From Start

– Best Fit From End

– Sparse

j. Select a value for the **Minimum Prefix Length** field either by entering the value or by using the upward and downward arrows. Allowable values are from 8 to 128. The default value is the minimum prefix length of the pool to which the block is added.

k. Select a value for the **Maximum Prefix Length** field either by entering the value or by using the upward and downward arrows. Allowable values are from 8 to 128. This value should be numerically less than the value selected in the **Minimum Prefix Length** field. The default value will be the maximum prefix length of the pool to which the block is added.

l. Select a value for the **Default Prefix Length** field either by entering the value or by using the upward and downward arrows. Allowable values are from 8 to 128. This value should be in between the value selected in the **Minimum Prefix Length** field and the **Maximum Prefix Length** field.

m. Click **OK**. The seed block is displayed in the hierarchy.

Note: *Block assignment settings are inherited from the pool to which the seed block is added.*

Step 8: Create a child pool

a. Click **Address Management ▸ IPv6 ▸ Pools**. The IPv6 Address Hierarchy page opens.

b. Select a seed pool in the IPv6 Address Hierarchy list. The Seed Pool Properties page opens.

c. Click **Actions** and from the drop down list, select **Create Child Pool**. The Create Child Pool page opens.

d. Enter a name for the child pool in the **Name** field. No other child pool should have the same name under the same parent.

e. From the **Block Requests** drop-down list, select from one of the following options:

– Approval Required

– Automatic Assignment

f. From the **Block Exhaustion** drop-down list, select from one of the following options:

– Automatic Parent Request

– Manual Parent Request

g. From the **Notification** drop-down list, select from one of the following options:

– Requests and Assignments

– Requests Only

– Assignment Only

– None

Note: *If you select* **None**, *the* **Contact** *field will not be displayed.*

h. In the **Contact** field, enter a valid e-mail id. You will receive the notifications (to this e-mail id) corresponding to your notifications selected from the **Notification** drop-down list.

i. From the **Default Algorithm** drop-down list, select one of the following options:

– Best Fit From Start

– Best Fit From End

– Sparse

j. Select a value for the **Minimum Prefix Length** field either by entering or using the upward and downward arrows. Allowable values are from 8 to 128.

k. Select a value for the **Maximum Prefix Length** field either by entering or using the upward and downward arrows. Allowable values are from 8 to 128. This value should be numerically less than the value selected in the **Minimum Prefix Length** field.

l. Select a value for the **Default Prefix Length** field either by entering or using the upward and downward arrows. Allowable values are from 8 to 128. This value should fall between the value selected in **Minimum Prefix Length** field and **Maximum Prefix Length** field.

m. Select the **Create Reverse Zone(s) on Assignment** option to create a reverse zone for the seed block.

Note: *This option is selected by default if the global policy* **Create Reverse Zones with V6 Seed Blocks** *is set to* **True**.

n. Click **OK**. The child pool is displayed in the IPv6 Address Hierarchy.

Note: *The child pool inherits values from the parent pool. These values can be overridden later.*

Step 9: Assign a block

a. Click **Address Management ▸ IPv6 ▸ Pools**. The IPv6 Address Hierarchy page opens.

b. Select a child/seed pool in the IPv6 Address Hierarchy list. The Pool Properties page opens.

c. Click the **Blocks** tab and select a block .

d. Click the **Assign Block** icon at the bottom of the page. The Assign Block page opens.

e. The **Pool** field displays the name of the source pool from which the blocks are assigned. The **Address** field displays the IP address of the selected block.

f. Select the required block from the **Block** drop-down list.

g. For **Assignment Type**, select either **Algorithm** or **Specific**.

h. Select the **Create Reverse Zone(s) on Assignment** option to create a reverse zone for the seed block.

Note: *This option is selected by default if the global policy* **Create Reverse Zones with V6 Seed Blocks** *is set to* **True**.

i. If you select *Algorithm* in the previous step, select the **Assignment Algorithm** from the following options:

– Best Fit From Start

– Best Fit From End

– Sparse

Note: *If the blocks have already been assigned from the selected block, the Assignment Algorithm is disabled.*

j. If you select **Specific** in the previous step, the **Assignment Algorithm** field is not displayed. A new field **Start Address** is displayed. Enter the starting IPv6 address in this field.

k. Select a value for the **Prefix Length** field either by entering or using the upward and downward arrows. The biggest and smallest block sizes allowed will be equal to the Maximum Prefix Length and Minimum Prefix Length of the parent block.

l. To assign the block to a new pool, select **Assign to new Pool**. If you need to assign the block to an existing pool, go to step q.

m. Enter the pool name in the **Pool** field.

n. Enter the block name in the **Block Name** field. The default name will be obtained from the parent block.

o. From the **Default Algorithm** drop-down list, select one of the following options:

– Best Fit From Start

– Best Fit From End

– Sparse

p. Select a value for the **Default Prefix Length** field either by entering or using the upward and downward arrows. Allowable values are from 8 to 128.

q. To assign a block to existing pools, click **Search**. The Search Pool page opens. The search results display the available assignment options.

r. Select the desired option and click **OK**. The Assign Block page is displayed.

s. Select **Create Subnet**, if you need to create a new subnet.

t. Click **Assign**. If you have selected the **Create Subnet** option, the Create Subnets page opens.

u. Select the number of subnets you need and click **Preview**.

v. Click **Save**. The message "Successfully created subnets- x" is displayed, where 'x' represents the number of subnets created. You can also assign blocks from the Block Profile page.

Step 10: Request a block

a. Click **Address Management ▸ IPv6 ▸ Pools**. The IPv6 Address Hierarchy page opens.

b. Select the child pool for which you need to request the block. The Pool Properties page opens.

c. Click the **Blocks** tab and select a block .

d. Click **Actions** and from the drop down list, select **Request Block**. The Request Block page opens.

e. In the Source section, the **Pool**, **Block**, and **Address** fields are pre-populated with the parent pool properties.

f. From the **Block** drop-down list, select a block. If you leave the **Block** field blank, the **Address** field is not displayed and the parent/source pool can assign blocks from any of the available blocks.

g. For the **Assignment Type**, select either **Algorithm** or **Specific**.

h. In the **Block Name** field, enter a name for the block.

i. If you selected **Algorithm** in the previous step, the default algorithm of the parent block is used while assigning a block to the child pool.

j. If you selected **Specific** in the previous step, a new field **Start Address** is displayed. Enter an IPv6 address that will be used as the starting address.

k. "Select a value for the **Prefix Length** either by entering the value or using the upward and downward arrows. The default value will be the default prefix length of the source block. If no block was selected, the default value will be the default prefix length of the source pool.

l. Enter relevant information in the **Notes** field (optional).

m. Click **Request**.

– If you selected the source pool's Block Requests field as **Approval Required** and selected **Specific** for the assignment type in the Request Block page, a message **`The request sent to the source pool: <pool name> for block <IP Address>`** is displayed at the bottom.

– If you selected the source pool's Block Requests field as **Approval Required** and selected **Algorithm** for the assignment type in the Request Block page, a message **`The request sent to the source pool: <pool name>`** is displayed at the bottom.

– If you selected the source pool's Block Requests field as **Automatic Assignment**, a message **`The requested block assigned successfully <IP Address>`** is displayed at the bottom.

Step 11: Add a subnet

a. Click **Address Management ▸ IPv6 ▸ Pools**. The IPv6 Address Hierarchy page opens.

b. From the IPv6 address hierarchy, select the pool for which you need to associate a subnet. The Pool Properties page opens.

c. Click the **Create Subnets** icon at the bottom of the page. The Create Subnets page opens.

d. The **Pool**, **Block**, and **Address** fields are pre-populated.

e. For the **Create Subnet**, select either **Algorithm** or **Specific**.

f. In the **Prefix Length** field, either enter a value or use the upward and downward arrows to select the prefix length.

g. From the **Algorithm** drop-down list, select one of the following values:

– Best Fit From Start

– Best Fit From End

– Sparse

Note: *This option is enabled only if no other assignments have already happened from the selected source block.*

h. Select **Specific** to define a specific subnet address.

i. From the list of subnets below, double-click the address column of the subnet, to define a specific subnet address. If you select this option, the **Algorithm** field is not displayed.

j. In the **Subnets** field, specify the number of subnets to be created.

k. Select the **CreateReverseZone(s)** option to create a reverse zone for the subnet.

Note: *This option is selected by default if the global policy* **Create Reverse Zones with V6 Subnets** *is set to* **True**.

l. Click **Preview**.

m. Click **Save**.

Step 12: Add an IPv6 address range

a. Click **Address Management ▸ IPv6 ▸ Pools**. The IPv6 Address page opens.

b. Expand the list of pools and select the subnet for which you need to associate a range. The Subnet Properties page Fopens.

c. Click the **Range** tab. The Range page opens.

d. Click the **Add** icon at the bottom of the page. The Add IPv6 Range page opens.

e. In the **Name** field, enter the name for the IPv6 range. This field can contain up to 255 characters.

f. The **Start Address** is pre-populated based on the range default value mentioned in the Subnet Profile page. Retain the default or enter a different start address for the range.

g. In the **Prefix Length** field, either enter a value or use the upward and downward arrows to select the prefix length. The default prefix length is 128.

h. From the **Range Type** drop-down list, select Dynamic, Fixed, or Reserved. Only one range type is allowed for every subnet.

i. From the **Address Selection** drop-down list, select either Next Available or Random.

j. The name and address of the associated subnet are pre-populated in the **Subnet** field.

k. From the **Preferred/Standalone DHCP Server** drop-down list, select a DHCP server to be associated with the range.

l. In the **Redundant DHCP Server** field, enter the redundant DHCP server to be associated with this range. By default, this field is disabled.

m. From the **DHCP Option Template** drop-down list. select a DHCP option template.

n. From the **Enterprise Number** drop-down list. select an enterprise number to be associated with this range.

o. In the **Data** field, enter the data for the vendor class.

p. Select the user class from the **User Class** drop-down list and click **Add=>** to add the selected user class to the User Classes list. Repeat this step to add multiple user classes.

q. Click **Save**.

r. Click the **Addresses** tab. The Addresses page opens.

s. Specify the address name or IPv6 address in the **Filter by address/name** field to filter the specific ranges.

t. Click the **DHCP Options** tab. The Range DHCP Options page opens. For detailed information about the different DHCP options, refer the *VitalQIP Web Client User's Guide*.

u. Click the **DHCP Policies** tab. The Range DHCP Policies page opens. Specify the policy name in the **Filter by Server Policies** field to filer the DHCP policies that you need.

v. You can add user-defined DHCP policies in this tab. For detailed information about adding user-defined DHCP policies, refer the *VitalQIP Web Client User's Guide*.

Step 13: Add an IPv6 address

You can add an address from the Pool hierarchy or from the Subnet hierarchy.

a. Click **Address Management ▸ IPv6 ▸ Pools**. The IPv6 Address page opens.

b. Expand the list of pools and subnets until the range for which you want to associate an address is displayed. The Range Properties page opens.

c. Click the **Addresses** tab. The Addresses page opens.

d. Click the **Add IPv6 Address** icon at the bottom of the page. The Add IPv6 Address page opens.

e. In the **Domain Name** field, enter a domain name and click the drop-down list to select an existing domain.

f. From the **Type** drop-down list, select one of the following range types:

– Static

– Manual

– Dynamic

Note: *You cannot create dynamic addresses. By default the* **Dynamic** *option is disabled. This option is enabled only when dynamic addresses are associated with the leased DHCP server.*

g. In the **Address** field, enter the start address of the new address. The address is pre-populated, based on the range default value mentioned in the subnet profile page. Retain the default value or enter a different address.

h. In the **Range** field, the name and address of the associated range are pre-populated.

i. In the **IAID** field, enter the IAID value of the address.

j. In the **Subnet** field, the name and address of the associated subnet are pre-populated.

k. From the **Publish AAAA** drop-down list, select one of the following options:

– Always - The IPv6 AAAA record for the IPv6 address is published in the DNS server immediately.

– Never - The IPv6 AAAA record for the IPv6 address is never published.

– Push only - The IPv6 AAAA record for the IPv6 address is published after DNS generation.

l. From the **Publish PTR** drop-down list, select one of the following options:

– Always - The PTR record for the IPv6 address is published in the DNS server immediately.

– Never - The PTR record for the IPv6 address is never published.

– Push only - The PTR record for the IPv6 address is published after DNS generation.

m. In the **TTL** field, enter the time (in seconds) for which the TTL information resides on the DNS server.

n. For the **Associated Node Properties**, select either **Create new node** or **Choose from existing node.** By default, the **Create new node** option is selected.

o. By default, the **Node Name** field is disabled. VitalQIP assigns the domain name as the node name, when the **Same as Domain name** option is selected. Unselect this option to enter a new name of your choice.

p. From the **Node Class** drop-down list, select the type of node to be added. For detailed information about the different options for Node Class, refer to the *VitalQIP Web Client User's Guide*.

q. In the **Unique ID** field, enter a unique ID to be assigned to the node. VitalQIP assigns a unique ID, if you do not enter it in this field.

r. In the **DUID** field, enter the DUID assigned to the node. VitalQIP assigns a DUID, if you do not enter it in this field.

s. Select the **Choose from existing node** option to associate an existing node to the address.

t. In the **Node Name** field, click the **Search** icon to select a node name from the list of available nodes. The Node Search page opens.

u. Enter the search criteria in the **Node Type, Node Name**, and **Unique ID** fields. Click **Search**. From the search results, select a node and click **Select**. The Associated Node Properties are updated.

v. Click the **DHCP** tab. This tab is enabled only for addresses of type **Manual** and **Dynamic**.

w. From the **Preferred/StandAlone DHCP Server** drop-down list, select the preferred or standalone DHCP server to be associated with the address.

x. In the **Redundant DHCP Server** field, enter the redundant DHCP server to be associated with the address.

y. The **Lease Granted**, **Lease Preferred Expiration**, and **Lease Valid Expiration** fields are read-only. You can modify these values only for dynamic addresses.

z. In the **DHCP Options** area, select the required DHCP server options. For detailed information about the different DHCP options, refer to the *VitalQIP Web Client User's Guide*.

aa. Click **Save**.

Step 14: Add a node

a. Click **Address Management ▸ Node**. The Nodes Hierarchy opens.

b. Click **Add ▸ Add Node**. The Node Profile page opens.

c. In the **Name** field, enter the name of the node or click the **Generate Node Name** icon to enable VitalQIP to generate a node name.

d. From the **Type** drop-down list, select the type of node being added. Allowable values are site-specific. The following values are available at the time VitalQIP is installed. Different values might be listed here, if VitalQIP has been customized at your site.

– 3G Phone

– Access Router

– Audio MCU

– Bridge

– Core Router

– CRM server

– Database Server

– Edge Router

– Gateway

– IDP

- IDS
- IP PBX
- IP Phone
- IPS
- Laptop
- Legacy_System
- Load Balancer
- Mail Server
- Netbook
- Notebook
- Others
- Partially_Managed
- PC
- Printer
- Server
- SIP Phone
- SmartPhone
- Storage Area Network
- Switch
- Legacy_System
- Gateway

e. In the **Unique ID** field, enter a unique ID that is assigned to the node. If you leave this field blank, VitalQIP assigns a value.

f. In the **DUID** field, enter the DUID to be assigned to the node.

g. Click **Save**.

Step 15: Associate an IPv4 address to a node

a. Click **Address Management ▸ Node**. The Nodes Hierarchy opens.

b. Select a node from the hierarchy.

c. Click the **Link IPv4 Address** icon at the bottom of the page. The IPv4 Object Search page opens.

d. Select either the **Object Name** or the **IP Address** of the object. By default, **Object N**ame is selected.

e. Click **Search**. A list of matching object names is displayed.

f. Select one or more objects and click **Select**.

Step 16: Associate an IPv6 address to a node

a. Click **Address Management ▸ Node**. The Nodes Hierarchy opens.

b. Select a node from the hierarchy.

c. Click the **Add IPv6 Address** icon at the bottom of the page. The Add IPv6 Address page opens.

d. In the **Domain Name** field, enter a domain name and click the drop-down list to select an existing domain.

e. From the **Type** drop-down list, select one of the following range types:

- Static
- Manual
- Dynamic

Note: *You cannot create dynamic addresses. By default the* **Dynamic** *option is disabled. This option is enabled only when dynamic addresses are associated with the leased DHCP server.*

f. In the **Address** field, enter the start address of the new address. The address is pre-populated, based on the range default value mentioned in the subnet profile page. Retain the default value or enter a different address.

g. In the **Range** field, the name and address of the associated range are pre-populated.

h. In the **IAID** field, enter the IAID value of the address.

i. In the **Subnet** field, the name and address of the associated subnet are pre-populated.

j. From the **Publish AAAA** drop-down list, select one of the following options:

- Always - The IPv6 AAAA record for the IPv6 address is published in the DNS server immediately.
- Never - The IPv6 AAAA record for the IPv6 address is never published.
- Push only - The IPv6 AAAA record for the IPv6 address is published after DNS generation.

k. From the **Publish PTR** drop-down list, select one of the following options:

- Always - The PTR record for the IPv6 address is published in the DNS server immediately.
- Never - The PTR record for the IPv6 address is never published.
- Push only - The PTR record for the IPv6 address is published after DNS generation.

l. In the **TTL** field, enter the time (in seconds) for which the TTL information resides on the DNS server.

m. Click **Save**.

Step 17: Define the DHCPv6 server

a. Click **DHCP ▸ IPv6 ▸ DHCP Servers**. The DHCPV6 Server Hierarchy opens.

b. Click **Add ▸ Add Server**. The Server Information screen opens.

c. Select the server type **Alcatel-Lucent DHCP v6 1.0,** from the **Type** list. A set of server parameters opens.

d. To install the DHCP Server software on the same server as the DNS server, enter the host name you entered in Step 4d in the **Host Name** field.

e. Select the domain from the drop-down list. Select the domain you entered in Step 3c, or select the domain that you want.

f. Required server parameters appear in italics. Select the parameter and enter values (if necessary) as follows:

– **Default Directory**. Enter **/opt/qip/dhcpv6**.

g. Click the **Search Node** icon in the **V6 Address** field. The IPV6 Object Search page opens.

h. Select either the **IPV6 Objects** or **Ranges** option and click **Search**. From the search results, select a record and click **Select**.

i. In the **V4 Address** field, enter a valid IPv4 address.

j. From the **Server Role** drop-down list, select StandAlone, Preferred, or Redundant.

k. Click **Save.**

Step 18: Generate DHCP Configuration files

a. Select **DHCP ▸ IPv6 ▸ DHCP Servers.**The DHCP Servers Hierarchy opens.

b. Select the DHCP server for which you need to perform a DHCP push.

c. Click the **Actions** menu and select **Generation**. The Generate DHCP Configuration File page opens.

d. For the **Type** option, specify where you want the files to be saved. Allowable values are:

– **Server** - Perform DHCP generation (default).

– **Preview** - Preview the generated DHCP.

e. In the **Scheduler** area, select a schedule for DHCP configuration file generation.

f. Click **Submit**.

g. If you select **Server**, the DHCP files are exported to the specified directory on the server. The DHCP generation is performed or the Debug level is set.

Step 19: Test the environment

a. To test the environment, create three dynamic objects. Click **Managed Objects**.

b. Select three unused IP addresses and click Define Scope icon. The Define Scope(s) screen opens with the range added to the scope list.

c. Select **Workstation** from the **Object Class** field. Note that the 0ther required fields already display the default values you want.

d. Click **Create** and click **OK** in response to the confirmation message.

e. Select **DNS ▸ DNS Servers**. The DNS Servers Hierarchy opens.

f. Expand the Servers hierarchy and select the DNS server you added in Step 4. The DNS Properties screen opens.

g. Click **Actions** menu and select **DNS Generation**. The DNS Generation screen opens.

h. In the **Type** field, select the **Configuration and Data** option.

i. In the **Generate To** field, select the **Preview** option.

j. Click **Submit** and click **OK** in response to the **Scheduled the Job. Job ID is:** *nnn***.** message. Click **Cancel**.

k. Select **Tasks ▸ Scheduler**.

l. Double click on the completed status. The QIP DNS Generation screen opens.

m. Click **Select All** followed by **View Selected**. Check the DNS configuration files on the screen and check that the infrastructure is configured as intended.

n. Click the **Return to file list** link. To download files so you can review and/or print them, select them again and choose one of the download functions. Close the screen.

Step 20: Verify that all services are started:

– On Windows, click **Start** and select **Programs ▸ VitalQIP ▸ VitalQIP Service Controller**.

– On UNIX, list all currently running VitalQIP processes by running **ps -ef | grep qip**.

a. If the services are not running, start the VitalQIP Services. See "VitalQIP services on Windows" or "VitalQIP services on UNIX" in Chapter 2 of the *VitalQIP Administrator Reference Manual* for information on starting services.

Note: *You can find additional help troubleshooting VitalQIP services in Chapter 20 of the VitalQIP Administrator Reference Manual.*

b. If any services cannot be started:

– For Windows, select the **Event Viewer** tab in the Service Controller to see if there are any error messages.

c. For UNIX, refer to "Troubleshooting services/daemons on UNIX" in Chapter 20 of the *VitalQIP Administrator Reference Manual* for information on troubleshooting services.

Step 21: Initialize the DNS Server

a. Select **DNS ▸ DNS Server.** The DNS Server Hierarchy opens.

b. Expand the Servers hierarchy and select the DNS server you added in Step 4. The DNS Properties screen opens.

c. Click **Actions** menu and select **DNS Generation**. The DNS Properties screen opens.

d. Check that the **Type** field is set to **Update** and that the **Generate To** field is set to **Server**.

e. Click **Submit** and click **OK** in response to the confirmation message.

Step 22: Final test

a. Turn on a PC on the subnet that is configured to obtain an address from a DHCP server (DHCP compliant).

b. The PC will broadcast and receive one of the addresses created from the VitalQIP server. The PC name (Host name) will be registered in DNS. The VitalQIP database will be updated with the PC name and its MAC address.

c. Select **Address Management** ▸ **IPv4** ▸ **Subnets**. The IPv4 Hierarchy opens.

d. Expand the subnet hierarchy and select the subnet you created in Step 6. The Subnet Properties screen opens.

e. Click **Manage Objects**. The address assignment list for the subnet opens.

f. Double-click on the IP address of the PC and check the information in the Add Object screen.

Contacting Technical Support

If you need assistance with VitalQIP, contact technical support via phone or web.

Phone	Email
a. Go to http://alcatel-lucent.com/support/supportredirect.html. b. Select your country.	support@alcatel-lucent.com