Configuring VLANs manually using configuration manager templates

Use the steps in this quick start guide to configure VLANs between systems and switches using configuration templates *before* you deploy a virtual appliance to create connectivity from the virtual server to the switches.

Use these steps if you chose to configure VLANs manually, or if you need to connect virtual servers to multiple networks and need to configure some of those networks manually.

Note: To create VLANs dynamically using automated logical network provisioning, see the *Configuring your environment so that VLANs are dynamically created* quick start guide.

Prerequisites:

Make sure that you have met the following prerequisites before you complete the steps in this quick start guide:

- Completed all steps in the *Configuring network resources to support virtual server relocation* quick start guide to prepare your environment.

- Made note of the chassis switch (I/O module) port number connected to the compute node that is hosting the system For example, the compute node in bay "x" is connected to chassis switch port "INTA x". Refer to this topic for more information:

   In the information center (Internet):
   http://publib.boulder.ibm.com/infocenter/flexsys/information/topic/com.ibm.acc.8721.doc/configuring_io_modules.html
   The IBM Flex System product documentation is also available on the IBM Flex System Manager management node. To access the installed documentation, click Information Center from the IBM Flex System Manager Home page and then navigate to:

   IBM Flex System information→ Chassis→ Enterprise chasses Types 7893, 8721, and 8724→ Configuring the chassis→ Configuring I/O modules

- Made note of the chassis switch (I/O module) port number connected to the top-of-rack switch.
- Made note of the top-of-rack switch port number connected to the chassis switch.

Steps:

Complete the following steps to configure VLANs manually using configuration templates from the IBM Flex System Manager management node:

1. Configure and deploy a VLAN on the top-of-rack switch port that is connected to the chassis switch:
   a) Log in to the IBM Flex System Manager user interface with a user account that has sufficient privileges to configure devices managed by the IBM Flex System Manager management node.

b) On the Home page, select the Plug-ins tab.
c) Select **Configuration Manager**.
d) Under Configuration tasks, click **Create configuration template**.
e) On the Configuration Templates page, click **Create**.
f) On the Create page, use the following values:
- Template type – Ethernet Switch
- Configuration to create a template – BNT RackSwitch
- Name – Type in a name for your template, for example Top of Rack Template.

g) Click **Continue** to access the VLAN Configuration wizard.
h) On the VLAN configuration page, click **Create**.
i) On the Create VLAN Configuration Task page, complete the fields. For the Interface number, use the internal port number that you found in the prerequisites for this task.
j) On the VLAN egress configuration page, click **Create**.
k) On the Create VLAN egress configuration page, use the following values:
- Port number - port number to chassis port
- Egress status – tagged

l) On the VLAN port configuration page, click **Create**.
m) On the Create VLAN port configuration, use the values:
- Port number – port number of the chassis port
- Port VLAN ID – 1

Finish the wizard. On the Configuration templates page, select the VLAN template that you just created and deploy it against the top-of-rack switch.

2. Configure and deploy the VLAN on the chassis switch port connected to the top-of-rack switch and to the compute node:
   a) On the Configuration Manager page, under Configuration tasks, select **Create configuration template**.
   b) On the Configuration Templates page, click **Create**.
   c) On the Create page, use the following values:
   - Template type – IBM Flex System Enterprise chassis
   - Configuration to create a template – IBM Flex System Fabric EN4093 Scalable Switch VLAN Configuration
   - Name – Type in a name for your template, for example IOM Template.

   d) On the VLAN Configuration page, click **Create** to access the the VLAN Configuration wizard.
   e) On the Bay Number page, select the number of the bay where the switch (I/O module) resides in the chassis.
   f) On the VLAN configuration page, click **Create**.
   g) Complete the fields on the Create VLAN Configuration Task page. For the Interface number field, use the internal port number that you found in the prerequisites for this task.
   h) On the VLAN egress configuration page, select **Create**.

i) On the Create VLAN egress configuration page, use the values:
- Port number – port number of the top-of-rack port
- Egress status – tagged

j) Create another VLAN egress, this time using the following values:
- Port number – port number of the compute node
- Egress status – tagged

k) On the VLAN port configuration page, click **Create**.
l) On the Create VLAN port configuration page, use the values:
- Port number – port number of the top-of-rack port
- Port VLAN ID – 1

m) Create another VLAN port configuration, this time using the following values:
- Port number – port number of the compute node
- Port VLAN ID – 1

Finish the wizard. On the Configuration Templates page, select the VLAN template that you just created and deploy it against the chassis switch.

3. Configure and deploy a VLAN on the virtual switch in the Virtual I/O Server:
   a) On the Configuration Manager page, under Configuration tasks, select **Create configuration template**.
   b) On the Configuration Templates page, click **Create**.
   c) On the Create page, use the following values:
   - Template type – Virtual Switch
   - Configuration to create a template – Virtual Switch Module VLAN Configuration
   - Name – Type in a name for your template, for example vSwitch Template.

   d) On the Virtual Switch VLAN configuration page, click **Create**.
   e) On the Create VLAN Configuration Task page, type the VLAN ID.
   f) On the Configuration Templates page, select the VLAN template you just created and deploy it against the virtual switch of the compute node.

4. Create a virtual network interface card (NIC) configuration template:
   a) On the Configuration Manager page, under Configuration tasks, select **Create configuration template**.
   b) On the Configuration Templates page, click **Create**.
   c) On the Create page, use the following values:
   - Template type – Operating System
   - Configuration to create a template – Virtual NIC Connection
   - Name – Type in a name for your template, for example vNIC Template.

   d) On the Virtual NIC Connection page, click **Create**.
   e) On the Virtual NIC Connection page, use the following values:

- Profile name – any name
- Assign untagged to the Port VLAN ID (PVID) – the PVID for this vNIC
- Additional VLAN IDs – Additional VLAN IDs that are allowed through this port

f) Click **Save**.

5. Create a server system pool.
   A server system pool logically groups similar hosts and facilitates the relocation of virtual servers from one host to other hosts in the system pool. In this step, create a server system pool that contains two or more compute nodes that are part of the virtual appliance deployment.

   To create a server system pool, follow the instructions in the *Creating a system pool that supports relocation* quick start guide.

6. Deploy a virtual server using the network profile.
   Deploy a virtual appliance using the instructions in the *Deploying a virtual appliance workload* quick start guide. Use the following information to help you set up the network:
   - On the Target page, select the server system pool.
   - On the Target→Network Mapping page, select the virtual NIC connection profile for the tenant for the network.
   - On the Product page, enter the network attributes (IP address, gateway, and so on) that correspond to the network profile.

7. (Optional) Relocate a virtual server within the system server pool.
   To move a virtual server to a different host (compute node), right click on the virtual server and then click **Availability** -> **Relocate**.