Ethernet Menu Tasks

This chapter describes the Ethernet menu tasks for Element Manager and contains these sections:

Note The instructions in this chapter apply only to Server Switches that run Ethernet gateways.

Viewing the ARP Table

To view the static ARP table, perform the following steps:

Step 1 Click the **Ethernet** menu and choose **ARP**. The ARP window opens and displays the static ARP table. Table 9-1 lists and describes the fields in this table.

Table 9-1 ARP Table Field Descriptions

Field	Description
Port	Port (in slot#port# format) on your Server Switch to which the host connects.
NetAddress	IP address of the host.
PhysAddress	MAC address of the host.
Type	Type of route between the host and your Server Switch, either **static** or **dynamic**.

Adding a Static Entry to the ARP Table

To add a static address to the ARP table, perform the following steps:

Step 1 Click the **Ethernet** menu and choose **ARP**. The ARP window opens and displays the static ARP table.

Step 2 Click the **Insert Ethernet** button. The Insert static Ethernet ARP window opens.

Step 3 Click the "..." button next to the Port field. The choose Port window opens.

Step 4 Check the checkbox of the Ethernet gateway port to which you want to assign the new entry, and then click the **OK** button.

Step 5 Enter the IP address of the static host in the Net Address field.

Step 6 Enter the MAC address of the static host in the MAC field, and then click the Insert button.

Viewing Ethernet Routes

To view Ethernet routes, perform the following steps:

Step 1 Click the **Ethernet** menu and choose Routes. The Routes window opens. Table 9-2 lists and describes the fields in this window.

Table 9-2 Routes Window Field Descriptions

Field	Description
Dest	Destination IP address of the route.
Mask	Subnet mask of the route.
NextHop	IP address of the next hop on the Ethernet route (address of the Ethernet router).
Port	Ethernet gateway port of the route.
Type	Identifies the type of route as direct or indirect.
Proto	Protocol that the route runs.
NextHopAS	The Autonomous System Number of the next hop.

Creating an Ethernet Route

To create an Ethernet route, perform the following steps:

Step 1 Click the **Ethernet** menu and choose Routes. The Routes window opens.

Step 2 Click the **Insert** button. The Routes, Insert Routes window opens.

Step 3 Enter the destination IP address in the Dest field.

Step 4 Enter the subnet mask in the **Mask** field.

Step 5 Enter the IP address of the next hop in the NextHop field.

Step 6 Click the **Insert** button.

Deleting an Ethernet Route

To delete an Ethernet route, perform the following steps:

Step 1 Click the **Ethernet** menu and choose Routes. The Routes window opens.

Step 2 Click the route that you want to delete, and then click the **Delete** button.

Viewing IP Addresses

To view IP addresses, perform the following steps:

Step 1 Click the Ethernet menu and choose IP Addresses. The IP Addresses window opens. Table 9-3 lists and describes the fields in this window.

Table 9-3 IP Addresses Window Field Descriptions

Field	Description
Port	The index value which uniquely identifies the interface to which this entry is applicable.
Address	The IP address to which this entry's addressing information pertains.
Netmask	The subnet mask associated with the IP address of this entry.
BcastAddrFormat	The IP broadcast address format used on this interface.
ReasmMaxSize	The size of the largest IP datagram which this entity can re-assemble from incoming IP fragmented datagrams received on this interface.
Type	Identifies the address as a primary or backup address.
Status	Identifies the port as active or backup.

Viewing Trunk Groups

To view the trunk groups on your Server Switch, perform the following steps:

Step 1 Click the **Ethernet** menu and choose **Trunking**. The Trunking window opens. Table 9-4 lists and describes the fields in this window.

Table 9-4 Trunking Window Field Descriptions

Field	Description
ID	Trunk group identifier.
Name	Trunk group name.
Port Members	Physical Ethernet gateway ports that belong to this trunk group.
Distribution Type	Packet forwarding distribution algorithm of the trunk group.
Enabled	Identifies the trunk group as enabled or disabled.
MTU	Displays the maximum transmission unit of the trunk group.
MAC Address	Displays the MAC address assigned to this trunk group.
IfIndex	Logical port identifier that represents the trunk group.

Creating a Trunk Group

To create a trunk group, perform the following steps:

Step 1 Click the **Ethernet** menu and choose **Trunking**. The Trunking window opens.

Step 2 Click the **Insert** button. The Trunking, Insert Trunk Groups window opens.

Step 3 Enter an integer value (between 1 and 256) in the **ID** field.

Step 4 Enter a name, with ASCII characters, in the Name field.

Step 5 Click the "**...**" button in the Port Members field. The choose **Ports** window opens.

Step 6 Check the checkbox of any port that you want to add to the trunk group. Uncheck any box that you want to omit from the group. Click the **OK** button.

Step 7 Click the radio button of a distribution type in the Distribution Type field.

Step 8 (Optional) Check the **Enabled** checkbox to enable the new group when you create it. To disable the new group, uncheck the box.

Step 9 Click the **Insert** button. The new group appears as a row in the Trunking window.

Deleting a Trunk Group

To delete a trunk group, perform the following steps:

Step 1 Click the **Ethernet** menu and choose **Trunking**. The Trunking window opens.

Step 2 Click the entry of the trunk group that you want to delete, and then click the **Delete** button.

Editing a Trunk Group

You can reconfigure the following attributes of a trunk group:

- group name
- member ports
- distribution type
- enabled/disabled status

Changing a Trunk Group Name

To change a trunk group name, perform the following steps:

Step 1 Click the **Ethernet** menu and choose **Trunking**. The Trunking window opens.

Step 2 Double-click the cell in the Name column of the entry whose name you want to change. The cell becomes editable.

Step 3 Enter the new trunk group name, and then press the **Enter** key.

Step 4 Click the **Apply** button.

Note You can make multiple changes before you click the Apply button, but you must click the button to make the changes in the configuration file on the Server Switch.

Adding or Remove Physical Ethernet Gateway Ports from a Trunk Group

To add or remove physical Ethernet gateway ports from a trunk group, perform the following steps:

Step 1 Click the **Ethernet** menu and choose **Trunking**. The Trunking window opens.

Step 2 Double-click the cell in the Port Members column of the entry to which you want to add or remove ports. The choose Ports window opens.

Step 3 Check the checkboxes, in the choose Ports window, of the ports that you want to add to the group. Uncheck the boxes of ports that you want to remove. Click the OK button.

Step 4 Click the **Apply** button.

Note You can make multiple changes before you click the Apply button, but you must click the button to make the changes in the configuration file on the Server Switch.

Changing the Distribution Type of a Trunk Group

To change the distribution type of a trunk group, perform the following steps:

Step 1 Click the **Ethernet** menu and choose **Trunking**. The Trunking window opens.

Step 2 Click the cell, in the Distribution Type column, of the trunk group whose distribution type you want to change. A pulldown menu appears.

Step 3 Select a new distribution type from the pulldown menu.

Step 4 Click the **Apply** button.

Note You can make multiple changes before you click the Apply button, but you must click the button to make the changes in the configuration file on the Server Switch.

Enabling or Disabling a Trunk Group

To enable or disable a trunk group, perform the following steps:

Step 1 Click the **Ethernet** menu and choose **Trunking**. The Trunking window opens.

Step 2 Click the cell, in the Enabled column, of the trunk group whose enabled/disabled status you want to change. A pulldown menu appears.

Step 3 Select **true** (to enable) or **false** (to disable) from the pulldown menu.

Step 4 Click the **Apply** button.

Note You can make multiple changes before you click the Apply button, but you must click the button to make the changes in the configuration file on the Server Switch.

Viewing Bridge Groups

To view the bridge groups on the Server Switch, perform the following steps:

Step 1 Click the **Ethernet** menu and choose **Bridging**. The Bridging window opens. Table 9-5 lists and explains the fields in this window.

Table 9-5 Bridging Window Field Descriptions

Field	Description
ID	Unique numeric identifier of the bridge group.
Name	Name, in ASCII characters, of the bridge group.
Ethernet Port	The Ethernet interface that is assigned to this bridge group. A value of zero(0) means no interface is currently assigned.
IB Port	The Infiniband interface that is assigned to this bridge group. A value of zero(0) means no interface is currently assigned.

Table 9-5 Bridging Window Field Descriptions (continued)

Field	Description
Broadcast Forwarding	Configures whether this bridge group should forward broadcast packets. NOTE: Enabling broadcast forwarding can cause broadcast storms in a network if the network is not configured properly.
Broadcast Forwarding Mode	Active broadcast forwarding mode.
Loop Protection Method	Loop protection method of this bridge group.
IP Multicast	Specifies if the group forwards IP-V4 multicast packets.
IP Multicast Mode	Active IP multicast mode.
Redundancy Group	Redundancy group to which this bridge group is assigned.
Admin Failover Priority	Failover priority of the bridge group.
Oper Failover Priority	Active failover priority of the bridge group.

Creating a Bridge Group

To create a bridge group, perform the following steps:

Step 1 Click the **Ethernet** menu and choose **Bridging**. The Bridging window opens

Step 2 Click the **Add** button. The Add Bridge Group window opens.

Step 3 (Optional) Enter an integer in the **ID** field to assign a numeric identifier to the bridge group. Element Manager automatically populates this field.

Step 4 Enter a plain-text identifier of ASCII characters in the Name field.

Step 5 Click the **Groups** tab.

Step 6 Click the choose button in the Ethernet Port field. The Bridge Port window opens.

Step 7 From the **Port** pulldown menu, choose the Ethernet gateway port that you want to assign to the bridge group.

Step 8 (Optional) Enter the VLAN, in the VLAN field, of the Ethernet gateway port that you want to assign to the bridge group.

Step 9 Click the **OK** button.

Step 10 Click the choose button in the InfiniBand Port field. The Bridge Port window opens.

Step 11 From the **Port** pulldown menu, choose the internal IB port on the Ethernet gateway that you want to assign to the bridge group.

Step 12 Enter the partition key, in the P_Key field, of the partition to which you want to add the internal port.

Step 13 Click the **OK** button.

Step 14 (Optional) Check the **Enabled** checkbox in the Broadcast Forwarding field to enable broadcast forwarding.

Step 15 Select **one** or **none** from the pulldown menu in the Loop Protection Method field.

Step 16 (Optional) Check the **Enabled** checkbox in the IP Multicast field to enable IP multicasting.

Step 17 Click the **Add** button.

Deleting a Bridge Group

To delete a bridge group, perform the following steps:

Step 1 Click the Ethernet menu and choose **Bridging**. The Bridging window opens.

Step 2 Click the bridge group entry that you want to delete, and then click the **Delete** button.

Adding Bridge Forwarding to a Bridge Group

Step 1 Click the **Ethernet** menu and choose **Bridging**. The Bridging window opens

Step 2 Click the bridge group to which you want to add bridge forwarding, and then click the **Edit** button. The Edit Bridge Group window opens.

Step 3 Click the **Forwarding** tab.

Step 4 Click the **Add** button. The Add Bridge Forwarding window opens.

Step 5 Select **eth** or **ib** from the pulldown menu in the Port Type field.

Step 6 Enter the desination IP address in the Destination Address field.

Step 7 Enter an integer value from 0 to 32 in the Destination Length field.

Step 8 Enter the IP address of the next hop in the Next Hop field.

Step 9 Enter the subnet prefix of the next hop in the Subnet Prefix field.

Step 10 Enter an integer value from 0 to 32 in the Prefix Length field.

Step 11 Click the **Add** button.

Adding a Subnet to a Bridge Group

Step 1 Click the **Ethernet** menu and choose **Bridging**. The Bridging window opens

Step 2 Click the bridge group to which you want to add bridge forwarding, and then click the **Edit** button. The Edit Bridge Group window opens.

Step 3 Click the **Subnet** tab.

Step 4 Click the **Add** button. The Add Subnet window opens.

Step 5 Enter a subnet prefix in the Subnet Prefix field.

Step 6 Enter an integer value from 0 to 32 in the Prefix Length field.

Step 7 Click the **Add** button.

Viewing Redundancy Groups

To view the redundancy groups on your Server Switch, perform the following steps:

Step 1 Click the **Ethernet** menu and choose **Redundancy**. The Redundancy Groups window opens. Table 9-6 lists and describes the fields in this window.

Table 9-6 Redundancy Groups Window Field Descriptions

Field	Description
Group ID	Unique numerical identifier of the redundancy group.
Name	ASCII-text name of the redundancy group.
Group P_Key	The 16-bit multicast partition key used by this redundancy group.
Load Balancing	Used to enable/disable the load balancing feature for this bridge group.
Bridge Group Members	Indicates the bridge groups that are assigned to this redundancy group.
Broadcast Forwarding	Displays “true” if broadcast forwarding is enabled, otherwise displays “false.”
IP Multicast	Displays “true” if multicast forwarding is enabled, otherwise displays “false.”
Member Force Reelection	Displays “true” if the group is configured to reelect a new primary when a new member joins, otherwise displays “false.”

Creating a Redundancy Group

To create a redundancy group, perform the following steps:

Step 1 Click the **Ethernet** menu and choose **Redundancy**. The Redundancy Groups window opens.

Step 2 Click the **Add** button. The Add Redundancy Group window opens.

Step 3 (Optional) Enter an integer value in the ID field. Element Manager automatically populates this field.

Step 4 Enter a name for the redundancy group in the Name field.

Step 5 (Optional) Check the **Enabled** checkbox in the Load Balancing field to apply the load balancing feature to this redundancy group.

Step 6 (Optional) Check the **Enabled** checkbox in the Broadcast Forwarding field to apply the broadcast forwarding feature to this redundancy group.

Step 7 (Optional) Check the **Enabled** checkbox in the IP Multicast field to apply the multicast forwarding feature to this redundancy group.

Step 8 (Optional) Check the **Enabled** checkbox in the Member Force Reelection field to force the redundancy group to elect a new primary when a new member joins.

Step 9 Click the **Add Member** button. The Add Member window opens.

Step 10 Select a bridge group from the **Bridge Group** pulldown menu.

Step 11 Click the **Add** button. The entry appears in the Members field.

Step 12 (Optional) Repeat Step 9Click the Add Member button. The Add Member window opens. through <Link>step 11 to add additional members.

Step 13 Click the **Apply** button.

Editing a Redundancy Group

Step 1 Click the **Ethernet** menu and choose **Redundancy**. The Redundancy Groups window opens.

Step 2 Click the entry of the redundancy group that you want to edit, and then click the **Edit** button. The Edit Redundancy Group window opens.

Step 3 (Optional) Change the name in the Name field.

Step 4 (Optional) Check or uncheck the **Enabled** button in the Load Balancing field.

Step 5 (Optional) Check or uncheck the **Enabled** button in the Broadcast Forwarding field.

Step 6 (Optional) Check or uncheck the **Enabled** button in the IP Multicast field.

Step 7 (Optional) Check or uncheck the **Enabled** button in the Member Force Reelection field.

Step 8 (Optional) Click a bridge group member, and then click the **Remove** button, to remove a bridge group member.

Step 9 (Optional) Click the **Add Member** button to add a bridge group member. (Refer to Step 9Click the Add Member button. The Add Member window opens. through Step 11Click the Add button. The entry appears in the Members field. of the "Creating a Redundancy Group" section on page 9-9.

Step 10 Click the **Apply** button.

Deleting a Redundancy Group

Step 1 Click the **Ethernet** menu and choose **Redundancy**. The Redundancy Groups window opens.

Step 2 Click the entry of the redundancy group that you want to delete, and then click the **Delete** button. The **Delete Redundancy Group** window opens.

Step 3 Click **Yes**.