AJA-118

Provision Edge Management Gateway

PURPOSE

This procedure provisions the edge management gateway featuue.

GENERAL

The EMG (edge management gateway) is a means to manage edge devices using non-OSI, IP compatible protocols through the SONET DCC. EMG uses IP tunneling to encapsulate IP datagrams in CLNP (Connectionless-mode Network Protocol) packets at one 1603 SM NE and send the packets through the IP tunnel to another 1603 SM NE which is the next-hop IP address toward the destination edge device.
An IP router feature determines the route for the encapsulated datagrams. The IP router feature either discovers routes using OSPF (Open Shortest Path First protocol) or RIP (Routing Information Protocol) (RIP not supported on IP tunnels), or provisions static routes. A LAN connection connects the end-point 1603 SM NE to the end-point edge device or to an IP network for the next hop.

Procedure

Provision Local NE

1. Provision Local NE (see Figure 1):

    a. In the scope pane, right-click [*NE Name*] to display a context menu.

    b. From the context menu, select the following menu items:
    Provision>Protocols>LAN

c. Click on Parameters tab button.

d. Click on Retrieve.

e. Select LAN in Protocol column.

f. Click on Modify.

g. Select Service State = In Service.

h. Select LAN Type.

i. Select External Domain.

j. Set Level 1 Priority.

k. Set Level 2 Priority.

l. Select Routing (Select either OSPF, RIP, Both, or None for EMG. If None selection is used static routes will be required.)

m. Click on OK.

n. Click on Send.

Figure 1 . Typical Network with IP Tunnels Established

Provision TCP/IP Parameters

1. Provision IP tunnels. See Figure 1.

   a. In the scope pane, right-click [*NE Name*] to display a context menu.

b. From the context menu, select the following menu items: **Provisioning>Protocols>TCP/IP**

c. Click on TCP/IP Parameters tab button.

d. Click on Retrieve.

e. Select COMIP in TCP/IP column.

f. Click on Modify.

g. Select Service State = In Service.

h. Enter IP Address (for local NE in dotted decimal format).

i. Enter Subnet Mask

j. Enter Default Router address (in dotted decimal format).

k. Click on OK.

l. Click on Send.

Provision IP Area

1. If OSPF protocol is being used, enter the IP Area to be used:

    a. In the TCP/IP Protocol Provisioning screen, click on IP Area tab button.

    b. Click on Retrieve.

    c. Select IP Area being assigned.

d. Click on Modify.

e. Select Service State = In Service.

f. Enter Area ID (in dotted decimal format).

g. Enter Area Address (in dotted decimal format).

h. Enter Area Mask (in dotted decimal format).

i. Click on OK.

j. Click on Send.

Provision IP Tunnels

1. Establish tunnels on the Local 1603 SM NE (Figure 1):

   a. a In the TCP/IP Protocol Provisioning screen, click on IP Tunnels tab button.

   b. Click on Retrieve.

   c. Select IP Tunnel being assigned.

   d. Click on Modify.

   e. Select Service State = In Service.

   f. Enter NSAP (NSAP for destination NE in the tunnel).

   g. Select Routing (Select either OSPF or None for EMG. If None selection is used static routes will be required.)

h. Click on OK.

i. i Click on Send.

j. Repeat steps 4 a through 4 i for each tunnel.

Provision Static IP Routes, If Required

1. Establish static routes (Static routes are required if None was the Routing selection.)

   a. a In the TCP/IP Protocol Provisioning screen, click on IP Routes tab button.

   b. Click on Retrieve.

   c. Select IP Route being assigned.

   d. Click on Modify.

   e. Enter IP Address (in dotted decimal format).

   f. Enter Next Hop IP Address (in dotted decimal format) if 1603 SM NE is not connected to the destination edge device.

   g. Enter Net Mask (in dotted decimal format).

   h. Select Interface (either LANA or IPT-1 ... IPT-128. Select IPT-n for an IP Tunnel route or select LANA for a static connection via LAN).

   i. Click on OK.

   j. j Click on Send.

k. Repeat steps 5 a through 5 j for each static route.

2. Repeat Steps 1 through 5 for each remote NE (Remote 1 and Remote 2 in Figure 1).

3. STOP. This procedure is complete.