Configure NE with ONS 15454 4.5.x or Earlier to Match CTM 5.x or Later

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Contents

Introduction

This document describes how to configure Network Element (NE) with ONS 15454 4.5.x or earlier. The NE configuration enables Cisco Transport Manager (CTM) version 5.x and later to recognize the Gateway Network Element (GNE) and the End–point NE relationship previously configured in versions earlier than CTM 5.x.

Prerequisites

Requirements

Cisco recommends that you have knowledge of these topics:

- Cisco ONS 15454
- CTM

Components Used

The information in this document is based on these software and hardware versions:

- Cisco ONS 15454 version 4.5.x and earlier
- CTM version 5.x and later

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

Conventions

Refer to Cisco Technical Tips Conventions for more information on document conventions.

Background Information

Cisco has modified the way CTM recognizes the GNE and End–point NE relationship in CTM 5.x and later.

In versions earlier than CTM 5.x, users manually configure GNE and End–point NE based on the network topology, regardless of the proxy settings in the CTC–based NEs.

In CTM 5.x and later, the ability to manually configure GNE and End–point NE is no longer available. CTM automatically selects the GNE based on the GNE proxy settings on the NE. These three new classifications of NE status now exist in CTM:

- Gateway Network Element (GNE)
- External Network Element (ENE)
- LAN Connected Element (LNE)

In CTM 5.0, any NE for which you have not enabled proxy has the label of LNE even if the NE does not have a physical LAN connection. The system considers any NE with enabled proxy as GNE, which is especially true for NEs in versions earlier than CTC 4.5.x with no additional End–point NE setting option.

Issues

When you try to upgrade or add to CTM 5.x or later from CTC 4.5.x and earlier, you encounter these issues:

1. Incorrect labels appear for NEs in terms of GNE, LNE, and ENE in CTM.
2. CTM is unable to detect some states of the NEs. For example, the **communication state label as unavailable**, which means CTM is unable to establish a connection to the NEs.

Solution

Complete these steps in order to solve these issues:

Note: Ensure that you first test this procedure on a small ring in your network. If result is satisfactory, you can roll out the procedure to the rest of your network.

1. Enable proxy for the GNE. Complete these steps:

    a. Log into CTC.
    b. Click **Provisioning > Network > General**.
    c. Check the **Enable Proxy** check box in the Gateway Settings section (see arrow A in Figure 1).

    Figure 1   Gateway Network Element Setting
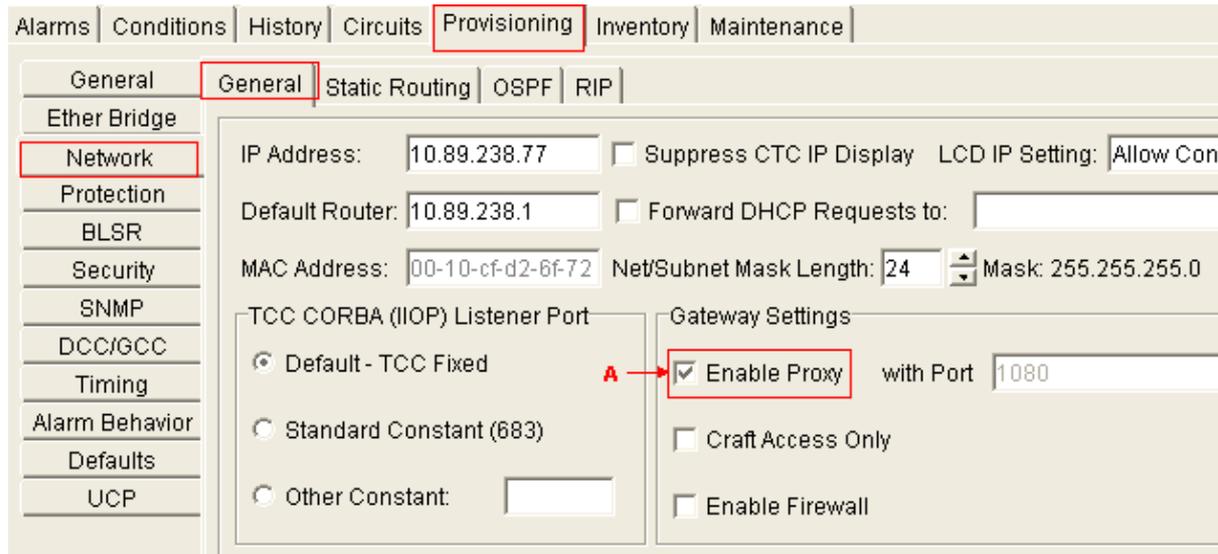
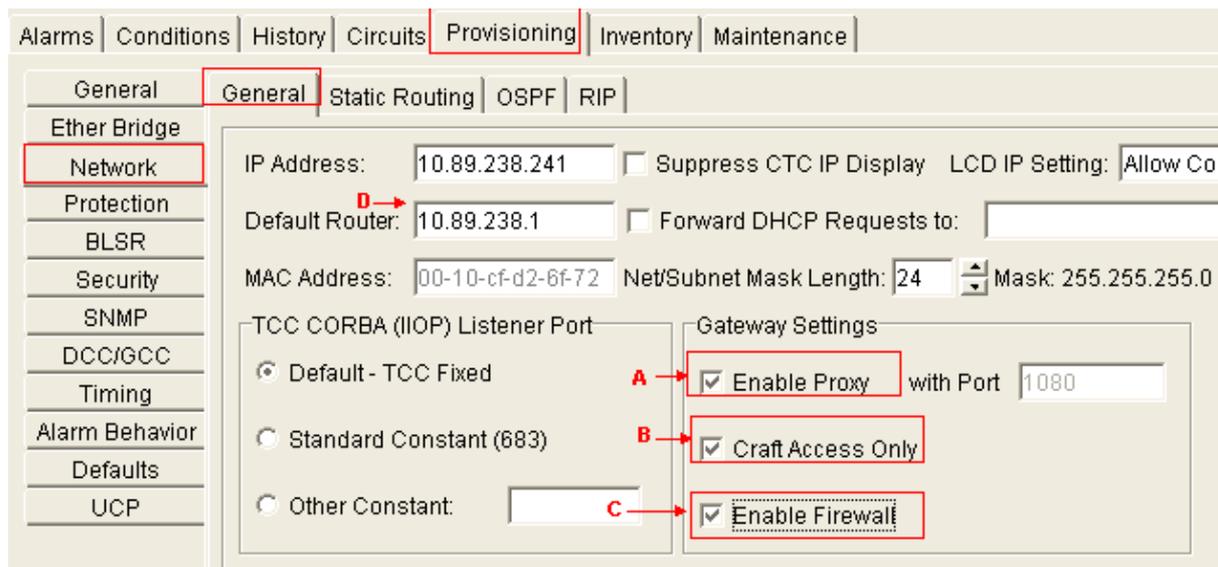2. Set the default route to 0.0.0.0 for each End–point NE, and enable these settings:

- ♦ Proxy
- ♦ Craft Access Only
- ♦ Firewall

Note: You must enable all the three options so that CTM has full visibility to all the nodes in the ring.

Complete these steps:

a. Log into CTC.
b. Click **Provisioning > Network > General**.

Figure 2   End–point Network Element Setting

c. Check the **Enable Proxy** check box (see arrow A in Figure 2).
d. Check the **Craft Access Only** check box (see arrow B in Figure 2).
e. Check the **Enable Firewall** check box (see arrow C in Figure 2).
f. Type 0.0.0.0 in the Default Router field in order to set 0.0.0.0 as the IP address of the default router (see arrow D in Figure 2).

Note: Your field technicians still have full visibility to the ring through CTC when they connect directly to the NEs through the TCC2 Ethernet interface. Ensure that your test covers this aspect before a network–wide rollout of the procedure.

Verification

Here is the CTM domain that shows the GNE–ENE configuration based on the settings on the NE:

- 10.89.238.77 (Imperial Palace .77) appears as GNE (see arrow A in Figure 3). A green check mark indicates that Imperial Palace .77 is the GNE.
- 10.89.238.241 (Imperial Palace .241) appears as ENE (see arrow B in Figure 3). A green check mark indicates that Imperial Palace .241 is an ENE.

Figure 3   CTM
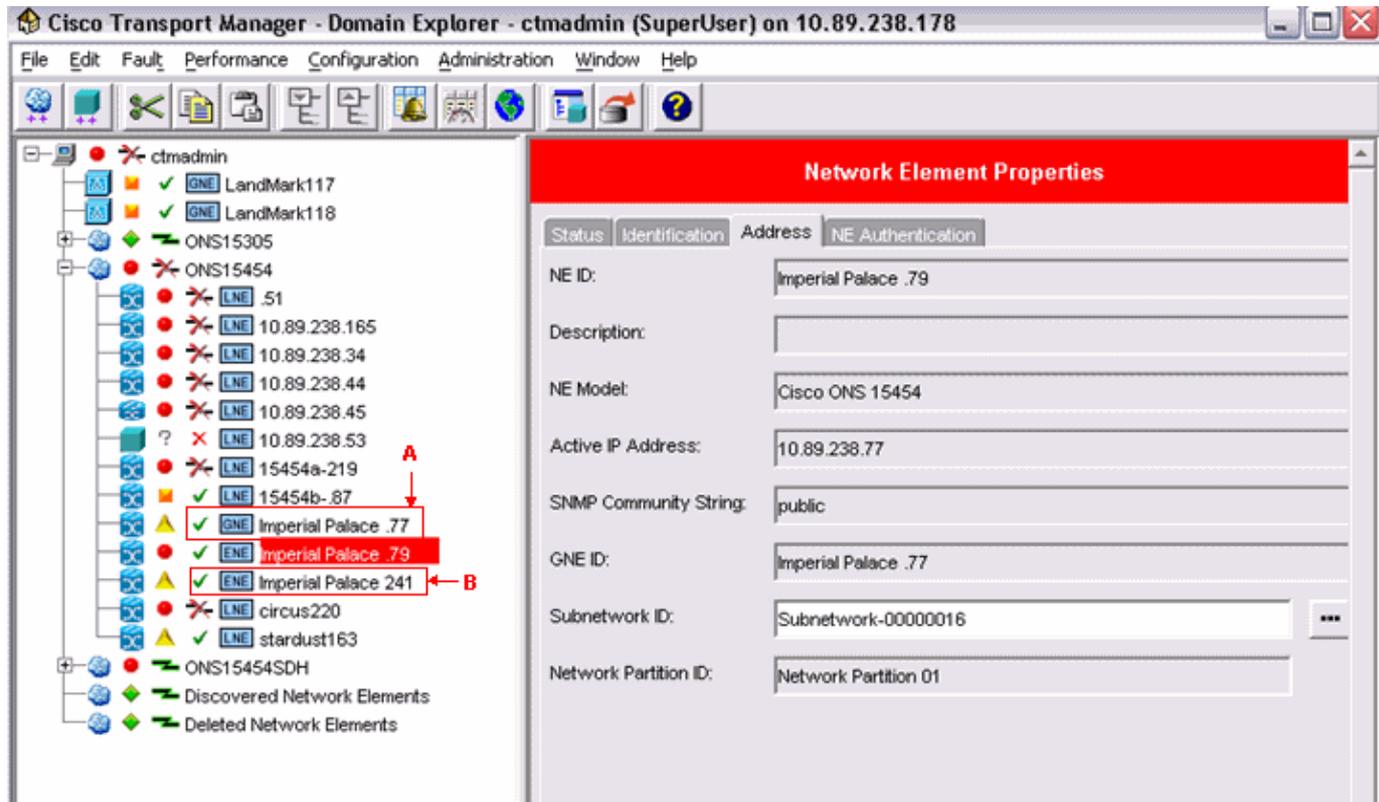
Related Information

- **Technical Support & Documentation – Cisco Systems**

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