BROADCOM®

OMCI WebUI User Guide

CPE-AN2400-R

Revision History

Revision	Date	Change Description
CPE-AN2400-R	05/02/16	Initial draft
		Update to first release of 04/07/2008

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About This Document

Purpose and Audience

This application note explains how to use the ONT Management Control Interface (OMCI) WebUI tool to configure ONT through OMCI commands and their management entities (ME). The WebUI tool is available on BCM968XX DSL Linux board designs.

This document is for software engineers designing applications on the BCM968XX CPE design boards.

Acronyms and Abbreviations

In most cases, acronyms and abbreviations are defined on first use.

For a comprehensive list of acronyms and other terms used in Broadcom documents, go to: http://www.broadcom.com/press/glossary.php.

Document Conventions

The following conventions may be used in this document:

Convention	Description
Bold	User input and actions: for example, type **exit**, click **OK**, press **Alt+C**
Monospace	Code: `#include <iostream>` HTML: `<td rowspan = 3>` Command line commands and parameters: `wl [-l] <command>`
< >	Placeholders for *required* elements: enter your <username> or `wl <command>`
[]	Indicates *optional* command-line parameters: `wl [-l]` Indicates bit and byte ranges (inclusive): [0:3] or [7:0]

References

The references in this section may be used in conjunction with this document.

> **Note:** Broadcom provides customer access to technical documentation and software through its Customer Support Portal (CSP) and Downloads and Support site (see Technical Support).

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Document (or Item) Name	Number	Source
Broadcom Items		
[1] OMCI Message Capture and Playback Application Note	CPE-AN27xx-R	CSP

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In addition, Broadcom provides other product support through its Downloads and Support site (http://www.broadcom.com/support/).

Introduction

This tool provides several add-on WebUI pages to the WebUI application that is supported in Linux releases of BCM968XX platforms. The add-on WebUI pages display an intuitive interface that can be used to configure an ONT with Get, Set, Create, Reboot and other OMCI commands. Furthermore, with its macro feature, these commands can be recorded to either memory or host, then can be retrieved and executed later.

The OMCI WebUI tool assists the user to test an ONT configuration through OMCI commands and its management entities. With this tool, OMCI commands are generated easily and can be executed, without using an OLT. The tool provides only the available management entities for Get, Set, or Create so that user will not make errors in generating any OMCI command.

This tool is tested with Internet Explorer browser only.

Using The OMCI WebUI Tool

The OMCI WebUI tool is opened by selecting Management | OMCI Configuration. The OMCI Configuration menu has links to the following Web pages:

- Get/Set/Reboot
- Create
- Get next
- Macro
- Download
- System

Get/Set/Reboot Commands

The main OMCI Configuration page allows you to generate OMCI commands such as Get, Set, Reboot, Activate Software, Commit Software or MIB Reset.

navigate to **Management | OMCI Configuration | Get/Set/Reboot** to display the OMCI Configuration screen.

Get OMCI Command

To generate a Get OMCI command, follow the steps below:

1. Select the OMCI management entity in the Object list.

2. Select the **Get** action from the Action list.

3. Click **Apply** to execute the Get OMCI command.

    The resulting message is shown after executing the Get OMCI command.

The OMCI WebUI tool will generate, and send one Get OMCI command per attribute (parameter) in the management entity. If attributes are not writable then their values are disabled and are displayed in gray.

The window below shows that the Get OMCI command has been performed successfully.

If the OMCI daemon is not running, then the Get command will fail. An error message is shown, as shown in the following screen.

Set OMCI Command

To generate a Set OMCI command, first perform a Get on the management entity that you want to Set, and then follow the steps below:

1. Select the OMCI management entity in the Object list.

2. Modify the values as appropriate for each attribute.

3. Select the **Set** action in the Action list.
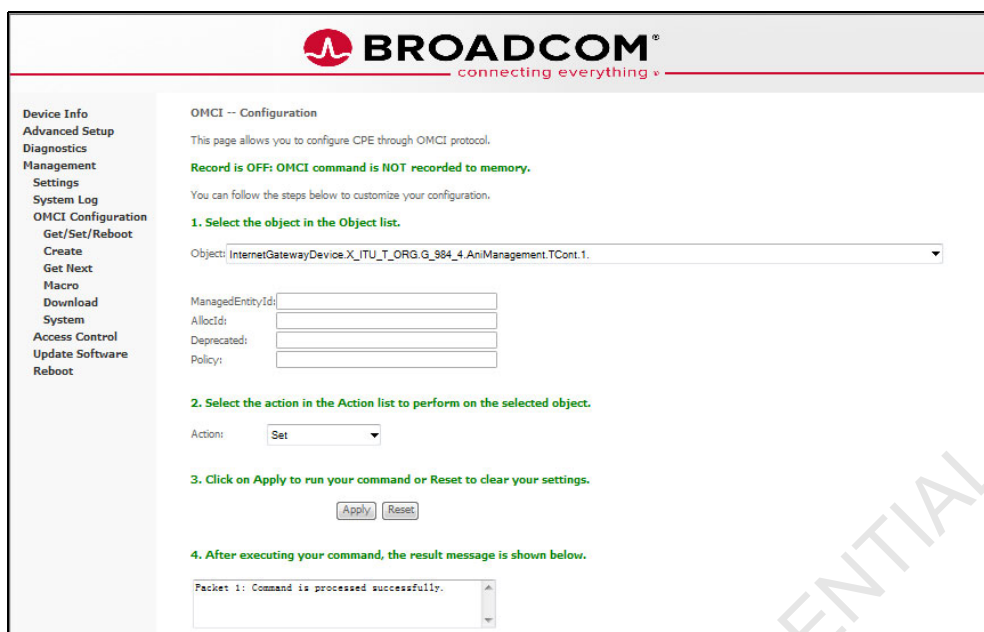
4. Click **Apply** to execute the Set OMCI command.

   The resulting message is shown after executing the Set OMCI command.

The OMCI WebUI tool generates, and sends one Set OMCI command per each writable attribute (parameter) in the management entity even if the value of attribute is not changed. When the Set OMCI command is performed successfully, the values of all attributes are clear. To display these values, perform a Get OMCI command on the selected management entity again.

The screen below shows the Set OMCI command before the Apply button is clicked.

The screen below shows that the Set OMCI command has performed successfully.

Reboot OMCI command

To generate a Reboot OMCI command, follow the steps below:

1. Select **Reboot** in the Action list.

2. Click **Apply** to execute the Reboot OMCI command.

3. The resulting message is shown after executing the Reboot OMCI command.

After receiving a Reboot OMCI command from WebUI, the OMCI daemon will wait for two seconds before rebooting the ONT.

The screen below shows the Reboot OMCI command is being sent from the WebUI to OMCI daemon.

If Macro is ON, then the Reboot OMCI command is only generated and saved to memory, but is not sent to the OMCI daemon.

The screen below shows the resulting message when a Reboot OMCI command is generated and Macro is on.

Reset Command

The Reset button is used to clear the previous settings. When this button is clicked, all of the fields in the OMCI Configuration page are cleared, as shown below.

Create Command

To create an OMCI command, navigate to **Management | OMCI Configuration | Create** to display the OMCI Creation screen.

To generate a Create OMCI command, follow the steps below:

1. Select the **OMCI management** entity from the Object list.

2. Modify the values as appropriate for each attribute. This page is dynamic and will change according to the entity selected.

3. Click **Create** to execute the Create OMCI command.

   The resulting message is shown after executing the Create OMCI command.

> ✎ **Note:** The OMCI WebUI tool generates, and sends only one Create OMCI command per management entity. As for the Set command, after a Create OMCI command is performed successfully, the values of all attributes are cleared. To display these values, perform a Get OMCI command on the corresponding management entity again. The instance ID of a created management entity does not start from 1, and is not continuous. For example, the first instance ID can be 3, and the second instance ID can be 6, and so on.

Below is screen that shows the Create OMCI command before the Create button is clicked.

The message in section 4. indicates that the Create OMCI command has processed successfully.

Perform a Get action on the corresponding management entity to verify that the object has been created successfully. The screen below shows the Get action.

Get Next

To generate a Get Next OMCI commands, navigate to **Management | OMCI Configuration | Get Next** to display the Get Next screen.

To generate a Get Next OMCI command, follow the steps below:

1. Select the OMCI management entity from the Object list.

2. Click **GetNext** to execute the Get Next OMCI command.

Using Macros

The Macro page allows you to record OMCI commands to memory, or save them to host. Then these OMCI commands can be run directly from memory or uploaded from the host.

To access the Macro features, navigate to **Management | OMCI Configuration | Macro** to display the OMCI Macro screen.

Toggle Macro On/Off

When an ONT is started, the Macro function is off by default. It's state is described as "Record is OFF: OMCI command is NOT recorded to memory, and is displayed in green text. To toggle the state from off to on, click the **Click to turn ON record** button. When this toggle button is clicked, the message is changed to "Record is ON: OMCI command is recorded to memory" as shown below.

The macro state is also displayed on the Get/Set/Reboot and Create pages. The Get/Set/Reboot screen in which the macro state is "Record is ON: OMCI commands is recorded to memory" is shown in the screen below. In this state, all OMCI commands (except "Reboot") are not only generated and sent to OMCI daemon, but also saved to memory.

Executing a Macro

After saving the OMCI commands to memory by turning on the macro state and performing OMCI commands, execute these commands by clicking the **Run** button. The confirm window should be displayed before these commands are executed.

Saving a Macro

Save OMCI commands that are in memory to host by clicking the **Save** button. If you are using the Internet Explorer browser, the following dialog should be displayed.

Do you want to open or save **omcimacro.conf** from **192.168.1.1?**   [Open] [Save | ▾] [Cancel]   ×
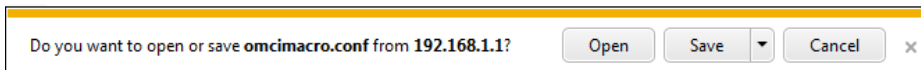
Using the **Save** drop-down arrow, use Save As to assign a filename, click **Save** to store the OMCI commands to the file in host machine.

Uploading a Macro

Upload a file that contains OMCI commands from the host machine to ONT memory and execute them by performing the following steps:

3. Click the **Browse** button to select the file on the host machine.

4. Click the **Upload Script** button to upload OMCI commands in the file to ONT memory and execute them.
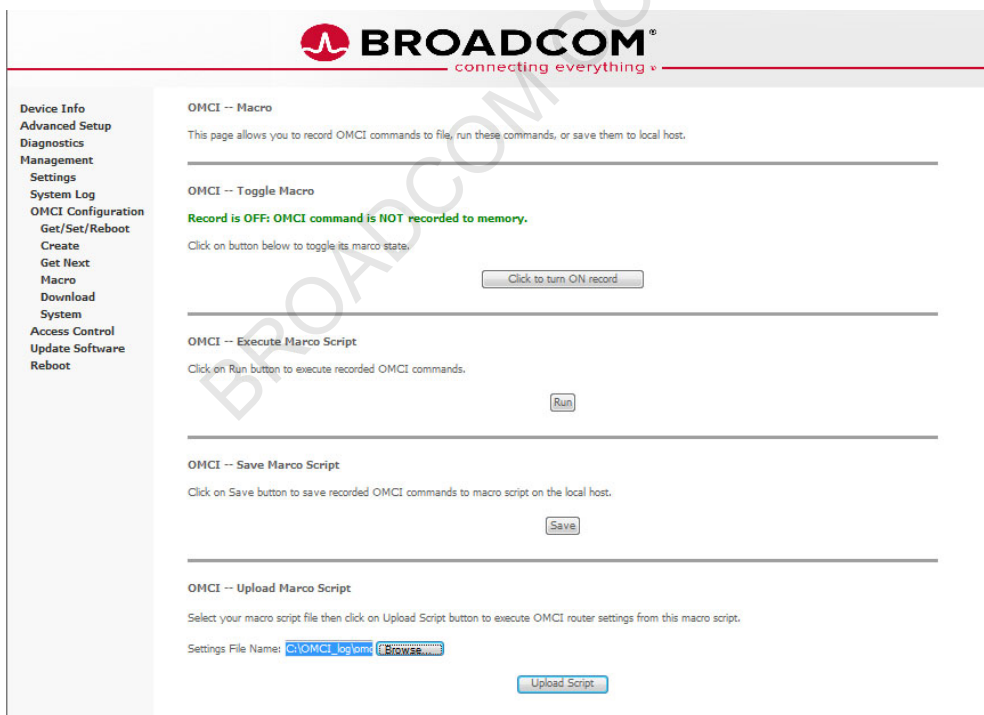
Download

The Download page initiates a software image download process, using the Start Software Download, Download Section, and End Software Download OMCI messages.

navigate to **Management | OMCI Configuration | Download** to display the Download Software Image screen.

To start a software image download process, follow the steps below:

1. Obtain a valid software image file.

2. Enter the path to the image file location in the Software File Name field box, or click the **Browse** button to locate the image file.

3. Click the **Download Software Image** button to download the software image.

After the download is completed, you can perform Activate Software or Commit Software on the corresponding Software Image ME instance to activate or commit the software image, as shown in the screen below.

System

This page is used to customize the default OMCI MIB, and to enable/disable OMCI debug messages. navigate to **Management | OMCI Configuration | System** to display the following screen.

Configurations related to OMCI debug and OMCI raw messages take effect immediately. The equivalent Broadcom CLI commands are:

```
omci debug --module <all|omci|model|vlan|flow|rule|mcast|file> --state <on|off>
omci rawmode --mode <on|off>
```

Configurations related to the default OMCI MIB (e.g., the number of TCONTs and Ethernet ports, and the first TCONT and Ethernet ME ID, etc.) require ONT reboot after the **Apply/Save** button is clicked.

The equivalent CLI commands are:

```
omci tcont --portmax <0..32> --startid <0..65535>
omci tcont --port <0..31> --policy <sp|wrr>
omci eth --portmax <0..8> --startid <0..65535>
```

Use http://192.168.1.1/dumpmdm.cmd or Broadcom CLI command "dumpMdm" to check the default OMCI MIB.

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