Emulex® OneCommand® CNA Manager Application for OneConnect® Adapters for Solaris Release Notes

Version: 11.2.1153.25

System: Solaris 10, and 10 Update 13
Solaris 11, and 11 Update 3
Solaris 12 (64-bit, x86, and SPARC)

Date: January 30, 2017

Purpose and Contact Information

These release notes describe the new features, resolved issues, known issues, and technical tips associated with this OneCommand Manager application version for the Emulex drivers for Solaris.

For the latest product documentation, go to www.broadcom.com. If you have questions or require additional information, contact an authorized Broadcom technical support representative at ccx-tech.support@broadcom.com or request assistance online at https://oemsupportportal.emulex.com/web2tech/ccx.html.

New Feature

- Beginning with software release 11.2, LightPulse® adapters and OneConnect adapters have independent software kits. Before updating earlier drivers and applications to the software in release 11.2, refer to the *Emulex Software Kit Migration User Guide* for special instructions and considerations for using the 11.2 software kits for LightPulse and OneConnect adapters.

Resolved Issues

There are no resolved issues for this release.

Known Issues

1. **Known issues related to updating firmware.**

   For OCe14000-series adapters, firmware version 11.x includes new features that require new flash regions to support them. Firmware versions earlier than 10.0.803.37 did not have the ability to configure the flash regions to support these new features.

   If you are updating from a firmware version earlier than 10.0.803.37, use one of these methods to update the firmware to 11.x:

   - Use the Offline Flash International Standards Organization (ISO) flash tool.
   - Use the released 11.x version of the OneCommand CNA Manager application graphical user interface (GUI) or OneCommand CNA Manager command line interface (CLI) application. You must perform the firmware update procedure twice to ensure that the flash regions are properly configured, and you must reboot the system after each firmware update.

Note: After you have updated the firmware, you must not downgrade the firmware to a version earlier than 10.0.803.37.

2. **The OneCommand CNA Manager CLI PortAttributes command reports the wrong virtual Ethernet port aggregator (VEPA) state on SPARC clients.**

   Workaround

   Use the OneCommand CNA Manager application GUI to report the correct VEPA state.

3. **The network interface card (NIC) driver must be installed and enabled to run the OneCommand CNA Manager application on a Fibre Channel over Ethernet (FCoE) OneConnect adapter.**

   If the OneConnect FCoE adapter is run without the NIC driver installed and enabled, many of the management functions are unavailable, and erroneous information is displayed by the OneCommand CNA Manager application.

   Unavailable management functions include:

   - Downloading
   - All diagnostics, including beaconing and diagnostic dumps
   - Core dump
   - Disabling or enabling a port

   Erroneous information includes:

   - FCoE storage ports are incorrectly grouped under the physical port
   - NIC, FCoE, and iSCSI ports do not appear under the correct adapter
   - Active and flash firmware versions
   - Firmware status
   - Basic input/output system (BIOS) version
   - Boot code version
   - Transceiver data display
   - Physical port link status
   - All data center bridging (DCB) settings
   - Event log display (OneCommand CNA Manager CLI only)

   Workaround

   Install and enable the NIC driver before running the OneCommand CNA Manager application GUI or OneCommand CNA Manager CLI.

4. **Changing the channel management mode might disrupt network traffic.**

   When the channel management mode of the OneConnect converged network adapter (CNA) is changed from SIMode to virtual NIC1 (vNIC1) mode, the existing SIMode Logical port VLAN ID(LPVID) settings carry over to the vNIC1 LPVID settings (also called Inner VLAN ID settings). This carry-over might disrupt network traffic. The OneCommand CNA Manager application GUI and OneCommand CNA Manager CLI do not allow you to change the vNIC1 LPVIDs.

Workaround

Use the Emulex PXESelect Utility to set the vNIC1 LPVID value:

a) Start or reboot the system. When prompted, hold down **Ctrl** and press **P** to enter the Emulex PXESelect Utility.

b) In the **Controller Configuration** menu, press **Tab** until **Continue** is highlighted. Press **Enter**.

c) Select the adapter and port number to be configured and press **Enter**.

d) Under the **MultiChannel Configuration** menu, set the LPVID for each NIC channel to either 0 (default) or the desired value. Press **Tab** until **Save** is highlighted and press **Enter**.

e) Continue to press **Esc** until you are prompted with the following message:

```
Do you want to exit from the utility?
```

f) Press **Y** to exit.

5. **Rebooting the system after a firmware update does not activate the new firmware.**

   Workaround

   - Perform a standard reboot using one of the following methods:
     - Issue the `reboot -p` command.
     - Configure the boot-config service to issue the standard reboot by default.
     - On x86 platforms running Solaris 11, disable Fast Reboot.

     Note: Refer to the Solaris documentation for more details on Fast Reboot.

   - If a standard reboot does not resolve the issue, power-cycle the system.

6. **While running the OneCommand CNA Manager application and during high converged input/output (I/O) traffic, a panic can occur when enabling or disabling Ethernet switch ports.**

   Workaround

   Stop the OneCommand CNA Manager application daemons before enabling or disabling Ethernet ports.

7. **The OneCommand CNA Manager application GUI and the OneCommand CNA Manager CLI might fail to run and return an error.**

   The OneCommand CNA Manager application and OneCommand CNA Manager CLI might fail to run and return the following error:

   ```
   ld.so.1: hbacmd: fatal: libgcc_s.so.1: open failed: No such file or
   directory
   ```

   This error is caused by an unsatisfied dependency on the Gnu Compiler Collection (GCC) Runtime library.

   Workaround

   Install the Sun Microsystems (SUNW) gccruntime package.

8. **When you install the OneCommand CNA Manager application on a guest operating system, the installer prompts you for a management mode.**

   When installing the OneCommand CNA Manager application on a guest operating system running on a virtual machine, the installer prompts you for a management mode (for example, local-only, full-management, read-only, and so on). However, when the OneCommand CNA Manager application runs on a guest operating system, it runs in local-only and read-only modes, so it does not matter how these modes are specified during installation.

   Workaround

   None.

9. **OneCommand CNA Manager Secure Management mode on Solaris systems require Pluggable Authentication Module (PAM) authentication configuration on the host machine.**

   In Secure Management mode, a user is authenticated on the machine at OneCommand CNA Manager application GUI startup. The PAM interface manages this authentication.

   Workaround

   Place the correct setting in the `auth` section of `/etc/pam.d/other` file or its earlier equivalent, `/etc/pam.conf`. Refer to the ***Emulex*** *OneCommand CNA Manager application for OneConnect Adapters User Guide* for more information about Secure Management mode.

10. **The OCe11101-E adapter cannot run loopback diagnostic tests (physical layer [PHY], media access control [MAC]). Attempting to run a loopback test on the OCe11101-E CNA fails.**

    Workaround

    None.

11. **OneCommand CNA Manager Secure Management Group Assignment/Configuration on Solaris using the `useradd` command requires a `-G` option.**

    If you assign users to one of the four OneCommand CNA Manager application groups using the `useradd` command, using the `-g` option instead of the `-G` option results in the user membership data not being returned in the `getent group` command.

    Workaround

    Use the `-G` option instead.

12. **On OCe11100-series adapters, if the Mode is set to Force and the Speed is set to 1 Gb/s, do not perform a MAC loopback test using the OneCommand CNA Manager application.**

    The Mode and Speed can be set from the **Physical Port info** tab in the OneCommand CNA Manager application or with the `SetPhyPortSpeed` OneCommand CLI command. If you perform a MAC loopback test, the link does not come back up after the test is performed.

    Workaround

    None.

13. **On Solaris 10 systems, the OneCommand CNA Manager application, OneCommand CNA Manager CLI, and all OneCommand CNA Manager services might not run. The following error message appears:**

    ```
    HBA_LoadLibrary: previously unfreed libraries exist, call
    HBA_FreeLibrary()
    ```

    The problem might be caused by devices on the storage area network (SAN) behaving incorrectly. This has been seen only on Solaris 10 x86 and SPARC platforms, beginning with update 6.

    Workaround

    Any one of the following solutions might resolve this problem:

    - Reboot the system.
    - Check for any malfunctioning adapters.
    - Check SAN infrastructure for connections or elements that might create excessive network latency. Make adjustments and reduce complexity where possible.
    - Remove unneeded virtual ports.

14. **The OneCommand CNA Manager application, OneCommand CNA Manager CLI, and all OneCommand CNA Manager services are unable to run. The following error message is repeatedly displayed in the syslog, to the console, or both:**

    ```
    ElxInitBrdMap: HBAAPI initialization attempt failed
    ```

    This known issue occurs when the host bus adapter application programming interface (HBAAPI) fails to report all adapters in the system.

    Workaround

    This known issue often resolves itself after several minutes. If the problem does not resolve itself, the following actions might resolve the problem:

    - Reboot the system.
    - Check for any malfunctioning adapters.
    - Check the SAN infrastructure for connections or elements that might create excessive network latency. Make adjustments and reduce complexity where possible.
    - Remove unneeded virtual ports.

15. **If a system contains several CNAs and is experiencing slow performance, the elxhbamgrd service might transition into a maintenance state during boot. This transition prevents the system from being managed by a remote OneCommand CNA Manager application client.**

    Workaround

    Any one of the following solutions might correct this problem:

    - Remove any unused CNAs.
    - After each reboot, restart the OneCommand CNA Manager services using the commands:

      ```
      /opt/ELXocm/stop_ocmanager
      ```

      ```
      /opt/ELXocm/start_ocmanager
      ```

    - After each reboot, restart the elxhbamgrd service using the following commands:

      ```
      svcadm disable elxhbamgrd
      ```

```
svcadm enable elxhbamgrd
```

16. **The Web Launch browser client must be run with administrator/root privileges.**

    When running the OneCommand CNA Manager Web Launch GUI, you must have administrator privileges when logged into the Web Launch client. On Solaris browser clients, you must be logged in as the root user. Unusual behavior might occur if this requirement is not met.

    Workaround

    None.

17. **Core dump is not supported on the FCoE driver for Solaris SPARC.**

    Workaround

    None.

18. **If you are using the OneCommand CNA Manager application to update firmware from a previous version to version 11.x, you must first update the OneCommand CNA Manager application to version 11.x.**

19. **When an adapter is configured with iSCSI in physical NIC (pNIC) mode and you log into an iSCSI target, if boot flag has been enabled for the target logical unit number (LUN), target logout is successful with Unified Extensible Firmware Interface (UEFI) but not with the OneCommand CNA Manager application.**

    Workaround

    None.

20. **LUNs are not displayed when the target connection is refreshed after port flap.**

    Workaround

    Restart the OneCommand CNA Manager application.

21. **For OCe14000-series adapters, on the Adapter Configuration tab, the third function does not allow the selection of any storage protocol.**

    For example:

    On the **Adapter configuration** tab with the **Custom** button selected, if you select **FCoE** from the list of the second function, the third function does not display other protocols (such as iSCSI) in the list.

    Workaround

    a) Switch the protocols from **FCoE** to **iSCSI** for the second function. The third function now displays **FCoE**.

    b) Switch back to the original option for the second function (FCoE). This action now displays **iSCSI** for the third function.

    This workaround can be repeated for the remaining ports if needed.

Technical Tips

1. **The OneCommand CNA Manager CLI `UmcEnableChanLink` command has been removed.**

   To enable the logical link status of a channel, use the `CMSetBW` command to set the minimum bandwidth to a value greater than 0. To disable the logical link status, set the minimum bandwidth to 0.

2. **Roles-based Secure Management mode is available.**

   Secure Management mode is a management mode available with this release. It is a roles-based security implementation. During the OneCommand CNA Manager application installation, you are prompted whether to run in Secure Management mode. When the OneCommand CNA Manager application is installed in this mode, the following operational changes occur:

   - A non-root or non-administrator user can run the OneCommand CNA Manager application.
   - The OneCommand CNA Manager application host uses a user's credentials for authentication.
   - A user has OneCommand CNA Manager application configuration privileges according to the OneCommand CNA Manager application group to which the user is assigned.
   - In Secure Management mode, a root or administrator user is provided full privileges on the local machine (OneCommand CLI does not require credentials) but no remote privileges.

   Note: Refer to the *OneCommand CNA Manager application User Manual* for more information on Secure Management mode.

3. **The OneCommand CNA Manager application no longer installs OneCommand Vision components.**

4. **On OneConnect adapters, if you change the port speed using the Change Port Speed dialog box, and the selected speed is supported by the adapter's port but is not supported by the connected hardware, the link does not come up.**

5. **A requirement exists whether DCB settings are connected to a non-data center bridging exchange (DCBX) switch.**

   If DCB settings are required when connected to a non-DCBX switch (or switch with DCBX disabled), DCBX must be disabled on the OneConnect adapter to use the adapter's configured parameters. If DCBX is enabled, the DCB priority flow control (PFC) and Priority Groups are ignored (the adapter assumes that the switch does not support these parameters) and, for FCoE adapters, the FCoE priority (COS) is 3.

6. **OneCommand CNA Manager Secure Management mode requires OneCommand CNA Manager user groups to be configured on the domain or, if the host is not running in a domain, on the host machine.**

   OneCommand CNA Manager Secure Management must be able to get the OneCommand CNA Manager application group to which the user belongs from the host's domain (Active Directory or Lightweight Directory Access Protocol [LDAP]) or if the host is not part of a domain, the host's local user accounts. This access is associated with the user groups, not with specific users. An administrator must create these user groups and then set up user

accounts such that a user belongs to one of these four OneCommand CNA Manager application user groups.

Table 1 Secure Management User Privileges

User Group	OneCommand CNA Manager Capability
ocmadmin	Allows full active management of local and remote adapters.
ocmlocaladmin	Permits full active management of local adapters only.
ocmuser	Permits read-only access of local and remote adapters.
ocmlocaluser	Permits read-only access of local adapters.

These four OneCommand CNA Manager application groups must be created and configured on the host machine or network domain. OneCommand CNA Manager Secure Management uses the C-library API calls `getgrnam` and `getgrid` to retrieve the OneCommand CNA Manager Secure Management group information. The equivalent to these can be obtained on the shell command line by typing the `getent group` command. If the four OneCommand CNA Manager application groups are listed, along with their member users, this is an indication that the host machine is sufficiently configured to work with OneCommand CNA Manager Secure Management.

7. **To view online help using the Google Chrome browser, you must disable Chrome's security check using the `--allow-file-access-from-files` option.**
    a) Create a copy of the Chrome shortcut on the desktop, and rename it to RH Chrome L.
    b) Right-click the new **Chrome** icon and select **Properties**.
    c) Add the `--allow-file-access-from-files` text to the end of the path appearing in Target. You must leave a space between the original string and the tag you are adding to the end of it.
    d) Click **OK** to save your settings.
    e) Close any open instances of Chrome.
    f) To open a local copy of the online help, use the new shortcut to open Chrome, and then press **Ctrl** + **Open** and browse to the start page; or open Chrome with the new shortcut, and then right-click the start page and click **Open With > Google Chrome**.
8. **The OneCommand CNA Manager application supports a maximum of 16 application-specific integrated circuits (ASICs) for OneConnect adapters. Most OneConnect adapters have a single ASIC, so a maximum of 16 adapters can be seen and managed by the OneCommand CNA Manager application. There are some OneConnect adapter models that have two ASICs. When all the adapters have two ASICS, a maximum of eight adapters can be seen and managed by the OneCommand CNA Manager application.**
9. **Single root input/output virtualization (SR-IOV) is not supported by the OneCommand CNA Manager application. SR-IOV management is provided through the Solaris operating system.**