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Compaq TaskSmart C-Series Servers Feature Procedures

Abstract: The Compaq TaskSmart C-Series server supports many features to manage and use the server. This guide provides additional information beyond the documentation provided with the server for understanding and configuring a few of the key features. The features covered in this paper are related to Quick Restore Release 3.0. These key features include:

- Configuration management utilities
- Software versions
- System date and time and timezone
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Notice

Introduction

The Compaq *TaskSmart*™ C-Series server provides you with the best in caching functionality and simplifies the challenges of a caching solution. Integration of the comprehensive management features of the TaskSmart C-Series server ensures rapid and successful deployment in your network. This white paper will address additional features not documented in the guides provided with the server.

Four other documents complement this one:

- *Compaq TaskSmart C-Series Streaming Servers Deployment Guide*
- *Compaq TaskSmart C-Series Server Deployment Guide*
- *Compaq TaskSmart C-Series Servers Performance Guide*
- *Enabling LDAP Authentication on Compaq TaskSmart C-Series Servers*

Also, the *Compaq TaskSmart C-Series Servers Feature Procedures* white paper is a reference to the methods that can be used to configure and manage the Compaq TaskSmart C4000 models.

This guide is for an audience familiar with server administrative procedures. When a step describes accessing the Linux shell and logging in as `user`, the `user` can be a Linux user that was set up with the TaskSmart C-Series System Administration Utility. This type of user may require extra steps to allow proper rights to copy or access certain files. The Linux Root user can also be used as `user`. Care must be taken because the Linux Root user has full rights to the operating system and could easily perform an action that cannot be reversed. The steps provided in this document assume Linux `user` is used.

You can access the Linux shell through a Telnet session, the Remote Insight Lights-Out Edition (RILOE) interface, or by attaching a monitor and keyboard to the server. The steps provided in this document assume a Telnet session is used. Be sure that the session is ended by logging off the system, either by typing `quit` or `exit`, at the appropriate screen.

With Traffic Server v5.2, a command line interface (CLI) is provided as another option to configure and monitor Traffic Server. This CLI can be accessed from the Traffic Server Configuration Utility (TSCU) through the CLI hyperlink located on the upper right side of the utility page.

TaskSmart C-Series Configuration Management Utilities

The following sections cover the various TaskSmart C-Series server utilities.

Compaq RapidLaunch TaskSmart Configuration Utility

The Compaq RapidLaunch TaskSmart Configuration Utility (TCU) is used for remote access and initial configuration of all Compaq TaskSmart appliance servers. The TCU is run from a client workstation and detects all Compaq appliance server IP addresses that are located on a specific network. If a DHCP server is not available on the network, the TCU acts as a mini-DHCP server to assign temporary addresses to newly installed devices.

If the TCU detects the TaskSmart appliance server and the server supports browser-based configuration, you can select the server from the list of appliances in the TCU. You can then launch the browser-based configuration utility (Compaq TaskSmart C-Series System Administration Utility). The TCU also allows you to create an off-line configuration diskette to apply network configurations to TaskSmart appliance servers and includes a unit ID illumination icon to easily identify physical units. Additionally, it can detect Compaq Remote Insight Lights-Out Edition boards that are installed in TaskSmart appliance servers when you enable the proper check box on the TCU graphical user interface (GUI).

Compaq TaskSmart C-Series System Administration Utility

The Compaq TaskSmart C-Series System Administration Utility is a browser-based utility for managing TaskSmart appliance servers on Linux platforms. It is useful for managing common Linux activities: adding users and changing passwords; enabling diskette boot for ROM upgrades; gracefully shutting down the server; and implementing value-added utilities including ping, trace route, and system load monitor. The Compaq Web-based Management Utility (*Compaq Insight Manager*™) can also be accessed from this utility.

To begin the configuration for a specific TaskSmart appliance server:

1. Click the IP address of the server or system name located in the **Device Detection** list in the RapidLaunch TCU. If you know the IP address or host name of the appliance server, you can also directly access the System Administration Utility by entering the URL address `https://xxx.xxx.xxx.xxx:3201` in the browser of the client workstation where *xxx.xx.xxx.xxx* represents the IP address or host name of the TaskSmart C-Series server. The host name is of the form *proxy.mydomain.com*. For example, a host name can be `TaskSmartM70.mycompany.com`.

IMPORTANT: If your browser uses a proxy to access the Internet, place the IP address of the TaskSmart appliance server in the proxy exception list of your browser, otherwise the browser is unable to access the configuration utilities.

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2. Click the **System Administrator** link on the **Welcome** page.
3. Enter the user name and password when prompted to log on. The factory default user name and password are both `administrator`.
4. Click **Rapid Startup** to complete the configuration of a new system or one using Quick Restore if a TaskSmart C-Series Server Configuration Data diskette was not used. Then follow the on-line instructions.

IMPORTANT: Use static IP and valid DNS addresses. Also, verify that the information is correct before applying the settings.

Previous configurations on the TaskSmart appliance server are automatically overwritten with the new configuration settings once you click **Apply**.

To change the default user name and password of the System Administration Utility, click **Linux Configuration**, then **Administration**. The **Administrator Login** dialog box is for the Administration Utility. The **Root Password** dialog box is for setting the Linux root password.

Traffic Server Configuration Utility

The Traffic Server Configuration Utility (TSCU) is a utility developed by Inktomi that is used for configuring and monitoring the Traffic Server application. There are two ways to access the TSCU:

- Click **Traffic Server Configuration** in the Compaq System Administration Utility.
- Enter the IP address or the host name followed by administration port 8081 as the URL in the browser.

For example, in the URL `http://`*`xxx.xxx.xxx.xxx`*`:8081`, the *`xxx.xxx.xxx.xxx`* represents the IP address or host name of the TaskSmart C-Series server.

The default logon user name and password for this utility are both `administrator`.

Note: The Traffic Server administration port 8081 is the factory default. This UI port field can be changed while using the TSCU by clicking the **Configure** tab, **My Proxy, UI Setup,** and then the **General** tab. You must restart the Traffic Server application to apply the changes.

IMPORTANT: The TSCU and the System Administration Utility are two separate applications. Although both utilities have the same default user names and passwords, they are separate entities and the user names and passwords are not linked. Therefore, changing the user name and password for one utility will not automatically change those of the other.

To change the default user name and password of the TSCU:

1. Access the utility, and then click the **Configure** tab.
2. Click **My Proxy**, **UI Setup**, and then the **General** tab.

RealSystem Administrator Utility

For systems that support streaming media, such as the Compaq TaskSmart C4000 Models 50 and 70, streaming media protocol data is available in the TSCU under the **Monitor** tab and **Streaming Media**. These systems also include RealServer and the RealServer plugin from Inktomi. The RealSystem Administrator Utility can be accessed at `http://xxx.xxx.xxx.xxx:8090/admin/index.html`, where *xxx.xx.xxx.xxx* represents the IP address or host name of the TaskSmart C-Series server.

The default user and password for accessing the RealSystem Administrator are both set to `administrator`. To change the RealSystem Administrator password, access the System Administration Utility using the address above, then select **Configure**, **Security**, **Realms**, and then **Edit a User in Realm**.

The System Administration Utility also provides a link to the **Real Proxy 8 Monitor** window. To access this window, click the **Real Proxy 8 Monitor** hyperlink under **Management**.

URL Address Reference

The following URLs are associated with each TaskSmart C-Series server utility:

Compaq TaskSmart C-Series System Administration Utility	`https://xxx.xxx.xxx.xxx:3201`
Traffic Server Configuration Utility	`http://xxx.xxx.xxx.xxx:8081`
Compaq Web-based Management (Compaq Insight Manager)	`http://xxx.xxx.xxx.xxx:2301`
RealProxy Administrator (available on streaming media servers only)	`http://xxx.xxx.xxx.xxx:8090/admin/index.html`

Note: *xxx.xxx.xxx.xxx* represents the IP address or host name of the TaskSmart C-Series server.

Software Versions

You can find the overall software version (Quick Restore release) for the TaskSmart C-Series server in the System Administration Utility on the **Welcome** window, or by clicking **Management**, and then **Current Software Information**. The Quick Restore release has a format of *X.Y.Z*, where *X.Y* represents the major software revision and *Z* represents the engineering build number that was approved for production. The number *X.Y* matches the Quick Restore CD-ROM artwork release number. You can also find the System Administration Utility release number in both locations.

You can display the Traffic Server software version in one of three ways:

- From the TSCU, click the **Monitor** tab, **My Proxy**, and **Summary**
- From the TSCU, click the **CLI** hyperlink and enter the command `show:version`

- From Linux CLI through RILOE or a monitor and a keyboard, list the Traffic Server directory name under the /home/inktomi directory

System Date and Time and Timezone

To change the System Date and Time and Timezone using the TSCU, click the **Configure** tab, **My Proxy**, and **Date/Time**.

IMPORTANT: The TaskSmart C-Series server uses the system time to validate cache freshness. Time errors can cause excessive validation since documents are incorrectly seen as stale. Check that the date and time are set appropriately for your time zone.

Shutdown and Restart of the TaskSmart C-Series Server

To properly shut down or restart the TaskSmart C-Series server using the System Administration Utility:

1. Click **Management** and then **Shutdown Server**.
2. Select either **Restart the Server** or **Halt the Server for Power-off**.

   If you select **Restart the Server** and then **Yes, shutdown the server**, the server shuts down the applications and operating system. You hear a melodic string of notes as the server shuts down. The server then either restarts or shuts down.

   If you select **Halt the Server for power-off,** the server is ready to be shut off with the power button after the melodic string of notes. If the server is located in an environment where the notes are inaudible, the server is ready to be powered off after two minutes.

You can also shut down or restart the server through the TSCU. To do so, select the **Configure** tab, **My Proxy**, and **Control**.

Note: To restart Traffic Server and not the entire server for various TSCU changes, select the **Configure** tab, **My Proxy**, **Basic**, and the **General** tab; then click **Restart**.

LDAP Authentication

You can find information on LDAP authentication in the Compaq white paper, *Enabling LDAP Authentication on Compaq TaskSmart C-Series Servers.*

Enabling of Clustering

Refer to Traffic Server on-line help files or the *Compaq TaskSmart C-Series Administration Guide (Powered by Inktomi Traffic Server)*.

Hierarchical Caching

If your network has a proxy server that traffic must pass through to get to the Internet, you must set up this proxy server as a parent to the TaskSmart C-Series server. Refer to the *Compaq TaskSmart C-Series Administration Guide (Powered by Inktomi Traffic Server)* to set up a proxy server as a parent cache through the TSCU.

Enabling Parent Caching or ICP Caching can be set as a **must only forward** condition using the `go_direct` value as true. The TaskSmart C-Series server makes cache miss requests only to the parent cache. Use parent proxy rules in the parent.config configuration file to set up these rules. Modifications to the parent.config file can be made through the TSCU by selecting the **Configure** tab, **Content Routing**, and **Hierarchies**. Refer to the *Compaq TaskSmart C-Series Administration Guide (Powered by Inktomi Traffic Server)*.

Pinning of Cache Objects

Cache objects can be kept in the cache **pin-in-cache** for a specified amount of time by setting up rules in the cache.config. Refer to the *Compaq TaskSmart C-Series Administration Guide (Powered by Inktomi Traffic Server)* and the *Compaq TaskSmart C-Series User Guide (Powered by Inktomi Traffic Server Media-IXT)* for specific `cache.config` commands through the TSCU.

Cache Scheduled Updates

The TaskSmart C-Series server provides the ability to schedule the preloading of objects into its cache. The terms **download** or **preload** have also been used to refer to this feature. This feature is accessed using the TSCU by selecting the **Configure** tab, **Protocols**, and **HTTP Scheduled Update**. Refer to the *Compaq TaskSmart C-Series Administration Guide (Powered by Inktomi Traffic Server)* or use the online help with the TSCU for more information.

Addition of Multiple DNS Servers

From the **Rapid Startup** menu in the System Administration Utility, you can enter one DNS value. This value overwrites any existing values.

To use the TSCU to add more than one DNS server:

1. Click the **Configure** tab.
2. Click **Networking** and **System**.
3. Click the **General** tab.

Changing of IP or Gateway Address Information

To change an IP address or Gateway address for an Ethernet port using the TSCU:

1. Click the **Configure** tab.
2. Click **Networking** and **System**.
3. Click the **NIC** tab.

Security

The TaskSmart C-Series server provides security in two areas: Linux system administration and Traffic Server application administration. The TaskSmart C-Series System Administration Utility is used to set up Linux system security. You can set up cache-control and administration security for the Traffic Server application through the TSCU or CLI.

Compaq TaskSmart C-Series System Administration Utility

The Compaq TaskSmart C-Series System Administration Utility can be used to set up various security levels for the Linux system. Linux user logons and passwords, as well as the Linux root password, can be set by using the System Administration Utility. For more information, see the "TaskSmart C-Series Configuration Management Utilities" section of this document.

Individual system users can be added for Linux system management. A user can be configured during system initialization through the **Rapid Startup** menu, or by clicking **Linux Configuration** and then **Users**.

A secure browser session is used to access the System Administration Utility for Linux system administration. You can enable or disable this browser session for each network interface. The root logon can be disabled and the SSH key can be regenerated as well. To modify these settings, click **Linux Configuration** and then **SSH**.

The TaskSmart C-Series server supports SNMP. Through the System Administration Utility, you can modify the read-only and read-write community strings by clicking **Linux Configuration, Network,** and then **SNMP Setup**. These strings are used by the RapidLaunch TaskSmart Configuration Utility to access the UID light on the server. Compaq Insight Manager also uses these SNMP settings to monitor and manage the server.

Traffic Server Application

The following is a list of security features for the Traffic Server application:

- Client access to the TaskSmart C-Series server proxy cache
- Host access to the TaskSmart C-Series server
- Administration access to the Traffic Server Configuration Utility
- SOCKS firewall integration
- DNS server selection
- LDAP-based proxy authentication
- SSL termination for secure reverse proxy connections
- Timeout session for the Traffic Server Configuration Utility

Refer to the *Compaq TaskSmart C-Series Administration Guide (Powered by Inktomi Traffic Server)* to configure each security feature. Refer to the *Enabling LDAP Authentication on Compaq TaskSmart C-Series Servers* white paper if additional setup information is needed for LDAP authentication.

SSL security is provided for remote access to the TSCU. An SSL certificate is provided on the TaskSmart C-Series server and does not need to be obtained from Inktomi. The certificate can be obtained from a recognized certificate authority as well.

To enable SSL for GUI administration:

1. Access the TSCU. See the "Traffic Server Configuration Utility" section of this document for access instructions.
2. Click the **Configure** tab, **My Proxy**, **UI Setup**, and then the **General** tab.
3. Click **Enabled** or **Disabled** to turn SSL on or off.

IMPORTANT: After SSL is turned on, HTTPS must be used to access the Traffic Server Configuration Utility URL. The link to Traffic Server from the TaskSmart C-Series System Administration Utility uses HTTP.

Security measures for Media-IXT are set for each media type by using the command line or by modifying configuration files. Refer to the *Compaq TaskSmart C-Series Administration Guide (Powered by Inktomi Traffic Server)* and the *Compaq TaskSmart C-Series User Guide (Powered by Inktomi Traffic Server Media-IXT)* for additional information.

Enabling of the Websense Filtering Plugin

To enable the Websense filtering plugin from the TSCU:

1. Click the **Configure** tab, and then **Plugins**.
2. Click **Enable** to enable the Websense plugin, and then click **Apply**.
3. Click the **Configure** tab, **My Proxy**, **Basic**, and then click **Restart**.
4. Return to the configure plugins page on the TSCU. Click **Websense** to proceed with the configuration of the Websense plugin.
5. Specify the hostname and port number of the Websense server. Information on configuring the Websense server can be found by following the hyperlink provided at the bottom of the page.

Log File Maintenance

The TaskSmart C-Series server creates three sets of log files: a set from the Linux operating system, a set from System Administration Utility, and a set from the Inktomi Traffic Server and Media-IXT application, which includes Real Networks logs. You should periodically check these log files and export or delete them from the server.

Linux System Log Files

Linux system log files are enabled as part of the installation process. To view or save these logs while using the TSCU, click the **Configure** tab, **My Proxy**, and **Logs**.

Compaq TaskSmart C-Series System Administration Utility Log Files

The Compaq TaskSmart C-Series System Administration Utility stores its error and access log files at /var/cpqcfg/httpd/log.

To export the System Administration Utility file from the server:

1. Access the Linux shell by starting a Telnet session.
2. Log on as a Linux user (denoted as `user` in remaining instructions).
3. Type `su`, and then enter the password for the Linux root user when prompted.
4. Change the directory to /var/cpqcfg/httpd/log by entering the command `cd /var/cpqcfg/httpd/log`.
5. Copy file(s) to /home/*user* by entering `cp messages /home/user`.
6. Change the directory to /home/*user* by entering `cd /home/user`.
7. Change the owner from *root* to *user* by entering `chown user:user messages`.
8. Exit the Telnet session.
9. Start an FTP session.
10. Log on as `user`.
11. Change the directory to /home/*user*.
12. Export the log files by entering `get filename`. This action copies the *filename* file to the current location on the client.
13. Exit the FTP session.

Traffic Server and Media-IXT Log Files

The Traffic Server application supports multiple log file formats. Refer to the *Compaq TaskSmart C-Series Administration Guide* (*Powered by Inktomi Traffic Server)* for descriptions and instructions on selecting log files as well as their locations. You can export these log files using the method described in "Compaq TaskSmart C-Series System Administration Utility Log Files."

Refer to the *Compaq TaskSmart C-Series Administration Guide (Powered by Inktomi Traffic Server)* and the *Compaq TaskSmart C-Series User Guide (Powered by Inktomi Traffic Server Media-IXT)* for the individual logging capability of the supported streaming media formats. These formats include Windows Media Technologies, RealMedia, and Apple QuickTime. RealMedia has log files in /home/inktomi/rni/logs, as well.

Backup and Restore Configuration

The TaskSmart C-Series server provides capability to back up and restore Linux configuration data used with System Administration Utility and Traffic Server application data. This capability is provided through the System Administration Utility.

Backing up the Server Configuration Data

To back up the server configuration data:

1. Start the System Administration Utility.
2. Click **Backup/Restore**, and then **Backup Linux Configuration**.
3. Select all check boxes for a full backup. Traffic Server and Linux user data is backed up if you select **Application & User Data**.
4. Click **Next** and verify data in the **Items to Backup** window, and then click **Start Backup**.

During this backup process, you are requested for a location to store the file on the client. The file size can vary from 5 KB to 50 MB (or even more if much Linux user data is stored in /home/*user*). The file created is a compressed file that can be viewed or unpacked with the WinZip application.

IMPORTANT: The backup file is saved to the client hard drive and **not** to the TaskSmart C-Series server.

Restoring the Server Configuration Data

To restore the server configuration data:

1. Start the System Administration Utility.
2. Click **Backup/Restore**, and then **Restore Linux Configuration**.
3. In the **Restore File** field, enter the full path and file name of the backup file or use **Browse** to find the file. The restore file should be a .tgz file that was previously exported from the server.
4. Click **Begin Restore**. This procedure will take several minutes depending on the file size.

Backing up and Restoring the Traffic Server Application

The TSCU allows a backup and restoration of the Traffic Server configurations through snapshots. Traffic Server Snapshots can be saved to the node, FTP server, or diskette drive. To back up and restore the Traffic Server, access the TSCU and click the **Configure** tab, **My Proxy**, and **Snapshots**. These snapshot directories saved to the node are also saved with the System Administration Utility backup. Refer to the *Compaq TaskSmart C-Series Administration Guide (Powered by Inktomi Traffic Server)* for details on the backup and restore procedure.

Note: Before clicking **Apply**, you can select a restoration snapshot directory at the same time you enter a new backup snapshot directory. The snapshot backup is performed on the current system configuration, and then a snapshot restoration based on the restore snapshot you selected from the list box.

Changing of the 10/100 NIC Speed and Duplex Settings

The TaskSmart C4000 C-Series server NICs default to auto select. This can be changed to force the NICs to full or half duplex by manually editing the /etc/modules.conf file.

1. Access the Linux shell by starting a Telnet session.
2. Log on as a Linux user.
3. Type `su`, then enter the password for the Linux root user when prompted.
4. Change directory to /etc by entering the command `cd /etc`.
5. Using an editor such as pico or vi, open the modules.conf file.
6. Enter the line `add options e100 e100_speed_duplex=`*x*`,`*x* where *x* represents the speed and duplex value based on the following:
   - Valid range: 0-4 with default value of 0
   - 0 indicates auto detection for both speed and duplex mode
   - 1 indicates a speed of 10 Mbps and a duplex mode of half
   - 2 indicates a speed of 10 Mbps and a duplex mode of full
   - 3 indicates a speed of 100 Mbps and a duplex mode of half
   - 4 indicates a speed of 100 Mbps and a duplex mode of full

   Notice that there are two *x* values to enter, one for each adapter. The first value is for Eth0 and second for Eth1. They can be set to separate values.
7. Save and close the file.
8. Exit Telnet.
9. From the System Administration Utility, reboot the system.

Resetting of a Server Proxy Mode

When the server is factory set with Server Acceleration mode by default, it is typically listening on port 80. To change this listening port back to port 8080 for standard forward proxy mode, access the TSCU. Click the **Configure** tab, **Protocols**, **HTTP**, and then the **General** tab. From this window you can modify the Compaq TaskSmart C-Series server port value to 8080. You must stop and restart the Traffic Server cache service for these values to take effect. To restart the Traffic Server, click the **Configure** tab, **My Proxy**, **Basic**, the **General** tab, and then **Restart**.

If the server port was originally set for port 80, then verify in the /home/inktomi/*x.x.xx*/config/ipnat.conf file that transparent proxy port 80 traffic is being redirected to port 8080, where *x.x.xx* is the Traffic Server version number. Refer to the *Compaq TaskSmart C-Series User Guide (Powered by Inktomi Traffic Server Media-IXT)* or the ipnat.conf file comments for further information.