Advanced Lights Out Management(ALOM)

Abstract

In this paper I will explain about ALOM. I will give a short introduction and summary of ALOM and demonstrate how to operate it along with relevant commands.

Introduction

ALOM is a hardware card which operate in the same power line of the server, and thus depend on the same power resources of the server, but may perform a power off and power on operations along with hardware diagnostic commands. ALOM enables remote management and console via serial(9600, no-parity,1-stop-bit,no-handshake) management port, or network(**10Mbit)** management port, which should be configured using the serial management port or using the Solaris commands to ALOM..

More information can be found in the following URL:
http://www.sun.com/products-n-solutions/hardware/docs/html/817-5481-11/

Features of ALOM

ALOM provides several categories of commands:

-   Internal administration commands for managing ALOM configuration.

    (like - users&permission, local network configuration, informative messages routing, SNMP traps, self reboot, self upgrade of ALOM firmware.)

-   Management commands to manage the server and console view of the server.

-   Server and ALOM hardware and environmental diagnostic commands.

System requirements

Sun rack mountable servers – all SunFire Vxx0 (like 120/210/240/440/480/490)

and some other Sun servers, which may be a long list to include.

Compatibility issues

- Commands may vary between the LOM and ALOM cards, but still there is a lot in common.
- Solaris 8 and higher with an installation type of:

  Entire distribution plus OEM support

  is needed, in order to install Solaris related commands(**scadm** command).

First Time ALOM configuration

Type: **setupsc**

This script will step you through the process of ALOM configuration.

Internal administration commands

help - a very useful command to get explanation and information about available commands.

setupsc – an internal script to configure the entire ALOM configuration.

showsc – command to view the entire ALOM configuration.

setsc – command to change a specific value in the ALOM configuration.

showdate/setdate – commands to show or set date in ALOM.

shownetwork - a command to show network configuration of the server.

setlocator on|off – a command to turn on a locator led on or off, in order to allow identification of the server when someone is in front of the server..

logout – don't leave your session open – anyone can gain root access or mess with your server !

Server management commands

poweroff/poweron– commands to switch on or off the server (but not the ALOM)

console – a command to switch to server console view.(-f to force a release of another user's session in order to assign it to you.

#. - (pound-period) a sequence of keys to switch back to ALOM internal view

break – a dangerous command to perform a STOP-A sequence.

showusers – a command to show internal users in the ALOM configuration.

user+del/add/password/show – any one of the concatenating commands may result a simple

operation to configure the users DB in the ALOM.

useradd haim - add a user named haim.

userperm cuar haim – assign full permissions to user haim.

(**c** – allow console connection , **a** – administrative, **u**- user administration, **r** – allow reset power).

userpassword haim - change the password of the user haim.

Diagnostic commands

showfru - a command to show status of all Field Replaceable Units(FRU) in your system.

showplatform (-v) - a general command to display info about hardware configuration of the server.

showenvironment (-v) - a general command to show environmental status of the server.

Solaris related commands

[RSC]/ALOM configuration can also be done by the **[r]scadm** command.

Setting [r]scadm PATH:

> If using sh/bash type:
>
> (this may be also inserted to the files: **.profile** or **.bashrc** in the user home directory)
>
> PATH=/usr/platform/`uname-i`/sbin:$PATH   #(for scadm, V240/440etc...)
>
> PATH=/usr/platform/`uname-i`/rscs:$PATH   #(for rscadm, V880/890etc...)
>
> export PATH

[r]scadm help - The ultimate command to get list of available commands.

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User related commands

[r]scadm useradd haim - command to add a user into ALOM users DB.

[r]scadm userpassword haim – command to assign new password to the user haim.

[r]scadm userperm haim cuar – command to assign full permissions to user haim.

(**c** – allow console connection , **a** – administrative, **u**- user administration, **r** – allow reset power).

ALOM configuration related commands

[r]scadm resetrsc – command to reset the ALOM card in case of a hung card or a misleading led information

[r]scadm set netsc_ipaddr 192.168.2.1 – command to set the ALOM IP address to be **192.168.2.1**

[r]scadm set netsc_ipnetmask 255.255.255.0 – command to set the ALOM netmask address to be **255.255.255.0**

[r]scadm set netsc_ipgateway 192.168.2.254 – command to set the ALOM gateway address to be **192.168.2.254**

Best Practice – Configuring V890 RSC

In order to configure rsc on V890 follow the following procedure:

1. Donwload RSC software from www.sun.com/software

2. Install the RSC packages using the command:

   pkgadd -d . SUNWrsc SUNWrscd SUNWrscj

3. Run the configuration script for RSC by typing:

   /usr/platform/SUNW,Sun-Fire-V890/rsc/rsc-config

4. After finishing the RSC configuration you should wait till the card finish writing all the configuration into the PROM of the RSC. Then the card will reset automatically and ask you for a password for the user you have configured.

V890 server administrators should use the rscadm command described above !!!

Resetting ALOM password on T1000/T2000

unplug all power cords from the system

return the power cords back and immediately press ESC to get a menu.

Enter e – in order to erase NVRAM.

Enter r – in order to return to normal POST(Power On Self Test).