Enabling HP Systems Insight Manager 5.0 and Novell ZENworks 7 Linux Management to co-exist on the same server

Overview

Business problem

In today's IT environment, installing servers is only the beginning; updating and managing the servers, once deployed, have become major concerns. The need to track the health of the server and to apply updates to the operating system as required are now high priorities to address security and stability issues. Finding a tool to handle all necessary tasks is never easy, if even possible. The issue becomes whether to make different software tools co-exist on a single server or to put every software tool on its own server, a less likely scenario.

HP/Novell solution

For monitoring and managing HP servers, HP Systems Insight Manager 5.0 (HP SIM) provides a unified server and storage management platform. HP SIM 5.0 delivers fault monitoring, inventory reporting and configuration management for HP ProLiant, HP Integrity, and HP 9000 systems, and has now expanded to include the HP Integrity NonStop and HP StorageWorks XP, Enterprise Virtual Array (EVA) and Modular Smart Array (MSA) families of storage arrays. HP SIM uses a web-based user interface to monitor, manage, and troubleshoot devices. HP SIM links to HP Insight Management Agents, HP Diagnostics, Array Configuration Utility (ACU), Lights-Out interfaces, and many other HP ProLiant Essentials products.

Note: Information about HP diagnostics, ACU, Lights-out, and ProLiant Essentials can be found at HP.com – ProLiant Management Software, www.hp.com/servers/manage.

HP SIM utilizes a highly secure login via SSL, communicates to devices using industry standards such as WBEM/WMI, SNMP, and HTTP, discovers and links to the open source webmin for Linux, allows command launching from a remote browser or via the command line, and will integrate with many open source management tools. For a complete list of HP SIM features, go to http://www.hp.com/go/hpsim.

Managing a server is only one piece of the puzzle. Updating the operating system and applications is another major piece. Novell offers the new ZENworks Linux Management, today's most powerful, secure and manageable Linux software management solution. ZENworks Linux Management allows updating of servers from Novell, or creating a mirror server to manage updates within your organization.

ZENworks Linux Management is the only solution that uses Policy-Driven Automation to deploy, manage and maintain Linux resources. These automated and intelligent policies allow administrators to provide centralized control throughout the lifecycle of Linux systems for workstation lockdown, imaging, remote management, and inventory and software management. Simply define business processes and policies once and then automatically apply them to all your Linux workstations and servers across the enterprise – throughout their

entire lifecycle. The result is a comprehensive solution that eliminates IT effort by dramatically reducing the overhead needed to manage Linux systems.

For more information on Novell ZENworks Linux Management visit
www.novell.com/products/zenworks/linuxmanagement

Why HP and Novell

HP and Novell enjoy one of the longest partnerships in the industry, dating from Novell's earliest NetWare offerings to today's cutting-edge solution products and Linux operating systems. HP systems and Novell software are literally made for each other. Close engineering and development collaboration between the two companies means that Novell's software is optimized and certified to run smoothly on HP systems. But the strength of the partnership does not end there. HP and Novell join forces to ensure that their joint customers receive world-class customer support, issue resolution, and customer satisfaction.

Target audience

This document is for system administrators of HP ProLiant servers running Novell SUSE Linux who have a need to consolidate their management and software updates onto a single server and want to take advantage of the capabilities offered by HP SIM and Novell ZENworks Linux Management.

Software solution

This paper defines the specific steps required to allow HP SIM and Novell ZENworks Linux Management to co-exist on the same server. At issue is the PostgreSQL database used by both. PostgreSQL creates a single instance on a server and each application added will use that instance. If HP SIM is installed using the default installation scripts after ZENworks Linux Management is installed, then, due to the current installation process for HP SIM, the PostgreSQL information required by ZENworks Linux Management will be overwritten, causing ZENworks to cease functioning. If HP SIM is installed first, then ZENworks will break HP SIM in the same fashion.

Both HP SIM and ZENworks 7 Linux Management (ZLM 7) use the PostgreSQL database for storing necessary tables of information, and both can co-exist in the same database; however, it is the installation process that will break the first application installed. To solve this problem, it becomes necessary to install the software in a specific order. This will allow both applications to co-exist in the same PostgreSQL database instance.

Planning considerations

These two applications have been found to function properly together on one server running the SUSE Linux Enterprise Server 9 (SLES9) with SP2. However, there are several steps that must be followed to make this possible.

This installation was performed on a dual-processor ProLiant DL360 G3 server and would be identical on any other server.

When installing the operating system, ensure the following software components are selected:

1. Python
2. Mozilla
3. Sun J2RE Java™ runtime (IBM Java is selected by default, you may wish to de-select it or leave it. Mozilla will use the Sun Java by default.)

Once the installation is complete run on-line update for the latest OS updates.

A PostgreSQL database will be installed with the installation of HP SIM 5. Once the server and software are installed, ensure the Java plugin has been registered with Mozilla. If not, execute the following commands:

cd /opt/Mozilla/lib/plugins
ln -s /usr/java/j2re1.4.2_05/plugin/i386/ns610-gcc32/libjavaplugin_oji.so

Download the HP SIM 5.0 file (HPSIM-Linux-C.05.00.00.00.bin) from www.hp.com/ and do an automated install as defined on the download site. This will install HP SIM 5 and configure the initial PostgreSQL database.

You can now configure HP SIM using the command:

/opt/mx/bin/mxinitconfig –a
(this will do an integrity check and initialize the database)

Once HP SIM is installed, go into the **/var/lib/pgsql** directory and add the following line to the **pg_hba.conf** file:

local template1 postgres trust

Without this line the PostgreSQL database will fail to start during the installation of ZLM 7 due to a timing issue on how long ZLM 7 waits for the database to restart during the installation. Once that has completed restart PostgreSQL with the command:

rcpostgresql restart

Once the initialization process is complete, you can then access the HP SIM console by using Mozilla and going to the URL: http://localhost:280. Due to the Java based code, the first time you start HP SIM it can take several minutes for the services to start to render the user interface.

ZENworks Linux Management will allow installation to an existing database, but due to database security it is recommended to not do this with HP SIM. During the install of ZLM 7 you will be asked to install a new PostgreSQL environment, this will overwrite the HP SIM PostgreSQL configuration file, preventing HP SIM from functioning. Certain steps must be taken to preserve the HP SIM PostgreSQL environment. Before installing ZENworks Linux Management execute the following commands:

/opt/mx/bin/mxstop
cd /var/lib/pgsql/data

> **cp pg_hba.conf pg_hba.conf.sim**

Install ZENworks 7 Linux Management by mounting the ZENworks 7 Linux Management CD-ROM or if using an ISO image mount the image using the command:

> **mount -o loop** *<iso image> <mountpoint>*

and run the zlm-install script.

Answer Y to install now, accept the license agreement, and answer Y if prompted that the installation may overwrite some configuration files for already installed packages. This is due to PostgreSQL already being installed, and previously the necessary configuration file was saved. ZENworks Linux Management will now install the required components. When prompted, answer Y to running zlm-config now.

If this is the first ZENworks Linux Management server it needs to be configured as primary. Answer Y when prompted about primary server, otherwise this server will be a mirror server to the primary server. You will need to supply a zone for management and an administrator password. (**NOTE**: Please refer to the Novell documentation site, http://www.novell.com/documentation/zenworks7/index.html for the installation and administration documentation for ZENworks Linux Management.) ZENworks Linux Management requires a database and can be configured to use either Oracle® or PostgreSQL (as this document uses). When prompted to have ZENworks install and set up a local PostgreSQL database answer Y. This will create a new pg_hba.conf file for ZENworks Linux Management. Once the installation is complete browse to https://localhost to verify ZENworks Linux Management is functional. You should be prompted to login to the ZENworks Linux Management web interface.

Now that ZENworks Linux Management is functional, it is necessary to go back and make HP SIM functional. To accomplish this execute the following commands:

> **cd /var/lib/pgsql/data**
> **cat pg_hba.conf.sim >> pg_hba.conf**

This will copy the saved HP SIM information to the existing pg_hba.conf. (**NOTE**: Make sure you use >> to append to the existing file.)

Restart PostgreSQL:

> **rcpostgresql restart**

Restart HP SIM:

> **/opt/mx/bin/mxstart**

You must wait a few minutes for all ZENworks Linux Management and HP SIM processes to start, then using the Mozilla web browser, verify access to ZENworks Linux Management

> https://localhost

and HP SIM

> http://localhost:280

Summary

This paper focuses on putting HP SIM 5.0 and ZENworks 7 Linux Management from Novell together on the same management server. Although ZENworks 7 Linux Management will use an existing PostgreSQL database, at this time it is not recommended putting the ZENworks Linux Management data into the HP SIM database.

The ZENworks Linux Management web console is an excellent tool for monitoring the availability of your servers, obtaining asset and version information, and managing servers. The strength of HP SIM is the ability to trap and investigate problems with the health of a server. A good practice would be to use the ZENworks Linux Management console to monitor the servers, and when a server is listed as unavailable use HP SIM console and tools to troubleshoot and solve the issue. These tools together give you an excellent method of deploying, managing, and troubleshooting your server environment remotely.

For more information

HP Systems Insight Manager	http://www.hp.com/go/hpsim
HP ProLiant Server Management and HP ProLiant Essentials	http://www.hp.com/servers/manage
HP + SUSE	http://www.hp.com/go/suse
HP + Novell	http://www.hp.com/go/novell
HP Open Source + Linux	http://www.hp.com/go/linux