Introduction to Oracle® Solaris 11.3 Administration

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This article outlines the essential tasks that are necessary to set up and manage your Oracle Solaris system. Each section in the article provides references to further information about these tasks. The tasks covered include the following:

- "Creating and Managing User Accounts and Groups" on page 2
- "Managing System Services" on page 2
- "Viewing and Controlling System Information, Processes, Tasks, and Performance" on page 3
- "Administering the System Console, Locally Connected Terminal Devices, and Power Services" on page 3
- "Setting up and Administering Printers" on page 3
- "Managing and Troubleshooting a System Using Core Files and Crash Dump Information" on page 4

Note - This article assumes that you have already installed the Oracle Solaris operating system and connected your system to the network. If you have not yet performed those tasks, see the following references:

- *Installing Oracle Solaris 11.3 Systems*
- *Planning for Network Deployment in Oracle Solaris 11.3*

Creating and Managing User Accounts and Groups

After you have installed the Oracle Solaris operating system and connected your installed system to the network, you are ready to set up some essential functions on your system. You might choose to start by setting up user accounts and user groups on your system.

Note - If you are not familiar with Oracle Solaris user management, see "What Are User Accounts and Groups?" in *Managing User Accounts and User Environments in Oracle Solaris 11.3*.

Start by creating any user accounts that you need and apply security attributes for each user. You can customize the users' work environments by modifying the user initialization files. You can also create group accounts and control the security settings for your groups. You can use either command-line tools or the User Manager GUI to perform these tasks.

User management procedures are documented in *Managing User Accounts and User Environments in Oracle Solaris 11.3*.

Managing System Services

Another essential task for system administrators is to manage applications and system services by using the Oracle Solaris Service Management Facility (SMF). SMF enables you to define relationships between applications or services on your system. SMF also defines actions that can be invoked on a service.

Note - If you are not familiar with SMF, see Chapter 1, "Introduction to the Service Management Facility" in *Managing System Services in Oracle Solaris 11.3*.

Using SMF, you can display service information such as status, property values, or dependencies. You can modify property values for services and create custom properties. You can create a custom service or a custom service instance. You can also troubleshoot system services.

For instructions about managing services, see *Managing System Services in Oracle Solaris 11.3*.

Viewing and Controlling System Information, Processes, Tasks, and Performance

Your ongoing system administration tasks are likely to include monitoring and controlling system processes and system performance.

Using the standard administration tools provided in the Oracle Solaris operating system, you can display system information such as host name, memory, or processor type. You can also change information such as the date and time, or the host name for a system. You can display process information such as process status, process ID, and process priority. You can also use the standard administration tools to start, stop, re-prioritize, or schedule system processes. In addition, you can monitor system performance information such as swapping statistics, disk input and output, buffer activity, and disk space information. Using the standard administration tools, you can also schedule individual jobs or repetitive jobs.

For information about performing these ongoing tasks, see *Managing System Information, Processes, and Performance in Oracle Solaris 11.3*.

For advanced system performance information, see the following references:

- Improving system performance by tuning the system parameters – "Tuning an Oracle Solaris System" in *Oracle Solaris 11.3 Tunable Parameters Reference Manual*
- Optimizing workloads in Oracle Solaris zones – "Setting Up Resource Management Task Map" in *Administering Resource Management in Oracle Solaris 11.3*
- Investigating system performance issues using DTrace – "Getting Started" in *Oracle Solaris 11.3 DTrace (Dynamic Tracing) Guide*

In addition, if you are administering an international system environment, see *International Language Environments Guide for Oracle Solaris 11.3*.

Administering the System Console, Locally Connected Terminal Devices, and Power Services

Another part of your ongoing work includes managing your system console and any terminal devices that are connected to your system. You must also manage the power for your system. In the Oracle Solaris operating system, these tasks are performed by using SMF.

For information on these topics, see the Chapter 5, "Managing the System Console, Terminal Devices, and Power Services" in *Managing System Information, Processes, and Performance in Oracle Solaris 11.3*.

Setting up and Administering Printers

For information about managing your system printers, see the following references:

- Chapter 2, "Setting Up Printers by Using CUPS (Tasks)" in *Configuring and Managing Printing in Oracle Solaris 11.3*
- "Administering Printers by Using CUPS Print Manager (Task Map)" in *Configuring and Managing Printing in Oracle Solaris 11.3*

Managing and Troubleshooting a System Using Core Files and Crash Dump Information

Another essential task involves preparing to handle system problems and troubleshooting system problems that occur. A system crash can occur due to hardware malfunctions, I/O problems, or software errors. If a system crashes, it will display an error message on the system console and write a copy of its physical memory to the dump device. The system will then reboot automatically. Also, when a process terminates abnormally, a core file is generated that you can examine. You can customize the default processes that create crash dump files and core files. And, you can use various Oracle Solaris tools including the crash dump files and core files to investigate what has caused a specific problem and to make corrections to the system.

For further information, see *Troubleshooting System Administration Issues in Oracle Solaris 11.3*.

Additional tools are available for troubleshooting. The Oracle Solaris operating system includes an architecture for building and deploying systems and services that are capable of predictive self-healing. The Fault Management Architecture (FMA) receives data related to errors, automatically diagnoses the problems, and attempts to take faulty components offline.

For information about fault management, see *Managing Faults, Defects, and Alerts in Oracle Solaris 11.3*.

Additional Documentation

The documentation library for each Oracle Solaris release covers all aspects of system administration. In addition to the essential administration tasks described in this article, the documentation set for each release covers:

- Administering your network
- Managing data and storage for your system
- Securing your system
- Creating and using virtual environments

Check the documentation library for information on all of these topic areas.

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