Oracle Solaris Containers Administration

Duration: 3 Days

What you will learn

The Oracle Solaris Containers Administration course offers a practical, guided experience working with Oracle Solaris Containers, the Oracle virtualization feature comprised of Oracle Solaris Zones and Oracle Solaris Resource Controls. Containers are used to create isolated environments for running applications, and enable server consolidation with low overhead. In this course, you gain the knowledge critical to properly implement and manage these important capabilities in the Oracle Solaris Operating System.

The hands-on practice exercises offered in this course involve accessing equipment that resides at a location other than where the training is delivered.

Learn To:

Configure Zones
Install Zones
Administer Zones
Configure Zone file systems and networkingConfigure
Migrate Zones
Administer packages and patches within Zones

Audience

System Administrator

Related Training

Required Prerequisites

Perform basic UNIX tasks

Use the vi text editor

Describe UNIX devices and common administration concepts

Administer systems at a level consistent with having completed the Solaris System Administration parts 1 and 2 courses

Suggested Prerequisites

Administer the Oracle Solaris 10 operating system

Configure many zone resource management features

Perform zone advanced network management

Rename, move, clone, and migrate Solaris zones

Back up and restore zones

Configure lx branded zones

Describe Solaris zones architecture and configure zones

Connect storage to zones

Manage packages and patches when zones are present

Configure persistent resource pools

Migrate physical Solaris systems into Zones

Course Topics

Virtualization Trends in the Datacenter
Describe the need for virtualization
Describe the benefits of a dynamic datacenter
Describe Oracle virtualization technologies

Describing Solaris Zones and Containers
Identify the features of Solaris Zones partitioning technology
Describe when zone partitioning is used
Describe zone types
Identify zone daemons
Describe zone models
Describe zone networking
Describe zone states
Differentiate between a zone and a container

Creating, Installing, and Booting Zones
Configure zones
Install zones
Boot zones
Halt a zone
Access a running zone from the global zone
Complete zone system identification steps in various ways

Connect Storage to Zones
Describe different ways to make storage available to zones
Use UFS with zones
Use LOFS with zones

Use ZFS with zones

Managing Packages and Patches Within Zones
Describe the Oracle Solaris Zones software package management features
Add packages to zones
Remove packages from zones
Describe the Oracle Solaris Zones software patch management features
Apply patches to zones, including using the zones parallel patching enhancement for all Solaris 10 releases
Remove patches from zones
Identify Solaris update methods available on systems with non-global zones installed

Configuring Persistent Resource Pools
Describe resource management concepts
Describe resource pool concepts
Determine which resource pool configuration is appropriate
Configure a persistent resource pool
Bind one or more zones to a persistent pool

Configuring Resource Management With Zones
Describe new zone resource management features in the Oracle Solaris 10 OS
Describe and implement use of the Fair Share Scheduler class
Configure temporary resource pools using zone configurations
Configure CPU shares for zones
Configure memory capping for zones
Configure an absolute fine-grained cap on the amount of CPU resources that can be consumed by a zone

Performing Zone Advanced Network Management
Describe IP multi-pathing (IPMP)
Configure IPMP to support a shared-IP zone
Configure exclusive-IP zones
Configure IPMP with exclusive-IP zones

Renaming, Moving, Cloning, and Migrating Zones
Rename zones
Move a zone to another location on the same system
Clone a zone
Migrate zones from one machine to another
Perform a trial migration before migrating a zone
Migrate a physical Oracle Solaris system to a zone

Performing Zone Backups and Restores
Describe how to create backups on systems with zones installed
Relate non-global zone configurations to backup and recovery requirements
Make zone backups from the global zone
Make backups from within a non-global zone
Understand limitations on backing up loopback file systems
Save and restore non-global zone configuration information
Recover individual non-global zones

Migrating a Physical Solaris System into a Zone
Describe how to migrate a physical Oracle Solaris System into a Zone (P2V)
Understand the P2V capabilities of Solaris 10

Prepare for system migration
Configure the zone on the target system in preparation for migration
Install the zone on the target system
Boot the zone to complete migration

Configuring the lx Branded Zone
Describe branded zones technology
Plan, configure, and install an lx branded zone
Boot an lx branded zone
Configure lx branded zone networking
List the operation system types supported by branded zones
Administer applications in an lx rranded zone