Solaris 10 Containers Administration

(SA-355-S10, 4 days)

Course Description

The Solaris 10 Containers Administration course provides a practical, hands-on, guided experience working with Sun's virtualization capabilities, collectively known as Solaris Containers. Solaris Zones and Solaris Resource Controls combine to create Solaris Containers. In this course you gain the knowledge critical to properly implement and manage these important capabilities in the Solaris Operating System. The hands-on labs offered in this course involve accessing equipment that resides at a location other than where the training is delivered.

Who Can Benefit

Students who can benefit from this course include system administrators who intend to implement Solaris Zones and Resource Controls on production systems, and individuals who support systems that are configured to use these Solaris capabilities.

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 part 1 and 2 courses
- Network Administration for the Solaris 10 Operating System (SA-300-S10)
- System Administration for the Solaris 10 OS Part 2 (SA-202-S10)

Suggested Prerequisites:

- Administer the Solaris 10 operating system
- Administer systems at a level consistent with having completed the Solaris Network Administration course

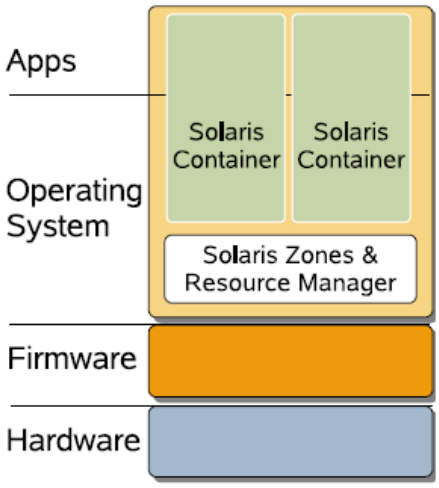

Figure 2. i Solaris OS Containers/Resource Manager

Skills Gained

Upon completion of this course, students should be able to:

- Describe virtualization trends in the datacenter
- Describe Solaris zones architecture and configure zones
- Connect storage to zones
- Manage packages and patches when zones are present
- Configure persistent resource pools
- Configure many zone resource management features
- Perform zone advanced network management
- Rename, move, clone and migrate Solaris zones
- Backup and restore zones
- Configure lx branded zones

Suggested Next Courses:

- Solaris System Performance Management (SA-400)

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Course Content

Module 1 - Virtualization Trends in the Datacenter

- Describe the need for virtualization
- Describe the benefits of a dynamic datacenter
- Describe Sun virtualization technologies

Module 2 - Describing Solaris Zones and Containers

- Describe zone features
- Describe zone concepts
- Describe zone types
- Identify zone daemons
- Describe zone models
- Describe zone networking
- Describe zone states

Module 3 - Creating, Installing, and Booting Zones

- Configure and verify zones
- Export zone configurations
- Install zones
- Boot and halt zones
- Access a running zone from the global zone
- Complete zone system identification steps in various ways

Module 4 - 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

Module 5 - Managing Packages and Patches Within Zones

- Describe package management features for zones
- Use package commands with zones
- Describe patch management features for zones
- Use patch commands with zones
- Describe Solaris 10 OS system update methods available when zones are configured

Module 6 - Configuring Persistent Resource Pools

- Describe resource management concepts
- Describe resource pool concepts
- Configure a persistent resource pool
- Bind one or more zones to a persistent pool
- Change a running zone's pool binding

Module 7 - Configuring Resource Management With Zones

- Describe new zone resource management features in the Solaris 10 OS 8/07 release
- 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

Module 8 - 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

Module 9 - Renaming, Moving, Cloning and Migrating Zones

- Rename zones
- Move zones
- Clone zones
- Migrate zones from one system to another

Module 10 - Performing Zone Backups and Restores

- Describe creating backups on systems with zones installed
- Relate non-global zone configurations to backup and recovery requirements
- Make zone backups from the global zone
- Make various backups from the non-global zone
- Understand limitations on backing up loopback file system directories
- Save and restore non-global zone configuration information

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Module 11 - Configuring the lx Branded Zone

- Describe branded zones
- Plan, configure, and install an lx branded zone
- Boot an lx branded zone
- Configure lx branded zone networking