

Solaris 10 Zones (Containers) Administration

Course Summary

Length: 3 days

Prerequisite: Solaris System Administration Part 1 course or equivalent experience

Recommendation Statement:

The student should have completed the Solaris 10 System Administration Part 1 course or should have five months of experience administering the Solaris operating system.

Course Description:

This course teaches the student how to administer Zones (Containers) in the Solaris 10 operating environment. A Zone is the implementation of virtualization within the Solaris OE. You'll learn the advantages of using Zones, how to implement Zones and how to manage Containers. You'll understand the issues associated with administering Solaris Zones in a real world environment. The course includes plenty of hands-on labs and each student will have their own system to practice on.

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

- Understand when and where to utilize Solaris Zones
- Configure and Administer non-global Zones
- Sparse vs. whole root Zones
- Networking in a Zone environment
- Boot, halt, clone and uninstall/delete non-global Zones
- Move Zones across file systems
- Migrate (copy/clone/move) a Zone across systems
- Backup and Restore Zones
- Connect storage to Zones
- Make modifications to an existing Zone configuration
- Allocate and delegate ZFS file systems to Zones
- Administration Packages and Patches in Zones
- Configure Resource Pools and Resource Management with Zones

Solaris 10 Zones Administration

Detailed Course Outline

Introduction to Solaris Zones

- Describe virtualization
- Zones overview
- When to implement zones
- An overview of how zones operate
- Why use Solaris zones
- Describe networking in Zones

Overview of Global and Non-global Zones

- Describe global and non-global zones
- Describe zone components
- Zone configuration files
- Zone daemons
- Whole root vs. Sparse zones

Configuring Non-global Zones

- The zonecfg command

Administering Zones

- Installing, verifying and booting zones
- Understanding zone states
- Halting and rebooting zones
- Cloning non-global zones
- Uninstalling and Deleting zones
- Logging into zones
- Export zone configurations
- Moving and migrating Zones
- Renaming zones
- Monitoring the health of zones
- Backup and Restore Zones
- Backup and restore data in zones
- Modify an Zone configuration

Configure Zone Storage

- Understand the methods used to provide storage to a Zone
- Using UFS with a Zone
- Using LOFS with a Zone

Using ZFS with Zones

- Allocate ZFS datasets to Zones
- Delegating ZFS datasets to Zones

Administration Packages and Patches in Zones

- Adding and removing packages to a zone
- Adding and removing patches to a zone

Configuring Resource Pools and Resource Management with Zones

- Describe new zone resource management features in the Solaris 10 OS 10/09 release
- Describe resource pools
- Configure a resource pool for a zone
- Describe and implement use of the Fair Share Scheduler class
- Configure CPU shares for zones
- Configure memory capping for zones

Networking in a Zone

- Using IP multi-pathing in a Zone (IPMP)
- Configure Exclusive IP Zones

Configure an Ix Branded Zones

- Understand branded Zones
- Plan and configure a branded zone
- Install and boot a branded zone

Perform 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