

Sun Virtualization Part II

Solaris 10 Logical Domains Administration (SA-345-S10)



Course Description

Sun Microsystems Logical Domains (LDMs) technology is part of a suite of methodologies for consolidation and resource management that includes Sun Fire Dynamic System Domains and Solaris OS Containers. This technology allows you to allocate a system's various resources, such as memory, CPUs, and devices, into logical groupings and create multiple, discrete systems. Each of these systems will have its own operating system, resources, and identity. The emphasis of this course is on providing practical LDM planning, configuration, and administration experience, while also covering the underlying technologies and best practices. This course features the Solaris 10 OS, and LDM management software. The students perform the course lab exercises using LDMs supported servers.

Who Can Benefit

Students who can benefit from this course are system administrators, IT architects, and other individuals tasked with the following responsibilities:

- Planning server consolidation
- Configuring logical domains
- Administering virtualized OS environments

Prerequisites

To succeed fully in this course, students should be able to:

- Administer the Solaris 10 OS
- Administer Ethernet networks
- Perform basic Sun Fire server initial setup tasks

Related Courses

Before:

- System Administration for the Solaris 10 Operating System Part 1 (SA-200-S10)
- System Administration for the Solaris 10 Operating System Part 2 (SA-202-S10)

Related:

- Solaris 10 Containers Administration (SA-355-S10)

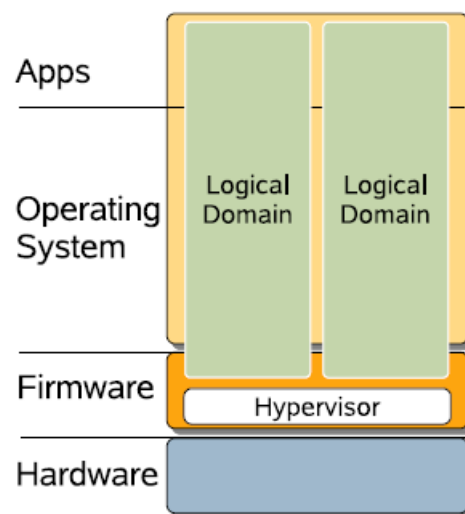


Figure 2. ii Logical Domains

Skills Gained

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

- Identify IT datacenter virtualization trends
- Describe the benefits of logical domains
- Explore logical domain architecture
- Prepare a system to support logical domains
- Create logical domains
- Reconfigure logical domains
- Create Split PCI configurations

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Course Content

Module 1 - Virtualization Trends in the Datacenter

- Describe the virtualization need
- Describe the benefits of an dynamic datacenter
- Describe Sun Microsystems' virtualization technologies

Module 2 - Solaris Logical Domains Fundamentals

- Describe LDom architecture
- Identify appropriate hardware platform
- Describe core/thread affinity model on CMT systems
- Describe Hypervisor software concepts
- Describe the LDom Manager
- Define LDom domain types:
 - Control domain
 - I/O domain
 - Service domain
 - Guest domain
- Define LDom virtualization
- Determine what to partition
- Identify physical resources
- Define virtual devices and services
- Identify Ldom configuration guidelines and requirements
- Identify resource requirements for control domains
- Identify resource requirements for I/O and service domains
- Determine how many domains are needed
- Define cryptographic devices and virtual CPUs
- Identify logical domains configuration requirements and guidelines

Module 3 - Preparing a System for Logical Domains

- Install the required firmware to support LDom
- Identify which hardware to use
- Configure a system to support LDom
- Perform Solaris configuration:
 - Obtain the correct build of the Solaris OS
 - Check the Solaris OS version
 - Patch Solaris to include the latest

- Ldoms support
- Perform Firmware configuration:
 - Check firmware versions
 - Update firmware version
- Run the install-ldm script:
 - Logical domains manager and security packages
 - User access to run ldm commands
- Administer security:
 - Security toolkit
 - RBAC
 - Audit controls
- Perform a quick test of the logical domains manager

Module 4 - Creating a Control and Service Logical Domain

- Describe the Logical Domains Manager (LDom) ldm command
- Identify control and service domain resources
- Create default virtual services
- Setup the control domain

Module 5 - Creating Guest Logical Domains

- Create a guest logical domain
- JumpStart a guest logical domain
- Verify a guest logical domain configuration

Module 6 - Advanced Logical Domain Administration

- Add and remove virtual CPUs to logical domains
- Add memory to logical domains
- Configure a group console
- Create a split PCI configuration
- Configure file-based virtual disks
- Configure ZFS-based virtual disks
- Configure virtual switch and service domain for NAT and routing
- Configure IPMP in the logical domain environment
- Configure virtual I/O failover
- Backup, remove, and restore logical domains

REGISTRATION AND INFORMATION

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