

Oracle Solaris 11 Performance Management

Duration: 5 Days

What you will learn

No hands on lab environment for the TOD course format.

This Oracle Solaris 11 Performance Management course introduces you to performance tuning principles. Learn to monitor utilities and use tuning tools for the Oracle Solaris 11 Operating System.

Learn To:

Use the Oracle Solaris 11 OS and third-party tools to analyze performance.

View and set tunable parameters for the global or a non-global zone.

Monitor and report on process and thread activity.

Modify CPU scheduling and virtual memory operations.

Describe system caches and system buses.

Tune I/O, the ZFS File System and network subsystems.

Evaluate system workloads.

Assess system performance.

Determine the cause of system performance issues.

Configure system resource for best performance.

Optimize software running on UltraSPARC CMT technology.

Tune the Solaris 11 OS.

Monitor System Efficiency

You'll also review Solaris subsystems and utilities to monitor system efficiency, including: kstat, sar, vmstat, iostat, netstat, mpstat, nfsstat, ps, prstat, pmap, the proc tools, truss, dtrace, the DTrace Toolkit, cpustat, cputrack, swap, lockstat and mdb.

Optimize Performance

This course also includes a section about optimizing system resources and tuning Solaris virtualization. You'll also review content related to key Cloud performance technologies, like Solaris Integrated Load Balancer and data flows control.

Hands-On Practice

The Oracle Solaris 11 Performance Management course includes robust hands-on practices. These labs will help you apply best practices and techniques to reinforce critical thinking and skills.

Audience

Data Center Manager
Support Engineer
System Administrator

Related Training

Required Prerequisites

Configure and administer Oracle Solaris 11 networking

Create and manage Oracle Solaris 11 storage

Employ advanced systems administration skills in a networked Oracle Solaris 11 OS server environment

Oracle Solaris 11 Advanced System Administration

Suggested Prerequisites

Oracle Solaris 11 ZFS Administration

Oracle Solaris 11 Zones Administration Ed 3

Course Objectives

Identify ways to measure or load subsystems

Configure resource management with zones and pools

Use system monitoring tools including DTrace

Determine the cause of system performance issues

Use system configuration tool

Course Topics

Introducing Performance Management

Introduction to Performance Management
Performance Analysis Concepts
Monitoring tools in Oracle Solaris 11
System Configuration Assessment

kstat Monitoring Tools

The kstat Monitoring Tools

procfs Monitoring Tools

Introduction to procfs-based tools

DTrace

- Introduction to DTrace
- DTrace Architecture
- DTrace Toolkit
- DTrace Virtualization Tool

Other Significant Tools

- The swap Utility
- The cpustat Utility
- The mdb Utility
- The Solaris Studio dbx Utility

Processes and Threads

- Operating System Theory
- Process Concepts
- Threads and Locking
- Process-Related Tunable Parameters
- CPU Scheduling Classes
- Managing Scheduling Classes

System Caches and Buses

- Cache Concepts
- CMT architecture
- System Buses
- Assessing System Buses

System Memory

- System Memory Concepts
- Virtual Memory 2
- Monitoring Memory utilization

ZFS File System

- The ZFS File System
- Tuning the ZFS file system

Network Performance Management

- Network Performance Concepts
- Oracle Solaris 11 Networking
- Configuring networks for best performance
- Network Resource management
- TCP
- Network Monitoring

Resource Management

- Resource Management
- Projects and Tasks
- Resource Controls
- Resource Pools
- Resource Capping

Oracle Solaris Virtualization Performance Management

- Oracle Solaris Zones
- Oracle Solaris Zones Resource Management

Network Virtualization
Oracle VM Server for SPARC

Applying the Performance Analysis Approach

Performance Testing and Benchmarks

Performance Testing Tools