

## Oracle Solaris 11 Performance Management

**Duration:** 5 Days

### What you will learn

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

## 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