# Sun Educational Services—Instructor-led Course Description

## Network Administration for the Solaris™ 9 Operating Environment

# SA-399

The *Network Administration for the Solaris™ 9 Operating Environment* course provides students with the knowledge and skills necessary to perform network administration tasks, such as configuration and troubleshooting of a local area network (LAN). This course also provides hands-on experience with topics such as Internet Protocol (IP) routing, Domain Name System (DNS), Dynamic Host Configuration Protocol (DHCP), and IP version 6 (IPv6).

## Who Can Benefit

Students who can benefit from this course are experienced system administrators who are or will be responsible for administering Sun systems in a networked environment that includes LANs and the Solaris™ Operating Environment (Solaris OE).

## Prerequisites

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

- Install, configure, and maintain a Solaris product line server
- Change system run levels
- Read and edit system resource files

## Skills Gained

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

- Configure routing and routing tables
- Configure subnet masks, including variable length masks
- Configure DHCP clients and servers
- Configure DNS
- Configure an Network Time Protocol (NTP) server and client
- Configure a system as an IPv6 host or router
- Configure IPv6-over-IPv4 tunnels
- Troubleshoot network problems

## Related Courses

Before:

- SA-299: *Advanced System Administration for the Solaris™ 9 OE*

After:

- SA-400: *Solaris™ System Performance Management*
- SC-300: *Administering Security on Solaris™ 8 OE*
- IN-350: *LDAP Design and Deployment*

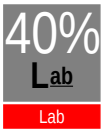
## Course Outline

### Module 1 – Introducing the TCP/IP Model

- Describe network model fundamentals
- Describe the layers of the TCP/IP model
- Describe basic peer-to-peer communication and related protocols

### Module 2 – *Introducing LANs and Their Components*

- Describe network topologies
- Describe LAN media
- Describe network devices





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***http://www.sun.com/service/suned,***
*or to order, please call: 1-800-422-8020.*

Module 3 – *Describing Ethernet Interfaces*

- Describe Ethernet concepts
- Describe Ethernet frames
- Use network utilities

Module 4 – *Describing ARP and RARP*

- Describe ARP
- Describe RARP

Module 5 – *Configuring IP*

- Describe the Internet layer protocols
- Describe the IP datagram
- Describe IP address types
- Describe subnetting and variable length subnet masks (VLSMs)
- Describe the interface configuration files
- Administer logical interfaces

Module 6 – *Configuring Multipathing*

- Increase network throughput and availability
- Implement multipathing
- Implement trunking

Module 7 – *Configuring Routing*

- Identify the fundamentals of routing
- Describe route table population
- Describe routing protocol types
- Describe the route table
- Configure static routing
- Configure dynamic routing
- Describe classless inter-domain routing (CIDR)
- Configure boot time routing
- Troubleshoot routing

Module 8 – *Configuring IPv6*

- Describe IPv6
- Describe IPv6 addressing
- Describe IPv6 autoconfiguration
- Describe IPv6 unicast address types
- Describe IPv6 multicast address types
- Enable IPv6
- Manage IPv6
- Configure IPv6-over-IPv4 tunnels
- Configure IPv6 multipathing

Module 9 – *Describing the Transport Layer*

- Describe Transport layer fundamentals
- Describe UDP
- Describe TCP
- Describe TCP flow control

Module 10 – *Configuring DNS*

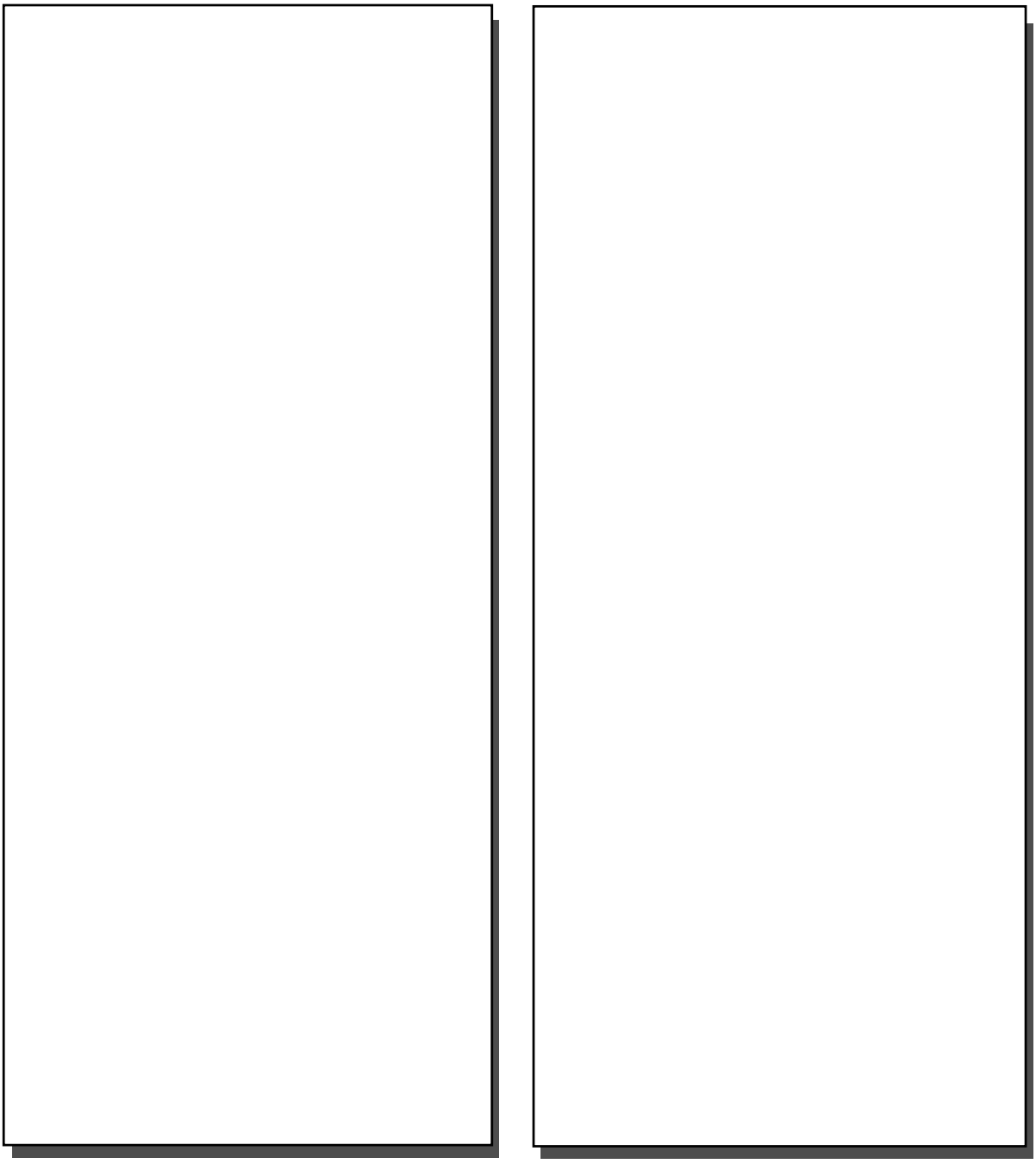
- Describe DNS basics
- Configure DNS server
- Troubleshoot the DNS server using basic utilities

Module 11 – *Configuring DHCP*

- Describe the fundamentals of DHCP
- Configure a DHCP server
- Configure and manage DHCP clients
- Configure for dynamic DNS
- Configure a DHCP server to support JumpStart™ clients

Module 12 – *Configuring NTP*

- Identify NTP basics
- Configure an NTP server
- Configure an NTP client
- Troubleshoot NTP





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