RH423 Red Hat Enterprise Directory Services and Authentication

Course Summary

Description

This course is designed to train people with RHCE competency on skills required to manage and deploy the Red Hat Directory Server on and for Red Hat Enterprise Linux systems. Gaining an understanding of the basic concepts, configuration, and management of LDAP-based services is central to this course. The course will also look at PAM, the Pluggable Authentication Modules system, and how it is integrated with services that require authentication and authorization.

Topics

- Introduction to Directory Services
- The LDAP Naming Model
- Red Hat Directory Server: Basic Configuration
- Red Hat Directory Server: Authentication and Security
- Searching and Modifying the LDAP Directory
- Linux User Authentication with NSS and PAM
- Centralized User Authentication with LDAP
- Kerberos and LDAP
- Directory Referrals and Replication
- Authenticating Windows Clients
- Windows Domain Authentication and Linux Clients

Audience

This course is aimed at senior Red Hat Enterprise Linux system administrators and other IT professionals who need to provide enterprise-wide authentication or information services or who desire training in the management of LDAP-based directory services and customization of Linux authentication using the Red Hat Directory Server.

Prerequisites

Students are required to have RHCE-level skills. The RHCE certificate on Red Hat Linux 7.1 or later is recommended but not required. Prerequisite skills can be shown by passing the RHCE Exam or by possessing comparable skills and knowledge.

Duration

Four days

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Course Outline

I. Introduction to Directory Services
- A. What is a directory?
- B. LDAP: models, schema, and attributes
- C. Object classes
- D. LDIF

II. The LDAP Naming Model
- A. Directory information trees and Distinguished Names
- B. X.500 and "Internet" naming suffixes
- C. Planning the directory hierarchy

III. Red Hat Directory Server: Basic Configuration
- A. Installation and setup of Red Hat Directory Server
- B. Using the Red Hat Console
- C. Using logging to monitor Red Hat Directory Server activity
- D. Backing up and restoring the directory
- E. Basic performance tuning with indexes

IV. Red Hat Directory Server: Authentication and Security
- A. Configuring TLS security
- B. Using access control instructions (ACI's)
- C. ACI's and the Red Hat Console

V. Searching and Modifying the LDAP Directory
- A. Using command line utilities to search the directory
- B. Search filter syntax
- C. Updating the directory
- D. Using graphical LDAP client utilities

VI. Linux User Authentication with NSS and PAM
- A. Understanding authentication and authorization
- B. Name service switch (NSS)
- C. Advanced pluggable authentication modules (PAM) configuration

VII. Centralized User Authentication with LDAP
- A. Central account management with LDAP
- B. Using migration scripts to migrate existing data into an LDAP server
- C. LDAP user authentication

VIII. Kerberos and LDAP
- A. Introduction to Kerberos
- B. Configuring the Kerberos key distribution center (KDC) and clients
- C. Configuring LDAP to support Kerberos
- D. Access control with Simple Authentication and Security Layer (SASL)

IX. Directory Referrals and Replication
- A. Referrals and replication
- B. Single master configuration
- C. Multiple master configurations
- D. Planning for directory server availability

X. Authenticating Windows Clients
- A. Windows networking overview
- B. Configuring a Samba primary domain controller (PDC) using LDAP

XI. Windows Domain Authentication and Linux Clients
- A. Active Directory servers
- B. Linux as a client
- C. Active Directory and NSS
- D. OpenLDAP
- E. Winbind

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