

ANNEX C. CONTENTS AND OBJECTIVES OF THE TRAINING

IBM Tivoli Storage Manager V 6.2 – Implementation and Administration

This course teaches storage administrators the essential skills required for implementing, configuring and administering IBM Tivoli Storage Manager. Through hands-on exercises, learn how to install the Tivoli Storage Manager 6.2 server, backup-archive client, the Tivoli Integrated Portal and Administration Center. After the product is installed you will configure the environment. You will create and configure storage pool hierarchies and define policies to manage the flow of data from disk to disk or tape media. Lab exercises will guide you through the steps to back up, restore, archive and retrieve client data. You will also create schedules to run administrative and client processes and maintain your Tivoli Storage Manager environment to ensure recoverability.

The Student Exercises for this course are conducted on a Windows operating system.

Skills taught

- Discuss the features of IBM Tivoli Storage Manager.
- Install IBM Tivoli Storage Manager server and backup-archive client.
- Navigate the administrative interfaces.
- Explain the concepts of attaching a tape library and preparing media.
- Create and manage storage pools and storage pool volumes.
- Describe data deduplication.
- Define policy to meet business requirements.
- Customize the IBM Tivoli Storage Manager database and recovery log.
- Configure the backup-archive client.
- Back up, restore, archive, and retrieve client data.
- Protect the IBM Tivoli Storage Manager database and storage pools.
- Schedule administrative tasks.
- Monitor server and client messages and events

Course outline

- IBM Tivoli Storage Manager Overview (1 hour; no lab exercises)
- Installing IBM Tivoli Storage Manager (2 hours; 11 lab exercises)
- Administrative Interfaces and Privileges (3 hours; 20 lab exercises)
- Storage Media Devices (1 hour; no lab exercises)
- Managing Storage Pools and Storage Pool Volumes (3 hours; 15 lab exercises)
- Policy Management (2 hours; 6 lab exercises)
- Customizing the Tivoli Storage Manager Database and Recovery Log (2.5 hours; 4 lab exercises)
- Client Configuration (3.5 hours; 18 lab exercises)
- Backup-Archive Client Functions (3 hours; 24 lab exercises)
- Protecting the Database and Storage Pools (3 hours; 14 lab exercises)
- Automating Operations (2 hours; 13 lab exercises)
- Monitoring and Event Logging (2 hour; 3 lab exercises)

Data storage systems DS4000 in the SAN networks

This course is for the staff with the responsibilities of planning, installing, administrating storage systems IBM DS4000/DS5000 for System x.

Skills taught

- Install and set DS4000/DS5000 with the help Storage Manager
- Manage storage system and keep the monitoring
- Copy virtual discs for archive and other purposes
- Install and set the FibreChannel communication equipment
- Manage FC-communicators and keep the monitoring
- Fix typical errors
- Deal with servers access to the storage systems
- Describe the monitoring and management systems for storage systems

Course outline

- Outline of FibreChannel
- Products of FibreChannel from IBM
- Management of storage system DS4000/DS5000
- Issues of accessing of AIX and Linux to DS4000/DS5000
- Copying options of DS4000/DS5000 - FlashCopy, VolumeCopy, Remote Volume Mirroring
- Data storage networks – creating and zoning
- IBM TPC - TotalStorage Productivity Center
- Issues of support DS4000/DS5000
- Finding and fixing of errors in DS4000/DS5000

IBM System x Technical Principles

This is the entry course for all of the System x Technical Education Roadmaps including certification, clustering, and systems management. The student will gain a thorough understanding of the design, architectures, features, and functions of IBM System x servers.

This course will cover all the technological innovations that comprise the System x and BladeCenter product portfolio. First, we will build a foundation centered around basic System x architectures and technologies that are featured across the product line. Next, we focus on the products that comprise the System x server portfolio: tower, rack, and the new eX5 line of servers. Finally, we will look at one of the hottest infrastructure solutions: virtualization. This course will show how the System x technologies, tools, systems management options, and support combine to provide a total end-to-end business solution.

Skills taught

- List the features of IBM X-Architecture
- Recognize the System x server product line
- Articulate the elements that comprise IBM Smarter Planet
- Describe how System x plays a key role in IBM Smarter Planet
- List the three key requirements of IBM Smarter Planet
- Recognize the basic server types
- Articulate the features of the System x disk subsystem
- List the RAID levels supported by IBM ServeRAID adapters
- List the key elements of the System x memory subsystem
- Identify the various System x processor options
- Describe the features common to System x networking subsystem
- Examine the System x PCI subsystem
- Articulate the features of the Integrated Management Module (IMM)
- List the features of Light Path Diagnostics
- Describe the Unified Extensible Firmware Interface (UEFI)
- Articulate the benefits of IBM Systems Director
- Describe the new virtualization extension of IBM Systems Director - VMControl
- Articulate the ways that IBM Active Energy Manager can save a typical data center power and cooling costs
- List all the deployment, update, diagnostic, and configuration tools available from the IBM ToolsCenter
- Recognize the IBM System x tower server portfolio
- Recognize the IBM System x rack server portfolio
- Recognize the IBM eX5 enterprise server portfolio
- Recognize the benefit to installing the Standalone Solutions Configuration Tool (SSCT)
- List the features of the IBM Hardware Configurator
- Describe benefits of using the Configuration and Options Guide
- Understand the value of the BladeCenter & System x Power Configurator Tool
- Describe the recommendations provided by the Sizing Guides
- Recognize the key components listed in the IBM Workload Estimator (WLE)
- Introduce the concepts and considerations for rack design and implementation in the data center
- Provide an overview of power requirements and options, including PDU selection and IBM configuration and planning tools
- Introduce chassis cooling concepts
- List three IT issues that helped virtualization become popular
- List three benefits of using virtualization
- Identify the key differences between Type 1 and Type 2 hypervisors
- Distinguish the System x product line by listing the features that support virtualization
- List the IBM virtualization offerings available today

Course outline

Day 1

Unit 1: Introduction to IBM System x
Unit 2: System x server subsystem technologies
Lab 1: Using the Remote Supervisor Adapter II
Lab 2: System x hardware configuration
Lab 3: Updating firmware on System x Servers (UpdateXpress)

Day 2

Unit 2: System x server subsystem technologies (cont.)
Unit 3: System x systems management
Unit 4: System x systems overview: Tower servers
Unit 5: System x systems overview: Rack servers
Unit 6: System x systems overview: IBM eX5 enterprise servers
Lab 4: ServerGuide setup and installation

Day 3

Unit 7: System x tools and support
Unit 8: Rack, power, and cooling: Data center design
Unit 9: System x business solutions: Virtualization
Lab 5: Using the Unified Extensible Firmware Interface
Lab 6: ServeRAID driver update
Lab 7: ServeRAID Manager

Building the IBM Lotus Domino 8 Infrastructure

In this course, you will install and configure a basic infrastructure with a single domain using an existing deployment plan. Students will also set up replication and mail routing in the single-domain environment.

Skills taught

Upon completing the course, you should be able to:

- Install and set up the first Lotus Domino server and administrator
- Set up servers in the Lotus Domino domain
- Add Lotus Notes workstations to the Lotus Domino domain
- Set up the administration environment
- Set up the replication schedule to synchronize Lotus Domino system databases in the domain
- Configure intranet Lotus Domino mail routing
- Configure internet mail routing
- Enable message controls
- Enable server and messaging monitoring
- Troubleshoot common mail setup problems

Course outline

- **Installing and setting up the first Lotus Domino server and administrator**
 - Considering deployment scenarios
 - Designing a hierarchical naming scheme

- Installing and setting up the first Domino server and the Domino Administrator client
- Creating a database to track Lotus Domino and Lotus Notes licenses
- **Setting up servers in the Lotus Domino domain**
 - Creating additional certifiers for servers and users per an established naming scheme
 - Constructing server IDs per an established naming scheme
- **Adding Lotus Notes workstations to the Lotus Domino domain**
 - Creating internal Lotus Domino user IDs per an established naming scheme
 - Installing the Lotus Notes client software
 - Setting up the Lotus Notes workstation
 - Making user groups
 - Specifying desktop settings using policies
- **Setting up the administration environment**
 - Specifying administration preferences
 - Allowing and restricting server access
 - Making administrators access to the Domino Directory
 - Recording server activity in the Domino Server Log file
- **Setting up the replication schedule to synchronize Lotus Domino system databases in the domain**
 - Designing a replication topology
 - Creating a group for server replication
 - Scheduling replication
 - Monitoring replication
- **Configuring intranet Lotus Domino mail routing**
 - Creating Domino Named Networks
 - Routing mail between Domino Named Networks
 - Scheduling mail routing
- **Configuring internet mail routing**
 - Enabling SMTP routing
 - Configuring basic and advanced settings for SMTP routing
 - Restricting mail flow to and from the Internet
- **Enabling message controls**
 - Controlling mail delivery
 - Setting mail restrictions
 - Creating white-list and blacklist filters
 - Implementing message disclaimers
 - Enhancing transfer performance
 - Enabling mail journaling
 - Understanding how mail rules are executed
 - Creating mail rules
 - Stopping the processing of mail rules
 - Using the blacklist tag and white-list tag mail rule conditions
 - Establishing mail quotas
 - Archiving mail using policies
 - Controlling Inbox size

- **Enabling server and messaging monitoring**
 - Testing mail routing
 - Enabling message tracking
 - Monitoring mail delivery and mail statistics
 - Enabling message recall
- **Troubleshooting common mail setup problems**
 - Testing mail connections
 - Restarting the Router
 - Forcing mail to route
 - Managing dead and undelivered mail