

Training Proposal for CN OSS Project

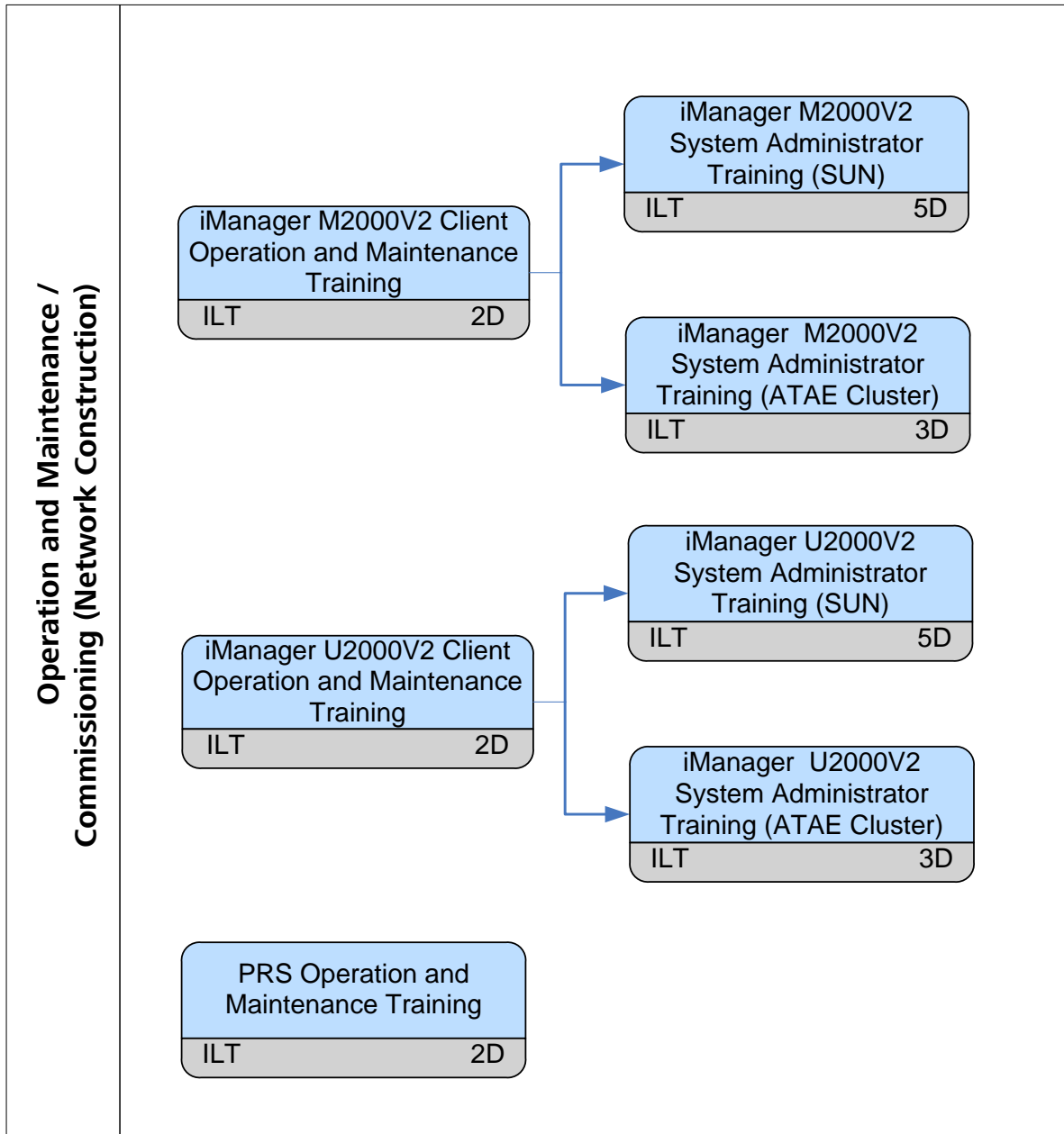


CONTENTS

1	Training Solution	3
1.1	CN OSS Training Path.....	3
1.2	Required Training Programs	4
1.3	iManager M2000.....	5
1.3.1	iManager M2000V2 Client Operation and Maintenance Training.....	5
1.3.2	iManager M2000V2 System Administrator Training (SUN)	7
1.3.3	iManager M2000V2 System Administrator Training (ATAE Cluster)	11
1.4	PRS	14
1.4.1	PRS Operation and Maintenance Training	14
1.5	iManager U2000	16
1.5.1	iManager U2000V2 Client Operation and Maintenance Training.....	16
1.5.2	iManager U2000V2 System Administrator Training (SUN).....	18
1.5.3	iManager U2000V2 System Administrator Training (ATAE Cluster).....	21

1 Training Solution

1.1 CN OSS Training Path



1.2 Required Training Programs

CN OSS For this project, the whole training solution is designed into the following programs. List of Training Program(s) for CN OSS Project:

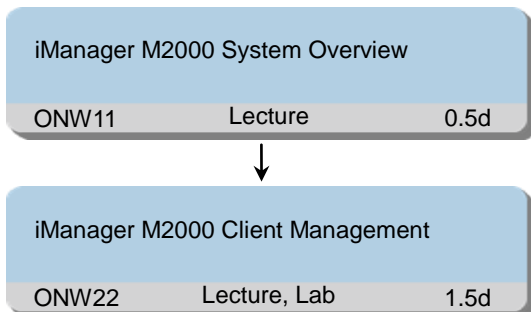
Training Program	Program Level	Duration (workdays)	Training Location	Class Size
iManager M2000				
iManager M2000V2 Client Operation and Maintenance Training	II	2		6 ~ 12
iManager M2000V2 System Administrator Training (SUN)	III	5		6 ~ 12
iManager M2000V2 System Administrator Training (ATAE Cluster)	III	3		6 ~ 12
PRS				
PRS Operation and Maintenance Training	III	2		6 ~ 12
iManager U2000				
iManager U2000V2 Client Operation and Maintenance Training	II	2		6 ~ 12
iManager U2000V2 System Administrator Training (SUN)	III	5		6 ~ 12
iManager U2000V2 System Administrator Training (ATAE Cluster)	III	3		6 ~ 12

Level Description: I : Basic Course II : Intermediate Course III: Advanced Course IV: Expert Course

1.3 iManager M2000

1.3.1 iManager M2000V2 Client Operation and Maintenance Training

Training Path



Target Audience

Network monitor
M2000 system manager

Prerequisites

- Being familiar with MS Windows Operation System
- A basic knowledge of mobile communications

Objectives

On completion of this program, the participants will be able to:

- Know the system structure of M2000 system
- State the functions of M2000 system
- Conduct basic operations on M2000 client
- Construct and manage the topology structure of the entire network
- Learn and monitor the running status of the entire network by browsing the topology view
- Describe Fault Management Basic Concept
- Outline Handling Alarm Procedure
- Complete Handling Alarm tasks
- Describe the role of performance management in the M2000
- Perform performance management operations
- Describe M2000 configuration management module function
- Complete daily maintenance tasks through MIT and LMT

Training Content

ONW11 iManager M2000 System Overview

- iManager M2000 V200R012 System Overview
 - Introduction to M2000
 - System Structure
 - Main Functions

-
- System Typical Configuration
- ONW22 iManager M2000 Client Management
- iManager M2000V200R012 Topology Management
 - Basic Concept of Topology Management
 - Creating a Physical Subnet
 - Creating a Physical NE
 - Monitoring an NE
 - Adjusting the Network Topology
 - iManager M2000V200R012 Fault Management
 - Fault Management Basic Concept
 - Fault Management Routine Operation
 - iManager M2000V200R012 Performance Management
 - Basic Concept of Performance Management
 - Preferences Settings
 - Database Capacity Parameters
 - Measurement Management
 - Custom Counter Management
 - Querying Performance Measurement Results
 - Missing Result Diagnosis Tool
 - Other Functions
 - iManager M2000V200R012 Configuration Management
 - Related Concepts of Configuration Management
 - Configuration Management
 - MML Commands

Duration

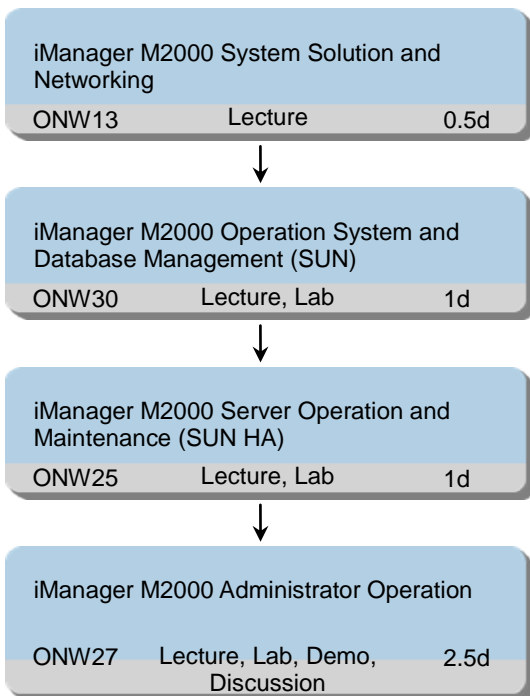
2 working days

Class Size

Min 6, Max 12

1.3.2 iManager M2000V2 System Administrator Training (SUN)

Training Path



Target Audience

M2000 Server maintenance engineer

Prerequisites

- Master Solaris basic operations
- Master Sybase database basic operations

Objectives

On completion of this program, the participants will be able to:

- Know M2000 hardware and software structure
- Describe M2000 software modules structure and modules functions
- List M2000 server typical configuration
- Describe M2000 server networking
- Describe Solaris 10 system management commands
- Describe files system structure
- Perform system management operation
- Describe Sybase15 database modules
- Describe Sybase15 database operation commands
- Implement start and stop data process
- Master how to import and export database
- Describe M2000 SUN Single Server network system structure, logical, hardware, software structure

-
- List M2000 server file system composing
 - List M2000 system user type
 - Perform powering on/powering off the M2000, monitoring system status, M2000 database management, system backup and restore
 - Perform M2000 routine maintenance tasks
 - Describe M2000 SUN HA network system structure, logical, hardware, software structure
 - List M2000 server file system composing
 - List M2000 system user type
 - Perform powering on/powering off the M2000, managing cluster resources, monitoring system status, M2000 database management, system backup and restore
 - Perform M2000 routine maintenance tasks
 - Describe user type in M2000 system
 - Master how to create, modify, delete user information
 - Manage user group in M2000 system
 - Manage user network right and operation right
 - Complete monitor user state
 - Complete M2000 system log management
 - Master NEs status checking methods
 - Describe M2000 system software structure
 - Describe system software updating procedure and methods
 - Perform NEs mediation software installation and updating
 - Describe M2000 system Backup and Restore base knowledge
 - Master how to backup and restore M2000 data
 - Know the base knowledge of M2000 system emergency maintenance
 - List M2000 system emergency scene
 - Master the methods and steps of M2000 system emergency maintenance
 - Know M2000 dangerous operations
 - Master normal Trouble Shooting methods
 - Describe Northbound interface functions in M2000 system

Training Content

ONW13 iManager M2000 System Solution and Networking

- iManager M2000 V2 System Solution and Networking
 - Introduction to M2000
 - M2000 Network Solution
 - M2000 Software Architecture
 - M2000 Hardware Components
 - M2000 System Networking

ONW30 iManager M2000 Operation System and Database Management (SUN)

- Operation System Management (Solaris10)
 - Features of UNIX
 - Basic Operation of UNIX

-
- File System Management
 - User Management
 - Resource Management
 - Network Management
 - Restart and Shutdown the UNIX
 - Database Management (Sybase15)
 - Sybase Database Introduction
 - Sybase Basic Concepts
 - Practical Program
 - SQL Server Start and Shut down
 - T-SQL Language
 - Sybase Backup and Recovery
- ONW25 iManager M2000 Server Operation and Maintenance (SUN HA)
- iManager M2000 V2 Server Operation and Maintenance (SUN HA)
 - M2000 SUN HA system overview
 - M2000 system power on and power off
 - M2000 system users management
 - M2000 cluster resources management
 - M2000 daily/monthly/yearly maintenance operations
- ONW27 iManager M2000 Administrator Operation
- iManager M2000 V2 Security Management
 - Security Management Overview
 - Set M2000 system security parameter
 - Create OM Users
 - Manage OM User
 - Manage NE Users
 - Customize MML Authority
 - Monitor OM Users
 - iManager M2000 V2 Log Management and Daily Checking
 - Basic Knowledge of log Management
 - Log Operation from Client
 - Log Operation from Server
 - iManager M2000 V2 Software Upgrading and Mediation Software Installation
 - Software Upgrading Procedure
 - Mediation Software Installation Procedure
 - iManager M2000 V2 Backup and Restore Solution
 - M2000 Backup and Restore Solution Introduction
 - Backing up the M2000 Data
 - Restoring the M2000 Data
 - iManager M2000 V2 Troubleshooting
 - Dangerous Operations in M2000 system
 - M2000 Trouble Shooting

Duration

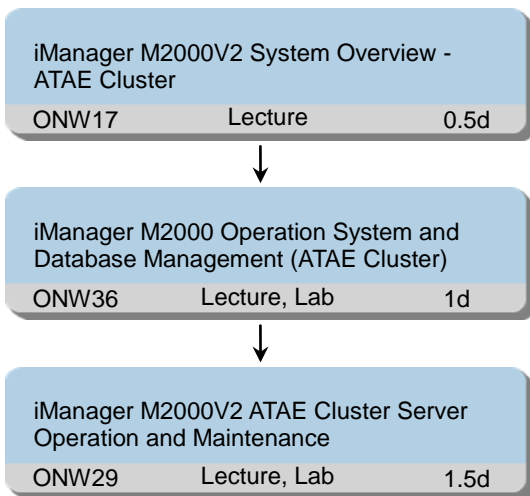
5 working days

Class Size

Min 6, Max 12

1.3.3 iManager M2000V2 System Administrator Training (ATAE Cluster)

Training Path



Target Audience

Network management operator

Prerequisites

- Having basic knowledge in telecommunication and mobile communication

Objectives

On completion of this program, the participants will be able to:

- Describe the basic concepts and principles of ATAE cluster
- Describe the ATAE hardware structure and its function
- Map between principles and the corresponds hardware module
- Master the networking and typical application scenario of ATAE Cluster scheme
- Describe the system structure and basic function of OSMU
- Master the system management of OSMU
- Master the equipment management, service management, software management, general maintenance OSMU
- Master the method to backup and restore the different data types of ATAE Cluster
- Describe Northbound Interface Definition and Function
- Perform Northbound Interface Interconnection Commissioning
- Handle Northbound Interface Common Troubleshooting
- Explain the meaning of OM user, NE user, mode 1, mode 2 NE
- Manage OM user and NE user
- Set security policy parameters
- Monitor the user status
- Describe Oracle storage and SQL language
- Describe M2000 database

-
- Perform the M2000 database Usage viewing
 - Describe the concept and features of SUSE Linux system
 - Perform common operating system commands

Training Content

ONW17 iManager M2000V2 System Overview - ATAE Cluster

- iManager ATAE Cluster Principle and Structure
 - Introduction to ATAE Cluster
 - Hardware Structure
 - ATAE Cluster Scheme

ONW36 iManager M2000 Operation System and Database Management (ATAE Cluster)

- iManager M2000 ATAE Cluster OS Operation
 - Oracle Database Overview
 - Oracle Storage Overview
 - Oracle SQL Language Introduction
 - Oracle SQL DML Operation
 - Oracle SQL*Plus Introduction
 - M2000 Database Introduction
 - M2000 Oracle User Introduction
 - M2000 Database Usage Viewing

ONW29 iManager M2000V2 ATAE Cluster Server Operation and Maintenance

- iManager M2000 V2 Security Management
 - Security Management Overview
 - Set M2000 system security parameter
 - Create OM Users
 - Manage OM User
 - Manage NE Users
 - Customize MML Authority
 - Monitor OM Users
- iManager ATAE Cluster Operation and Maintenance
 - Configure, monitor, maintenance and collect information of hardware
 - Switch board and storage
 - Install and upgrade M2000 server software, mediation and license
 - Commission NBI
 - Manage the PRS system on ATAE Cluster
 - Manage and maintenance processes of board level or system level
 - Manage multi-task of all status
 - Collect health information
 - Collect ESN and troubleshooting information
 - Maintenance time, route and password of the system
 - Manage the OSMU board
- iManager ATAE Cluster Backup and restore

-
- Master the principle of backup and restore
 - Describe the scenarios for backup and restore
 - Backup and restore OS, static and dynamic data
 - Backup and restore data of OSMU
 - iManager M2000 Northbound Interfaces Introduction
 - Northbound Interface Definition and Classification
 - CORBA Interface Introduction
 - Inventory File Interface Introduction
 - SNMP Interface Introduction
 - XML Interface Introduction
 - CORBA Interface Interconnection Commissioning
 - Inventory File Interface Interconnection Commissioning
 - SNMP Interface Interconnection Commissioning
 - XML Interface Interconnection Commissioning

Duration

3 working days

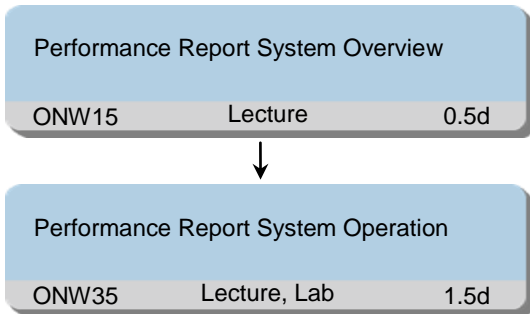
Class Size

Min 6, Max 12

1.4 PRS

1.4.1 PRS Operation and Maintenance Training

Training Path



Target Audience

Network Performance analyzing and maintenance engineer

Prerequisites

- Being familiar with MS Windows Operation System
- A basic knowledge of mobile communications

Objectives

On completion of this program, the participants will be able to:

- Describe PRS Network Topology
- Describe Architecture of PRS
- Describe Functions of PRS
- Perform Typical Configurations of PRS
- Describe Technical Specifications of PRS
- Master how to power on and power off the PRS, set the server parameters for the PRS system, manage the clients of the PRS system, manage PRS system logs, monitor the PRS system, manage PRS processes and services, manage the PRS system database, manage files and disks of the PRS system
- Know routine maintenance of the PRS System

Training Content

ONW15 Performance Report System Overview

- PRS System Introduction V1R8 (Separated Deployment)
 - PRS Network Topology
 - Architecture of PRS
 - Functions of PRS
 - Typical Configurations of PRS
 - Technical Specifications of PRS

ONW35 Performance Report System Operation

-
- PRS Operator Guide V1R8 (Separated Deployment)
 - Routine Operations on PRS Client
 - Preference Related to Performance Report
 - Managing Engineering Parameters
 - Managing KPIs
 - Managing Customized Performance Reports
 - Generating a Performance Report File on Schedule
 - Monitoring the Performance of the Network
 - PRS Web System
 - PRS Administrator Guide V1R8 (Separated Deployment)
 - Managing Files and Disks of PRS Server
 - Monitoring PRS Server with PRS Client
 - Managing PRS Logs
 - Managing PRS Users
 - Managing PRS System Processes and Services
 - Managing PRS Database
 - Back Up and Restoring PRS system

Duration

2 working days

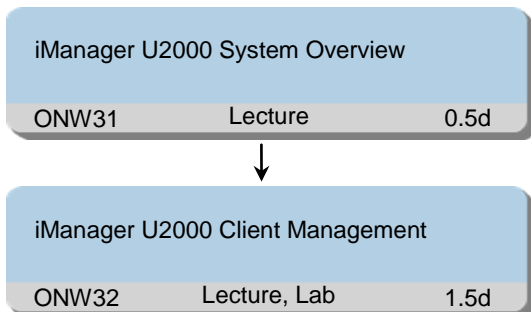
Class Size

Min 6, Max 12

1.5 iManager U2000

1.5.1 iManager U2000V2 Client Operation and Maintenance Training

Training Path



Target Audience

Network monitor
U2000 system manager

Prerequisites

- Being familiar with MS Windows Operation System
- A basic knowledge of mobile communications

Objectives

On completion of this program, the participants will be able to:

- Know the system structure of U2000 system
- State the functions of U2000 system
- Conduct basic operations on U2000 client
- Construct and manage the topology structure of the entire network
- Learn and monitor the running status of the entire network by browsing the topology view
- Describe Fault Management Basic Concept
- Outline Handling Alarm Procedure
- Complete Handling Alarm tasks
- Describe the role of performance management in the U2000
- Perform performance management operations
- Describe U2000 configuration management module function
- Complete daily maintenance tasks through MIT and LMT

Training Content

ONW31 iManager U2000 System Overview

- iManager U2000 V200R014 System Overview
 - Introduction to U2000
 - System Structure
 - Main Functions

-
- System Typical Configuration
- ONW32 iManager U2000 Client Management
- iManager U2000V200R014 Topology Management
 - Basic Concept of Topology Management
 - Creating a Physical Subnet
 - Creating a Physical NE
 - Monitoring an NE
 - Adjusting the Network Topology
 - iManager U2000V200R014 Fault Management
 - Fault Management Basic Concept
 - Fault Management Routine Operation
 - iManager U2000V200R014 Performance Management
 - Basic Concept of Performance Management
 - Preferences Settings
 - Database Capacity Parameters
 - Measurement Management
 - Custom Counter Management
 - Querying Performance Measurement Results
 - Missing Result Diagnosis Tool
 - Other Functions
 - iManager U2000V200R014 Configuration Management
 - Related Concepts of Configuration Management
 - Configuration Management
 - MML Commands

Duration

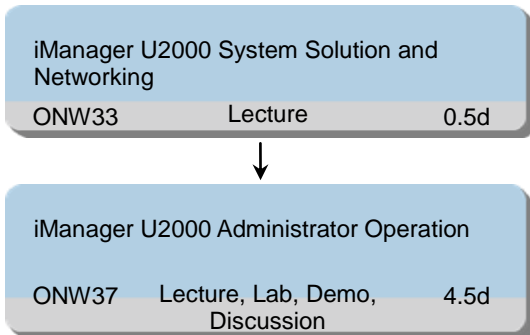
2 working days

Class Size

Min 6, Max 12

1.5.2 iManager U2000V2 System Administrator Training (SUN)

Training Path



Target Audience

U2000 Server maintenance engineer

Prerequisites

- Master Solaris basic operations
- Master Sybase database basic operations

Objectives

On completion of this program, the participants will be able to:

- Understand the related concept about U2000
- Master the U2000 system architecture
- Understand the U2000 system networking
- Describe the logical, hardware, and software structure of the local solution of the U2000
- List the components of the U2000
- Describe the classification of the northbound interfaces
- Describe the function of the northbound interfaces
- List the types of U2000 users
- Describe U2000 SUN Single Server network system structure, logical, hardware, software structure
- List U2000 server file system composing
- List U2000 system user type
- Perform powering on/powering off the U2000, monitoring system status, U2000 database management, system backup and restore
- Perform U2000 routine maintenance tasks
- Explain the meaning of O
- M user, NE user, mode 1, mode 2 NE
- Manage OM user and NE user
- Set security policy parameters
- Monitor the user status
- Master the concept related to log management

-
- Master how to perform the log management from client and server
 - Perform Software Upgrading Procedure
 - Perform Mediation Software Installation Procedure
 - Outline the U2000 backup and restore data type
 - Describe the solutions of U2000 data backup and restore
 - Describe the topology, procedure of U2000 data backup and restore solutions
 - Complete backing up the U2000 data operations
 - Complete restoring the U2000 data operations
 - Perform U2000 troubleshooting

Training Content

ONW33 iManager U2000 System Solution and Networking

- iManager U2000 V2 System Solution and Networking
 - Introduction to U2000
 - U2000 Network Solution
 - U2000 Software Architecture
 - U2000 Hardware Components
 - U2000 System Networking

ONW37 iManager U2000 Administrator Operation

- iManager U2000 V2 Server Operation and Maintenance
 - U2000 SUN single server system overview
 - U2000 system power on and power off
 - U2000 system users management
 - U2000 daily/monthly/yearly maintenance operations
- iManager U2000 Northbound Interface Introduction
 - TMN Hierarchical Structure
 - Northbound Interfaces and Classification
- iManager U2000 V2 Security Management
 - Security Management Overview
 - Set U2000 system security parameter
 - Create OM Users
 - Manage OM User
 - Manage NE Users
 - Customize MML Authority
 - Monitor OM Users
- iManager U2000 V2 Log Management and Daily Checking
 - Basic Knowledge of log Management
 - Log Operation from Client
 - Log Operation from Server
- iManager U2000 V2 Software Upgrading and Mediation Software Installation
 - Software Upgrading Procedure
 - Mediation Software Installation Procedure

-
- iManager U2000 V2 Backup and Restore Solution
 - U2000 Backup and Restore Solution Introduction
 - Backing up the U2000 Data
 - Restoring the U2000 Data
 - iManager U2000 V2 Troubleshooting
 - Dangerous Operations in U2000 system
 - U2000 Trouble Shooting
 - iManager U2000 V2 Troubleshooting Practice Guide
 - U2000 system normal fault analysis and processing procedure
 - U2000 troubleshooting case analysis

Duration

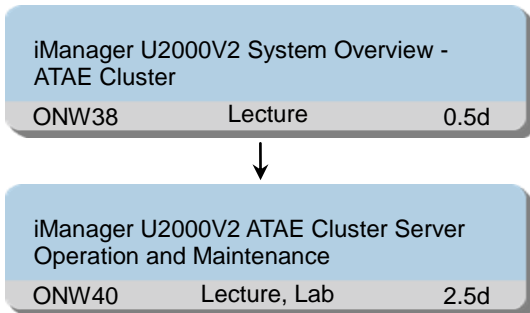
5 working days

Class Size

Min 6, Max 12

1.5.3 iManager U2000V2 System Administrator Training (ATAE Cluster)

Training Path



Target Audience

Network management operator

Prerequisites

- Having basic knowledge in telecommunication and mobile communication

Objectives

On completion of this program, the participants will be able to:

- Describe the basic concepts and principles of ATAE cluster
- Describe the ATAE hardware structure and its function
- Map between principles and the corresponds hardware module
- Master the networking and typical application scenario of ATAE Cluster scheme
- Outline the main features and basic concepts of Sybase
- Start, shutdown, backup and restore Sybase database
- Describe basic SQL language
- Describe the concept and features of SUSE Linux system
- Perform common operating system commands
- Describe the system structure and basic function of OSMU
- Master the system management of OSMU
- Master the equipment management, service management, software management, general maintenance OSMU
- Master the method to backup and restore the different data types of ATAE Cluster
- Describe the classification of the northbound interfaces
- Describe the function of the northbound interfaces
- Describe Northbound Interface Definition and Function
- Describe File Interface Classification and Function
- Perform File Interface Interconnection Commissioning
- Explain the meaning of O
- M user, NE user, mode 1, mode 2 NE
- Manage OM user and NE user
- Set security policy parameters

-
- Monitor the user status

Training Content

ONW38 iManager U2000V2 System Overview - ATAE Cluster

- iManager U2000 Cluster Principle and Structure
 - Introduction to ATAE Cluster
 - Hardware Structure
 - ATAE Cluster Scheme

ONW39 iManager U2000 Operation System and Database Management (ATAE Cluster)

- iManager U2000 ATAE Cluster OS Operation
 - Sybase Database Introduction
 - Sybase Basic Concepts
 - Practical Program
 - SQL Server Start and Shut down
 - T-SQL Language
 - Sybase Backup and Recovery
- U2000 Database Introduction
 - U2000 Oracle User Introduction
 - U2000 Database Usage Viewing
- iManager U2000 ATAE Cluster OS Operation Practice Guide
 - N/A

ONW40 iManager U2000V2 ATAE Cluster Server Operation and Maintenance

- iManager U2000 V2 Security Management
 - Security Management Overview
 - Set U2000 system security parameter
 - Create OM Users
 - Manage OM User
 - Manage NE Users
 - Customize MML Authority
 - Monitor OM Users
- iManager U2000 V2 Security Management Practice Guide
 - U2000 security management basic concepts
 - U2000 system security management and maintenance
- iManager U2000 ATAE Cluster Operation and Maintenance
 - Configure, monitor, maintenance and collect information of hardware
 - Switch board and storage
 - Install and upgrade U2000 server software, mediation and license
 - Commission NBI
 - Manage the PRS system on ATAE Cluster
 - Manage and maintenance processes of board level or system level
 - Manage multi-task of all status
 - Collect health information
 - Collect ESN and troubleshooting information

-
- Maintenance time, route and password of the system
 - Manage the OSMU board
 - iManager U2000 ATAE Cluster Backup and restore
 - Master the principle of backup and restore
 - Describe the scenarios for backup and restore
 - Backup and restore OS, static and dynamic data
 - Backup and restore data of OSMU
 - iManager U2000 Northbound Interfaces Introduction
 - TMN Hierarchical Structure
 - Northbound Interfaces and Classification
 - iManager U2000 Northbound File Interfaces Introduction
 - Northbound Interface and File Interface Overview
 - Inventory File Interface Introduction
 - Alarm File Interface Introduction
 - Performance File Interface Introduction
 - NE License File Interface Introduction
 - Configuration File Interface Introduction

Duration

3 working days

Class Size

Min 6, Max 12

