

Training Proposal for Network OSS Training Project



HUAWEI
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1 Training Solution

1.1 Background Introduction

1.2 Overview

1.3 Network OSS Training Path

Installation and Commissioning	<div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center; margin: 10px auto; width: 200px;"> <p>iManager U2000 Installation Training (Windows)</p> <hr style="border: 0; border-top: 1px solid black; margin: 0;"/> <p>ILT 1D</p> </div>	
Operation and Maintenance	<div style="display: flex; flex-wrap: wrap; justify-content: space-around;"> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center; margin: 10px auto; width: 200px;"> <p>iManager U2000 Administration Training</p> <hr style="border: 0; border-top: 1px solid black; margin: 0;"/> <p>ILT 2D</p> </div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center; margin: 10px auto; width: 200px;"> <p>iManager uTraffic Network Performance Monitoring Training (IP+Access+Transmission)</p> <hr style="border: 0; border-top: 1px solid black; margin: 0;"/> <p>ILT 3D</p> </div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center; margin: 10px auto; width: 200px;"> <p>iManager OSS Solution Introduction</p> <hr style="border: 0; border-top: 1px solid black; margin: 0;"/> <p>ILT 0.5D</p> </div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center; margin: 10px auto; width: 200px;"> <p>iManager U2000 NBI Operation and Maintenance Training</p> <hr style="border: 0; border-top: 1px solid black; margin: 0;"/> <p>ILT 1D</p> </div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center; margin: 10px auto; width: 200px;"> <p>iManager U2000 Veritas Standby Training (Solaris)</p> <hr style="border: 0; border-top: 1px solid black; margin: 0;"/> <p>ILT 3D</p> </div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center; margin: 10px auto; width: 200px;"> <p>iManager U2000 Veritas Standby Training (Linux)</p> <hr style="border: 0; border-top: 1px solid black; margin: 0;"/> <p>ILT 3D</p> </div> </div>	

1.4 Required Training Programs

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

Training Program	Program Level	Duration (workdays)	Training Location	Class Size
Network OSS Training				
iManager U2000 Veritas Standby Training (Linux)	III	3		2 ~ 6
iManager U2000 Administration Training	III	2		6 ~ 12
iManager U2000 Veritas Standby Training (Solaris)	III	3		2 ~ 6
iManager U2000 Installation Training (Windows)	II	1		6 ~ 16
iManager uTraffic Network Performance Monitoring Training (IP+Access+Transmission)	II	3		6 ~ 12
iManager OSS Solution Introduction	II	0.5		6 ~ 12
iManager U2000 NBI Operation and Maintenance Training	II	1		6 ~ 16

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

1.5 Network OSS Training

1.5.1 iManager U2000 Veritas Standby Training (Linux)

Training Path

U2000 Veritas Standby System Operation & Maintenance (Linux)		
ONU13	Lecture, Lab	3d

Target Audience

U2000 Veritas system administrator (Linux)

Prerequisites

- Having Linux and Sybase basic knowledge

Objectives

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

- Outline the main features of Linux
- Perform some basic operation of Linux workstation
- Describe some basic commands of Linux
- Outline the main features of Sybase
- Start, shutdown, backup and restore Sybase database
- Describe some basic SQL language
- Explain the basic concepts of the Veritas system
- Describe the working principles of volume management and volume replication of the Veritas system
- Explain the principle of cluster management of the Veritas system
- Perform Veritas hot standby system basic operations
- Execute Veritas hot standby system routine maintenance
- Perform Veritas hot standby system troubleshooting
- Outline Veritas hot standby system installation preparations
- List Veritas hot standby system installation checking items

Training Content

ONU13 U2000 Veritas Standby System Operation & Maintenance (Linux)

- iManager U2000 HA (Veritas Hot Standby) Principle
 - Basic Knowledge of the Veritas System
 - Overview of the Veritas System
 - Volume Management of the Veritas System
 - Volume Replication of the Veritas System
 - Cluster Management of the Veritas System
- Sybase Database Basics

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- Sybase Introduction
 - Basic Operations of Sybase
 - iManager U2000 HA System (Linux) Operation and Maintenance
 - Setting up VCS interface
 - Starting Veritas hot standby system
 - Shutting down Veritas hot standby system
 - Performing Active/Standby switching
 - Deleting a cluster
 - Taking a resource group offline
 - Bringing a resource online
 - Flushing the current operation
 - Disabling a resource
 - Probing a resource
 - Clearing faults in a resource group
 - Freezing a resource group
 - Routine Maintenance
 - Troubleshooting
 - iManager U2000 HA System (Linux) planning and Installation
 - Installation preparations
 - Planning parameters for Linux
 - Linux Operating System Basics
 - Environment Setup of the Linux OS
 - Linux OS Management

Duration

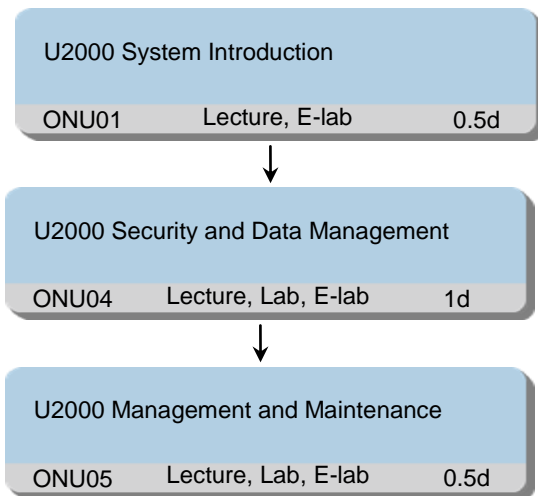
3 working days

Class Size

Min 2, Max 6

1.5.2 iManager U2000 Administration Training

Training Path



Target Audience

U2000 administrator

Prerequisites

- Having the basic knowledge of network management
- Having Solaris/Linux and Sybase basic knowledge

Objectives

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

- Describe the architecture and main features of U2000
- Describe the directory structure of U2000
- Describe the main functions of U2000
- Explain the concept of security management
- Complete the operation of U2000 security management
- Explain the concept of data management
- Complete the operation of U2000 data management
- List U2000 routine maintenance items
- Perform operations of routine maintenance
- Complete routine maintenance for U2000
- List the common analysis methods of fault localization
- Locate U2000 faults
- Get the experience for U2000 troubleshooting
- Analyze and handle the typical faults
- Perform Msuite tool common operations

Training Content

ONU01 U2000 System Introduction

- iManager U2000 System Introduction
 - Telecommunications Management Network Concept
 - Network Management Layer of U2000
 - U2000 System Architecture
 - Interfaces of U2000
 - Managed Equipment of U2000
 - Hardware and Software Requirement
 - The User Interface of U2000
 - Processes of U2000
 - NMS Maintenance Suite: MSuite
 - License Introduction
 - Directory Structure of U2000

ONU04 U2000 Security and Data Management

- iManager U2000 Security and Data Management
 - Introduction
 - OS and database users management
 - Log management
 - Network security management
 - NMS user security management
 - U2000 Database Management

ONU05 U2000 Management and Maintenance

- iManager U2000 Routine Maintenance
 - Operation Precautions
 - Check Running Conditions of U2000
 - Check Communication between U2000 and NEs
 - Browse Current AlarmsView Information in “System Monitor”
 - Check Solaris/Linux Error Logs
 - Back Up and Restore U2000 Data
 - View Server Time
- iManager U2000 Troubleshooting
 - General Thoughts About U2000 Troubleshooting
 - Typical Troubleshooting Cases on Windows OS
 - Typical Troubleshooting Cases on Solaris OS
 - Typical Troubleshooting Cases on Linux OS
 - Veritas Troubleshooting Cases
- iManager U2000 Msuite Operation and Maintenance
 - Start Msuite
 - Msuite common operation and management
 - Msuite operation for HA system

Duration

2 working days

Class Size

Min 6, Max 12

1.5.3 iManager U2000 Veritas Standby Training (Solaris)

Training Path

U2000 Veritas Standby System Operation & Maintenance (Solaris)		
ONU06	Lecture, Lab	3d

Target Audience

U2000 Veritas system administrator

Prerequisites

- Having Solaris and Sybase basic knowledge

Objectives

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

- Outline the main features of Solaris
- Perform some basic operation of SUN workstation
- Describe some basic commands of Solaris
- Outline the main features of Sybase
- Start, shutdown, backup and restore Sybase database
- Describe some basic SQL language
- Explain the basic concepts of the Veritas system
- Describe the working principles of volume management and volume replication of the Veritas system
- Explain the principle of cluster management of the Veritas system
- Perform Veritas hot backup system basic operations
- Execute Veritas hot backup system routine maintenance
- Perform Veritas hot backup system troubleshooting
- Outline Veritas Hot Backup System Installation Preparations
- Perform Veritas Hot Backup System Installation
- List Veritas Hot Backup System Installation Checking Items

Training Content

ONU06 U2000 Veritas Standby System Operation & Maintenance (Solaris)

- iManager U2000 HA (Veritas Hot Standby) Principle
 - Basic Knowledge of the Veritas System
 - Overview of the Veritas System
 - Volume Management of the Veritas System
 - Volume Replication of the Veritas System
 - Cluster Management of the Veritas System
- Solaris Operating System Basics
 - Solaris Introduction

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- SUN Workstation Introduction
 - Solaris Commands and Configuration
 - Sybase Database Basics
 - Sybase Introduction
 - Basic Operations of Sybase
 - iManager U2000 HA System (Veritas Hot Backup) Operation and Maintenance
 - Setting up VCS interface
 - Starting Veritas hot standby system
 - Shutting down Veritas hot standby system
 - Performing Active/Standby switching
 - Deleting a cluster
 - Taking a resource group offline
 - Bringing a resource online
 - Flushing the current operation
 - Disabling a resource
 - Probing a resource
 - Clearing faults in a resource group
 - Freezing a resource group
 - Routine Maintenance
 - Troubleshooting
 - iManager U2000 HA System (Solaris) Planning and Installation
 - Installation preparations
 - Planning parameters for Solaris

Duration

3 working days

Class Size

Min 2, Max 6

1.5.4 iManager U2000 Installation Training (Windows)

Training Path

U2000 System Installation		
ONU11	Lecture, Lab	1d

Target Audience

U2000 and LCT user

Prerequisites

- Having the basic knowledge of Windows OS

Objectives

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

- Perform the installation of U2000 software in Windows platform
- Perform the installation of U2000 LCT software in Windows platform

Training Content

ONU11 U2000 System Installation

- iManager U2000 Installation Introduction (Windows)
 - U2000 Installation Preparations
 - U2000 Installation Procedure
 - Checking the Correctness of Installation
 - U2000 LCT Installation

Duration

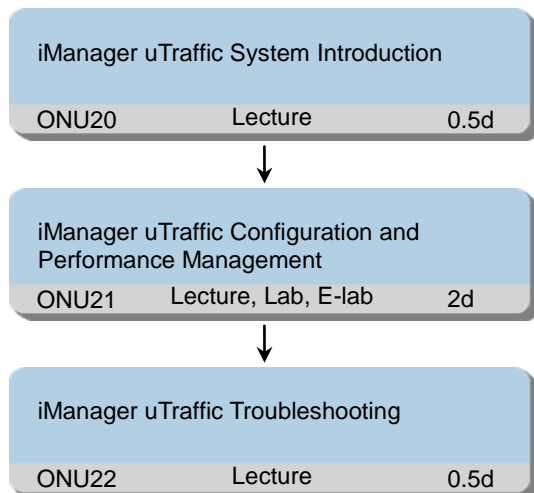
1 working day

Class Size

Min 6, Max 16

1.5.5 iManager uTraffic Network Performance Monitoring Training (IP+Access+Transmission)

Training Path



Target Audience

U2000 Maintenance Engineer and Administrator

Prerequisites

- Having the basic knowledge of NMS

Objectives

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

- Describe the basic concepts in performance management of iManager uTraffic
- Perform the browse and setting operation for performance events
- Describe the IP/Transmission/Access scenario in iManager uTraffic
- Understand the basic parameters in performance management of iManager uTraffic
- Describe the iManager uTraffic troubleshooting

Training Content

ONU20 iManager uTraffic System Introduction

- iManager uTraffic System Introduction
 - uTraffic Overview
 - uTraffic Main Services
 - uTraffic System Architecture
 - uTraffic Management Capability
 - uTraffic Solutions

ONU21 iManager uTraffic Configuration and Performance Management

- iManager uTraffic Configuration and Performance Management (PTN/OTN/RTN)
 - Interconnecting the uTraffic with the U2000

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- Report User Management
 - Configuring uTraffic Performance Collection
 - uTraffic Network Performance Report
 - iManager uTraffic Configuration and Performance Management (PTN/OTN/RTN) Practice Guide
 - uTraffic Performance Configuration Introduction
 - PTN Performance Configuration
 - OTN Performance Configuration
 - RTN Performance Configuration
 - iManager uTraffic Performance Management(IP CORE)
 - Configuring equipment and network performance monitoring in iManager uTraffic
 - Configuring performance report in iManager uTraffic
 - Viewing the performance monitoring result in iManager uTraffic
 - iManager uTraffic Performance Management(IP RAN)
 - Configuring equipment and network performance monitoring in iManager uTraffic
 - Configuring performance report in iManager uTraffic
 - Viewing the performance monitoring result in iManager uTraffic
 - iManager uTraffic Performance Management(ACCESS)
 - uTraffic Configuration Process Overview
 - Performance Indicators for uTraffic Reports
 - Performance Data Collection Instance Configuration on U2000
 - Check the Connection between U2000 and uTraffic
 - Query Performance Reports on uTraffic
- ONU22 iManager uTraffic Troubleshooting
- iManager uTraffic Troubleshooting
 - uTraffic Troubleshooting Principles
 - Uploading Performance Data
 - U2000 Interconnection Faults
 - uTraffic Report System Faults
 - Import and Export Faults

Duration

3 working days

Class Size

Min 6, Max 12

1.5.6 iManager OSS Solution Introduction

Training Path

iManager OSS Solution Introduction		
ONU23	Lecture	0.5d

Target Audience

OSS Technical Manager

Prerequisites

- Having the basic knowledge of NMS

Objectives

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

- List OSS development method
- Understand OSS apply for Huawei product
- Understand OSS solution

Training Content

ONU23 iManager OSS Solution Introduction

- iManager OSS Solution Introduction
 - OSS development introduction
 - OSS tendency
 - OSS application scenarios
 - OSS solution

Duration

0.5 working day

Class Size

Min 6, Max 12

1.5.7 iManager U2000 NBI Operation and Maintenance Training

Training Path

iManager U2000 NBI Operation and Maintenance		
ONU24	Lecture, Lab, E-lab	1d

Target Audience

U2000 Administrator

Prerequisites

- Having the basic knowledge of NMS

Objectives

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

- List U2000 NBI types
- Understand U2000 NBI principle
- Complete U2000 NBI configuration

Training Content

ONU24 iManager U2000 NBI Operation and Maintenance

- iManager U2000 CORBA Interface
 - Principle of U2000 CORBA Interface
 - Integration Process of U2000 and OSS with CORBA Interface
 - U2000 CORBA Operations Introduction
 - Troubleshooting Thoughts and Cases
- iManager U2000 SNMP Interface
 - U2000 SNMP interface basics
 - U2000 SNMP north bound interface common operation
 - U2000 SNMP south bound interface configuration
- iManager U2000 Performance Text Interface
 - U2000 Performance Text NBI Introduction
 - Installing U2000 Performance Text NBI
 - Configuring U2000 Performance Text NBI
 - Obtaining and Parsing Performance Texts
 - PMS Configuration Example
- iManager U2000 XML Interface
 - U2000 XML NBI Basics Introduction
 - Overall Functions of the XML NBI
 - Configuration of the U2000 XML NBI
 - Introduction to XML NBI Logs
 - Routine maintenance

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- iManager U2000 NBI Practice Guide
 - NBI Corba configuration
 - NBI SNMP configuration
 - NBI performance text configuration
 - NBI XML configuration

Duration

1 working day

Class Size

Min 6, Max 12