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Informix 12.10 System Administration

CODE:	DURÉE:	PRIX H.T.:
IX813G	32 Hours (4 Jours)	€2,990.00

Description

In this course, students will develop the skills necessary to administer one or more Informix database servers. They will learn how to configure and utilize a database server instance, configure and test client connectivity, configure and manage memory and disk usage, plan and implement system maintenance tasks, and configure the server for optimal Online Transaction Processing (OLTP) or decision support (DS) utilization.

Objectifs

Please refer to course overview

Audience

This course is designed for Informix System Administrators, Informix Database Administrators, and Informix Applications Developers.

Prérequis

Students in this course should satisfy the following prerequisites:
• Knowledge of Structured Query Language (SQL)
• Knowledge of dbaccess
• Experience using basic Linux functionality
• Experience using the vi editor

Programme

Preface
• Course Overview
• Intended Audience
• Course Objectives
• Prerequisites
Unit 1 - Overview of the Informix Database Server
• Describe the major components of the Informix Database Server
• Define database server terms
• Describe major database server events
Unit 2 - Preparing for configuration
• Review the contents of the release notes
• Identify the kernel parameters that must be set
• Determine operating system patches that must be applied
Unit 3 - Configuring client-server connectivity
• List the methods to connect to the database server
• Make appropriate entries into the sqlhosts file
• Set the environment variables necessary for a client application to connect to the database server
Unit 4 - Configuring a database server
• Create cooked files or prepare raw devices for server disk storage
• Set environment variables necessary to administer a database server
• Explain the purpose of the configuration file
• Identify basic configuration parameter settings required to bring up a simple database server
• Use a text editor to modify the configuration file
• Bring the database server online

Unit 5 - Monitoring the database server
• Describe the use of the SMI (System Monitoring Interface)
• Connect to the sysmaster database and run simple SQL queries
• Use onstat to monitor information about the database server
• Use oncheck to gather information about space usage and the status of indexes and tblspaces
Unit 6 - Managing shared memory
• List and describe the database server operating modes
• Use onmode and oninit to change the operating mode
• Describe the shared memory segments used by the database server
• Describe the configuration parameters that affect the size of shared memory
• Set the RESIDENT parameter to control shared memory residency
• Monitor the major components of shared memory
Unit 7 - Virtual processors and threads
• Define a thread
• Describe the multithreaded architecture
• Describe how the virtual processors are implemented in Unix
• Use onstat to monitor VPs and threads
• List and explain the virtual processor classes
• Describe how network connections are handled by the server
• Set server configuration parameters related to VPs and threads
• Dynamically add and remove virtual processors
Unit 8 - Disk architecture
• Describe the Dynamic Server page and chunk structure
• Explain how pages are allocated within extents
• Explain the difference between table and index extents
• Describe the relationship between chunks and dbspaces
• Describe the overhead pages in various types of chunks
• Describe the structure of a dbspace, blobspace, and sbspace
• Use the oncheck command to display reports about space allocation, tblspace usage, and index usage
• Use onstat to display dbspace and chunk information
Unit 9 - Managing and monitoring disk space
• Create and drop dbspaces, blobspaces, and sbspaces
• Change the status of a mirrored dbspace
• Monitor dbspaces, blobspaces, and sbspaces
• Use the storage pool and the APIs to administer storage spaces
Unit 10 - Physical and logical logging
• Move the physical log to a plogspace
• Add, drop, and modify logical logs
• Change the logging mode of a database
• Define a long transaction
• List and describe configuration parameters related to physical and logical logging
• Monitor the physical and logical logs
Unit 11 The shared memory buffer pool
• List the steps performed by the server to update a row on disk
• Describe the checkpoint process
• Describe the differences between a blocking and a nonblocking checkpoint
• Properly set the configuration parameters related to checkpoints
• Describe what events cause a checkpoint to occur
• Monitor checkpoints and buffer writes performed by the server
Unit 12 Fault tolerance
• Describe the types of failures that could occur on the server system
• Describe the fast recovery process
• Examine the status of chunks and dbspaces
• Identify the configuration parameters associated with recovery
Unit 13 Introduction to backup and restore
• Identify Informix backup and restore utilities
• Explain the backup and restore process
• Explain the incremental backup levels
• Explain the two different methods to backup logical logs
• Describe the difference between a warm and cold restart
Unit 14 Backup and restore using ontape
• Configure your server to use ontape for backup and restore
• Perform a server backup using ontape
• Backup logical log files using ontape
• Perform a warm restore using ontape
Unit 15 Temporary files and tables
• Describe the temporary objects created by the database server
• Describe the configuration parameters and environment variables related to temporary objects
• Explain the importance of using multiple temporary dbspaces

• Explain the purpose of the WITH NO LOG clause when used to create temporary tables
• Use onstat and the SMI to monitor the space used to create temporary objects
Unit 16 Performance features
• Configure your server to perform read-aheads
• Configure your server to use recovery threads
• Configure your server to enable or disable the use of OS time
• Describe the PDQ operations available in the database server
• Describe configuration parameters that control PDQ resources
• Configure your server to use the SQL statement cache
Unit 17 Monitoring user activity
• Use onstat and the sysmaster database to monitor user activity on the database server
• Identify the resources held by a user session
• Display the last SQL command run by a user session
• Identify which user sessions have created temporary tables
• Describe how to identify the type of locks held by user sessions
• Identify and terminate a specific user session
• Explain the purpose of the dynamic lock manager
Unit 18 Event alarms
• Explain how to use the event alarm feature
• List the event security codes
• List the classes of alarm events in the server environment
• Explain the purpose of the system alarm program
Unit 19 SQL administrative functions and task scheduler
• Use SQL commands to perform system administrative tasks
• Use the built-in scheduler to automatically perform routine tasks
Unit 20 Troubleshooting
• Identify and respond to common server problems
• Run the commands to check for consistency of the disk subsystem
• Identify the version and serial number of the database server
• Identify permission problems with devices and server files
• Describe the information required by Technical Support
• Describe the parts of a database version number
• Recover from a simple permission or data storage location problem in the server
Unit 21 A configuration case study (optional)
• Set required server environment variables
• Create an sqlhosts file entry to enable a connection
• Initialize and configure a server
• Use command line utilities or SQL administrative routines to reinitialize the server and to:
• Create dbspaces
• Create and delete logical logs
• Move the physical log
Appendix A Installing Informix on Linux / UNIX
• Prepare the host machine for installation of the Informix server
• Install Informix on the host machine

Dates de session

Sur demande. Merci de nous contacter

Informations Complémentaires

Cette formation est également disponible sous forme de formation sur site. Veuillez nous contacter pour en savoir plus.