

HP Education Services Course Description

HP NonStop Remote Database Facility (RDF) Workshop (U4146S)



This 4-day course provides an introduction, including hands-on exercises, to the new Independent Product version of RDF. After a brief review of Transaction Monitoring Facility (TMF) operation and audit trails, there will be an overview of RDF operational features and functions.

Audience

- Anyone interested in receiving an introduction to RDF

Prerequisites

- Concepts and Facilities for NonStop Systems (U4147S)
- NonStop Transaction Manager/MP Operations and Management (U4186S)

Course Objective

- Understanding of the proper use and integration of RDF in the customer's Disaster Recovery Plan
- Understanding of RDF's basic software process, file, and performance requirements
- Defining an effective environment for RDF operation
- Understanding RDF installation and management
- Commands and procedures needed to run RDF
- Recognition of (and planning for) various failure scenarios
- Use of various RDF-related utility programs designed to monitor RDF operations and the associated databases

Benefits to You

- To provide an introduction, including hands-on exercises, to the new Independent Product version of RDF

Why education services from HP?

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Course Title: HP NonStop Remote Database Facility (RDF) Workshop

HP Product Number: U4146S

Category/Subcategory: NonStop/System Operations and Management

Course Length: 4 days

Level: Advanced

Delivery Language: English

To Order: You can order this course online at <http://www.hp.com/learn>. At the site, select a country, then choose "registration" or "Book a course" and fill out the online registration form.

Detailed Course Outline

Module 1 — Introduction to the Remote Database Facility

- RDF purpose and features
- RDF system requirements
- RDF volume, file and network considerations

Module 2 — RDF System Description

- TMF concepts
- RDF processing tasks
- RDF processes
- RDF Process Functions:
 - Monitor
 - Extractor
 - Receiver
 - Updater
 - Purger
- RDF modes of operation
- Report generation on backup database

Module 3 — RDF Installation and Characteristics

- RDF product family
- RDF/IMPX product architecture
- Overview of RDF installation
- Security attributes
- RDF control files
- Performance and sizing considerations
- Optimizing expand line performance for RDF
- Lab exercise:
 - Installing RDF software

Module 4 — Introduction to RDFCOM Commands

- RDF command interface
- RDF command categories
- RDFCOM utility commands:
 - HELP
 - OBEY and HISTORY
 - FIX
 - OPEN
 - OUT
- The STATUS command
- Status RTD calculation

Module 5 — Configuring an RDF Environment

- Preparing RDF for the first time test
- The INITIALIZE RDF command
- RDF configuration commands:
 - SET
 - SHOW and RESET
 - ADD
- RDF global configuration parameters
- Receiver and purger configuration parameters
- Image-Trail parameter
- Volume (Updater) configuration parameters
- The INFO command
- The VALIDATE CONFIGURATION command
- The ALTER command
- The DELETE IMAGETRAIL command
- The DELETE VOLUME command
- RDF configuration sample
- Lab exercises:
 - Creating an RDF configuration for the Master Audit Trail (MAT)
 - Initializing RDF and activating the configuration

Module 6 — Running an RDF Environment

- Starting RDF
- Controlling the application of updates
- Stopping RDF processes
- Database synchronization concepts
- Synchronization methods
- Overview of online database synchronization
- Planned primary system switchover to backup system
- Plan for controlled switchover, controlled switchover procedure
- Lab exercise: Starting the RDF environment

Module 7 — RDF Working with NonStop SQL

- Summary of RDF Working with NonStop SQL/MP
- NonStop SQL/MP objects defined, NonStop SQL/MP objects protected by RDF
- Configuring the replication of Enscribe purges
- Enscribe purge replication
- Planning the backup database
- Index replication
- Program object files
- Recommended procedure for RDF database structure changes
- NonStop SQL/MX considerations
- Lab exercises:
 - Understanding RDF features
 - Online database synchronization
 - Creating an RDF configuration for an auxiliary audit trail
 - Understanding various RDF features with an auxiliary audit trail

Module 8 — Takeover Processing

- The TAKEOVER command
- Tasks not performed by RDF following a takeover
- Switching back to the primary system
- Lab exercise: RDF takeover and reversal

Module 9 — RDF Failure Scenarios and Utilities

- Communications and process failures
- File resynchronization considerations and procedures
- NonStop TMF volume crash, NonStop TMF system crash
- FileIncomplete, FileComplete audit records, and the problem with FileIncomplete records
- RDF health checks, problem escalation
- RDF utilities: RDRCHEK, RDFSNOOP
- Lab exercise: RDF utilities

Module 10 — RDF Advanced Topics

- RDF versions:
 - 1.1, 1.3, 1.3, 1.4, 1.6, 1.7
- Configuring RDF with SMF
- SMF catalogs
- Interactions between RDF and SMF
- File placement of new files
- Adding and removing disks in the SMF pools
- RDFCOM validation changes
- Errors and troubleshooting
- Updater opens
- Lockstep operation
- Introduction to NonStop AutoTMF
- AutoTMF Software and Runtime
- NonStop TMF and AutoTMF performance
- Introduction to ASAP
- Architectural overview
- Installation and auto discovery
- Monitoring of specific RDF environments
- Adding and removing RDF environments
- ASAP version compatibility
- RDF metrics reported by ASAP
- Additional enhancements in RDF 1.6 & 1.7
- Product installation instructions

Onsite-Delivery Equipment Requirements

- Two NonStop servers with:
 - D46.xx or later version of the NonStop Kernel operating system for K-series servers, or
 - G06.03xx or later version for NonStop S-series servers
- RDF/IMP IMPX installed
- Eight volumes each
- NonStop SQL/MP
- Terminal access for each attendee

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