

**COURSE DESCRIPTION**

This course is essential for anyone who intends to assume responsibility for maintaining z/OS Unix controls or wants to verify their z/OS Unix environment is properly secured and monitored. Participants will gain a solid understanding of z/OS Unix and how it can be protected in a z/OS RACF system. The course will explore the assignment of user uid and group gid Unix identities and offer best practices for managing them. Powerful authorities such as Superuser (i.e., root) will be discussed in detail along with guidance on their assignment and alternatives offered by UNIXPRIV profiles. Considerable time and attention will be devoted to file and directory access controls. Participants will learn how permission bits and Extended Access Control Lists (ACLs) grant access as well as how UNIXPRIV profiles influence access authorization. Techniques and best practices for granting permissions will be provided. The course will also cover all commands required for administering permissions and provide lab exercises.

**DURATION**

3 Half-Day WebEx Sessions

**WHO SHOULD ATTEND**

- **RACF Administrators & Analysts** who want to take control of z/OS Unix security
- **IT Auditors** seeking to ensure regulatory compliance
- **Systems Programmers** who provide Unix and RACF technical support or implement system controls

**WHAT YOU WILL LEARN**

- Security-related z/OS Unix configuration options
- How z/OS Unix uids and gids are assigned
- Ways to grant full and limited Superuser authority
- Controlling Daemons and Servers
- How file and directory access is permitted
- Effective use of UNIXPRIV profiles
- Best practices for using permission bits and ACLs
- Ensuring security access events are logged

**PREREQUISITES**

Completion of RSH's [RACF Introduction & Basic Administration](#) course or equivalent RACF experience.

**INSTRUCTORS - ROBERT S. HANSEL**

Mr. Hansel has worked with RACF since 1986 as an administrator, auditor, consultant, and trainer. He is a prominent speaker on RACF audit and technical topics at conferences and user groups throughout the U.S.

**COURSE OUTLINE**

1. Introduction to z/OS Unix
  - a. Overview, background, & functions
  - b. OMVS Procedure & BPXPRMxx parameters
  - c. Unix File System
  - d. Daemons & Servers
  - e. Security Levels
2. Users & Groups
  - a. Introduction to Unix uids and gids
  - b. OMVS user and group profile segments
  - c. User Security Packet (USP)
  - d. Real, Effective, & Saved uid
  - e. Supplemental gids
  - f. Automatic id assignment
  - g. Preventing duplicate uid assignment
  - h. Default User
  - i. Surrogate authority
3. High Level Authorities
  - a. Daemons
  - b. Servers
  - c. Superuser
  - d. PRIVILEGED & TRUSTED Started Tasks
  - e. FACILITY class BPX profiles & authorities
  - f. UNIXPRIV class profiles and authorities
4. Program Controls & Attributes
  - a. Maintaining a clean program environment
  - b. Program profiles & libraries
  - c. File extended attributes & authorities
5. File System Security
  - a. Physical & Logical File System
  - b. Navigating the directory structure
  - c. File Security Packet (FSP)
  - d. RACF's role in file access authorization
  - e. Setuid and Setgid
  - f. Listing the FSP
  - g. Superuser, Owner, Group, & Other authority
  - h. Permissions bits
  - i. Extended Access Control Lists (ACLs)
  - j. Access permit levels
  - k. UNIXPRIV class profiles affecting authorization
  - l. Access authorization logic
6. Monitoring & Logging
  - a. User auditing
  - b. File and directory audit bits
  - c. UNIXPRIV profile auditing
  - d. SETROPTS AUDIT & LOGOPTIONS settings
  - e. SMF options & other factors effecting auditing
  - f. Reporting tools - SMF unload & RACFICE
7. Other Control Issues
  - a. FACILITY & FIELD class administration profiles
  - b. Identity Mapping - UNIXMAP & AIM
  - c. Performance Tuning

**Security ❖ Support ❖ Solutions**

To register for public courses, arrange for in-house training, or find out more about how RSH Consulting can help you better secure your system, call us at 617-969-9050, email us at [info@rshconsulting.com](mailto:info@rshconsulting.com), or visit our web site at [www.rshconsulting.com](http://www.rshconsulting.com).

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