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Agenda

- RACF Security Server
- LDAP
- SSL server
- Common Criteria
- DIRMAINT

z/VM RACF Security Server feature

- z/VM 5.3 RACF database mapping error!
  - Unpredictable results if sharing with z/OS or z/VM 5.4
  - Apply APAR VM64383 – Follow the instructions EXACTLY
    - Do NOT upgrade database templates or share the database until this APAR is applied.
- Database has been updated with new templates
  - RACFCONV will fix-up a broken 5.3 database as part of migration, but any 5.3 system that is using it better have VM64383 applied!

z/VM RACF Security Server feature

- IRRUT200 (database copy) instructions updated
  - No serialization, so no sharing
  - Must be run from RACFVM user ID
- IRRUT400 (database copy/split/merge/extend) instructions and examples updated
  - Can be run on active, shared databases

z/VM RACF Security Server feature

- Password change logging for LDAP
  - When password is changed by administrator or user, a PKCS #7 encrypted envelope is created and placed into the RACF database
  - An LDAP change log record is created
  - LDAP client can extract the encrypted field

z/VM RACF Security Server feature

- RACF recognizes current and alternate system operators when RACF server is down
  - Commands are accepted from the current system operator
    - SYSTEM_USERIDS
    - ALTERNATE_OPERATORS
    - SET SYSOPER
  - Allows commands and LOGON, deferring to CP for authorization and password checking

z/VM RACF Security Server feature

- New installs now default to DES password encryption
- Password masking is still available

LDAP Server

- Upgrade to z/OS 1.10 ITDS
- Published back-end APIs to enable usage by other ESMs
- Support for password change logging
  - z/OS uses RACF certificate services
  - z/VM uses System SSL services
- Password phrase can now be used in an ldap bind

SSL Server

- SSL server has been ported to CMS
  - Available December 2008
  - Base does not include any SSL capability
    - Do not migrate to 5.4 immediate if you require SSL
- SSL services provided by System SSL
  - Same as z/OS System SSL
  - Exploits CPACF integrated cryptographic function
  - No exploitation of Cryptographic Coprocessors (cards)
  - APIs are not published or supported for customer use

SSL Server

- Certificate management via gskeyman
  - Introduced in z/VM 5.3 with the LDAP server
  - Data held in BFS
  - Create user certficiates in response to a request
  - Create intermediate CAs and trusted CAs
  - Certificate export, import, renewal
  - Menu driven (linemode, so automation is possible)
- Working on plan to provide private key migration from z/VM 5.2 and 5.3

FTP Clear Command Channel (CCC)

- CCC subcommand recognized by z/VM client and server
- Issued **after** user ID and password are sent
- Control connection switches to clear-text
- File transfer is always encrypted

FTP Clear Command Channel (CCC)

- Enables firewalls to dynamically open and close data ports for file transfer
  - Just like for non-secure FTP
- Enables 3rd-party audit of file transfer
- Eliminates need for PassivePortRange in the server

FTP Clear Command Channel (CCC)

- Partner must support RFC 4217
  - Early drafts of the RFC did not define the behavior of CCC, so it was inferred
- z/OS FTP includes “TLSRFCLEVEL” option in FTP.DATA to control draft vs. RFC. The default is draft.
- No option is provided in z/VM to use the draft version

Common Criteria

- ISO/IEC 15408:2005
  - A set of meaningful security functions
    - Access control
    - Audit
  - Extensive testing of those functions
  - Effective processes
  - Good documentation
- Assurance levels 1 through 7
  - Evaluation by accredited firms
  - Certification by government agencies
  - CommonCriteriaPortal.org

Common Criteria

	Evaluation Assurance Level						
Function	1	2	3	4	5	6	7
function 1	✓	✓	✓	✓	✓	✓	✓
function 2			✓	✓	✓	✓	✓
function 3						✓	✓
strength analysis 1			✓	✓	✓	✓	✓
strength analysis 2					✓	✓	✓
evaluation 1			✓	✓	✓	✓	✓
evaluation 2				✓	✓	✓	✓

Common Criteria

- Higher assurance level does not indicate more or better security
- “Plus” (+) means you can fix a problem in the field
- A **Protection Profile** defines a standardized set of required functions with a minimum EAL

Common Criteria

- Controlled Access Protection Profile (CAPP)
  - Discretionary access controls
  - “I choose to give you access”
  - User- or administrator-controlled access
- Labeled Security Protection Profile (LSPP)
  - Mandatory access controls (MAC)
  - System overrides user
  - Security clearances (if any) and data/user compartmentalization enforced

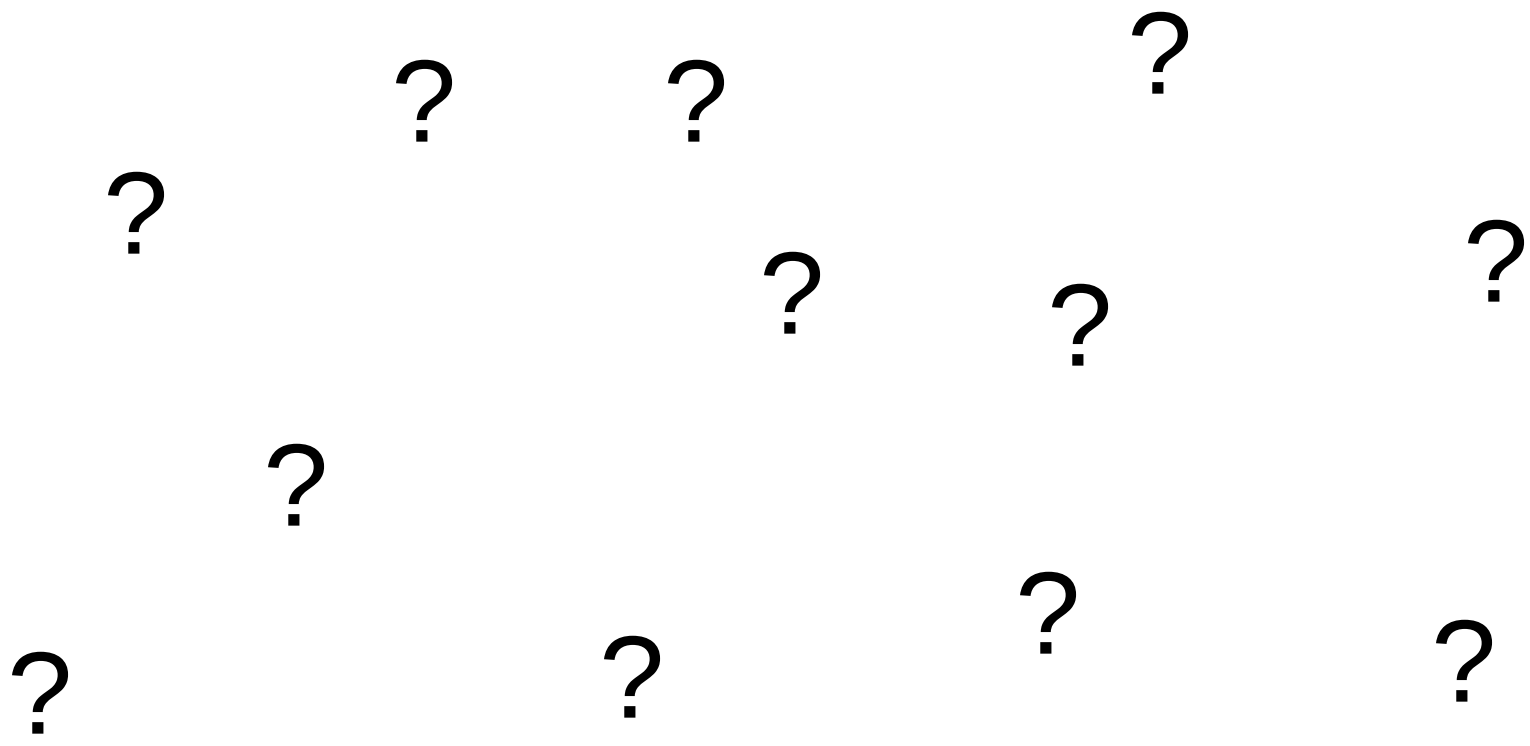
Common Criteria

- z/VM compliance
  - Includes CP, TCP/IP stack with telnet, and RACF
  - **z/VM 5.3** evaluated to CAPP and LSPP at EAL 4+
- z/VM 5.4 will not be evaluated, but we will make z/VM 5.3 available upon request
- LPAR is EAL 5
- z/OS is EAL 4+
- Linux is EAL 4+
- VMware is EAL 4+

DIRMAINT

- Users can authenticate with a password phrase (NEEDPASS YES)
- PW and SETPW can call an ESM to set the password or phrase
- Separation of RACF support from Dirmaint exits
  - Exits can be used in addition to RACF support
- IUCV communication instead of VMCF
  - Use of VMCF was interfering with RACF communications

Questions



Thanks!