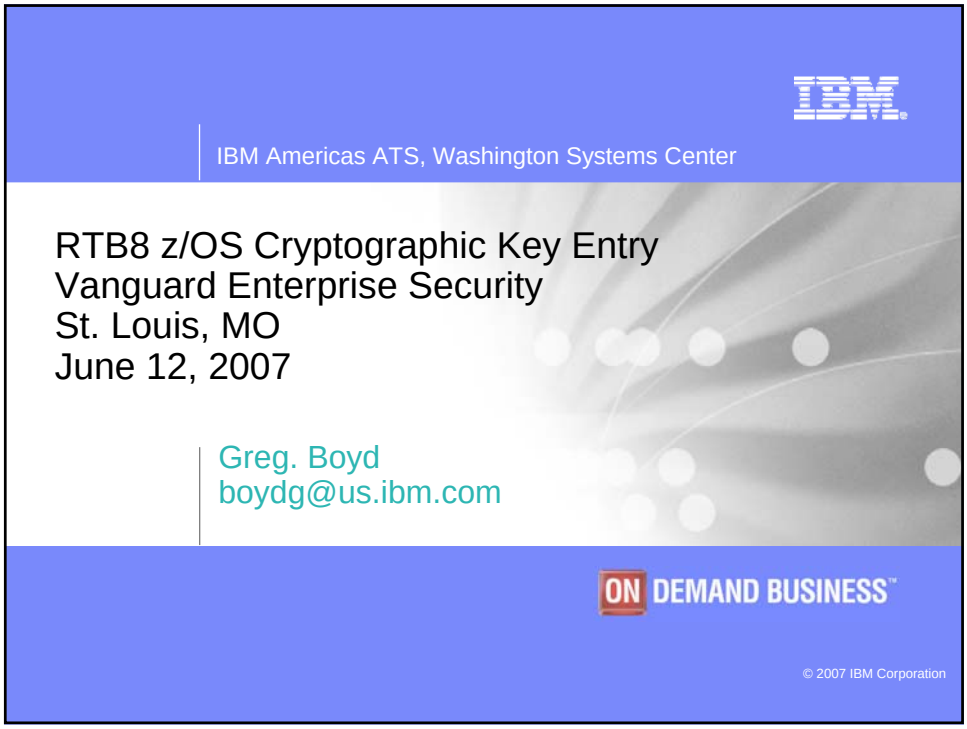

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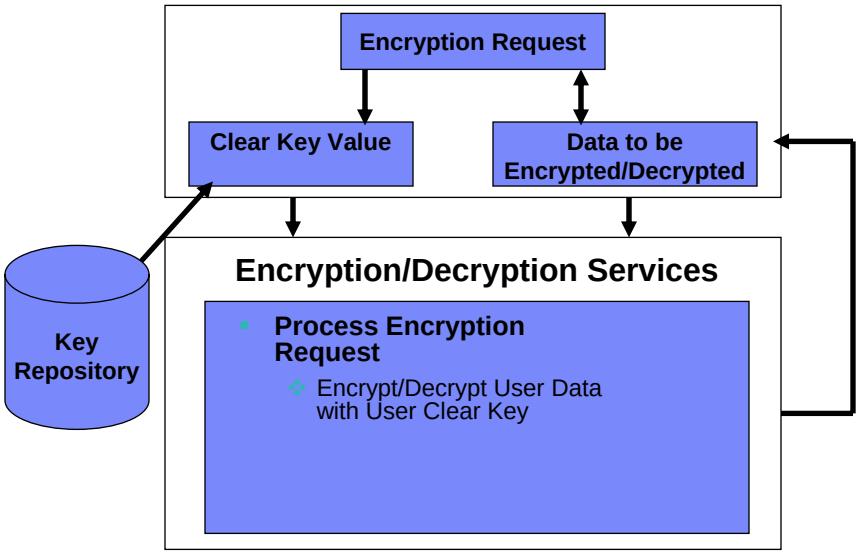
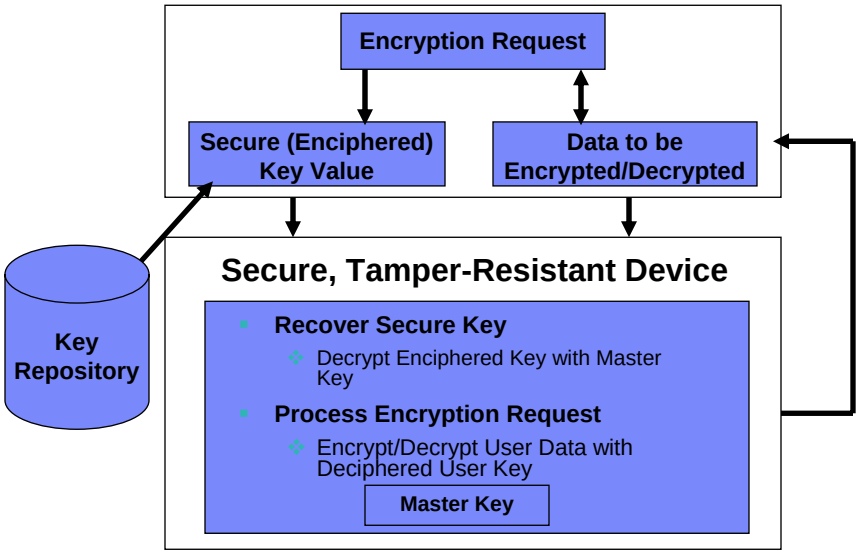
Agenda

- **Some Basics (Secure/Clear Keys, Crypto Hardware)**
- **Creating and Managing Master Keys**
- **Key Management Considerations**

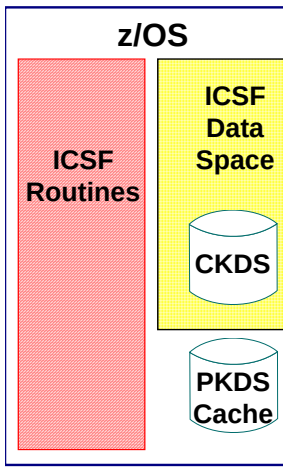
Clear Key Processing

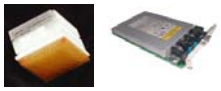


Secure Key Processing

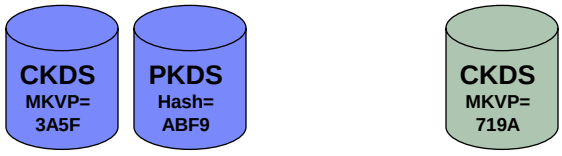


Keep In Sync – Hardware, ICSF Software, Storage





LPAR & Domain	DES Master Key			PKA Master key		
	Current	New	Old	Current	New	Old
LP1 UD1	ABC (MKVP=3A5F)			PKAMstKy (Hash=ABF9)		
LP15 UD9	LP15K (MKVP=719A)					



Key Entry

- **Master Keys**
  - Passphrase Initialization, PPINIT (Master Key Only)
  - ISPF Panels for ICSF (Master Key Only)
  - Trusted Key Entry Workstation
- **Operational Keys**
  - Trusted Key Entry Workstation
  - Key Generation Utility Program (KGUP)
  - APIs

ICSF Main Menu

```
HCR7730 ------------------ Integrated Cryptographic Service Facility ----------------------
OPTION ===>
 Enter the number of the desired option.
  1 COPROCESSOR MGMT  – Management of Cryptographic Processors
  2 Master Key        -- Master key set or change, CKDS/PKDS Processing
  3 OPSTAT            -- Installation Options
  4 ADMINCNTL         -- Administrative Control Functions
  5 UTILITY           -- ICSF Utilities
  6 PPINIT            -- Pass Phrase Master Key/CKDS Initialization
  7 TKE               -- TKE Master and Operational Key processing
  8 KGUP              -- Key Generator Utility processes
  9 UDX MGMT          -- Management of User Defined Extensions
Press ENTER to go to the selected option.
Press END   to exit to the previous menu.
```


Pass Phrase Initialization

```
----- ICSF - Pass Phrase MK/KDS Initialization -----
COMMAND ===>
 Enter your pass phrase and the names of the CKDS and PKDS:
   Pass Phrase (16 to 64 characters)
   ===>
   CKDS
   ===>
   PKDS
   ===>
   Initialize the CKDS and PKDS? (Y/N) ===> Y
   Initialize new PCIXCCs only ? (Y/N) ===> N
Press ENTER to process.
Press END   to exit to the previous menu.
```


ICSF Main Menu

```
HCR7730 ------------------ Integrated Cryptographic Service Facility ----------------
OPTION ===>
 Enter the number of the desired option.
  1 COPROCESSOR MGMT  – Management of Cryptographic Processors
  2 Master Key        -- Master key set or change, CKDS/PKDS Processing
  3 OPSTAT            -- Installation Options
  4 ADMINCNTL         -- Administrative Control Functions
  5 UTILITY           -- ICSF Utilities
  6 PPINIT            -- Pass Phrase Master Key/CKDS Initialization
  7 TKE               -- TKE Master and Operational Key processing
  8 KGUP              -- Key Generator Utility processes
  9 UDX MGMT          -- Management of User Defined Extensions
Press ENTER to go to the selected option.
Press END   to exit to the previous menu.
```


ICSF Coprocessor Management Screen

```
------------------------- ICSF Coprocessor Management --------------------------
COMMAND ===>
 Select the coprocessors to be processed and press ENTER.
 Action characters are: A, D, E, K, R and S  See the help panel for
   details.
  COPROCESSOR          SERIAL NUMBER          STATUS
  --------------------  ----------------------  ------------
  .  A0                                        ACTIVE
  .  A1                                        ACTIVE
  .  A2                                        ACTIVE
  .  A3                                        ACTIVE
 S  X04                 93001166               ACTIVE
 S  X05                 93001449               ACTIVE
```


ICSF Panels – Display Hardware Status

```
------------------------------------------- ICSF – Coprocessor Hardware Status -------------------------------------------
COMMAND ===>                                                          Crypto Domain:  3
REGISTER STATUS                    COPROCESSOR X04          COPROCESSOR X05
Crypto Serial Number          :    93001166                 93001449
Status                        :    ACTIVE                   ACTIVE
Symmetric-Keys Master Key
  New Master Key register     :    EMPTY                    EMPTY
    Verification pattern      :
    Hash pattern              :
  Old Master Key register     :    EMPTY                    EMPTY
    Verification pattern      :
    Hash pattern              :
                              :
  Current Master Key  register:    VALID                    VALID
    Verification pattern      :    B0070E6F8F31B3C2         B0070E6F8F31B3C2
    Hash pattern              :    4181A04120413B35         4181A04120413B35
              ...

Press ENTER to refresh the hardware status display.
Press END   to exit to the previous menu.
```


ICSF Panels – Display Hardware Status (cont.)

```
------------------------------------- ICSF – Coprocessor Hardware Status -------------------------------------
COMMAND ===>                                                          Crypto Domain:  3
REGISTER STATUS                COPROCESSOR X04          COPROCESSOR X05

Asymmetric-Keys Master Key
  New Master Key register   :  EMPTY                    EMPTY
  Hash pattern              :

  Old Master Key register   :  EMPTY                    EMPTY
    Hash pattern            :
                              :
Current Master Key  register :  VALID                    VALID
    Hash pattern            :  69723AECF26FAA80         69723AECF26FAA80
                              :  CE8771914F05D03A         CE8771914F05D03A

Press ENTER to refresh the hardware status display.
Press END   to exit to the previous menu.
```


ICSF Main Menu

```
HCR7730 ------------------- Integrated Cryptographic Service Facility --------------------
OPTION ===>
 Enter the number of the desired option.
  1 COPROCESSOR MGMT  – Management of Cryptographic Processors
  2 Master Key        -- Master key set or change, CKDS/PKDS Processing
  3 OPSTAT            -- Installation Options
  4 ADMINCNTL         -- Administrative Control Functions
  5 UTILITY           -- ICSF Utilities
  6 PPINIT            -- Pass Phrase Master Key/CKDS Initialization
  7 TKE               -- TKE Master and Operational Key processing
  8 KGUP              -- Key Generator Utility processes
  9 UDX MGMT          -- Management of User Defined Extensions
 Press ENTER to go to the selected option.
 Press END   to exit to the previous menu.
```


ICSF Utility Menu

```
------------------------------------------ ICSF - Utilities ----------------------------------
OPTION ===>
 Enter the number of the desired option.
  1 ENCODE          - Encode Data
  2 DECODE          - Decode Data
  3 RANDOM          - Generate a random number
  4 CHECKSUM        - Generate a checksum and verification and hash
                      pattern
  5 PPKEYS          - Generate master key values from a pass phrase

 Press ENTER to go to the selected option.
 Press END   to exit to the previous menu.
```


ICSF Panels – Random Number Generator

```
------------ ICSF – Random Number Generator ------------
COMMAND ===>
Enter data below:

  Parity Option     ===> RANDOM                 ODD, EVEN, RANDOM
  Random Number1   :  7AD08F3EC17940B3          Random Number 1
  Random Number2   :  76EFE59438982A08          Random Number 2
  Random Number3   :  26041F0DFBF19D83          Random Number 3




 Press ENTER to process.
 Press END   to exit to the previous menu.
```


ICSF Panels – Checksum Calculation

```
------------ ICSF – Checksum and Verification and Hash Pattern ------------
COMMAND ===>
Enter data below:
  Key Type   ===>                          (Selection panel displayed if blank)
  Key Value  ===> 7AD08F3EC17490B3         Input key value 0 - 7
             ===> 76EFE59438982A08         Input key value 8 - 15
             ===> 26041F0DFBF19D83         Input key value 16 – 23 (PKA Keys only)

Checksum         : 00                     Check digit for key value
Key Part VP      : 0000000000000000       Verification Pattern
Key Part HP      : 0000000000000000       Hash Pattern
                 : 0000000000000000

Press ENTER to process.
Press END   to exit to the previous menu.
```


ICSF Panels – Checksum Calculation

```
------------ ICSF – Checksum and Verification and Hash Pattern ------------
COMMAND ===>
Enter data below:
  Key Type   ===> MASTER                   (Selection panel displayed if blank)
  Key Value  ===> 7AD08F3EC17490B3         Input key value 0 - 7
             ===> 76EFE59438982A08         Input key value 8 - 15
             ===> 0000000000000000         Input key value 16 – 23 (PKA Keys only)

Checksum         : 2D                     Check digit for key value
Key Part VP      : 8809D948E06CED41       Verification Pattern
Key Part HP      : 5ACDE16BE799E722       Hash Pattern
                 : 95C92A87A6612955

Press ENTER to process.
Press END   to exit to the previous menu.
```


ICSF Main Menu

```
HCR7730 ------------------- Integrated Cryptographic Service Facility ---------------------
OPTION ===>
 Enter the number of the desired option.
  1 COPROCESSOR MGMT  – Management of Cryptographic Processors
  2 Master Key        -- Master key set or change, CKDS/PKDS Processing
  3 OPSTAT            -- Installation Options
  4 ADMINCNTL         -- Administrative Control Functions
  5 UTILITY           -- ICSF Utilities
  6 PPINIT            -- Pass Phrase Master Key/CKDS Initialization
  7 TKE               -- TKE Master and Operational Key processing
  8 KGUP              -- Key Generator Utility processes
  9 UDX MGMT          -- Management of User Defined Extensions
Press ENTER to go to the selected option.
Press END   to exit to the previous menu.
```


ICSF Coprocessor Management Screen

```
------------------------- ICSF Coprocessor Management --------------------------
COMMAND ===>
 Select the coprocessors to be processed and press ENTER.
 Action characters are: A, D, E, K, R and S  See the help panel for
   details.
  COPROCESSOR          SERIAL NUMBER          STATUS
  --------------------  ----------------------  ------------
  .  A0                                        ACTIVE
  .  A1                                        ACTIVE
  .  A2                                        ACTIVE
  .  A3                                        ACTIVE
  e  X04                93001166               ACTIVE
  e  X05                93001449               ACTIVE
```


ICSF Panels – 1st Key Part

```
------------ ICSF – Clear Master Key Entry -----------
COMMAND ===>
          Symmetric-keys new master key register      : EMPTY
          Asymmetric-keys new master key register     : EMPTY
Specify information below
   Key Type       ===>              (SYM-MK, ASYM-MK)
   Part           ===>              (RESET, FIRST, MIDDLE, FINAL)
   Checksum       ===>    00
   Key Value      ===>    0000000000000000
                  ===>    0000000000000000
                  ===>    0000000000000000          (ASYM-MK only)


Press ENTER to process.
Press END   to exit to the previous menu.
```


ICSF Panels – 1st Key Part (Before)

```
------------ ICSF – Clear Master Key Entry -----------
COMMAND ===>
          Symmetric-keys new master key register      : EMPTY
          Asymmetric-keys new master key register     : EMPTY
Specify information below
   Key Type       ===>    SYM-MK  (SYM-MK, ASYM-MK)
   Part           ===>    FIRST   (RESET, FIRST, MIDDLE, FINAL)
   Checksum       ===>    2D
   Key Value      ===>    7AD08F3EC17940B3
                  ===>    76EFE59438982A08
                  ===>    0000000000000000          (ASYM-MK only)


Press ENTER to process.
Press END   to exit to the previous menu.
```


ICSF Panels – 1st Key Part (After)

```
------------ ICSF – Clear Master Key Entry -----------
COMMAND ===>
          Symmetric-keys new master key register      : PART FULL
          Asymmetric-keys new master key register     : EMPTY
Specify information below
   Key Type        ===>    SYM-MK  (SYM-MK, ASYM-MK)
   Part            ===>    FIRST     (RESET, FIRST, MIDDLE, FINAL)
   Checksum        ===>    00
   Key Value       ===>    0000000000000000
                   ===>    0000000000000000
                   ===>    0000000000000000          (ASYM-MK only)
Entered key part   VP:  8809D948E06CED41
                   HP:  5ACDE16BE799E722  95C92A87A6612955
                            (Record and secure these patterns)
Press ENTER to process.
Press END   to exit to the previous menu.
```


ICSF Panels – 2nd Key Part (Before)

```
------------ ICSF – Clear Master Key Entry -----------
COMMAND ===>
          Symmetric-keys new master key register      : PART FULL
          Asymmetric-keys new master key register     : EMPTY
Specify information below
   Key Type        ===>    SYM-MK  (SYM-MK, ASYM-MK)
   Part            ===>    MIDDLE  (RESET, FIRST, MIDDLE, FINAL)
   Checksum        ===>    FF
   Key Value       ===>    CE548C08EAA42A89
                   ===>    0EBF346B9408258A
                   ===>    0000000000000000          (ASYM-MK only)




Press ENTER to process.
Press END   to exit to the previous menu.
```


ICSF Panels – 2nd Key Part (After)

```
------------ ICSF – Clear Master Key Entry -----------
COMMAND ===>
          Symmetric-keys new master key register      : PART FULL
          Asymmetric-keys new master key register     : EMPTY
Specify information below
   Key Type        ===>    SYM-MK  (SYM-MK, ASYM-MK)
   Part            ===>    MIDDLE  (RESET, FIRST, MIDDLE, FINAL)
   Checksum        ===>    00
   Key Value       ===>    0000000000000000
                   ===>    0000000000000000
                   ===>    0000000000000000          (ASYM-MK only)
Entered key part   VP:  8E86E485545AA669
                   HP:  1D29966EBEC2BD11  AD540801821039D0
                        (Record and secure these patterns)
Press ENTER to process.
Press END   to exit to the previous menu.
```


ICSF Panels – 3rd Key Part (Before)

```
------------ ICSF – Clear Master Key Entry -----------
COMMAND ===>
          Symmetric-keys new master key register      : PART FULL
          Asymmetric-keys new master key register     : EMPTY
Specify information below
   Key Type        ===>    SYM-MK  (SYM-MK, ASYM-MK)
   Part            ===>    FINAL   (RESET, FIRST, MIDDLE, FINAL)
   Checksum        ===>    64
   Key Value       ===>    BF57AD3D94CEAD62
                   ===>    C73491832638F7EF
                   ===>    0000000000000000          (ASYM-MK only)
Press ENTER to process.
Press END   to exit to the previous menu.
```


ICSF Panels – 3rd Key Part (After)

```
----------- ICSF – Clear Master Key Entry -----------
COMMAND ===>
            Symmetric-keys new master key register   : FULL
            Asymmetric-keys new master key register  : EMPTY
Specify information below
   Key Type          ===>     SYM-MK   (SYM-MK, ASYM-MK)
   Part              ===>     FINAL    (RESET, FIRST, MIDDLE, FINAL)
   Checksum          ===>     00
   Key Value         ===>     0000000000000000
                     ===>     0000000000000000
                     ===>     0000000000000000              (ASYM-MK only)
Entered key part   VP:  3FFEAC6F32912B2F   HP:  1FC752887DA6ED24  F339F8321FF99FF4
Master Key         VP:  B0070E6F8F31B3C2   HP:  4181A04120413B35   D389DE6FC7DF75A7
                     (Record and secure these patterns)

Press ENTER to process.
Press END   to exit to the previous menu.
```


ICSF Coprocessor Management Screen

```
------------------------- ICSF Coprocessor Management --------------------------
COMMAND ===>
 Select the coprocessors to be processed and press ENTER.
 Action characters are: A, D, E, K, R and S  See the help panel for
   details.
  COPROCESSOR          SERIAL NUMBER          STATUS
  --------------------  ----------------------  ------------
 .  A0                                         ACTIVE
 .  A1                                         ACTIVE
 .  A2                                         ACTIVE
 .  A3                                         ACTIVE
 S  X04                 93001166               ACTIVE
 S  X05                 93001449               ACTIVE
```


ICSF Panels – Display Hardware Status

```
------------------------------------------------- ICSF – Coprocessor Hardware Status ----------------------------
COMMAND ===>                                                                          Crypto Domain: 3
REGISTER STATUS                    COPROCESSOR X04                 COPROCESSOR X05
Crypto Serial Number          :           93001166                        93001449
Status                        :    ACTIVE                          ACTIVE
Symmetric-Keys Master Key
  New Master Key register     :    FULL                            FULL
    Verification pattern      :     3FFEAC6F32912B2F                3FFEAC6F32912B2F
    Hash pattern              :     1FC752887DA6ED24                1FC752887DA6ED24
  Old Master Key register     :    EMPTY                           EMPTY
    Verification pattern      :
    Hash pattern              :
                              :
  Current Master Key  register:    VALID                           VALID
    Verification pattern      :    B0070E6F8F31B3C2                 B0070E6F8F31B3C2
    Hash pattern              :    4181A04120413B35                4181A04120413B35
              ...

Press ENTER to refresh the hardware status display.
Press END   to exit to the previous menu.
```


ICSF Main Menu

```
HCR7730 ------------------- Integrated Cryptographic Service Facility --------------------
OPTION ===>
 Enter the number of the desired option.
  1 COPROCESSOR MGMT  – Management of Cryptographic Processors
  2 Master Key        -- Master key set or change, CKDS/PKDS Processing
  3 OPSTAT            -- Installation Options
  4 ADMINCNTL         -- Administrative Control Functions
  5 UTILITY           -- ICSF Utilities
  6 PPINIT            -- Pass Phrase Master Key/CKDS Initialization
  7 TKE               -- TKE Master and Operational Key processing
  8 KGUP              -- Key Generator Utility processes
  9 UDX MGMT          -- Management of User Defined Extensions
 Press ENTER to go to the selected option.
 Press END   to exit to the previous menu.
```


ICSF Panels – CKDS/PKDS Access

```
------------ ICSF – Administrative Control Functions ------------  Row 1 to 4
COMMAND ===>

  Active CKDS:        hlq.YOUR.CKDS
  Active PKDS:        hlq.YOUR.PKDS

  To change the status of a control, enter the appropriate character
  (E – Enable, D – Disable)  and press Enter.

    FUNCTION                                  STATUS
    --------------                            -----------
d   Dynamic CKDS Access                       ENABLED
_   PKA Callable Services                     ENABLED
_   PKDS Read Access                          ENABLED
_   PKDS Write, Create, and Delete Access     ENABLED

Press ENTER to process.
Press END   to exit to the previous menu.
```


ICSF Main Menu

```
HCR7730 ------------------- Integrated Cryptographic Service Facility ---------------------
OPTION ===>
 Enter the number of the desired option.
  1 COPROCESSOR MGMT  – Management of Cryptographic Processors
  2 Master Key        -- Master key set or change, CKDS/PKDS Processing
  3 OPSTAT            -- Installation Options
  4 ADMINCNTL         -- Administrative Control Functions
  5 UTILITY           -- ICSF Utilities
  6 PPINIT            -- Pass Phrase Master Key/CKDS Initialization
  7 TKE               -- TKE Master and Operational Key processing
  8 KGUP              -- Key Generator Utility processes
  9 UDX MGMT          -- Management of User Defined Extensions
Press ENTER to go to the selected option.
Press END   to exit to the previous menu.
```


ICSF Master Key Management

```
---------------------------------- ICSF – Master Key Management ----------------------------------
OPTION ===>
 Enter the number of the desired option.
  1 INIT/REFRESH CKDS     – Initialize a Cryptographic Key Data Set or activate
                            an updated Cryptographic Key Data Set
  2 SET MK                - Set a DES/symmetric-keys master key
  3 REENCIPHER CKDS       - Reencipher the CKDS prior to changing the
                            DES/symmetric-keys  master key
  4 CHANGE MK             - Change the DES/symmetric-keys master key  and
                            activate the reenciphered CKDS
  5 INITIALIZE PKDS       - Initialize or update a PKDS Cryptographic Key Data
                            Set header record
  6 REENCIPHER PKDS       - Reencipher the PKA Cryptographic Key Data Set
  7 ACTIVATE PKDS         - Activate the PKDS after it has been enciphered
  8 REFRESH CACHE         - Refresh the PKDS cache if enabled
Press ENTER to go to the selected option.
Press END   to exit to the previous menu.
```


ICSF Reencipher CKDS

```
-------------------------------- ICSF – Reencipher CKDS --------------------------------
COMMAND ===>

To reencipher all CKDS entries from encryption under the current
DES/symmetric-master keys master key to encryption under the new
master key enter the CKDS names below

   Input   CKDS ===>
  Output CKDS ===>

Press ENTER to reencipher the CKDS.
Press END   to exit to the previous menu.
```


ICSF Change Master Key

```
------------------------------ ICSF – Change Master Key ------------------------------
COMMAND ===>

Enter the name of the new CKDS below.

   New CKDS ===>

   When the master key is changed, the new CKDS will become active.



Press ENTER to change the master key.
Press END   to exit to the previous menu.
```


ICSF Master Key Management

```
--------------------------------- ICSF – Master Key Management ---------------------------------
OPTION ===>
 Enter the number of the desired option.
  1 INIT/REFRESH CKDS     – Initialize a Cryptographic Key Data Set or activate
                            an updated Cryptographic Key Data Set
  2 SET MK                - Set a DES/symmetric-keys master key
  3 REENCIPHER CKDS       - Reencipher the CKDS prior to changing the
                            DES/symmetric-keys  master key
  4 CHANGE MK             - Change the DES/symmetric-keys master key  and
                            activate the reenciphered CKDS
  5 INITIALIZE PKDS       - Initialize or update a PKDS Cryptographic Key Data
                            Set header record
  6 REENCIPHER PKDS       - Reencipher the PKA Cryptographic Key Data Set
  7 ACTIVATE PKDS         - Activate the PKDS after it has been enciphered
  8 REFRESH CACHE         - Refresh the PKDS cache if enabled
Press ENTER to go to the selected option.
Press END   to exit to the previous menu.
```


ICSF Initialize a CKDS

```
--------------------------------- ICSF – Initialize a CKDS ---------------------------------
COMMAND ===>
 Enter the number of the desired option.
    1 Initialize and empty CKDS (creates the header and system keys)
    2 REFRESH   -  Activate an updated CKDS

 Enter the name of the CKDS below.

    CKDS ===>

Press ENTER to go to the selected option.
Press END   to exit to the previous menu.
```


Steps for Changing the SYM-MK

From the ICSF Admin Guide:

1. **Enter the SYM-MK key parts**
2. **Disable CKDS Access**
3. **Re-encipher the CKDS under the new master key**
4. **Change the Master Key and Activate the Reenciphered CKDS**
5. **Enable CKDS Access**
6. **Change the ICSF Options data set to point to the new CKDS**

ICSF Master Key Management

```
---------------------------------- ICSF – Master Key Management ----------------------------------
OPTION ===>
 Enter the number of the desired option.
  1 INIT/REFRESH CKDS     – Initialize a Cryptographic Key Data Set or activate
                            an updated Cryptographic Key Data Set
  2 SET MK                - Set a DES/symmetric-keys master key
  3 REENCIPHER CKDS       - Reencipher the CKDS prior to changing the
                            DES/symmetric-keys  master key
  4 CHANGE MK             - Change the DES/symmetric-keys master key  and
                            activate the reenciphered CKDS
  5 INITIALIZE PKDS       - Initialize or update a PKDS Cryptographic Key Data
                            Set header record
  6 REENCIPHER PKDS       - Reencipher the PKA Cryptographic Key Data Set
  7 ACTIVATE PKDS         - Activate the PKDS after it has been enciphered
  8 REFRESH CACHE         - Refresh the PKDS cache if enabled
Press ENTER to go to the selected option.
Press END   to exit to the previous menu.
```


ICSF Initialize a PKDS

```
------------------ ICSF – Initialize PKA Cryptographic Key Data Set -----------
COMMAND ===>

Enter the name of the new PKDS below.

   PKDS ===>




Press ENTER to initialize the PKDS.
Press END   to exit to the previous menu.
```


ICSF Panels – CKDS/PKDS Access

```
----------- ICSF – Administrative Control Functions -----------  Row 1 to 4
COMMAND ===>

  Active CKDS:        hlq.YOUR.CKDS
  Active PKDS:        hlq.YOUR.PKDS

  To change the status of a control, enter the appropriate character
  (E – Enable, D – Disable)  and press Enter.

    FUNCTION                                  STATUS
    --------------                            -----------
_   Dynamic CKDS Access                       ENABLED
d   PKA Callable Services                     ENABLED
d   PKDS Read Access                          ENABLED
d   PKDS Write, Create, and Delete Access     ENABLED

Press ENTER to process.
Press END   to exit to the previous menu.
```


ICSF Reencipher a PKDS

```
---------------------------- ICSF – Reencipher PKDS -------------------------
COMMAND ===>


To reencipher all PKDS entries from encryption under the old
   signature/asymmetric master key to encryption under the
   current master key enter the PKDS names below.


   Input   PKDS ===>

   Output PKDS ===>


Press ENTER to reencipher the PKDS.

Press END   to exit to the previous menu.
```


ICSF Activate a PKDS

---------- ICSF – Activate PKA Cryptographic Key Data Set --------

COMMAND ===>

Enter the name of the new PKDS below.

New PKDS ===>

Press ENTER to activate the PKDS.

Press END to exit to the previous menu.

ICSF Master Key Management

---------- ICSF – Master Key Management ----------

OPTION ===>

Enter the number of the desired option.

1 INIT/REFRESH CKDS	**– Initialize a Cryptographic Key Data Set or activate an updated Cryptographic Key Data Set**
2 SET MK	**- Set a DES/symmetric-keys master key**
3 REENCIPHER CKDS	**- Reencipher the CKDS prior to changing the DES/symmetric-keys master key**
4 CHANGE MK	**- Change the DES/symmetric-keys master key and activate the reenciphered CKDS**
5 INITIALIZE PKDS	**- Initialize or update a PKDS Cryptographic Key Data Set header record**
6 REENCIPHER PKDS	**- Reencipher the PKA Cryptographic Key Data Set**
7 ACTIVATE PKDS	**- Activate the PKDS after it has been enciphered**
8 REFRESH CACHE	**- Refresh the PKDS cache if enabled**

Press ENTER to go to the selected option.

Press END to exit to the previous menu.

Steps for Changing the ASYM-MK

From the ICSF Admin Guide:

1. **Disable PKA Services**
2. **Enter the ASYM-MK key parts**
3. **Re-encipher the PKDS under the new master key**
4. **Activate the PKDS**
5. **Enable PKA Services**
6. **Enable PKA read, write, create and delete access**

Key Management Policies/Procedures

- **How Many Key Officers/Key Parts?**
- **How Are the Key Parts Generated? Who Generates them?**
- **Where are the Keys Stored for Emergencies?**
- **How Often is the SYM-MK changed? The ASYM-MK?**
- **How Often are Application Keys changed?**
- **Is crypto a part of change management?**
- **How are changes implemented/coordinated across the SYSPLEX?**

References

- **Publications**
  - ICSF System Programmer's Guide SA22-7520
  - ICSF Administration Guide, SA22-7521
  - ICSF Application Programmer's Guide SA22-7522
  - ICSF TKE Workstatoin User's Guide, SA22-7524
- **ATS TechDocs Web Site**
  www.ibm.com/support/techdocs
  - SEARCH ALL DOCUMENTS, keyword of Crypto
    - TD101580 Implications of Cryptographic Key Pass Phrase Initialization
    - WP100647 A Clear Key / Secure Key Primer
    - A number of documents on Application Keys

Questions …

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