

z/OS V2.5 IBM Education Assistant

Solution Name: IXCARM support for restarting a system task as a started task

Solution Element(s): z/OS BCP XCF



Agenda

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- Objectives
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Trademarks

- See url <http://www.ibm.com/legal/copytrade.shtml> for a list of trademarks.
- Additional Trademarks:
 - None

Objectives

- What is the effect of ARM support for system tasks?
- How does it improve ICSF availability characteristics?

Overview

- Who (Audience)
 - ICSF satisfied RFE 80667, which requested ICSF exploit ARM for ease of use and standardization of software restart services.
 - ICSF enabled the use of ICSF=xx and ICSFPROC=csfprocname in IEASYSxx to start ICSF at IPL-time. When started in this way, it is a *system task*.
 - The XCF Automatic Restart Manager (ARM) will not accept registration (nor restart) ICSF as a *system task* – causing a negative impact on ICSF availability characteristics for users of ARM and ICSFPROC.
- What (Solution)
 - Enhanced ARM to accept IXCARM REGISTER requests from *system tasks*. These registered elements will behave like *started task* elements.
- Wow (Benefit / Value, Need Addressed)
 - ICSF (as either a *system task* or *started task*) may register with ARM and be restarted as *started tasks* in the event that they terminate abnormally, providing improved availability.

Usage & Invocation

- Nothing to do – it is all “automatic”
 - If ICSF is configured to start at IPL time, registration with ARM may now be successful during IPL. A case that would previously always fail.
 - With the appropriate ARM policy, ARM can restart ICSF in the event of a failure

```
IXC392I 14.13.51 DISPLAY XCF          FRAME LAST  F      E  SYS=SY1
RESTART GROUP:DEFAULT          PACING   :    0  FREECSA:    0    0
ELEMENT NAME :SYSICSF_SY1      JOBNAME  :CSF      STATE   :AVAILABLE
  CURR SYS :SY1                JOBTYP  :STC        ASID    :0009
  INIT SYS :SY1                JESGRP   :          TERMTYPE:ELEMTerm
  EVENTEXIT:*NONE*            ELEMTYPE:*NONE*  LEVEL   :    2
  TOTAL RESTARTS :              0  INITIAL START:03/30/2020 14:13:32
  RESTART THRESH :              N/A  FIRST RESTART:*NONE*
  RESTART TIMEOUT:              N/A  LAST  RESTART:*NONE*
```

Interactions & Dependencies

- Software Dependencies
 - None
- Hardware Dependencies
 - None
- Exploiters
 - ICSF when started at IPL time by using ICSF=ICSFPROC in IEASYSxx PARMLIB member

Upgrade & Coexistence Considerations

- To exploit this solution, all systems in the Plex must be at the new z/OS level: **No**
- No toleration/coexistence APARs/PTFs.
 - Note that function is rolled back to z/OS V2R3 and V2R4 via APAR OA59120

Installation & Configuration

- None

Summary

- Registration with ARM by *system task* may now be successful
 - Only known exploiter is ICSF
- Users of ARM can improve availability characteristics for applications that can successfully register with ARM

Appendix

- Text in the Cryptographic Services ICSF: System Programmer's Guide (SC14-7507-XX) indicating ARM is not supported when starting ICSF at IPL-time is replaced:

z/OS Automatic Restart Manager (ARM) is supported when starting ICSF at IPL-time on z/OS V2R3 and later with the PTF for APAR OA59120 applied.