z/OS 3.1 IBM Education Assistant

Solution Name: Communications Server Exploitation of the IBM Function Registry

Solution Element(s): HVT6310

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Agenda

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Trademarks

- See url http://www.ibm.com/legal/copytrade.shtml for a list of trademarks.

- Additional Trademarks:

  - None

Objectives

- IBM Function Registry for z/OS provides information about the usage of functions registered with it.

- The Communications Server Exploitation of IBM Function Registry initiative aims at making the SNA usage data available in the IBM Function Registry

Overview - Who

- Who will benefit from the SNA usage data being available in IBM Function Registry?
    - The data will be used to collect customer usage statistics for SNA applications and sessions.
    - Information obtained will help drive business decisions for customers.

Overview - What

- What is the solution to get to the objective ?
    - The Communications Server exploitation of the IBM Function Registry for z/OS initiative enables the placement of the SNA usage data.
    - High-water mark for SNA Open ACB and associated session counts is collected.
    - Function Registry is updated with metrics at 5-minute timer intervals
    - This information can be retrieved using an existing z/OS FXEPRINT utility.

Overview – Wow

- What are the benefits of this initiative?
  - SNA usage data obtained from the customer will give an insight into the extent of SNA application activity in the network
  - This information will allow customers to better understand their SNA application usage.

Usage & Invocation

- The function information can be displayed using IBM Function Registry for z/OS utilities/commands
  - FXEPRINT utility located at SYS1.SAMPLIB
    - Sample command: S SUBMTJCL,JOB='SYS1.SAMPLIB(FXEPRNTJ)'

  - Display FXE command

- The following documents can be used as a reference
  - New Function Summary
    - Communications Server exploitation of the IBM Function Registry for z/OS added under Simplification section

  - SNA Network Implementation Guide
    - VTAM usage of IBM Function Registry for z/OS added under Operating VTAM

Usage & Invocation – FXEPRINT Product details

```
-----------------------------------------------------------------
Vendor Name:            IBM
Vendor Description:     International Business Machines Corporation
Vendor Slot Path:       VS(1)
-----------------------------------------------------------------
Product Name:           z/OS Communications Server
Product Release:        03.01.00
Product ID:             HVT6310
Instance ID:            VTAMCS
Product Description:    VTAM
Product Slot Path:      VS(1) PS(1,-)
Product Parent:         IBM
Product Attributes:
 Attribute Name:        Counters Last Updated On
 Attribute Value:       10/28/22 13:19:54
-----------------------------------------------------------------
```

Usage & Invocation – FXEPRINT Function details

```
Function Name:          SNA - General
Function Description:   General SNA Information
Function Slot Path:     VS(1) PS(1,-) FS(1,AUTHONLY)
Function Parent:        z/OS Communications Server
Function Used:          YES
Function Enabled:       YES
Function Attributes:
 Attribute Name:        Maximum number of RAPI only applications
 Attribute Value:       114
 Attribute Name:        Maximum number of APPC capable applications
 Attribute Value:       16
 Attribute Name:        Maximum number of TSO applications
 Attribute Value:       2
 Attribute Name:        Maximum number of TN3270 applications
 Attribute Value:       7
```

Usage & Invocation – FXEPRINT Function details cont.

```
Attribute Name:        Maximum number of RAPI sessions

Attribute Value:       20

Attribute Name:        Maximum number of APPC sessions

Attribute Value:       36

Attribute Name:        Maximum number of TSO sessions

Attribute Value:       1

Attribute Name:        Maximum number of TN3270 sessions

Attribute Value:       5


------------------------------------------------------------
```

Usage & Invocation – Display FXE

- Display FXE commands shows the registered functions
  - `DISPLAY FXE VN=*,PN=*,PID=*,IID=*,FN=*,STATE`

- Example command and corresponding output

```
DISPLAY FXE VN=IBM,PN=*,PID=*,IID=*,FN=*,STATE

MATCHING FUNCTION ENTRIES:
------------------------------------------------------
VENDOR:      IBM
PRODUCT:     z/OS Communications Server
PRODUCTID:   HVT6310
INSTANCEID:  VTAMCS
FUNCTION:    SNA - General
SLOTPATH:    VS(1) PS(1,-) FS(1,AUTHONLY)
ENABLED:     YES
```

Interactions & Dependencies

- Software Dependencies
  - Available on z/OS CS V2R4 and V2R5 via APAR OA63555. This APAR has a dependency on BCP Function Registry APAR OA63360.

- Hardware Dependencies
  - No hardware dependencies.

- Exploiters
  - No exploiters.

Upgrade & Coexistence Considerations

- To exploit this solution, all systems in the Plex must be at the new z/OS level: No

- APAR OA63555 has been produced on z/OS CS V2R4 and V2R5 for Communications Server Exploitation of the IBM Function Registry

Installation & Configuration

- APAR OA63555 is needed for enablement in z/OS CS V2R4 and V2R5.

- There are no configuration tuning knob adjustments needed for obtaining the SNA usage statistics.

Summary

- Communications Server Exploitation of the IBM Function Registry enables customers to record general usage statistics related to the SNA applications and sessions.

- Customers will be able to view the usage stats reported by running the FXEPRINT utility or by using the Display FXE command. Both already exist in z/OS.

Appendix

- Using and registering functions with IBM Function Registry
  - https://www.ibm.com/docs/en/zos/2.5.0?topic=guide-using-registering-functions-function-registry-zos

- FXEFR programming interface information
  - https://www.ibm.com/docs/en/zos/2.5.0?topic=iar-fxefr-information

- New Function Summary
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