z/OS 3.1 IBM Education Assistant

Solution Name: Infrastructure updates for Function Registry

Solution Element(s): Function Registry

July 2023

© 2023 IBM Corporation

Agenda

- Trademarks
- Objectives
- Overview
- Usage & Invocation
- Interactions & Dependencies
- Upgrade & Coexistence Considerations
- Installation & Configuration
- Summary
- Appendix

© 2023 IBM Corporation

Trademarks

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

© 2023 IBM Corporation

Objectives

- What is Function Registry(FXE)?
- What benefits does it provide our customers?
- Discuss the updates we have made in the new release.

© 2023 IBM Corporation

Overview

- Who
  - Customers and vendors who use z/OS.
- What
  - Infrastructure updates to Function Registry which enhance the “display fxe” command, provide new 4-byte offsets to specific fields in the registry, the FXEPRINT job now includes the "Product Release" field, and the addition of component information to the registry.
- Wow
  - Function Registry provides a dedicated space and an easy-to-use interface for users to see what programs or functions are actively running on their systems. This is not an all-inclusive list. Vendors and IBM products must add their information to the registry.

© 2023 IBM Corporation

Usage & Invocation

- What is Function Registry?
  - FXE is a mechanism that can be used by customers, vendors, and IBM to store information about provided functions on a system.
  - FXE also provides a simple interface for users to view the data in the registry with the “display fxe” command and the FXEPRINT batch job.
- What benefits does it provide?
  - FXE provides a simple and easy way for customers to see a subset of what is running on their system. This information could be helpful in debugging performance problems, planning a migration to a new release, or providing new products and services.
- What changes have we made in the new release?
  - The “display fxe” command has been updated to treat the product id and instance id as optional.
    - Even though the productid(PID) and instanceId(IID) are listed as optional in the documentation they must be included in the command prior to 3.1. Now in 3.1 they are treated as optional matching the description in the documentation.
    - Before the update, an example invocation would be “d fxe,vs=1,ps=1,fs=1,pid=*,iid=*,state”.
    - With the update we can now omit the id and pid parameters. For example: “d fxe,vs=1,ps=1,fs=1,state” works the same as the example above.
  - The FXEPRINT job now includes product release information.
  - Some of the mappings have been updated with new 4-byte offsets in addition to the original 2-byte offsets.

© 2023 IBM Corporation

Interactions & Dependencies

- Software Dependencies
  - None
- Hardware Dependencies
  - None
- Exploiters
  - CommServer, Predictive Failure Analysis(PFA), Runtime Diagnostics(HZR), and Health Checker(HZS). With more coming in the future.

© 2023 IBM Corporation

Upgrade & Coexistence Considerations

- To exploit this solution, all systems in the Plex must be at the new z/OS level: No
- List any toleration/coexistence APARs/PTFs. None
- List anything that doesn't work the same anymore. Nothing
- Upgrade involves only those actions required to make the new system behave as the old one did. True
- Coexistence applies to lower level systems which coexist (share resources) with latest z/OS systems. True

© 2023 IBM Corporation

Installation & Configuration

- List anything that a client needs to be aware of during installation:
  - Are any APARs or PTFs needed for enablement? No
  - What jobs need to be run? None
  - What hardware configuration is required? No special hardware configurations are required.
  - What PARMLIB statements or members are needed? None
  - Are any other system programmer procedures required? No
  - Are there any planning considerations? No
  - Are any special web deliverables needed? No
  - Does installation change any system defaults? No

© 2023 IBM Corporation

Summary

- Function Registry is a mechanism that gives customers an easy way to see a subset of the functions actively running on their system.
- Updates in this release include:
  - Enhancements to the “display fxe” command to treat the product id(pid) and instance id(iid) as optional.
  - Product release information is now included in the output of the FXEPRINT job.
  - 4-byte offsets have been added to some mappings to overcome 2-byte offset limitations.
  - Four IBM components are now exploiting the registry(CommServer, PFA, RTD, and HZS). However, that exploitation is not part of this initiative but still good to know.

© 2023 IBM Corporation

Appendix

- Publications:
  - z/OS MVS System Commands
  - z/OS MVS Programming: Authorized Assembler Services Guide

© 2023 IBM Corporation