Common Deployment Update

Operations and Coverage

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IBM Z

IBM

PJ47009 (Mar 2024) Managing common deployment files

Use the ZDFLV command to see information about versions of a file loaded to the zTPF system.

- Location of each version on z/TPF
- Location and timestamp on Linux on IBM Z
- Activation number and status
- Load time
- File size

This command is very useful for several personas.

User Story – Developer loads the wrong file

- A developer is making changes to an application that relies on a file that influences an application's behavior.
- The developer loads their new version of the file (the wrong version!).
- The application's behavior is not as expected.

As-Is:

- It is very difficult to determine that the wrong file was loaded.

To-Be:

- The developer uses the ZDFLV command to determine that the wrong file was loaded. It was loaded from the system build directory instead of their workspace.

User Story – Developer loads the wrong file

```
zdflv addGuest84.srvc.json info-all

DFLV0002I 14.59.51 EXTENDED FILE VERSION INFORMATION
FILE-/sys/tpf_pbfiles/tpf-fdes/addGuest84.srvc.json

* LOADSET- TEST0001  STAT-  ACT        ACT_NUM-     4  HI_ACT-   N/A
sourcepath=/ztpf/linuxbin/blddrv/adbi/jam/addGuest84.srvc.json _
loadtime=01-29-24 17.18.04
sourcemodtime=01-28-24 16.27.08
LOCATION-/sys/tpf_pbfiles/tpf-fdes/.addGuest84.srvc.json/.4
SIZE-91 bytes
```

User Story – Developer on shared test system

- A developer is making changes to an application that relies on a file that influences an application's behavior.
- The developer loads their new version of the file (the correct version!).
- The application's behavior is not as expected.

As-Is:

- It is very difficult to determine that the wrong file was used at run time.

To-Be:

- The developer uses the ZDFLV command to determine that the wrong file was used at run time.

User Story – Developer on shared test system

```
zdflv tpf-fdes/addGuest84.srvc.json LOADSET-ALL
DFLV0001I 15.33.15 STANDARD FILE VERSION INFORMATION
FILE-/sys/tpf_pbfiles/tpf-fdes/addGuest84.srvc.json

* LOADSET-NEWFILE2 STAT- ACT ACT_NUM- 9 HI_ACT- N/A
sourcepath=/another_user/adbi/jam/addGuest84.srvc.json _

LOADSET-NEWFILE STAT- ACT ACT_NUM- 8 HI_ACT- N/A
sourcepath=/developer/adbi/jam/addGuest84.srvc.json _

LOADSET- BASE STAT- ACT ACT_NUM- 0 HI_ACT- N/A
sourcepath=/ztpf/linuxbin/blddrv/adbi/jam/addGuest84.srvc.json
```

- Asterisk indicates the version that is currently active for the ECB that processed the command.
- Selectively activated loadsets might use a different version of the file.

User Story – Operator loading a fix

- An operator loads a fix that contains several files to a production system.

As-Is:

- The operator has to trust that the loadset contains the correct versions of the files to be loaded.
- The application does not behave as expected and causes an incident to occur in the production environment.

To-Be:

- After doing the load, the operator uses the ZDFLV command to verify the correct files are loaded before deploying the application changes.
- Deployment automation could also use the ZDFLV command to verify the correct artifacts are loaded before continuing the deployment script.

User Story – Operator loading a fix

```
zdflv * l-TPFMA6Q
CSMP0097I 19.22.13 CPU-B SS-BSS  SSU-HPN  IS-01 _
DFLV0003I 19.22.13 THE LIST OF MATCHING FILES
  01-/sys/tpf_pbfiles/tpf-fdes/myfile1.xml
  02-/sys/tpf_pbfiles/tpf-fdes/myfile2.xml
  03-/sys/tpf_pbfiles/tpf-fdes/myfile3.xml
  04-/sys/tpf_pbfiles/tpf-fdes/myfile4.xml _
  05-/sys/tpf_pbfiles/tpf-fdes/myfile5.xml

zdflv 01 cont
DFLV0001I 19.23.57 STANDARD FILE VERSION INFORMATION
  FILE-/sys/tpf_pbfiles/tpf-fdes/myfile1.xml
* LOADSET- TPFMA6Q  STAT-  ACT        ACT_NUM-     2  HI_ACT-   N/A
    sourcepath=/usr_instead_of_build_dir/base/tpf-fdes/myfile1.xml
```

User Story – Tester verifies a set of files for test case

- A tester loads a subset of required files to a test system to run a test case.

As-Is:

- The tester has to trust that the loadset contains the correct versions of the files and which files from the base will be used.
- The application does not behave as expected.

To-Be:

- The tester uses the ZDFLV command to verify the files in a specified directory are the correct versions.

User Story – Tester verifies a set of files for test case

```
zdflv *.jar start-/sys/tpf_pbfiles/apps/sshd
DFLV0006I 15.40.18 THE LIST OF CURRENT MATCHING FILES
  01-L-    BASE  /sys/tpf_pbfiles/apps/sshd/netty.jar
  02-L- SSHDJAR  /sys/tpf_pbfiles/apps/sshd/netty-common-2.5.1.jar
  03-L- SSHDJAR  /sys/tpf_pbfiles/apps/sshd/sshd-common-2.5.1.jar
  04-L-    BASE  /sys/tpf_pbfiles/apps/sshd/sshd-core.jar _
  05-L-    BASE  /sys/tpf_pbfiles/apps/sshd/sshd-mina.jar

zdflv /sys/tpf_pbfiles/apps/sshd/sshd-common-2.5.1.jar info-all
* LOADSET- SSHDJAR  STAT-  ACT        ACT_NUM-     4  HI_ACT-   N/A
sourcepath=/user_directory/sshd/sshd-common-2.5.1.jar
loadtime=04-20-24 12.00.00
sourcemodtime=01-28-24 16.27.08
LOCATION-/sys/tpf_pbfiles/apps/sshd/sshd-common-2.5.1.jar/.4
SIZE-91 bytes
```

The source modification time indicates this jar was not rebuilt as part of the project build on 4/20/24.

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PJ48019 (Very Soon!) ZMDES DISP wildcard support

- You can use wildcard characters to specify the descriptor file name.
- A question mark (?) matches any single character, and an asterisk (*) matches any number of characters.

```
zmdes disp file-*r?mc*
MDES0016I 19.30.08 DISPLAY OF REQUESTED DEPLOYMENT DESCRIPTORS FOR PROCESSOR B
IN-MEMORY    FILE
 STATUS     STATUS    FILE NAME
DEPLOYED   DEPLOYED   /sys/tpf_pbfiles/tpf-fdes/tpf_rtmc_cdc.ept.xml
DEPLOYED   DEPLOYED   /sys/tpf_pbfiles/tpf-fdes/tpf_rtmc_jvm.ept.xml
DEPLOYED   DEPLOYED   /sys/tpf_pbfiles/tpf-fdes/tpf_rtmc_mat.ept.xml
DEPLOYED   DEPLOYED   /sys/tpf_pbfiles/tpf-fdes/tpf_rtmc_nvpc.ept.xml _
DEPLOYED   DEPLOYED   /sys/tpf_pbfiles/tpf-fdes/tpf_rtmc_udm.ept.xml
```

Thank you

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