SMP/E V3.5 Advanced Function Hands-on Lab
Session: 8684
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Using SMP/E Advanced Functions: Hands-on Lab
Session 8684

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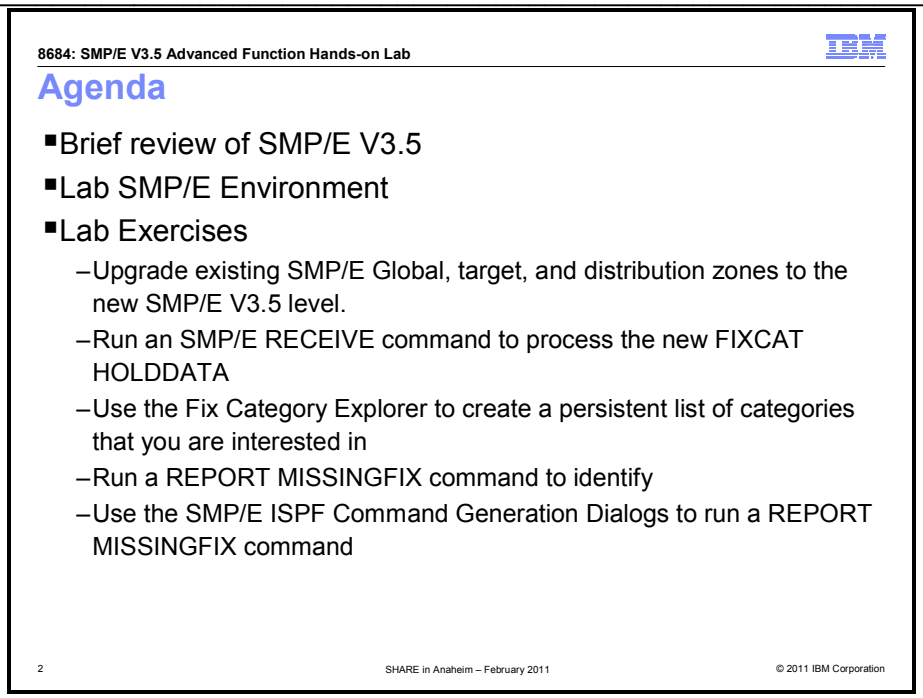

Using SMP/E Advanced Functions: Hands-on Lab

SMP/E V3.5 became available 26 September 2008 as an IBM Program Product which can be installed on top of all supported z/OS releases, and as part of z/OS V1.10. SMP/E V3.5 simplifies the task of verifying that required software fixes for new hardware devices, toleration and coexistence of new software releases, and for enabling new functions are installed. IBM consolidates the lists of required fixes from PSP buckets and produces new Fix Category (FIXCAT) HOLDDATA to identify those fixes.

Come to this lab to learn how to upgrade to SMP/E V3.5, and use the new FIXCAT HOLDDATA. You will learn how to use the new SMP/E Explorer, and how to use the new SMP/E REPORT MISSINGFIX command. If you are tired of manually looking at PTFs in PSP buckets, this is something you must attend.

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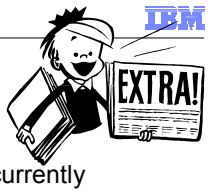
SMP/E V3.5 Introduction



- ***IBM SMP/E for z/OS Version 3 Release 5***
  - Program number 5655-G44
  - Entitled (no additional charge) to licensees of all currently supported z/OS or z/OS.e releases
- Availability:
  - SMP/E V3.5 is an independent and separately orderable product, and
  - SMP/E V3.5 is a base element of z/OS V1.10, z/OS V1.11, and z/OS V1.12
- Ordering and Delivery
  - Individual product order via ShopzSeries (CPBDO package)
    - Both physical and Internet delivery options available
  - Included in system replace ServerPac orders for z/OS V1.10, z/OS V1.11, and z/OS V1.12

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Current process for *'New Hardware, Release or Function'* Service

1. **Identify PSP Buckets to review**
2. **Review required service from the PSP Buckets and Product Documentation**
   - Hardware buckets for required service for device support or exploiting specific hardware functions.
   - Software buckets for recommended service to be installed when you install the software
   - Functional buckets for the list of Service Recommendations needed for the function
   - Product documentation for "driving system", coexistence, and cross product target system functional requirements
3. **Acquire the missing service and install all required service**
4. **Monitor PSP Bucket – as needed**
   - Can use Enhanced PSP Tool to identify uninstalled PSP Bucket service, and then acquire and install missing fixes

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Problems with the Current Methods

1. Procedure is very manual
2. The tools are NOT integrated into your existing processes
   - Extract files are not delivered when service is acquired
   - Report program is not part of SMP/E
   - No easy way to acquire or APPLY missing service
3. The procedure is geared to process one SUBSET at a time (when multiple SUBSETs are required)
4. Because of the above, many of you do NOT analyze PSP buckets
   - Or if you do,
     - You do not actively monitor updates in PSP buckets
     - You do not review hardware and functional buckets when you install new software levels (FMIDs).
5. There is no easy way to identify new hardware or functional buckets, or establish a list of buckets that are of interest.

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New Fix Category HOLDDATA

- Create metadata that associates PTFs with one or more fix categories
  - Such as fixes needed for:
    - Specific hardware levels
    - New software FMIDs
    - Enabling new hardware/software functions
- Deliver the metadata with existing PTF and HOLDDATA acquisition procedures.
- Integrate verification and installation tasks within typical SMP/E operations.

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Sample FIXCAT HOLDDATA

```
++HOLD(HDZ1B10) FIXCAT FMID(HDZ1B10) REASON(AA32004) RESOLVER(UA54754)
 CATEGORY(IBM.ProductInstall-RequiredService, IBM.Function.VSAM-RLS)
 DATE(10193).
++HOLD(HDZ1C10) FIXCAT FMID(HDZ1C10) REASON(AA32004) RESOLVER(UA54755)
 CATEGORY(IBM.ProductInstall-RequiredService, IBM.Function.VSAM-RLS)
 DATE(10193).
++HOLD(HBB7740) FIXCAT FMID(HBB7740) REASON(AA32081) RESOLVER(UA55256)
 CATEGORY(IBM.Device.Server.z10-EC-2097, IBM.Device.Server.z10-BC-2098)
 DATE(10194).
```

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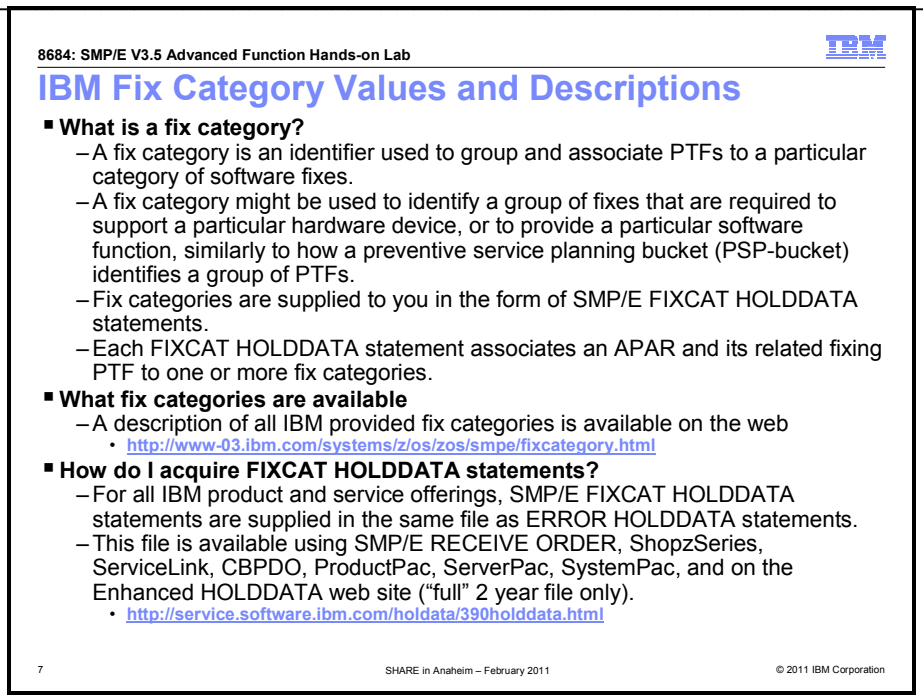

What is a fix category?

A fix category is an identifier used to group and associate PTFs to a particular category of software fixes. A fix category might be used to identify a group of fixes that are required to support a particular hardware device, or to provide a particular software function, similarly to how a preventive service planning bucket (PSP-bucket) identifies a group of PTFs. Fix categories are supplied to you in the form of SMP/E FIXCAT HOLDDATA statements. Each FIXCAT HOLDDATA statement associates an APAR and its related fixing PTF to one or more fix categories.

During SMP/E RECEIVE command processing, SMP/E translates fix category values into source IDs and assigns them to the resolving (fixing) PTFs identified on the HOLDDATA. You can then use the fix category values as source IDs when selecting a set of PTFs to be applied. For example, if you have a z/OS V1.11 target zone named ZOSR11T, you can attempt to install all required coexistence and fallback fixes for z/OS V1.12 that have already been received by using the following command:

```
SET BDY(ZOSR11T).
  APPLY SOURCEID(IBM.Coexistence.z/OS.V1R12) CHECK.
```

In addition, the SMP/E REPORT MISSINGFIX command can be used to identify PTFs for interesting fix categories that are missing in one or more target zones. In this case only the latest HOLDDATA needs to be received and not the individual resolving PTFs. For example, using the same zone as described above, you can identify all required coexistence and fallback fixes for z/OS V1.12 that are not yet applied in the ZOSR11T zone by using the following command:

```
SET BDY(GLOBAL).
  REPORT MISSINGFIX ZONES(ZOSR11T)
    FIXCAT(IBM.Coexistence.z/OS.V1R12).
```

For more information about the SMP/E APPLY or REPORT MISSINGFIX commands, see the SMP/E Commands book. For a discussion on how fix categories can be used to replace the service recommendation section of PSP-buckets, see "SMP/E 3.5 - Simplifying PSP buckets".

How do I acquire FIXCAT HOLDDATA statements?

For all IBM product and service offerings, SMP/E FIXCAT HOLDDATA statements are supplied in the same file as ERROR HOLDDATA statements. This file is available using SMP/E RECEIVE ORDER, ShopzSeries, ServiceLink, CBPDO, ProductPac, ServerPac, SystemPac, and on the HOLDDATA website (full 2 year file only).

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Fix category descriptions

The following tables identify and describe the fix category values currently used by IBM.

Installation categories

The following fix categories identify fixes that are recommended when installing or deploying new software product release levels.

Fix categories	Description
IBM.Coexistence.z/OS.V1R10	Fixes that allow z/OS V1.8 and z/OS V1.9 to coexist with, and fallback from, z/OS V1.10.
IBM.Coexistence.z/OS.V1R11	Fixes that allow z/OS V1.9 and z/OS V1.10 to coexist with, and fallback from, z/OS V1.11.
IBM.Coexistence.z/OS.V1R12	Fixes that allow z/OS V1.10 and z/OS V1.11 to coexist with, and fallback from, z/OS V1.12.
IBM.Coexistence.z/OSMF.V1R12	Fixes that allow z/OSMF V1.11 to coexist with, and fallback from, z/OSMF V1.12.
IBM.Coexistence.ICSF.z/OS_V1R9-V1R11-HCR7770	Fixes that allow prior levels of ICSF to coexist with, and fallback from, the Cryptographic Support for z/OS V1.9-V1.11 web deliverable (FMID HCR7770).
IBM.ProductInstall-RequiredService	Fixes that must be installed for an IBM product at the time the product is installed.
IBM.TargetSystem-RequiredService.z/OS.V1R11	Fixes required on other IBM products to allow them to run on z/OS V1.11.
IBM.TargetSystem-RequiredService.z/OS.V1R12	Fixes required on other IBM products to allow them to run on z/OS V1.12.
IBM.TargetSystem-RequiredService.z/OSMF.V1R11	Fixes required on other IBM products to enable z/OSMF V1.11 to run.
IBM.TargetSystem-RequiredService.z/OSMF.V1R12	Fixes required on other IBM products to enable z/OSMF V1.12 to run.

The complete list of fix categories is on the web:
http://www-03.ibm.com/systems/z/os/zos/smpe/fixcategory.html

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Lab Agenda

- Upgrade existing SMP/E Global, target, and distribution zones to the new SMP/E V3.5 level.
- Run an SMP/E RECEIVE command to process the new FIXCAT HOLDDATA
- Use the Fix Category Explorer to create a persistent list of categories that you are interested in
- Run a REPORT MISSINGFIX command to identify
  - z10 maintenance not currently installed
  - Coexistence maintenance for z/OS V1.10 not currently installed
  - Software PSP bucket maintenance not currently installed
- Use the SMP/E ISPF Command Generation Dialogs to run a REPORT MISSINGFIX command

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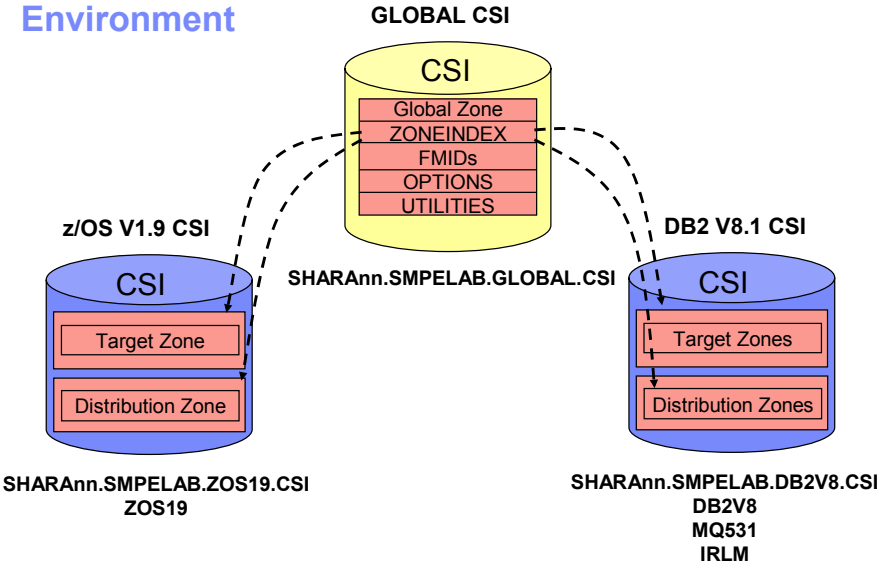
Environment



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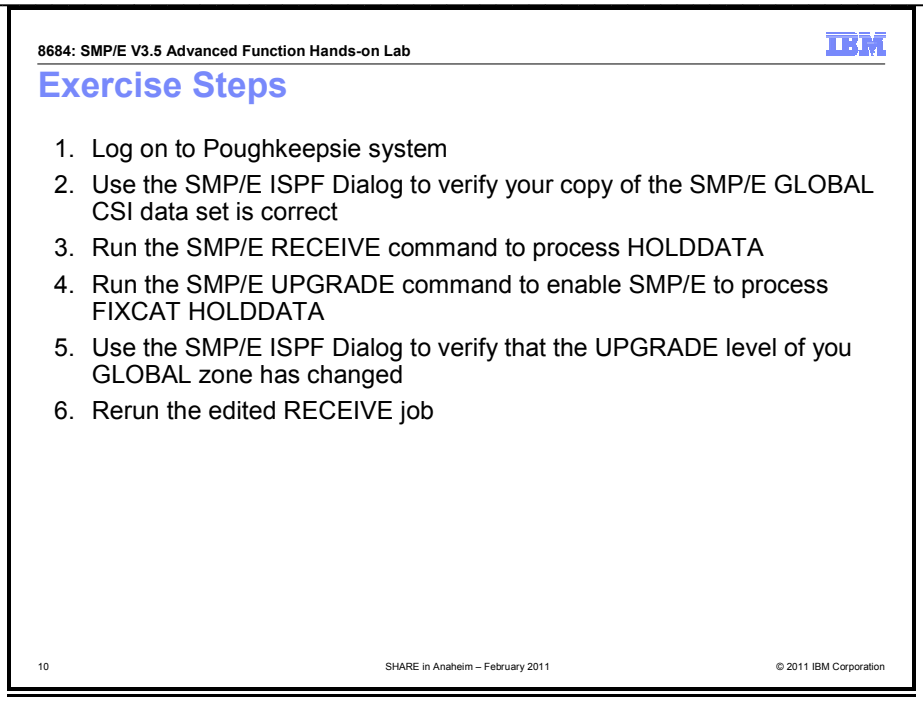

Exercise Steps

1. Log on to Poughkeepsie SHARE/EXPO system
   a. Enter "TSO" from the PCOM emulation session
   b. Enter the USERID that you were given
   c. On the TSO/E Logon panel enter the password, FIRSTPW
2. Use the SMP/E ISPF Dialog to verify your copy of the SMP/E GLOBAL CSI data set is correct
   a. Query the GLOBAL zone entry
   b. Exit the dialog
3. Run the SMP/E RECEIVE command to process HOLDDATA
   a. Edit the JCL to RECEIVE the HOLDDATA, changing USERID to your userid
   b. Submit the job
   c. Save the JCL changes
   d. Go to SDSF to view output
   e. Notice the SMP/E warning message that was produced
4. Run the SMP/E UPGRADE command to enable SMP/E to process FIXCAT HOLDDATA
   a. Submit the UPGRADE job, changing USERID to your userid
5. Use the SMP/E ISPF Dialog to verify that the UPGRADE level of you GLOBAL zone has changed
   a. Query the GLOBAL zone entry
6. Rerun the edited RECEIVE job
   a. Submit the edited job
   b. Go to SDSF to view output
   c. Notice that the command now got a zero (0) return code, and that numerous FIXCAT HOLDs were processed

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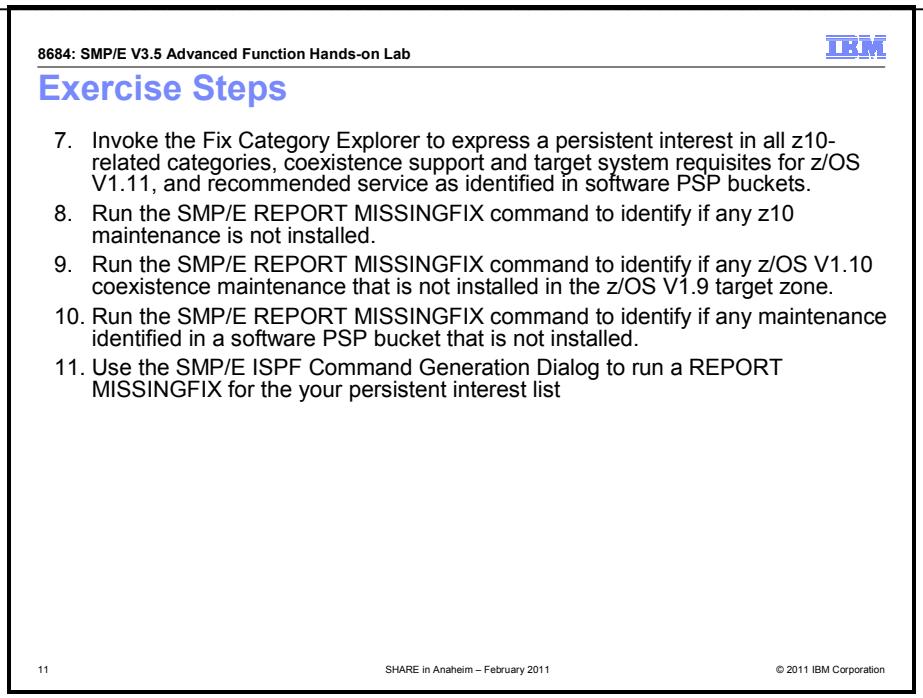

7. Use ISPF to invoke the Fix Category Explorer to create a persistent interest list containing all z10-related categories, coexistence support for z/OS V1.11, target system requisites for z/OS V1.11 and z/OSMF V1.11, and recommended service as identified in software PSP buckets.
    a. Invoke the SMP/E Administration ISPF Dialog to update the OPTIONS entry with a list of fix categories that we are interested in
        i. Go to Administration
        ii. Definition for the GLOBAL zone
        iii. Select OPTIONS and the GOPT entry, then HOLDDATA followed by FIXCAT
        iv. Specify **YES** for Explore Fix Categories? ==> ___ (YES or NO)
    b. Notice categories identified as NEW
    c. Issue the "C" primary command to collapse all categories
    d. Issue the "E" line command to expand the categories one level
    e. Expand all the IBM.Device.Server categories
    f. Issue the "F" (find) primary command for z10 to find the z10 related categories
    g. Issue the "S" line commands to select the z10 related fix categories
    h. Notice the implicitly selected fix categories
    i. Issue the "C" primary or line command to collapse the IBM.Device.Server categories
    j. Issue the "S" line command for z/OS coexistence (IBM.Coexistence.z/OS.V1R10) and IBM.ProductInstall-RequiredService to express an interest in those categories
    k. Save the persistent list
    l. Exit the SMP/E ISPF dialog
8. Run the SMP/E REPORT MISSINGFIX command to identify if any z10 maintenance is not installed.
    a. Edit the JCL member MISSZ10, changing USERID to your userid
    b. Submit the job
    c. Go to SDSF to view output
    d. Notice the SMP/E output fixes not installed, fixes not received
    e. Notice the punched jobs
9. Run the SMP/E REPORT MISSINGFIX command to identify if any z/OS V1.10 coexistence maintenance that is not installed in the z/OS V1.9 target zone.
    a. Edit the JCL member MISSZOS, changing USERID to your userid
    b. Submit the job
    c. Go to SDSF to view output
    d. Notice the SMP/E output fixes not installed, fixes not received
    e. Notice the punched jobs

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10. Run the SMP/E REPORT MISSINGFIX command to identify if any maintenance identified in a software PSP bucket that is not installed.
    a. Edit the JCL member MISSPSP, changing USERID to your userid
    b. Submit the job
    c. Go to SDSF to view output
    d. Notice the SMP/E output fixes not installed, fixes not received
    e. Notice the punched jobs
11. Use the SMP/E ISPF Command Generation Dialog to run a REPORT MISSINGFIX for the your persistent interest list

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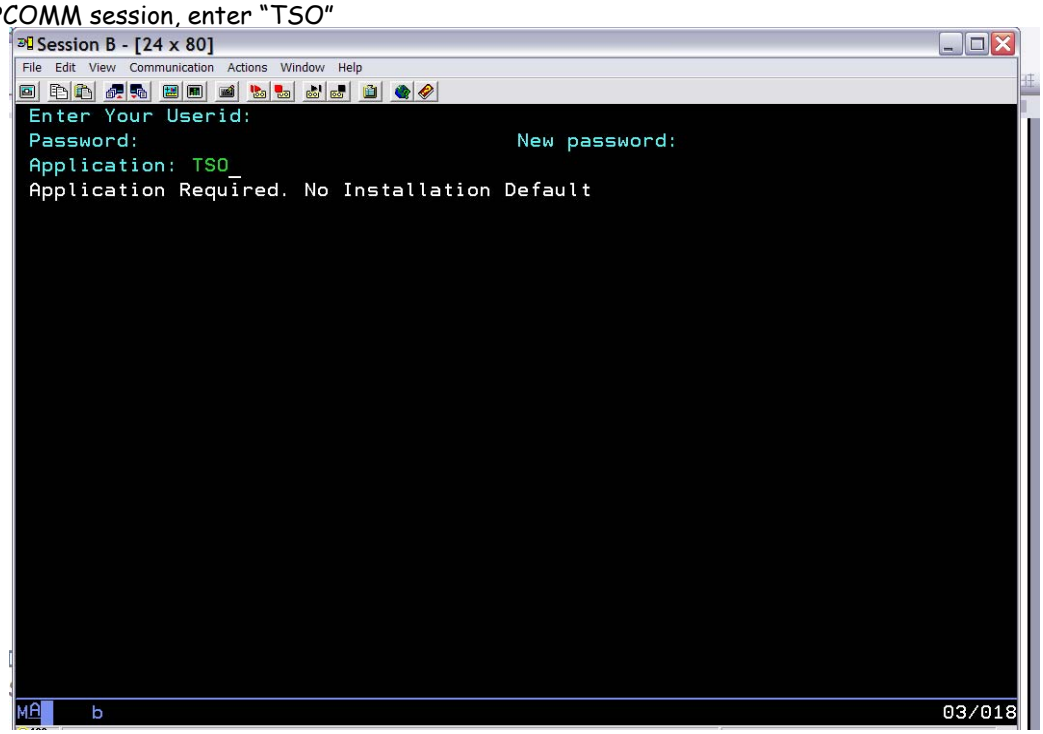
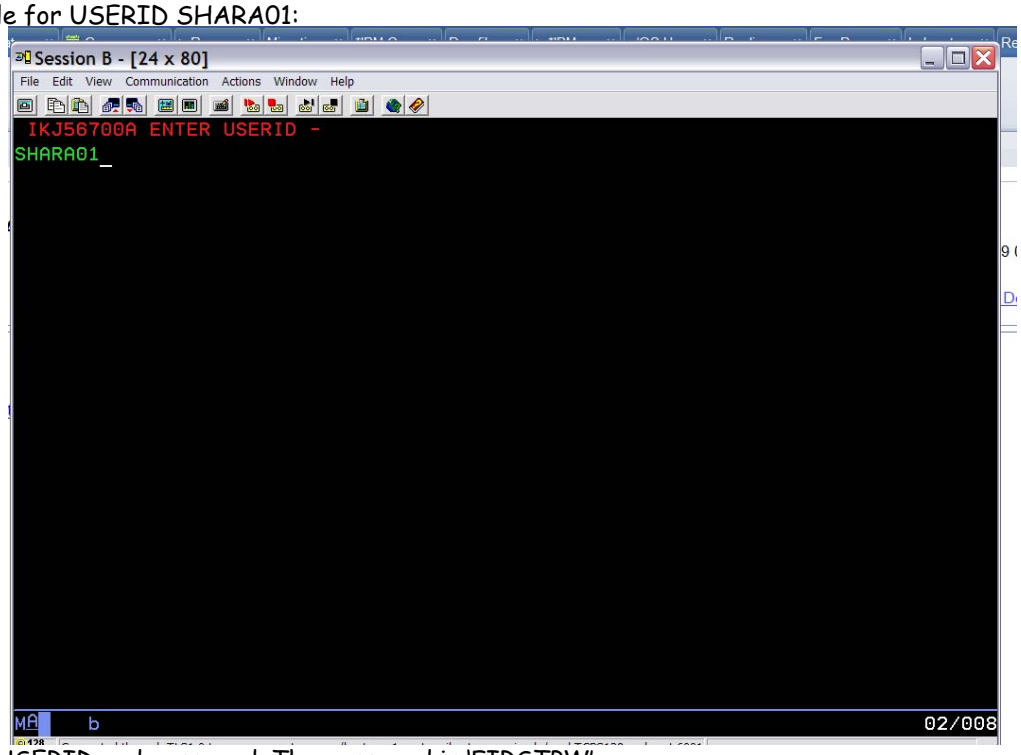
1. Logon to the Poughkeepsie SHARE/EXPO system

From the PCOMM session, enter "TSO"



Enter the TSO USERID assigned to your seat. Userids SHARA01 – SHARA30 have been set up for this lab. For example for USERID SHARA01:



Enter the USERID and password. The password is 'FIRSTPW'.

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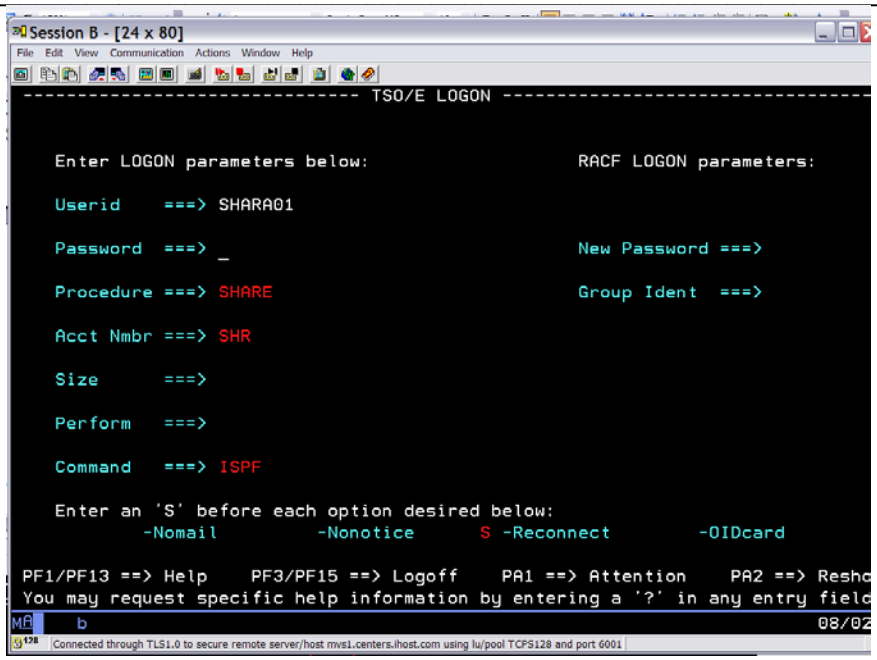
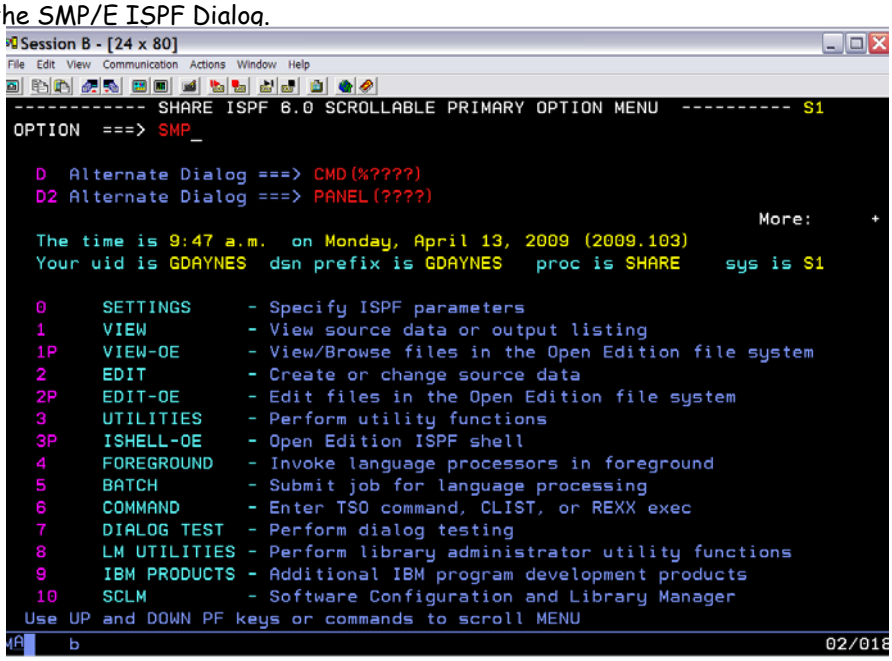


If instructed, on the logon panel, enter the command EX 'SHARE.CLIST(SMPELAB)'.

2. Use the SMP/E ISPF Dialog to verify your copy of the SMP/E GLOBAL CSI data set is correct

After you've logged on and gotten into ISPF, enter "SMP" and hit enter from the Primary ISPF panel to be brought to the SMP/E ISPF Dialog.



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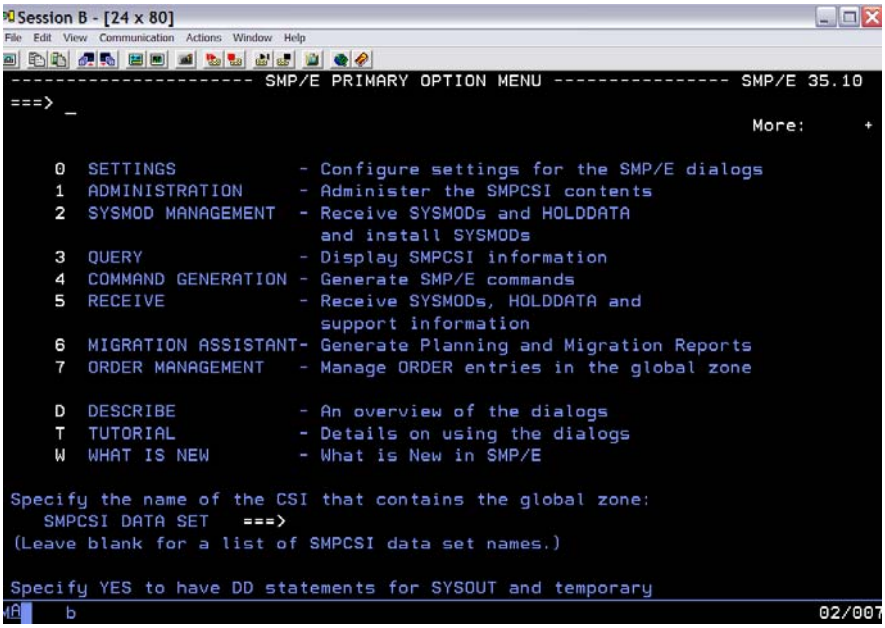
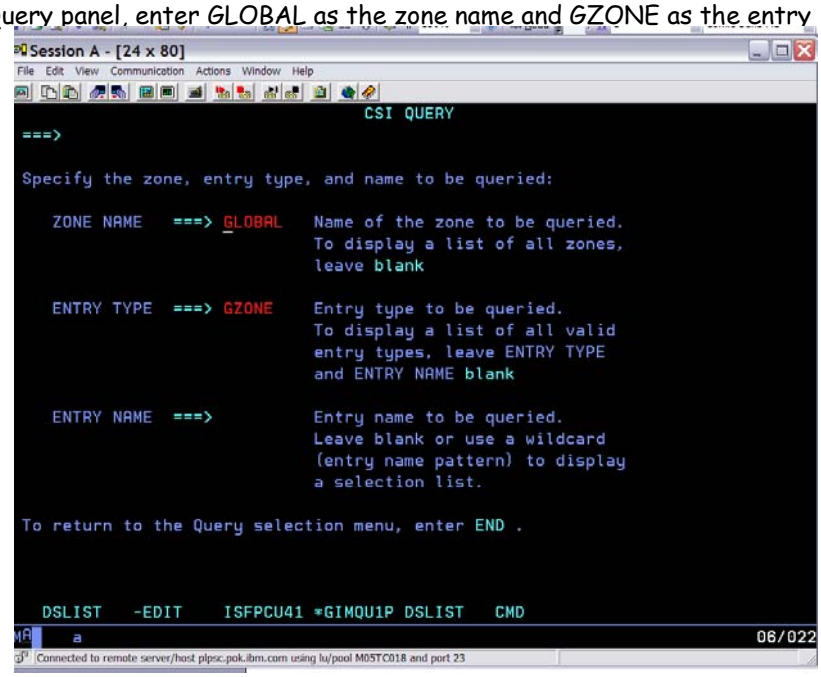
You will be brought to the following panel. Enter SMPELAB.GLOBAL.CSI as the SMPCSI data set name (no quotes needed). On the command line enter 3.1 to Query a zone.



From the Query panel, enter GLOBAL as the zone name and GZONE as the entry



After pressing the Enter key, the GLOBAL zone entry will be displayed.

1. First, look at the "UPGRADE LEVEL". It should be SMP/E 34.30.
2. Second, notice that a number of target and DLIB zones have been defined to this GLOBAL zone. These identify target and DLIB zones for z/OS V1.9, DB2 V8.1, MQ V5.3.1 and IRLM.
3. Finally, (if you are interested) you can scroll through the list of SRELs and FMIDs to see the FMIDs that have been defined to this GLOBAL zone. SMP/E will only process HOLDDATA for FMIDs defined to the GLOBAL zone (unless BYPASS is specified on the RECEIVE command).

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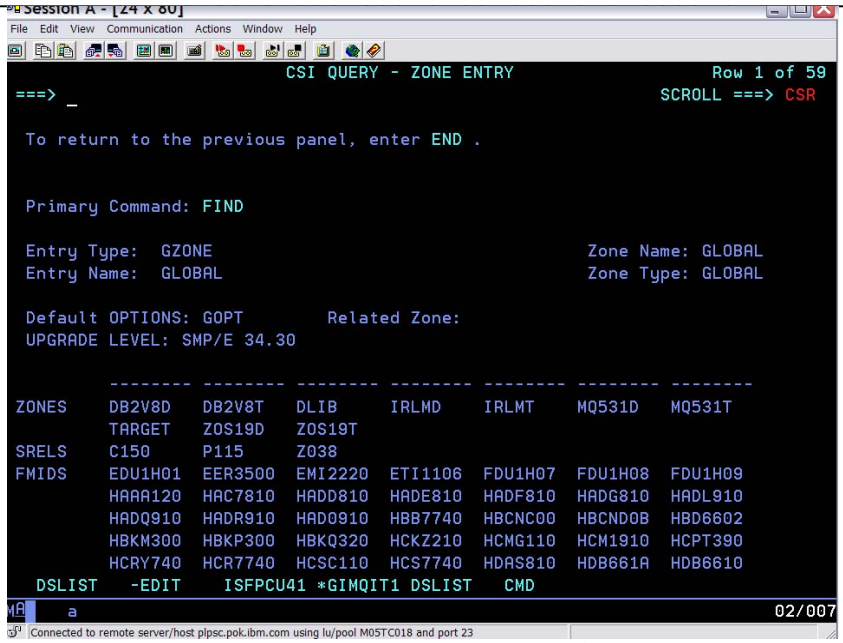

Exit the SMP/E ISPF dialog either by depressing the F4 key followed by the F3 key; or simply enter '=x' on the command line and depress the enter key.

3. Run the SMP/E RECEIVE command to process HOLDDATA

Edit the userid.JCL data set (again).

1. Edit member RECEIVE (for example "SHARA01.JCL(RECEIVE)") to run the SMP/E RECEIVE command to process a HOLDDATA file. Change all references of "USERID" to userid that you logged on with. For example, you can use the following change command: "C USERID SHARA01 all" (Please remember to use caps for your userid).
2. Once all references have been changed, submit the job and save your changes to the JCL job.
3. You can go into SDSF look at the output.
   - SDSF is Option "S" from the ISPF primary command
   - Once in SDSF, enter the following commands
     a. "OWNER userid" where userid is the ID that you logged on with
     b. "PREFIX *" to enable any jobname submitted by you to be displayed
   - Enter "H ALL" to see all jobs on the held output queue or "DA" to see jobs currently executing
   - Use the "S" line command to select the job that you want to view.
4. You should receive the following messages:
   - GIM58903W SMP/E COULD NOT PROCESS A ++HOLD FIXCAT MCS BECAUSE IT WOULD HAVE MADE A CHANGE TO THE GLOBAL ZONE THAT CANNOT BE PROCESSED COMPLETELY BY PRIOR LEVELS OF SMP/E. USE THE UPGRADE COMMAND TO ALLOW SMP/E TO MAKE SUCH CHANGES.
   - GIM20501I RECEIVE PROCESSING IS COMPLETE. THE HIGHEST RETURN CODE WAS 04.

4. Run the SMP/E UPGRADE command to enable SMP/E to process the FIXCAT HOLDDATA

Edit the userid.JCL data set again, this time member UPGRADE.

1. Edit member UPGRADE (for example "SHARA01.JCL(UPGRADE)") to run the SMP/E UPGRADE command against all the SMP/E zones. Change all references of "USERID" to userid that you logged on with. For example, you can use the following change command: "C USERID SHARA01 all" (Please remember to use caps for your userid).
2. Once all references have been changed, submit the job.
3. You can go into SDSF look at the output. For each zone processed, you should receive the message: "GIM20501I UPGRADE PROCESSING IS COMPLETE. THE HIGHEST RETURN CODE WAS 00."

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5. Use the SMP/E ISPF Dialog to (a) verify that the UPGRADE level of you GLOBAL zone has changed.
Now go back into the SMP/E ISPF Dialogs. The GLOBAL zone CSI data set name that you entered earlier should be remembered.

Perform the GZONE query that you did before you ran the UPGRADE command and notice that the UPGRADE level has changed. It is now UPGRADE LEVEL: SMP/E 35.27.

```
                          CSI QUERY - ZONE ENTRY              Row 1 to 9 of 59
===> _                                                        SCROLL ===> PAGE

 To return to the previous panel, enter END .


 Primary Command: FIND

 Entry Type:  GZONE                                  Zone Name: GLOBAL
 Entry Name:  GLOBAL                                 Zone Type: GLOBAL

 Default OPTIONS: GOPT        Related Zone:
 UPGRADE LEVEL: SMP/E 35.27

         -------- -------- -------- -------- -------- -------- --------
ZONES    DB2V8D   DB2V8T   DLIB     IRLMD    IRLMT    MQ531D   MQ531T
         TARGET   ZOS19D   ZOS19T
SRELS    C150     P115     Z038
FMIDS    EDU1H01  EER3500  EMI2220  ETI1106  FDU1H07  FDU1H08  FDU1H09
         HAAA120  HAC7810  HADD810  HADE810  HADF810  HADG810  HADL910
         HADQ910  HADR910  HAD0910  HBB7740  HBCNC00  HBCND0B  HBD6602
         HBKM300  HBKP300  HBKQ320  HCKZ210  HCMG110  HCM1910  HCPT390
         HCRY740  HCR7740  HCSC110  HCS7740  HDAS810  HDB661A  HDB6610
         HDB771A  HDB771N  HDB771W  HDB7710  HDB881A  HDB8810  HDB9910
```

6. Re-Run the SMP/E RECEIVE command to process HOLDDATA
Once the upgrade command has completed successfully for each zone, submit the RECEIVE job again. This time the output should be different. The first thing that you may notice is that the job took longer to run. The next thing is that it produced over 50,000 lines of output. You should check the SMPOUT output for the message: "GIM20501I RECEIVE PROCESSING IS COMPLETE. THE HIGHEST RETURN CODE WAS 00.". If you have time, you should also look at the SMPHRPT output (the big 53K line output) and find the word "CATEGORY". You will see that the FIXCAT HOLDDATA was processed for the FMIDs defined in the global zone.

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7. Use the Fix Category Explorer to express a persistent interest in all z10-related categories, coexistence support for z/OS V1.11, target system requisites for z/OS V1.11 and z/OSMF V1.11, and recommended service as identified in software PSP buckets.

We will now use the Fix Category Explorer to create a persistent interest list. The following is a subset of the information documented in the SMP/E manuals.

Manage a Persistent Fix Category Interest List

The Administration dialog can be used to display, update, and define entries in the GLOBAL zone, a target zone, or a distribution zone. It can also be used to create a new target or distribution zone. One of the entries in the GLOBAL zone that can be updated is the OPTIONS entry.

An OPTIONS entry defines processing options that are to be used for an SMP/E command or set of commands. Although OPTIONS entries exist in the GLOBAL zone, they are also used to process commands for the target and distribution zones.

The FIXCAT subentry specifies a list of Fix Categories. Fix Category values can be 1 to 64 characters in length, can contain any non-blank character in the range X'41' - X'FE' except single quote ('), comma (,), left parenthesis ((), and right paranthesis ()), and may be specified in two ways:

- Explicitly, by fully specifying a particular Fix Category value.
- Implicitly, by partially specifying a Fix Category value using any number of asterisks (*) as generic characters and percent signs (%) as placeholders.

The Fix Category Explorer is a new SMP/E dialog that allows you to view and select from a list of Fix Category values in a structured manner. The Fix Category Explorer takes advantage of the hierarchical form of the Fix Category values to allow the user to navigate the list of Fix Categories similar to how the navigation pane of Windows Explorer allows a user to navigate the directories and files of a hierarchical file system.

More specifically, the naming convention for Fix Categories uses dot-qualified hierarchical values of the form

```
FirstLQ.SecondLQ.ThirdLQ. ... NthLQ
```

That is, qualifiers are separated by dots (periods), allowing as many qualifiers as can fit within a maximum of 64 characters. For example, the Fix Category value IBM.Device.Server.z9-EC-2094 has three qualifiers, where IBM is the first level qualifier, Device is the second level qualifier, and Server is the third level qualifier, and "z0-EC-2094" is the fourth qualifier. The Fix Category Explorer panels display the Fix Categories by exploiting this dot-qualified hierarchical scheme. Fix Category values displayed can be considered "parent" or "child" values. A parent value is constructed from one or more qualifiers of a complete Fix Category value. For example, IBM is the parent value for IBM.Device which in turn is the parent value for IBM.Device.Server.

Please note that while the naming convention is similar to the data set naming conventions, there are differences in that the Fix Category names are less restrictive. Specifically, the maximum number of characters is 64 (not 44), each qualifier can have more than 8 characters, and there isn't any restriction on the leading characters of a Fix Category.

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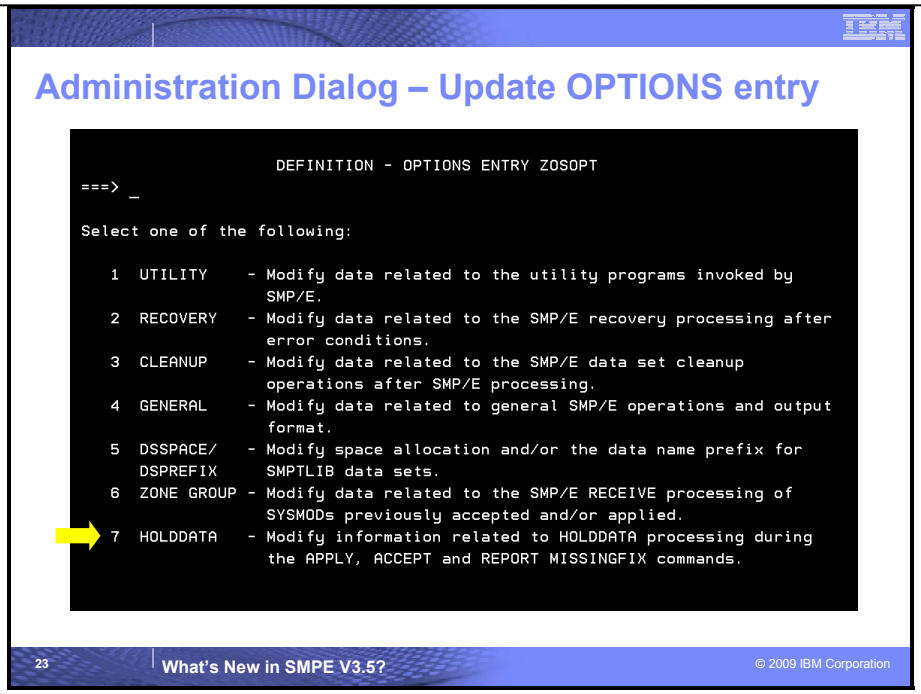
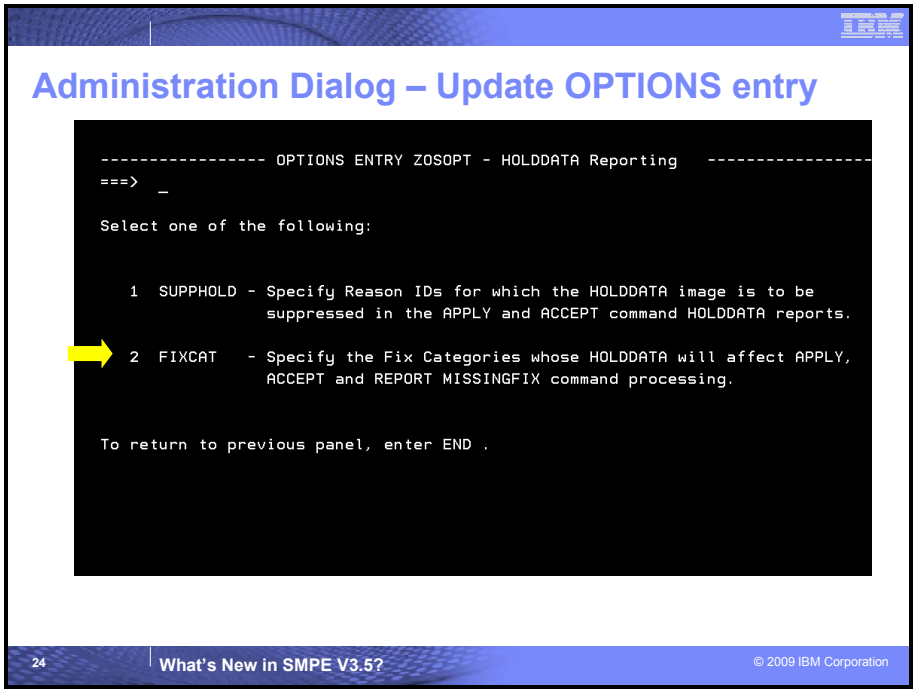


Administration Dialog Options Entry, FIXCAT Subentry

Within the SMP/E administration dialog for the options entry, the existing HOLDDATA selection was updated to manage persistent fix category interest lists. Selecting "7" on the panel above, will display the updated panel shown below. Selecting "2" on the panel below will enable you to define, or update, the persistent list of fix categories that will become the default when this OPTIONS entry is in use during APPLY, ACCEPT, or REPORT MISSINGFIX commands.



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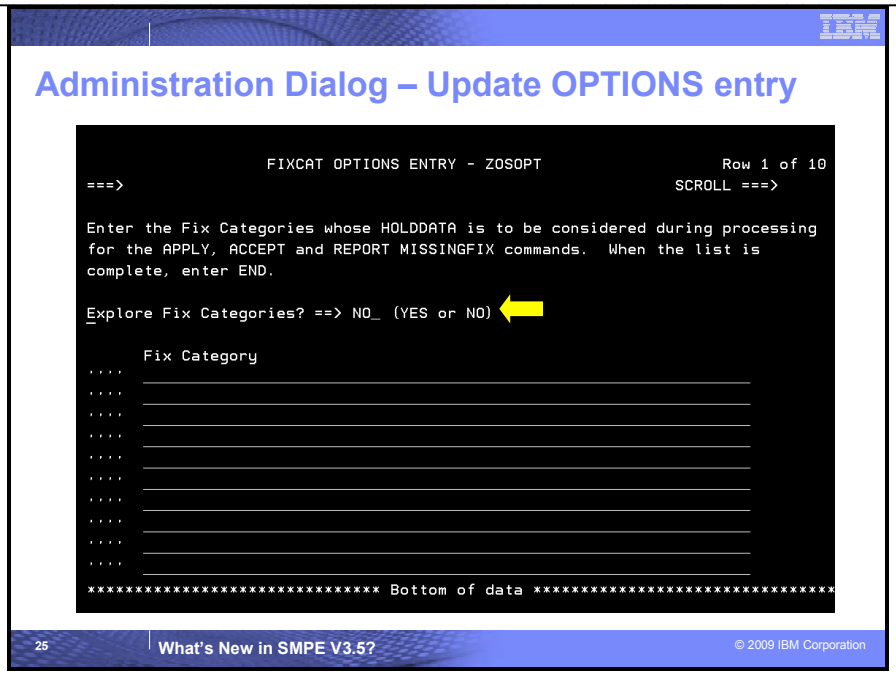
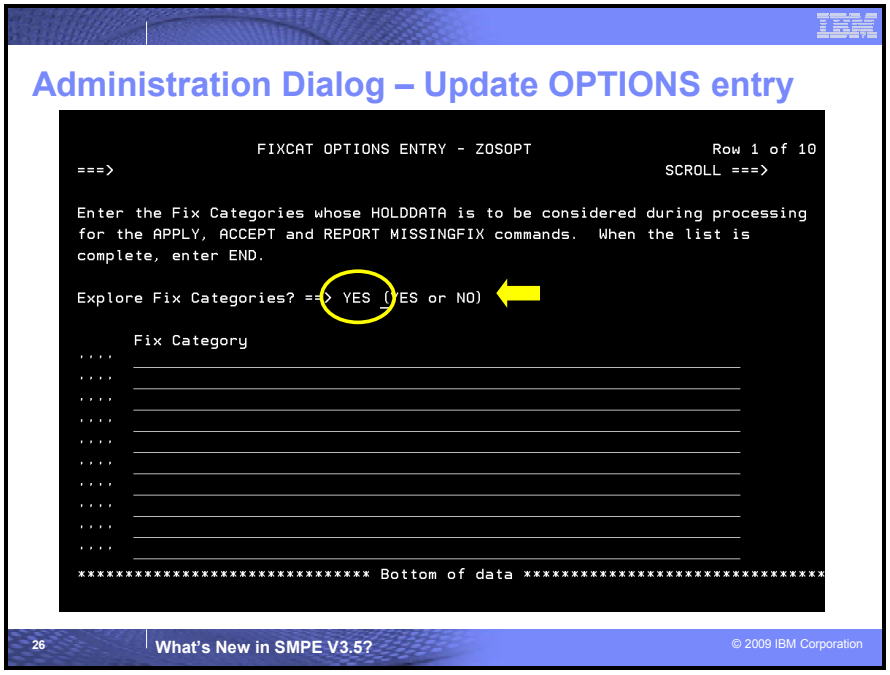


Administration Dialog Options Entry, FIXCAT Subentry

This panel allows you to specify a list of Fix Categories who's HOLDDATA is to be considered during APPLY, ACCEPT and REPORT command processing, or to use the Fix Category Explorer to view and select Fix Category values. If no FIXCAT subentry exists in the current OPTIONS entry, then the display will be empty. Otherwise the existing subentry list values will be displayed.

If you specify YES to enter the Fix Category Explorer (as shown below), you may view and select from a list of all Fix Category values from all FIXCAT HOLDs (next set of slides). In addition, new Fix Category values will be identified.



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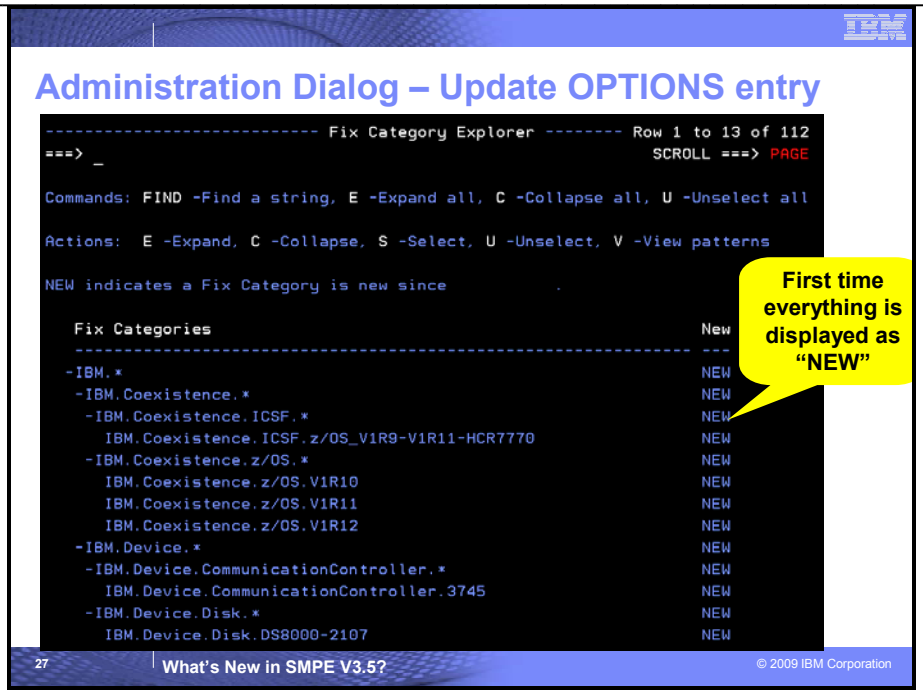

Fix Category Explorer

When a user enters the Fix Category Explorer while updating an OPTIONs entry, all Fix Category values that are new and have not been viewed previously will be marked as NEW in the display. That is, all FIXCAT HOLD entries will be read from the GLOBAL zone and all Fix Category values will be collected from those HOLD entries. This list of Fix Category values will be compared to the list of saved Fix Categories in the permanent ISPF table that is unique for the current userid (this is the list of Fix Categories viewed last time). Any Fix Category values from the HOLD entries that are not in the saved list are considered new. The NEW field for such values will be set to **NEW**. The NEW field for all other values will be blank. Finally, all Fix Categories are analyzed and dissected into their various levels, or qualifiers. Appropriate parent and child values are then constructed for the Explorer display.

This display option is useful if you have traveled this path before. That is, if you choose to enter the Fix Category Explorer, the SMP/E dialog will remember all Fix Category values that are used to build the display. The next time you enter the Explorer, only the Fix Categories from new HOLDDATA received into the GLOBAL zone since the last time will be marked new in the display.

The initial display for a user's first visit (or for a user with no saved list of previously viewed Fix Categories) all values will be NEW and therefore all levels are expanded in order to expose all NEW values in the display.

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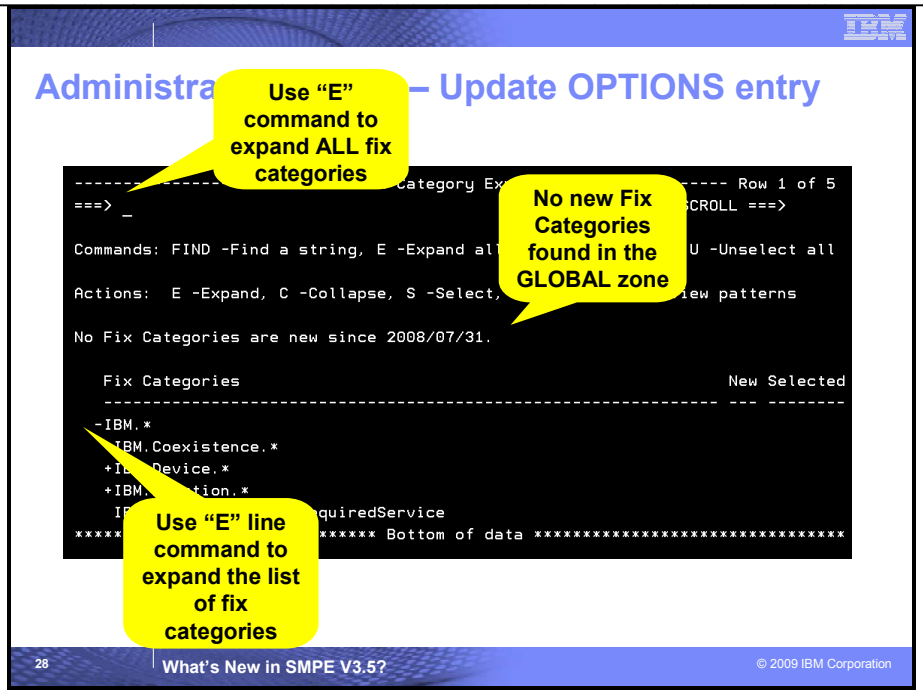
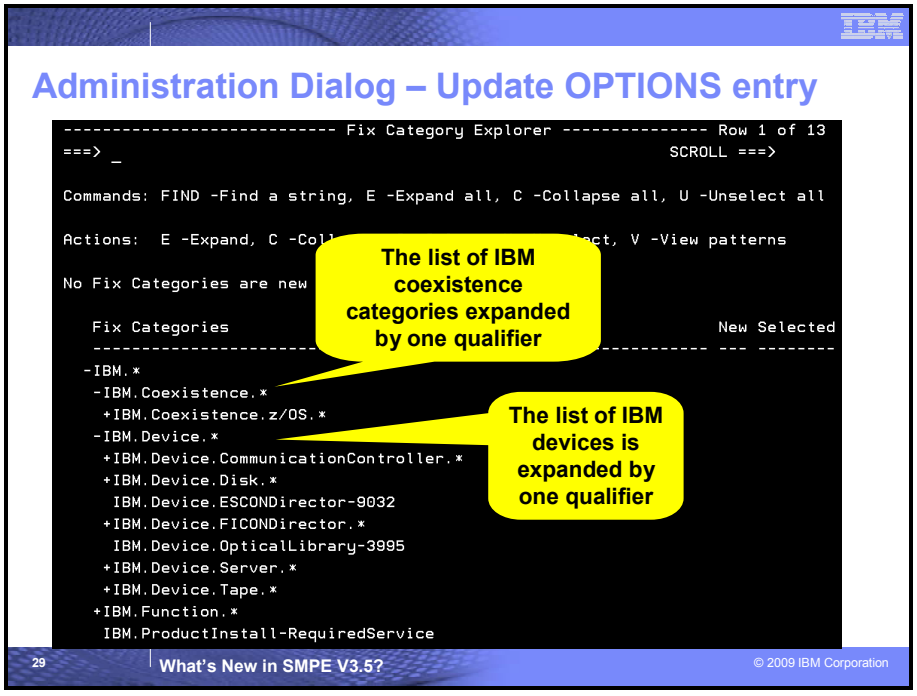


Fix Category Explorer

The Fix Category Explorer allows you to view and select Fix Category values from a structured display. The display takes advantage of the hierarchical form of the Fix Category values and represents all Fix Categories from all FIXCAT HOLDs found in the GLOBAL zone. It allows you to manage a persistent interest list. You can expand Fix Categories to see the more fully qualified name, as well as specify (select) an interest in a Fix Categories (or unselect it to state that you are no longer interested in that Fix Category).



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Administration … pdate OPTIONS entry

Can use the FIND command to locate z10 Fix Categories

```
---------------                                Explorer --------------- Row 1 of 28
===>        _                                                    SCROLL ===>

Commands: FIND -Find a string, E -Expand all, C -Collapse all, U -Unselect all

Actions:  E -Expand, C -Collapse, S -Select, U -Unselect, V -View patterns

No Fix Categories are new since 2008/07/31.

   Fix Categories                                                  New Selected
   ------------------------------------------------------------- --- --------
  -IBM.*
   -IBM.Coexistence.*
    +IBM.Coexistence.z/OS.*
   -IBM.Device.*
    +IBM.Device.CommunicationController.*
    +IBM.Device.Disk.*
     IBM.Device.ESCONDirector-9032
    +IBM.Device.FICONDirector.*
     IBM.Device.OpticalLibrary-39
    -IBM.Device.Server.*
      IBM.Device.Server.CouplingFacility-9674
      IBM.Device.Server.ParallelTransactionServer-9672
      IBM.Device.Server.s/390Multiprise3000-7060
```

The list of IBM servers is expanded by one qualifier

30 What's New in SMPE V3.5? © 2009 IBM Corporation

Administration Dialog – Update OPTIONS entry

```
--------------------------- Fix Category Explorer --------- CHARS 'Z10' FOUND
===> _                                                        SCROLL ===>

Commands                                ing, E -Expand all, C -Collapse all, U -Unselect all

Actions                                 lapse, S -Select, U -Unselect, V -View patterns

No Fix                                  since 2008/07/31.

   Fi                                                                New Selected
   ------------------------------------------------------------- --- --------
s     IBM.Device.Server.z10-EC-2097
s    +IBM.Device.Server.z10-EC-2097.*
      IBM.Device.Server.z800-2066
      IBM.Device.Server.z890-2086
     +IBM.Device.Server.z890-2086.*
      IBM.Device.Server.z9-BC-2096
     +IBM.Device.Server.z9-BC-2096.*
      IBM.Device.Server.z9-EC-2094
     +IBM.Device.Server.z9-EC-2094.*
      IBM.Device.Server.z900-2064
      IBM.Device.Server.z990-2084
     +IBM.Device.Server.z990-2084.*
    +IBM.Device.Tape.*
```

Use the "S" line command to express an interest in the Fix Category

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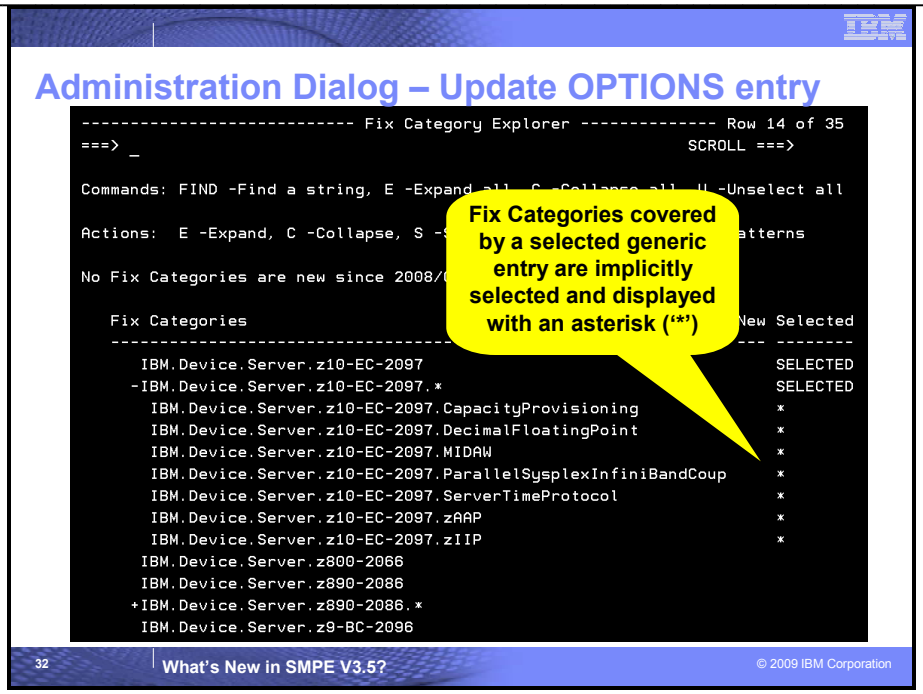

Fix Category Explorer (continued)

If one or more Fix Categories are already specified in the OPTIONS subentry, they will be pre-selected in the Fix Category Explorer display.

Specifying "S" on a row that is not already explicitly selected, or is implicitly selected by a match (its **Selected** field is either blank or *), will set that Fix Category to **SELECTED**. In addition, if the current row is a parent Fix Category value, then all of its children that are not already explicitly selected, will be implicitly selected. The **Selected** field for all such child Fix Categories will be set to asterisk (*), and then the table is redisplayed.

Note: Even though the **Selected** field for a child is set to asterisk (*), the display state of child rows is not affected by the Select command for a parent. That is, if a parent row is currently collapsed, its children will be implicitly selected, but they will remain hidden from view until the parent row is expanded.

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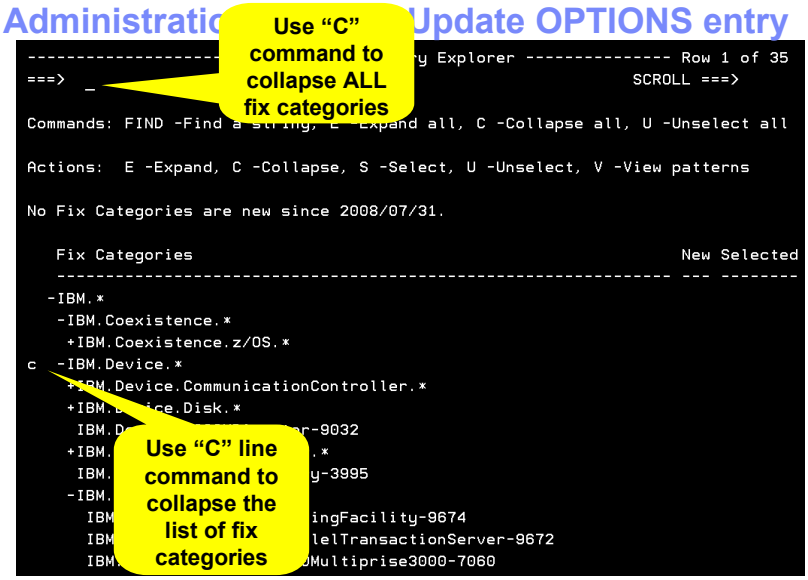
Administrati… Update OPTIONS entry



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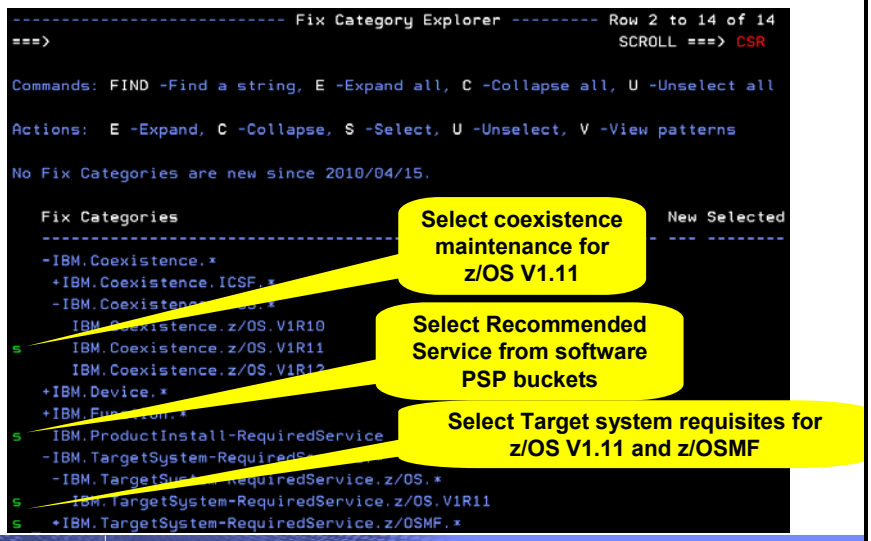
Administration Dialog – Update OPTIONS entry



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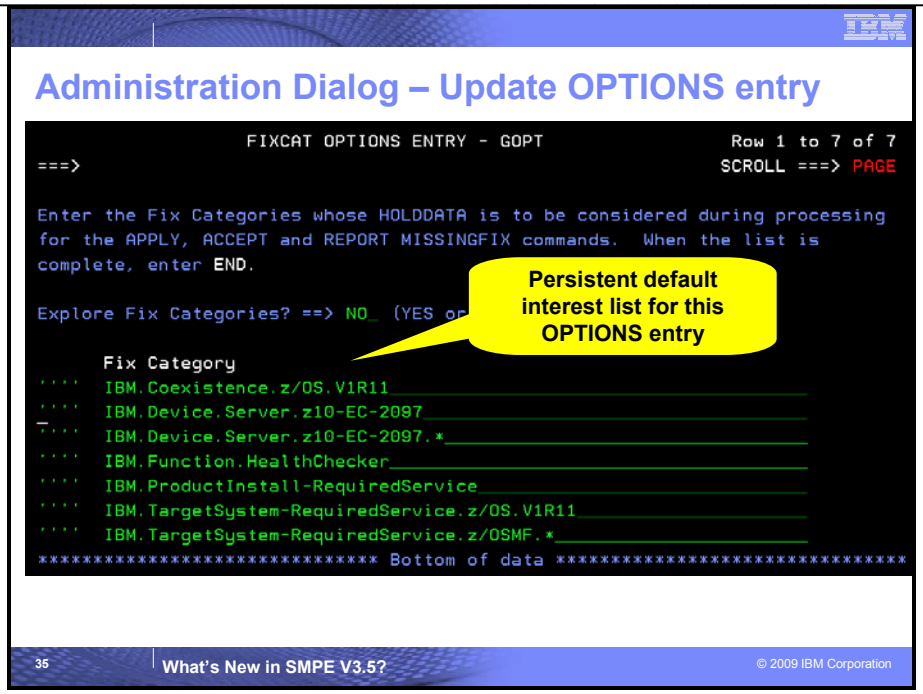

Fix Category Explorer (continued)

If either the END or RETURN command is processed, the list of Fix Categories displayed will be saved and used later to determine which Fix Categories will be marked "new" the next time this user chooses the NEW option of the Fix Category Explorer, and the selected Fix Categories will be stored in the FIXCAT subentry of the subject options entry.

8. Run the SMP/E REPORT MISSINGFIX command to identify if any z10 maintenance is not installed

Edit the userid.JCL data set.

a. Edit member MISSZ10 (for example "SHARA01.JCL(MISSZ10)") to run the SMP/E REPORT MISSINGFIX command to identify any maintenance needed to run on or exploit either a z10 EC or z10 BC server that is not installed. Change all references of "USERID" to userid that you logged on with. For example, you can use the following change command: "C USERID SHARA01 all" (Please remember to use caps for your userid).
b. Once all references have been changed, submit the job and save your changes to the JCL job.
c. You can go into SDSF look at the output. You should receive the following messages:
   - GIM20501I REPORT PROCESSING IS COMPLETE. THE HIGHEST RETURN CODE WAS 00.
   - You should get a MISSING FIXCAT SYSMOD REPORT for each zone. The report will identify that the only zone where fixes are missing is ZOS19T (the z/OS V1.9 target zone).
   - For each category with missing fixes, the FMID, APAR, fixing PTF, and status of the fixing PTF will be identified (see below)
   - For each fix that has not yet been RECEIVE'd, a sample RECEIVE ORDER job will be created to acquire those PTFs. Furthermore, for each fix not installed, a sample APPLY command is generated (with the not yet acquired service commented out).

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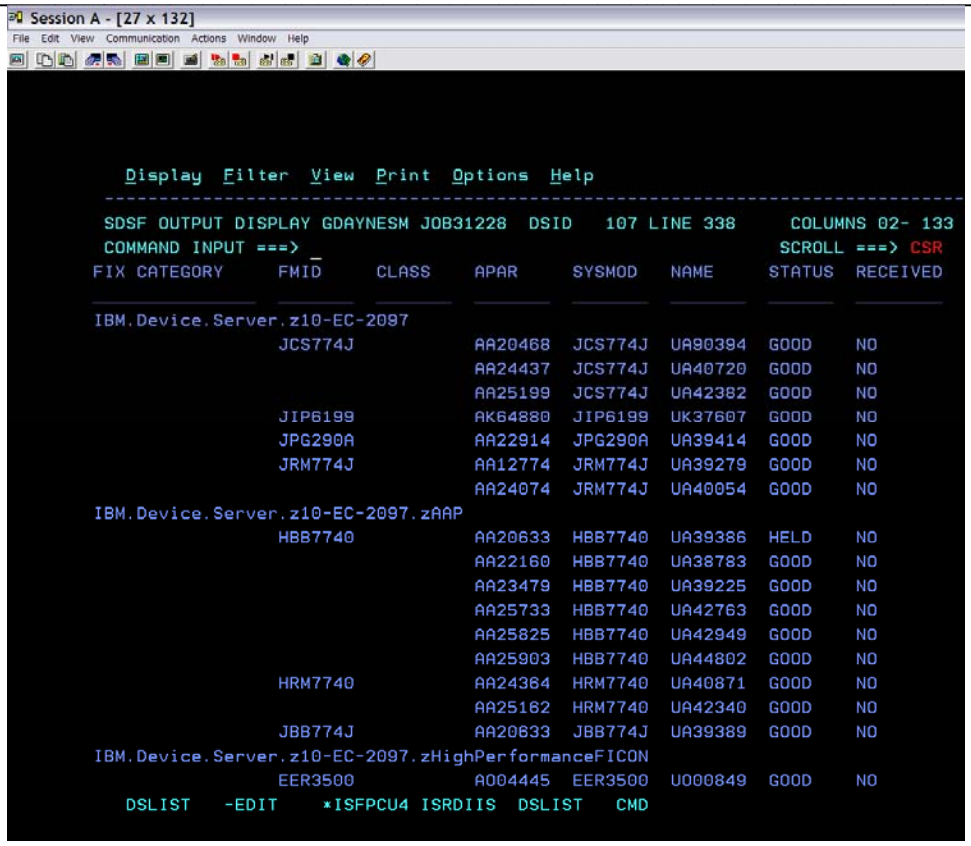

9. Run the SMP/E REPORT MISSINGFIX command to identify if any z/OS V1.10 coexistence maintenance that is not installed in the z/OS V1.9 target zone.

Edit the userid.JCL data set.

a. Edit member MISSZOS (for example "SHARA01.JCL(MISSZOS)") to run the SMP/E REPORT MISSINGFIX command to identify any maintenance needed to enable a z/OS V1.9 system to share resources with a z/OS V1.10 system (including in case of fallback) that is not installed. Change all references of "USERID" to userid that you logged on with. For example, you can use the following change command: "C USERID SHARA01 all" (Please remember to use caps for your userid).
b. Once all references have been changed, submit the job and save your changes to the JCL job.
c. You can go into SDSF look at the output. You should receive the following messages:
   - GIM20501I REPORT PROCESSING IS COMPLETE. THE HIGHEST RETURN CODE WAS 00.
   - You should get a MISSING FIXCAT SYSMOD REPORT for the ZOS19T zone. The report will identify that several coexistence fixes needed for z/OS V1.9 to coexist with z/OS V1.10 are not yet installed on the z/OS V1.9 system.
   - A similar report to what was produced for the z10 REPORT MISSINGFIX command will be produced.
   - For each fix that has not yet been RECEIVE'd, a sample RECEIVE ORDER job will be created to acquire those PTFs. Furthermore, for each fix not installed, a sample APPLY command is generated (with the not yet acquired service commented out).

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```
 Display  Filter  View  Print  Options  Help
-------------------------------------------------------------------------------
SDSF OUTPUT DISPLAY GDAYNESM JOB31664  DSID   107 LINE 3       COLUMNS 02- 133
COMMAND INPUT ===> _                                         SCROLL ===> CSR
MISSING FIXCAT SYSMOD REPORT FOR ZONE ZOS19T

                         HOLD     MISSING  HELD      ____RESOLVING SYSMOD_____
FIX CATEGORY     FMID    CLASS    APAR     SYSMOD    NAME     STATUS  RECEIVED
_______________  _______ _______  _______  ________  _______  ______  ________
IBM.Coexistence.z/OS.V1R10
                 HBB7740          AA17252  HBB7740   UA39716  HELD    NO
                                  AA23153  HBB7740   UA39874  GOOD    NO
                                  AA24850  HBB7740   UA40988  GOOD    NO
                                  AA25013  HBB7740   UA41279  GOOD    NO
                 HCS7740          AA22842  HCS7740   UA90386  GOOD    NO
                 HDZ119N          AA24257  HDZ119N   UA40245  GOOD    NO
                 HDZ1190          AA21487  HDZ1190   UA40229  GOOD    NO
                                  AA22026  HDZ1190   UA39934  GOOD    NO
                                  AA22211  HDZ1190   UA39940  GOOD    NO
                                  AA22400  HDZ1190   UA39959  GOOD    NO
                                  AA22449  HDZ1190   UA40221  GOOD    NO
                                  AA22804  HDZ1190   UA40306  HELD    NO
                                  AA23786  HDZ1190   UA39926  GOOD    NO
                                  AA25754  HDZ1190   UA42230  HELD    NO
                 HJE7740          CA20935  HJE7740   UA90383  GOOD    NO
                 HJS7740          AA21882  HJS7740   UA39863  GOOD    NO
  DSLIST   -EDIT    *ISFPCU4 ISRDIIS  DSLIST   CMD
```

Punched Sample Job

```
Session A - [27 x 132]
File  Edit  View  Communication  Actions  Window  Help

 Display  Filter  View  Print  Options  Help
-------------------------------------------------------------------------------
SDSF OUTPUT DISPLAY GDAYNESM JOB31664  DSID   109 LINE 1       COLUMNS 02- 133
COMMAND INPUT ===> _                                         SCROLL ===> CSR
SET BDY(GLOBAL) /*

  THE FOLLOWING SMP/E COMMANDS WERE GENERATED BY A REPORT MISSINGFIX
  COMMAND ON 04/13/09 AT 18:33:19.

               */.
  RECEIVE ORDER(
          CONTENT(ALL) /*

            SMP/E RECOMMENDS ORDERING AND RECEIVING ALL APPLICABLE
            PTFS.  IF YOU CHOOSE NOT TO ORDER ALL, THEN ORDER ONLY
            THE RESOLVING PTFS:

          CONTENT(PTFS(
            UA39319 UA39334 UA39716 UA39739 UA39863 UA39874 UA39926
            UA39934 UA39940 UA39959 UA39960 UA40221 UA40229 UA40245
            UA40306 UA40988 UA41279 UA42084 UA42230 UA44807 UA90383
            UA90386 UA90388 UO00701 UO00702
                )    )
            */
          ORDERSERVER(SMPOSRVR) /* SPECIFY THE ORDERSERVER DDNAME.     */
          CLIENT      (SMPCLNT ) /* SPECIFY THE CLIENT DDNAME.         */
   DSLIST   -EDIT    *ISFPCU4 ISRDIIS  DSLIST   CMD
```


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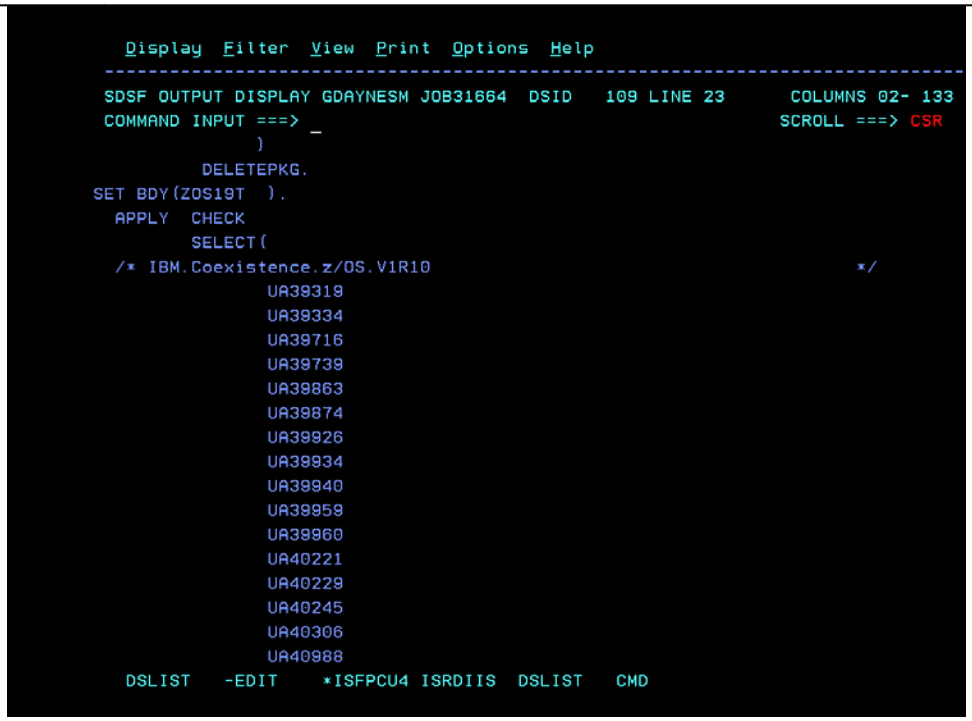

10. Run the SMP/E REPORT MISSINGFIX command to identify if any maintenance identified in a software PSP bucket that is not installed.

Edit the userid.JCL data set.

a. Edit member MISSPSP (for example "SHARA01.JCL(MISSPSP)") to run the SMP/E REPORT MISSINGFIX command to identify any maintenance identified in the Recommended Service section of a software Preventive Service Planning (PSP) bucket that is not installed. Change all references of "USERID" to userid that you logged on with. For example, you can use the following change command: "C USERID SHARA01 all" (Please remember to use caps for your userid).
b. Once all references have been changed, submit the job and save your changes to the JCL job.
c. You can go into SDSF look at the output. You should receive the following messages:
   - GIM20501I REPORT PROCESSING IS COMPLETE. THE HIGHEST RETURN CODE WAS 00.
   - You should get a similar report to what was produced for the z10 REPORT MISSINGFIX command. This report will identify that several recommended service fixes for DB2 V9 and z/OS V1.9 are not currently installed.
   - A similar punched job is also created.

11. Use the SMP/E ISPF Command Generation Dialog to run a REPORT MISSINGFIX for the your persistent interest list

Now go back into the SMP/E ISPF Dialogs. The GLOBAL zone CSI data set name that you entered earlier should still be remembered. This time choose option 4 from the SMP/E primary ISPF panel for Command Generation. The following panel will now be displayed. Enter "34" for REPORT and "GLOBAL" for the zone name, then depress the enter key.

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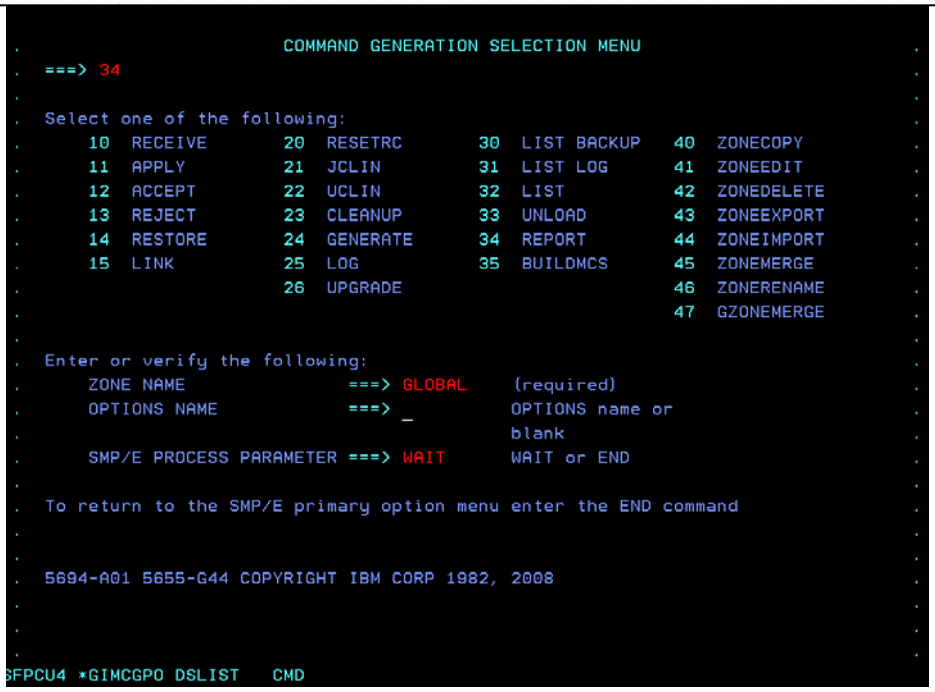
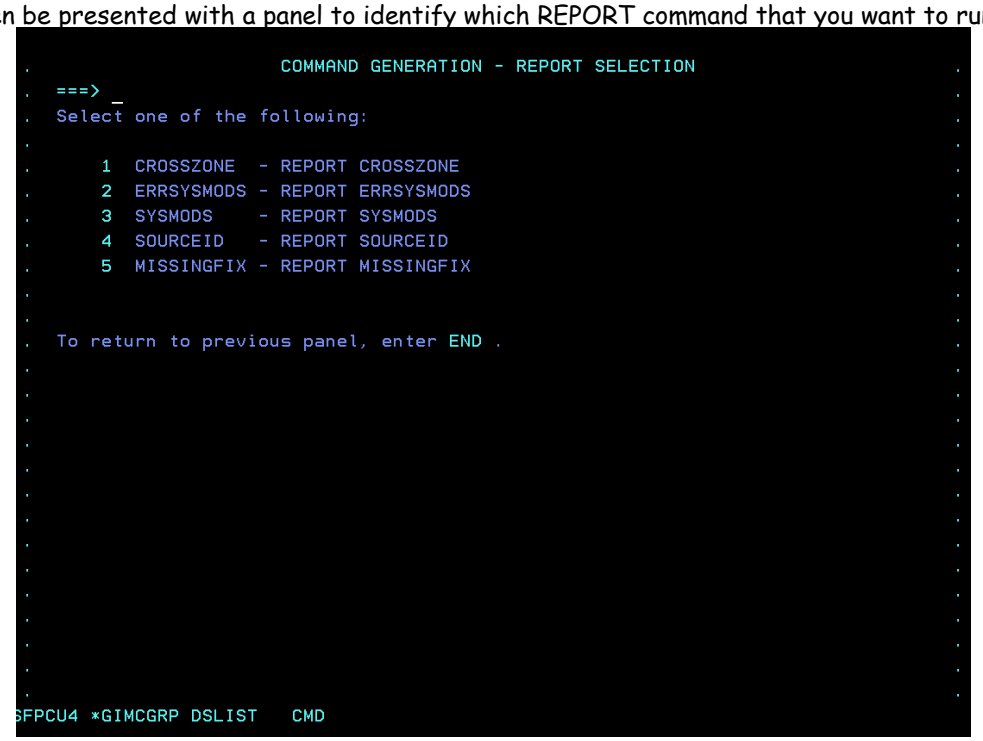


You will then be presented with a panel to identify which REPORT command that you want to run:



Select "5" for REPORT MISSINGFIX. This will bring you to the next panel. On that panel enter "NO" for FIXCAT, "NO" for FORFMID, and "NO" for NOPUNCH. If you specify "YES" for FIXCAT, you will have a opportunity to go back into the Fix Category Explorer to identify your interest list. However, that interest list is ONLY used for this command and isn't persistent.

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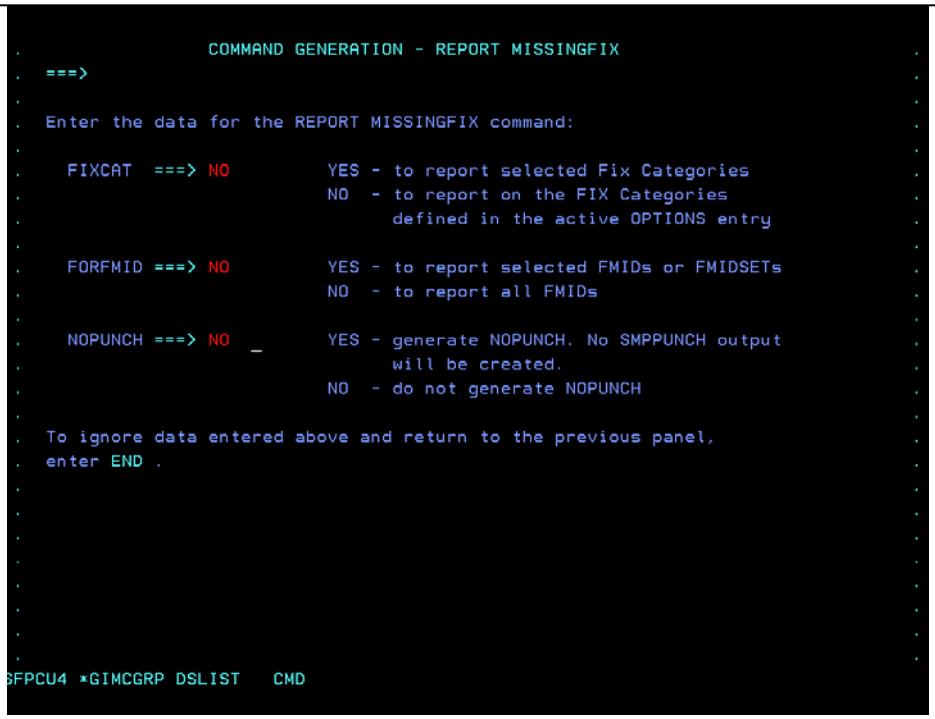
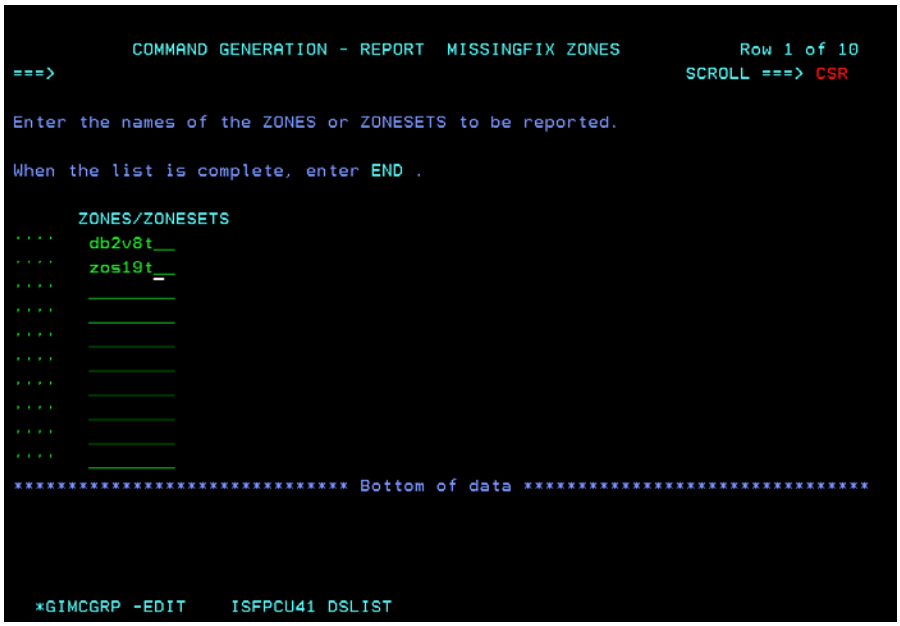


You will then be asked to specify SMP/E zone names (or the name of a ZONESET). Enter DB2V8T and ZOSV19T (for the DB2 V8.1 and z/OS V1.9 target zones). After entering those names hit F3 to END.



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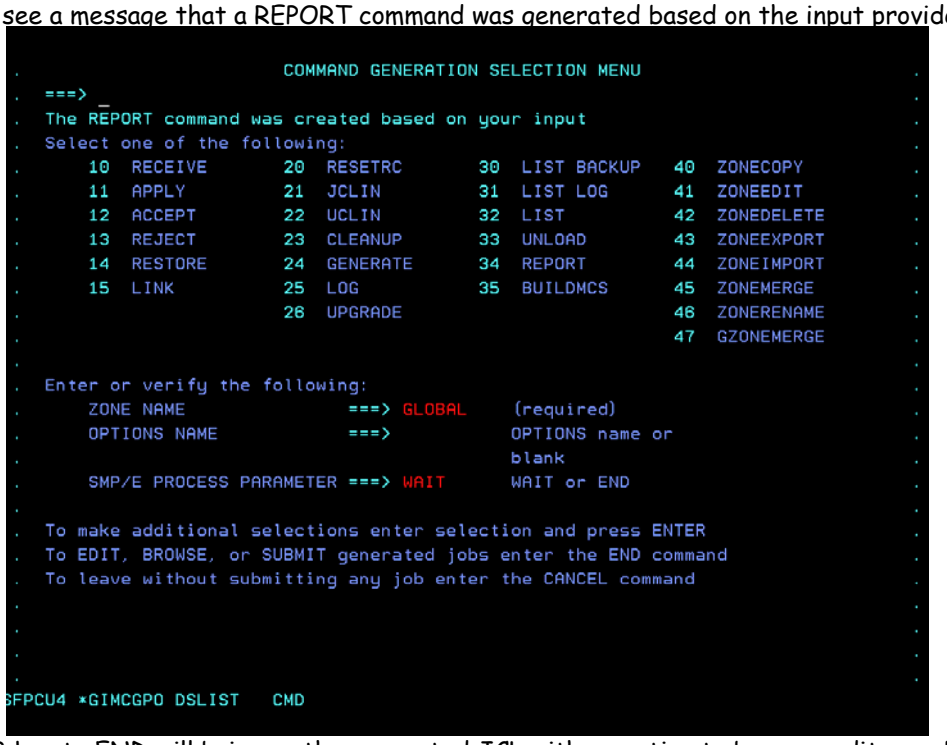
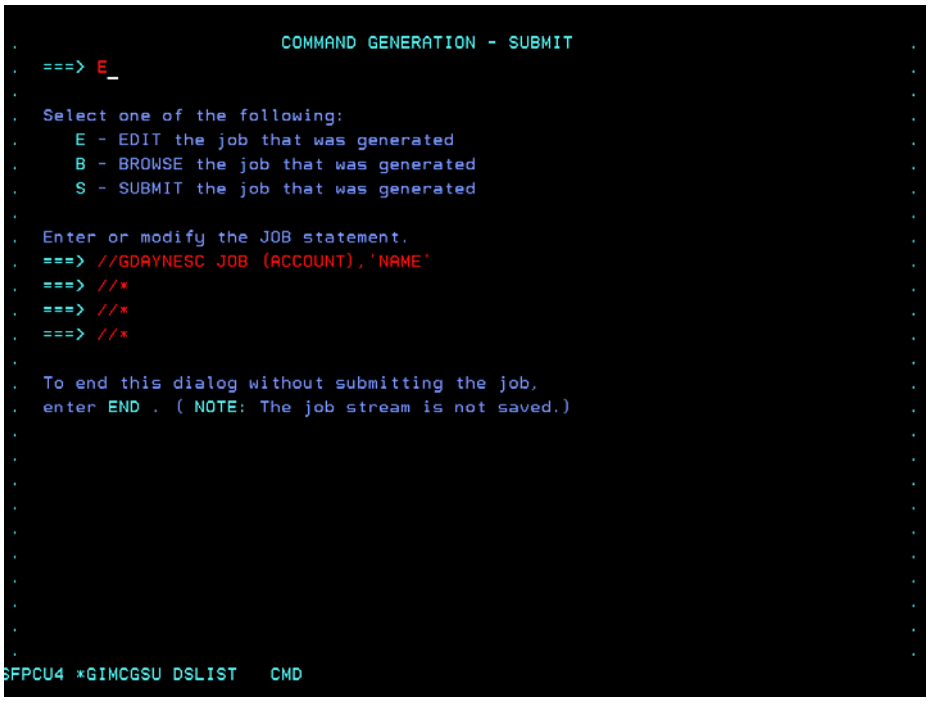
You will now see a message that a REPORT command was generated based on the input provided.



Using the F3 key to END will bring up the generated JCL with an option to browse, edit or submit the job. Selecting Edit will bring up the generated JCL.



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```
File  Edit  Edit_Settings  Menu  Utilities  Compilers  Test  Help
EDIT       SYS09106.T103243.RA000.GDAYNES.R0250211            CHARS 'USERID' changed
Command ===>                                                  Scroll ===> PAGE
****** ********************************* Top of Data ***********************************
==MSG> -Warning- The UNDO command is not available until you change
==MSG>           your edit profile using the command RECOVERY ON.
000001 //GDAYNES JOB 'D98A,B9211068','SHARE/EXPO SMPE LAB',REGION=0K,          00010001
000002 //            MSGLEVEL=(1,1),CLASS=A,MSGCLASS=H,NOTIFY=GDAYNES          00020001
000003 /*JOBPARM S=*                                                          00030000
000004 //S1       EXEC PGM=GIMSMP,
000005 //         PARM='PROCESS=WAIT',
000006 //         DYNAMNBR=120
000007 //*
000008 //* NOTE:      THIS JCL CREATED BY THE COMMAND GENERATION DIALOGS.
000009 //*
000010 //*            SMP ZONE-RELATED FILES ARE DYNAMICALLY ALLOCATED,
000011 //*            THIS INCLUDES THE SMPPTS, SMPLOG, AND SMPTLIB DATA SETS,
000012 //*            IF APPLICABLE.
000013 //*
000014 //* SMP FILES
000015 //*
000016 //SMPCSI   DD DISP=SHR,DSN=GDAYNES.SMPELAB.GLOBAL.CSI
000017 //*
000018 //*
000019 //SMPCNTL  DD *
ISFPCU41 DSLIST
```

```
File  Edit  Edit_Settings  Menu  Utilities  Compilers  Test  Help
EDIT       SYS09106.T103243.RA000.GDAYNES.R0250211          Columns 00001 00080
Command ===> _                                                Scroll ===> CSR
000020   SET    BOUNDARY (GLOBAL)
000021                  .
000022   REPORT
000023          MISSINGFIX
000024          ZONES   (
000025                  DB2V8T
000026                  ZOS19T
000027                 )
000028                .
****** ********************************* Bottom of Data ********************************
ISFPCU41 DSLIST
```

From here you can submit the job, save the generated JCL or cancel out of the job.

Notes:

1. Since we elected to use the persistent FIXCAT interest list, there is NOT a FIXCAT operand on the generated REPORT command. The interest list saved in the default OPTIONS entry for the GLOBAL zone will be used for this command.
2. The generated job expects DDDEF entries for any file the job needs.
3. Depending on your job card, you may need to add a REGION parameter to the step.

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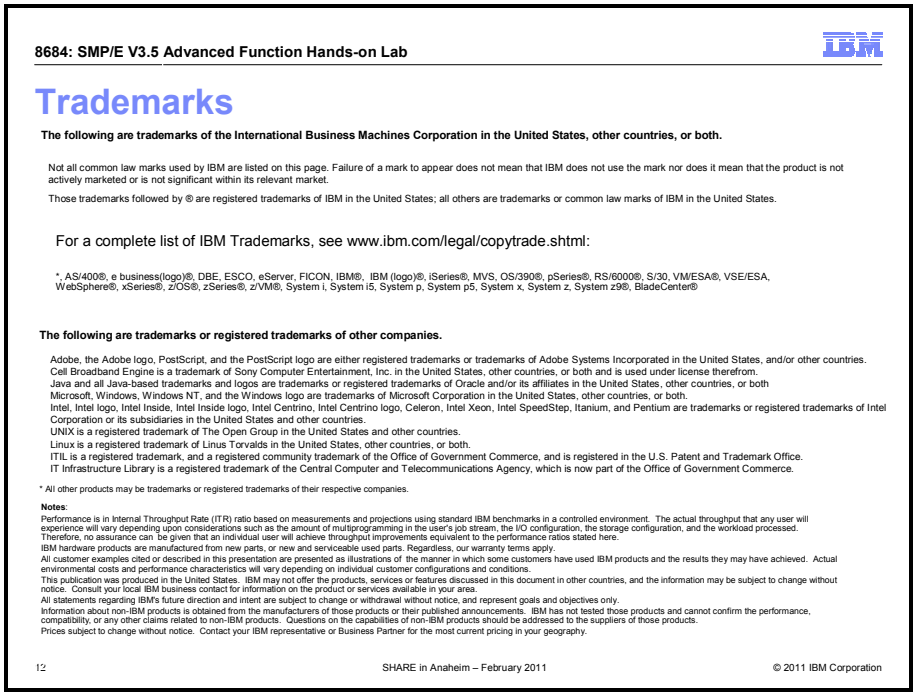
Reference Material

If at anytime you need to recreate your own copy of SMP/E CSI data sets

Edit the userid.JCL data set.

1. Edit member COPYMSTR (for example "SHARA01.JCL(COPYMSTR)") to copy the master SMP/E CSIs to your own copy. Change all references of "USERID" to userid that you logged on with. For example, you can use the following change command: "C USERID SHARA01 all" (Please remember to use caps for your userid).
2. Once all references have been changed, submit the job.
3. You can go into SDSF to verify that the job ran successfully.
   - SDSF is Option "S" from the ISPF primary command
   - Once in SDSF, enter the following commands
     c. "OWNER userid" where userid is the ID that you logged on with
     d. "PREFIX *" to enable any jobname submitted by you to be displayed
   - Enter "H ALL" to see all jobs on the held output queue or "DA" to see jobs currently executing
   - Use the "S" line command to select the job that you want to view.



8684: SMP/E V3.5 Advanced Function Hands-on Lab

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Notes:
Performance is in Internal Throughput Rate (ITR) ratio based on measurements and projections using standard IBM benchmarks in a controlled environment. The actual throughput that any user will experience will vary depending upon considerations such as the amount of multiprogramming in the user's job stream, the I/O configuration, the storage configuration, and the workload processed. Therefore, no assurance can be given that an individual user will achieve throughput improvements equivalent to the performance ratios stated here.
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