

z/OSMF Software Management Hands On Lab

z/OSMF Hands-On Labs - Choose Your Own - I, II, III Estimated Lab Time: 30-35 minutes

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Agenda

- Lab Objective
- z/OSMF Software Management Overview
- Lab Environment
- Lab Exercises
 - 1. Logon to z/OSMF and invoke software management
 - Add a Software Instance
 - 3. Change the Software Management specific "Settings"
 - 4. View the "Master" Software Instances
 - a. Their Products, Features, and FMIDs
 - b. Additional Product Information
 - c. Properties
 - d. Data sets (filtering by attribute)
 - e. Export (or Print) Table Data
 - 5. Report on the "Master" Software Instances
 - End of Service
 - b. SYSMOD Search
 - c. Missing FIXCAT SYSMODs
 - d. Missing Critical Fixes
 - e. Software Instance Comparison
 - Software Instance Validation
 - 6. View Products
 - 7. Deployments

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Lab Objectives and Hints and Tips

- Use z/OSMF to view and report on previously defined software instances
- Gain familiarity in using the z/OSMF application

Hints and Tips

- At any time you can use the Help facilities by clicking on the link in the upper right hand corner of the screen
- You are encouraged to follow the instructions provided, but you can use the new views and reports on any defined software instance
 - Please note that the closer you follow the instructions, the easier it will be to assist you if you go astray
 - The handout contains screen captures and guidance to lead you through the lab
- Please note: Do <u>NOT</u> use the Browser BACK button to go to the prior screen!!!
- Also note that if you change the browser display size (Ctrl/+, or Ctrl/-) then what you see may not exactly match the handout.

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z/OSMF Software Management

- z/OSMF V1.13 introduced a Software Deployment function
 - Introduced a concept of a software instance
- IBM introduced a Software Management task that extends the Software Deployment task to provide additional actions on software instances.
 - z/OSMF PTFs UK79887, UK83841, UK83825, UK83828, UK83833, UK83836, UK83842, and UK83852
- This function was integrated and enhanced in z/OSMF V2.1
 - This lab will use a z/OSMF V2.1 system with z/OSMF PTF UI16044 and its requisites installed

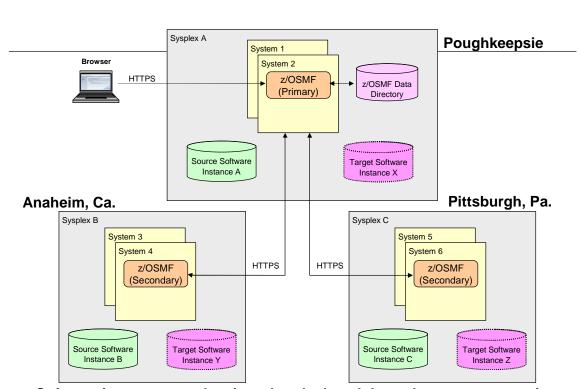
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z/OSMF Software Management ...

- In addition to deploying a software instance, the Software Management task will:
 - Allow inspection of a software instance to view the product, feature, and FMID content:
 - View the physical data sets that compose a software instance; and
 - Perform actions to analyze and report on software instances and installed products.
 - Identify software products that are approaching, or have reached, end of service support.
 - Validate the SMP/E structure and content of a software instance is correct.
 - Identify missing HIPER and PE fixes, and fixes associated with one or more fix categories
 - Determine if individual fixes are installed and in which software instances.
 - Compare the service and functional content of two software instances to aid in debugging or migration planning.

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Software instances can be viewed or deployed throughout your enterprise

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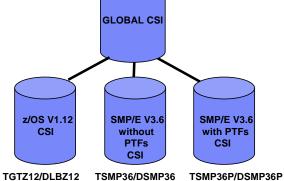
Lab SMP/E Environment

Four (4) "Master" Software Instances

- 1.MASTER ZOSV1.12
- 2.MASTER_SMPEV3.6_WITHOUT_PTFS
- 3.MASTER_SMPEV3.6_WITH_PTFS
- 4. MASTER_zOS_R13_w/Other_Products



ZOSMF.SWDEPLOY.GLOBAL.CSI



SMLAB01.GLOBAL.CSI



TGT zone	DLIB zone
Z1130T	Z1130D
COB320T	COB320D
PLI410T	PLI410D
DT910T	DT910D

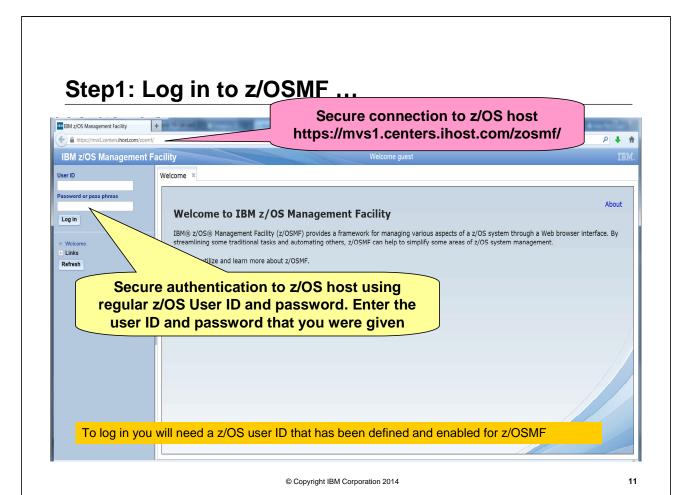
Step 1: Logon to z/OSMF and invoke Software Management

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Step 1: Log in to z/OSMF

- Launch the Mozilla Firefox browser
 - Note: If browser asks to add exception for certificate, do so
- Point Browser to z/OSMF enter the following url
 - https://mvs1.centers.ihost.com/zosmf/
 - Note: Ignore and close the warning message
 - IZUG809W Unsupported Web browser version or level found: "3.6.13 (
 .NET CLR 3.5.30729)" . Some z/OSMF functions might not be available if you continue.
- Login with SHARE userid/pw as provided by the lab instructor
 - Each workstation has been assigned a unique z/OS User ID
 - SHARAnn (where nn is 01 20)
 - Password: to be provided
- Each User ID has been authorized to all the z/OSMF applications (Plug-ins)



Step1: Invoke Software Management



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Step 1: Invoke Software Management ...

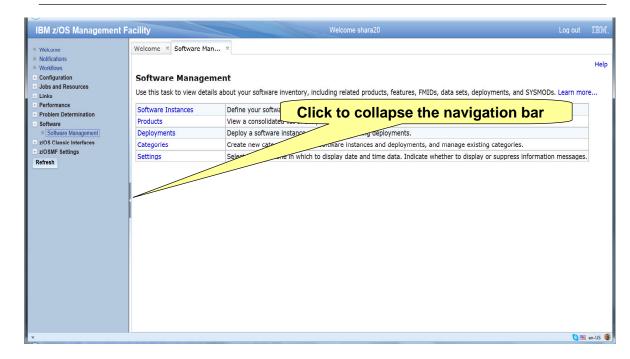


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Step 2: Add a Software Instance

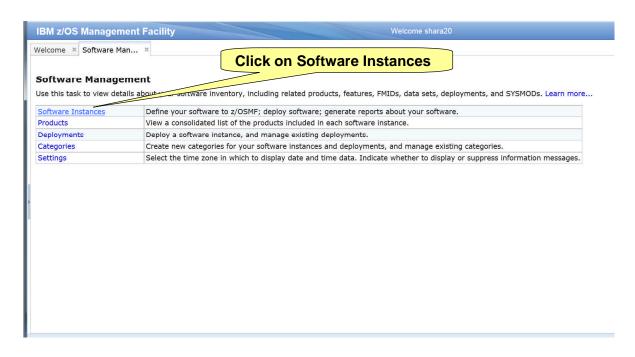
Step 2: Collapse the Navigation Bar

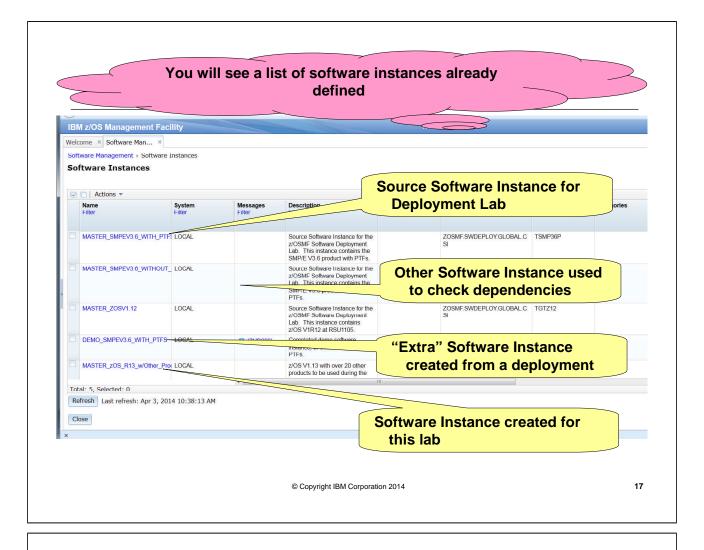


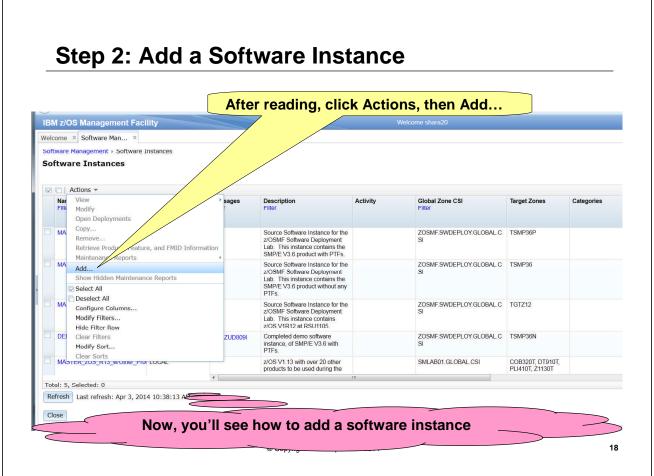
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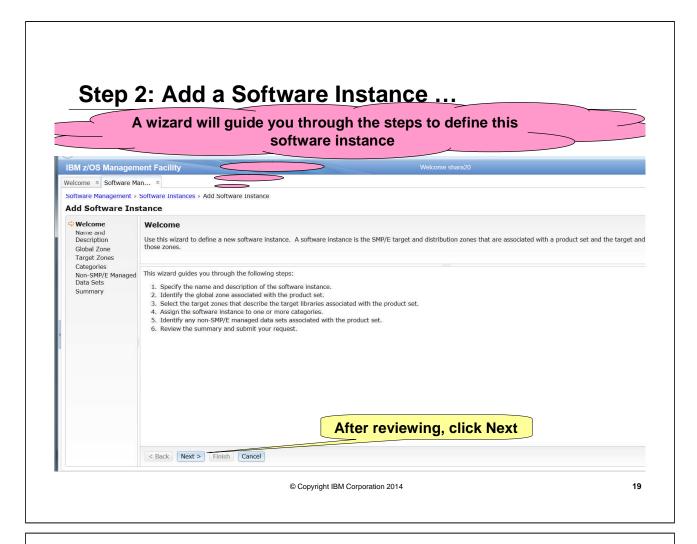
15

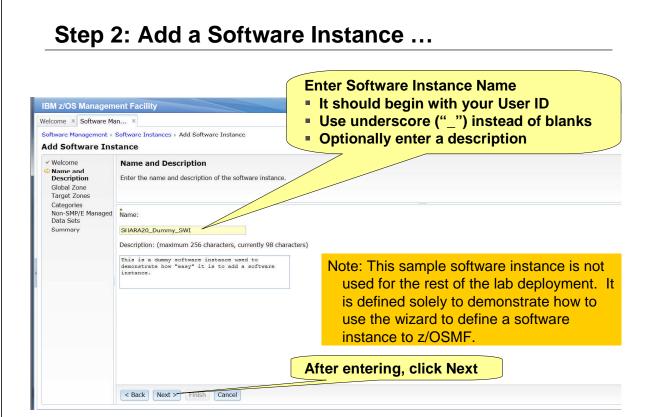
Step 2: View Software Instances

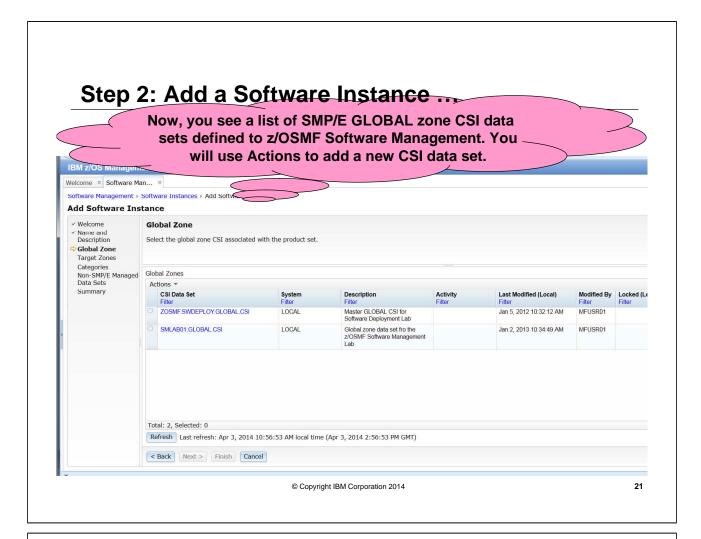




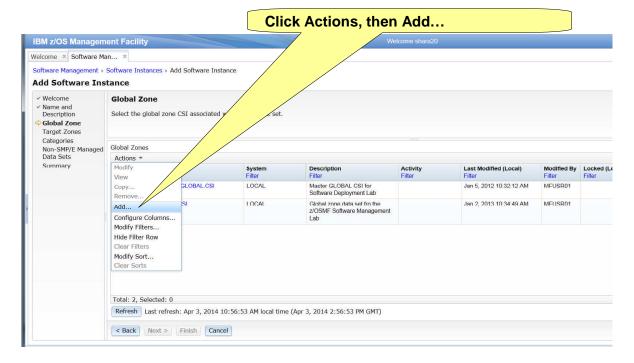


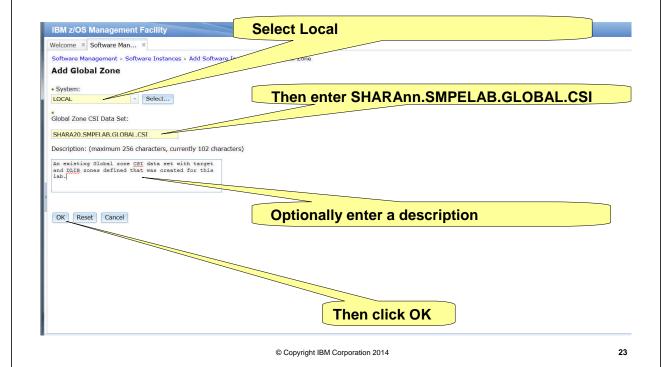




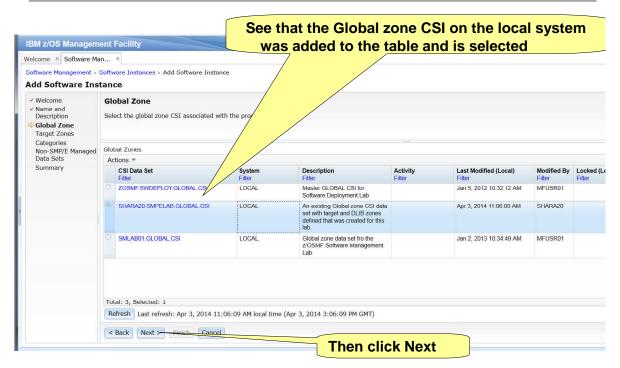




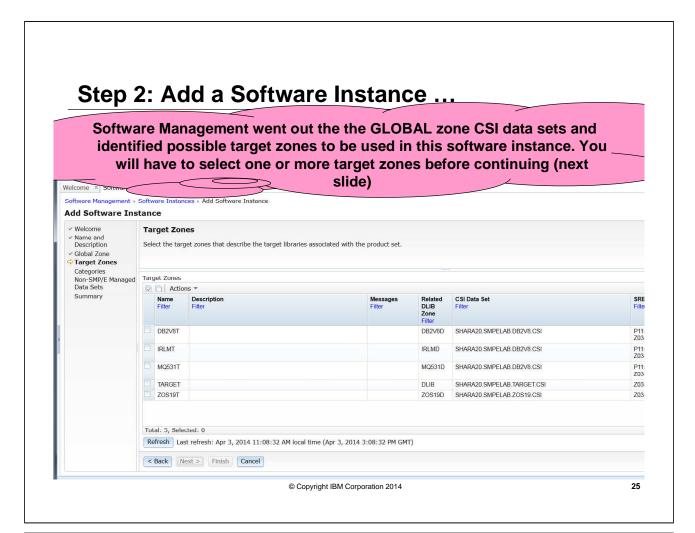


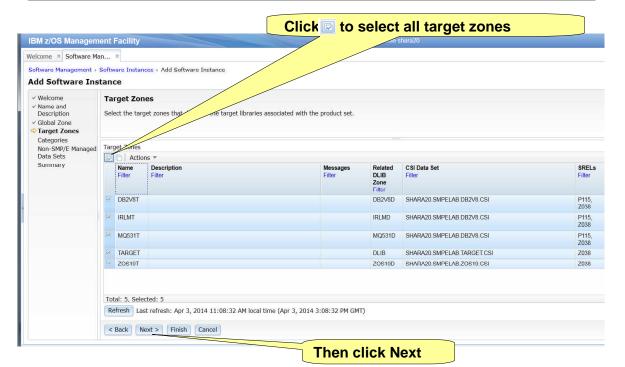


Step 2: Add a Software Instance ...



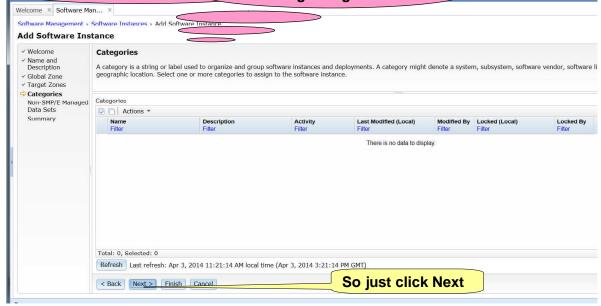
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Software Management allows you to associate the software instance with a "Category" as a means of grouping software instance. In this lab you will NOT be using Categories.

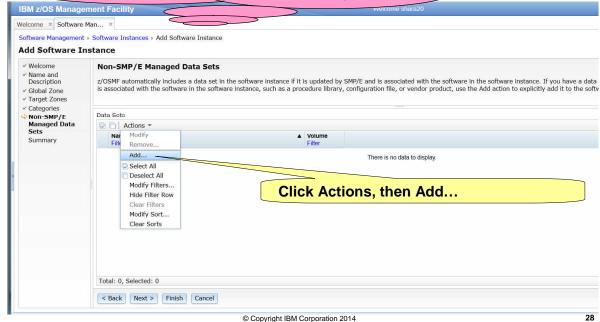


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Step 2: Add a Software Instance ...

Software Management allows you to associate one or more non-SMP/E managed data sets with the software instance. You will now associate a non-SMP/E managed data set with your software instance.



Simplified Addition of non-SMP/E Managed Data Sets

- z/OSMF V1.13 and z/OSMF V2.1 initially required the user to add non-SMP/E Data Sets <u>one data set at a</u> time.
- z/OSMF V2.1 with PTFs UI16044 and UI16028 installed allows the user to use "ISPF Data Set List (3.4)-like" capabilities to <u>add multiple data sets at one</u> time
 - Accept qualifiers and wildcarding for data set name
 - Accept volume with or without a data set name qualifier
 - Allow up to 10,000 data sets to be returned for selection
- The system used for the lab has these PTFs installed so you get to use the new function.

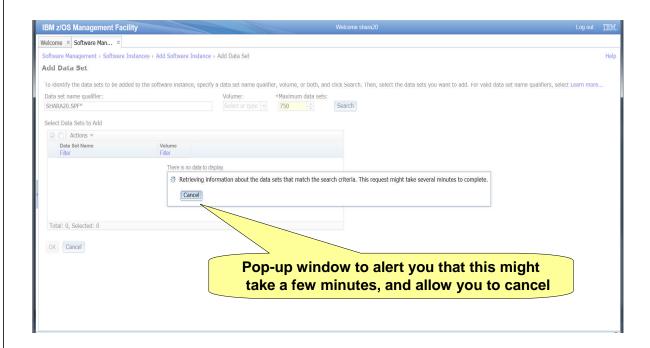
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Step 2: Add a Software Instance ...

Enter SHARAnn.SPF* Welcome × Software Man... × Add Data Set Do NOT enter a volume Software Management > Software Instances > Add S **Add Data Set** To identify the data sets to be or the software instance, specify a data set name qualifing one, or both, and click Search. Then, select the data sets you want to add. For valid data set nan Data set name qualifier SHARA20.SPF* *Maximum data sets: Select or type ▼ 750 Select Data Sets to Add Data Set Name There is no data to display Then click Search Total: 0, Selected: 0 OK Cancel

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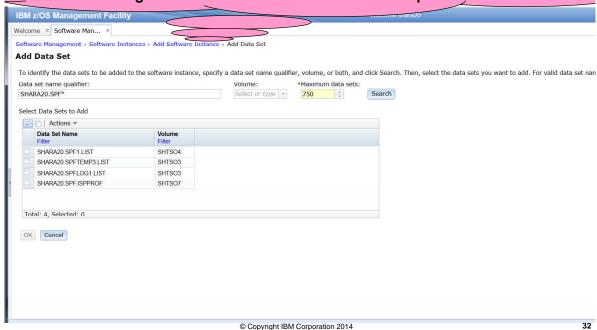


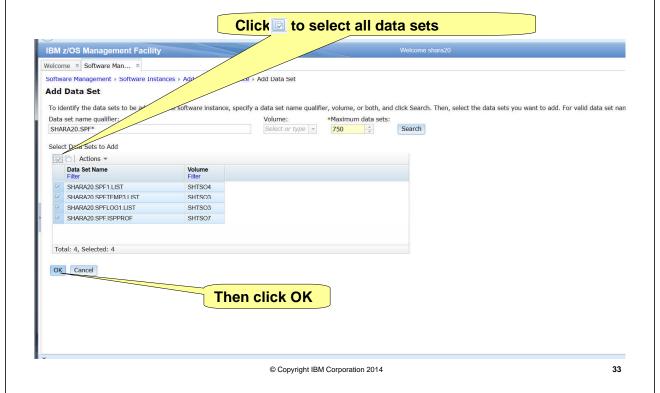
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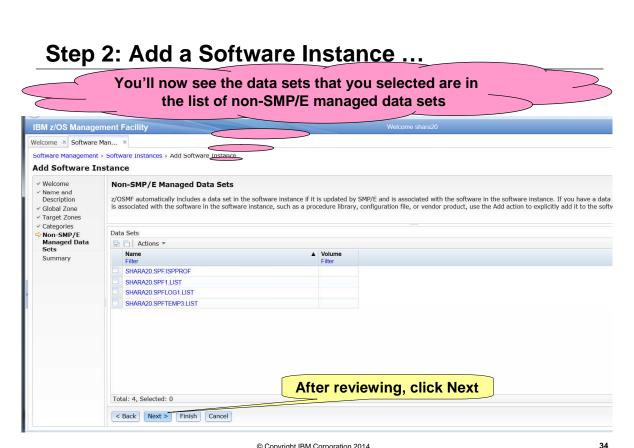
31

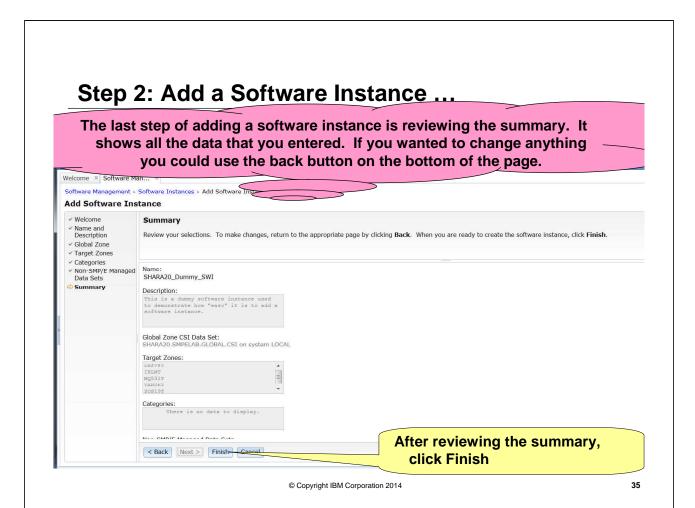
Step 2: Add a Software Instance ...

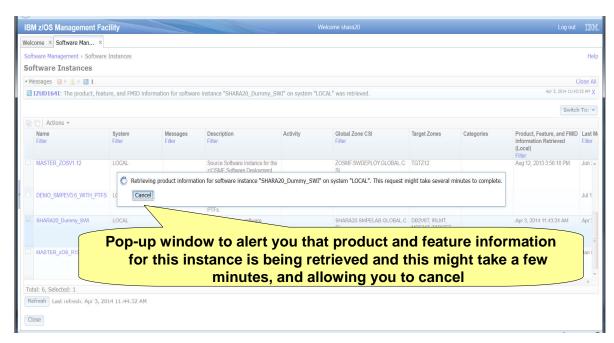
Software Management went out to the software instances' system (LOCAL) and discovered the following data sets. Depending on which lab user id you are using a different number of data sets will be presented.



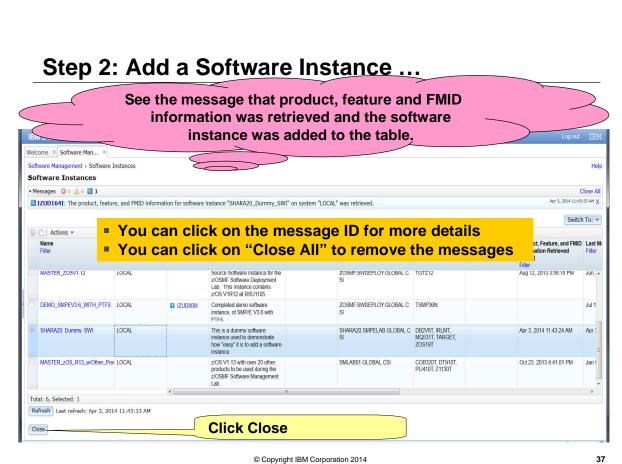








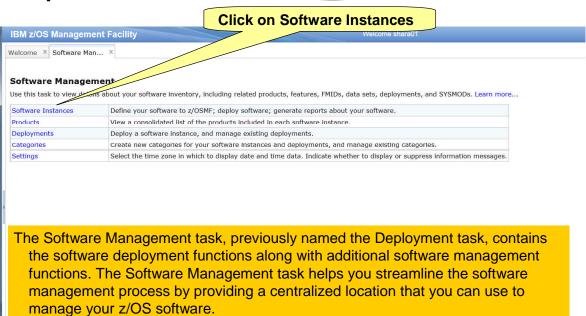
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Step 3: Change the **Software Management Settings**

Before you change the Settings, you will attempt to view Products, Features, and FMIDs for all the "Master" software instances. You will need to change the settings to see all the data.

Step 3

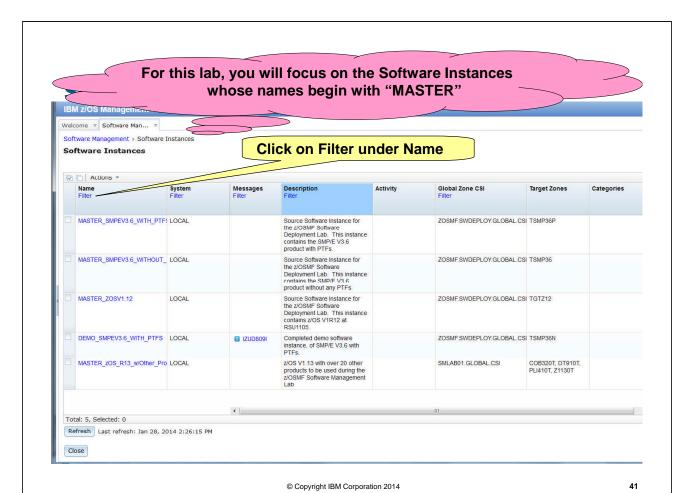


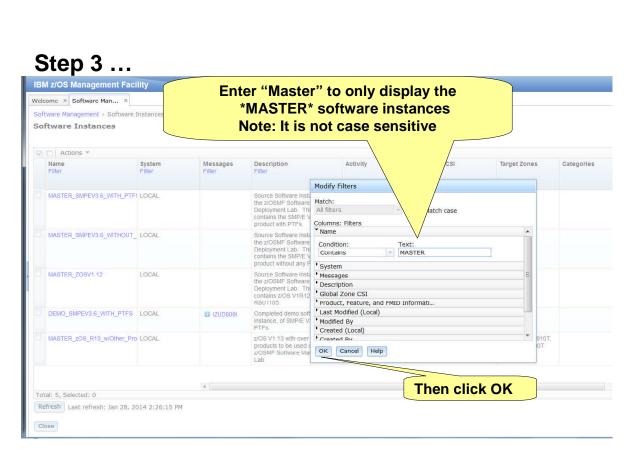
Step 3 ...

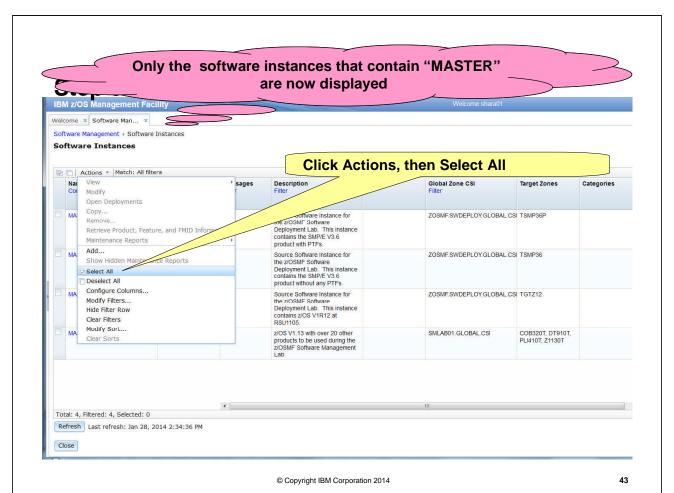
You will see a list of software instances already defined. Note that there may be additional software instances in the table.

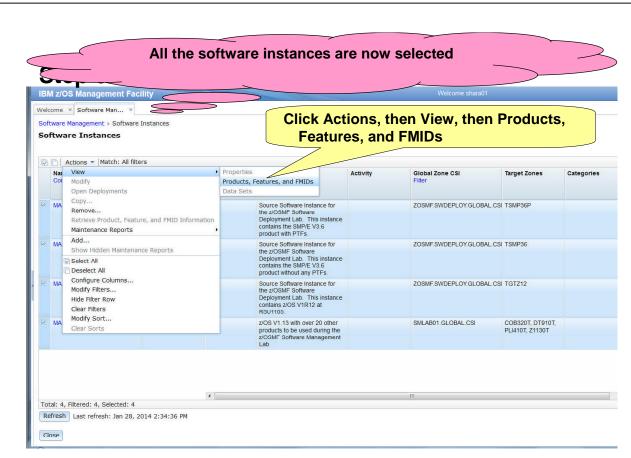
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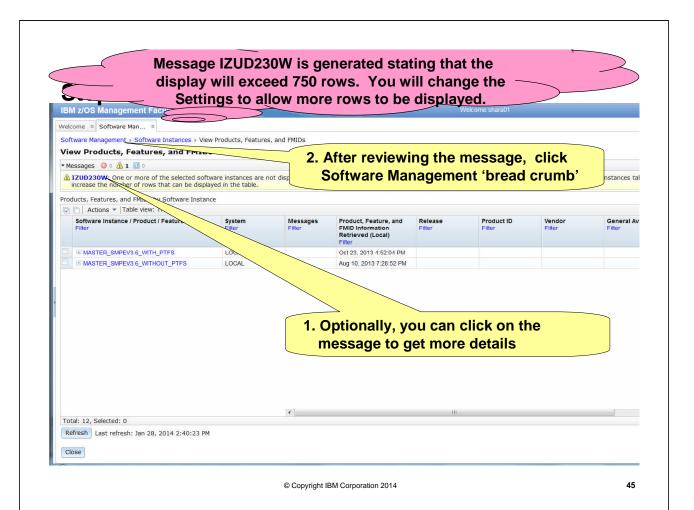


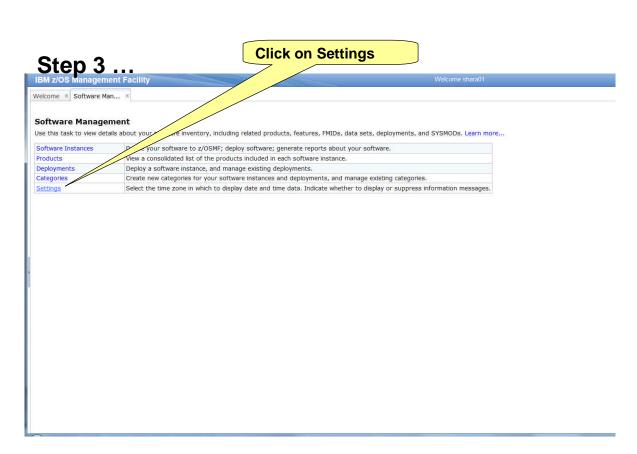


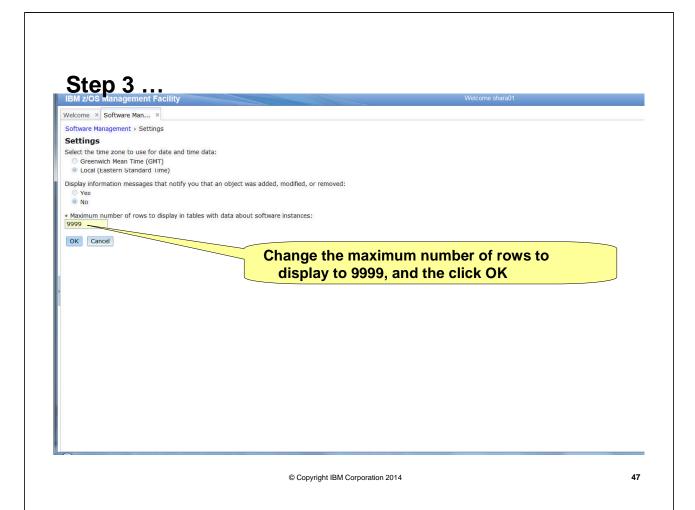








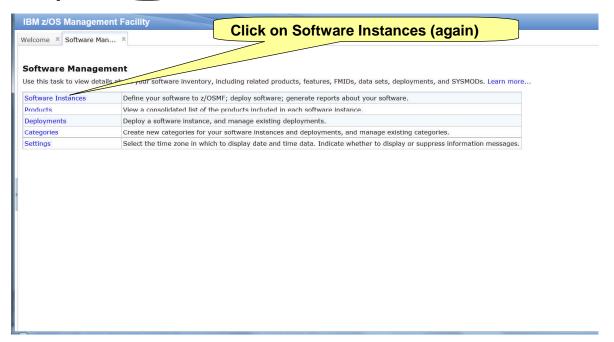




Step 4a: View the "Master" Software Instances' Products, Features, and FMIDs

You will now view ALL the "Master" software instances' Product, Feature, and FMIDs

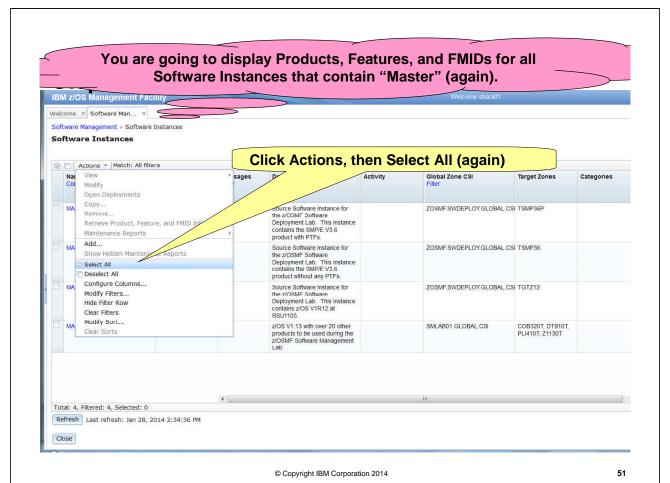
Step 4a



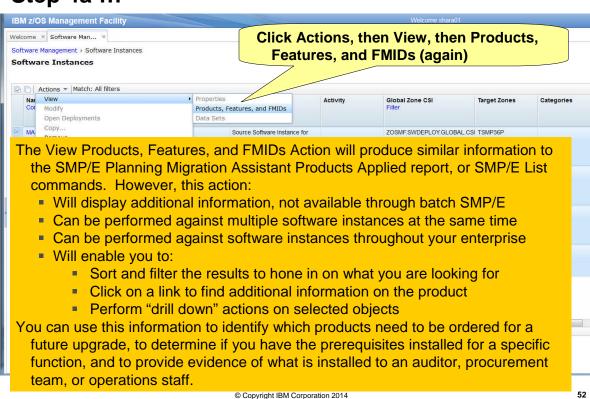
Notice that the Name Filter is still set and that ONLY Software Instances that contain "Master" are displayed.

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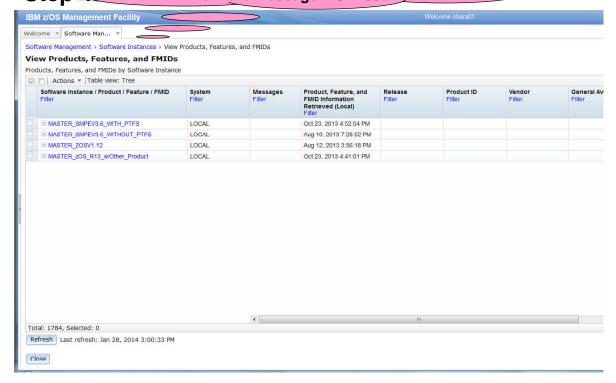




Step 4a ...



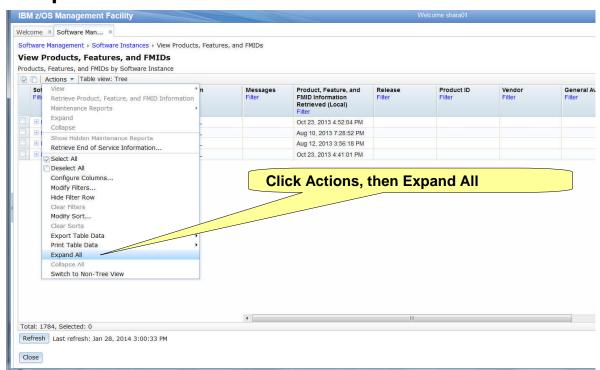
This time all the software instances can be viewed. No more message IZUD230W.



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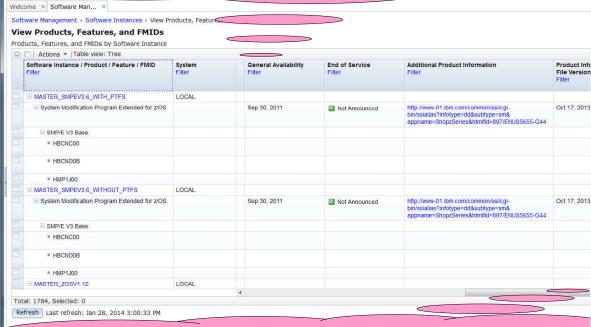
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Step 4a ...





The General Availability date, End of Service dates, and Additional Product Information are not available in batch SMP/E reports



Note: Additional columns are displayed but not shown in the handout. If they don't appear, then optionally you can scroll right again.

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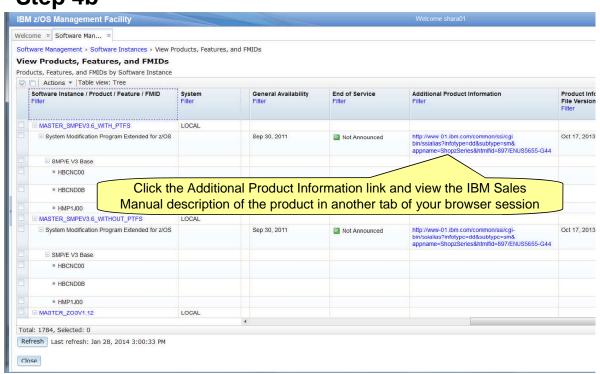
Step 4b: View the "Master" Software Instances' Additional Product Information

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Step 4b



The Additional Product Information link enables you to view the IBM Sales Manual description of the product in another tab of your browser session

Step 4b ...



5655-G44 IBM System Modification Program Extended (SMP/E) for z/OS V3.6

IBM United States Sales Manual Revised: August 06, 2013.

- ♣ Product Life Cycle Dates
- Program Number
- ↓ Abstract
- ◆ Product Positioning
- ◆ Highlights

- ◆ Description
- ◆ Technical Description
- ♣ Operating Environment
- ♣ Planning Information
- Security, Auditability, and Control

Product Life Cycle Dates

Program Number	VRM	Announced	Available	Marketing Withdrawn	Service Discontinued
5655-G44	03.06.00	2011/07/12	2011/09/30	-	(=)
5655-G44	03.05.00	2008/08/05	2008/09/26	1-9	2014/09/30
5655-G44	03.04.00	2005/07/26	2005/09/30	2008/09/26	2010/09/30
5655-G44	03.03.00	2004/08/10	2004/09/24	2005/09/30	2007/09/30
5655-G44	03.02.00	2003/05/13	2003/05/30	2004/09/24	2007/09/30
5655-G44	03.01.00	2001/09/11	2001/10/26	2003/05/30	2007/03/31

^{*} Back to top

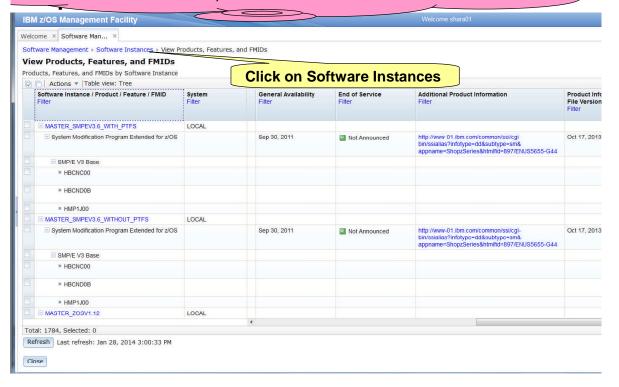
Program Number

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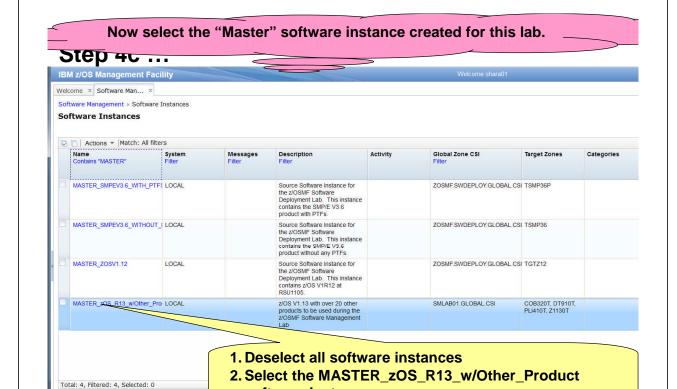
Step 4c: View the "Master" Software Instances' Properties

You are going to perform actions against a single Software Instance, so click on the "breadcrumbs"



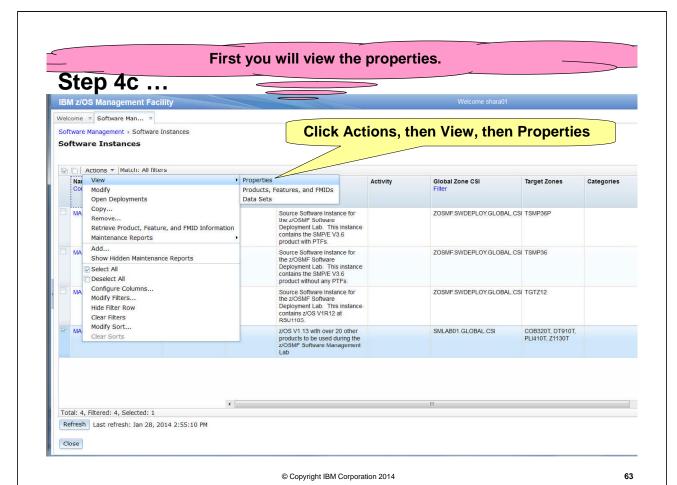
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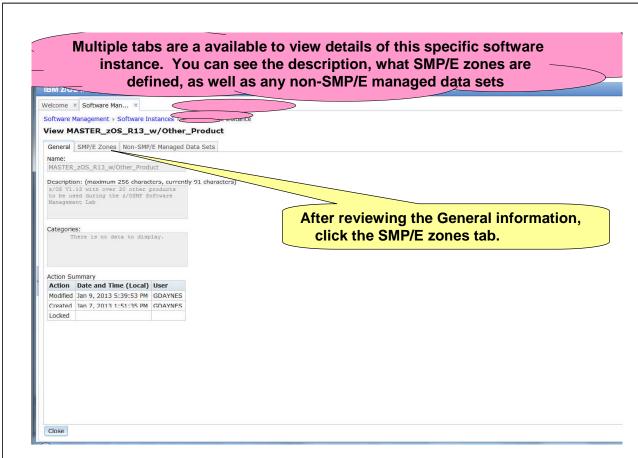
61

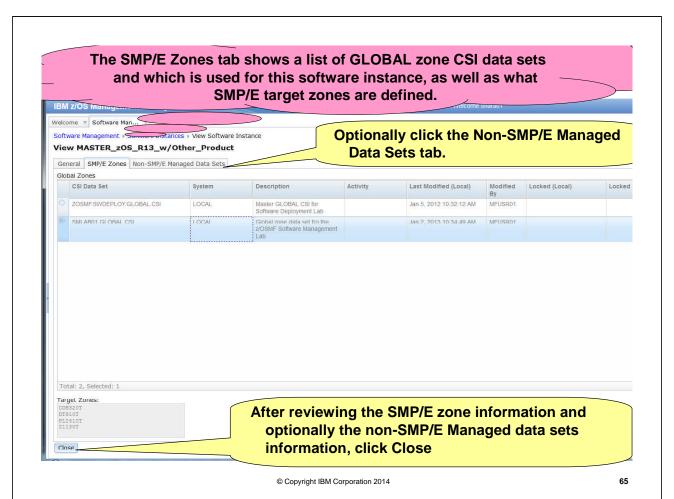


software instance

Refresh Last refresh: Jan 28, 2014 2:55:10 PM



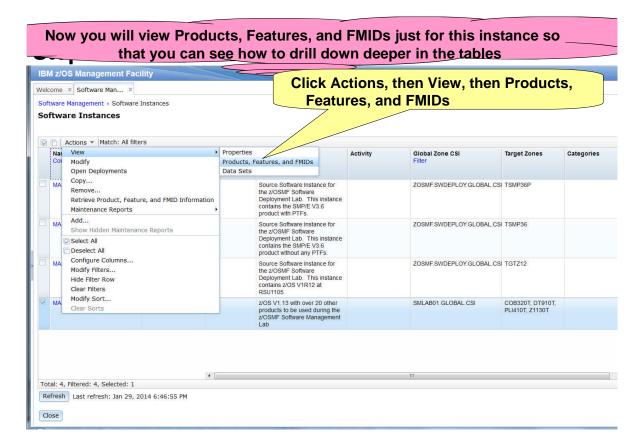


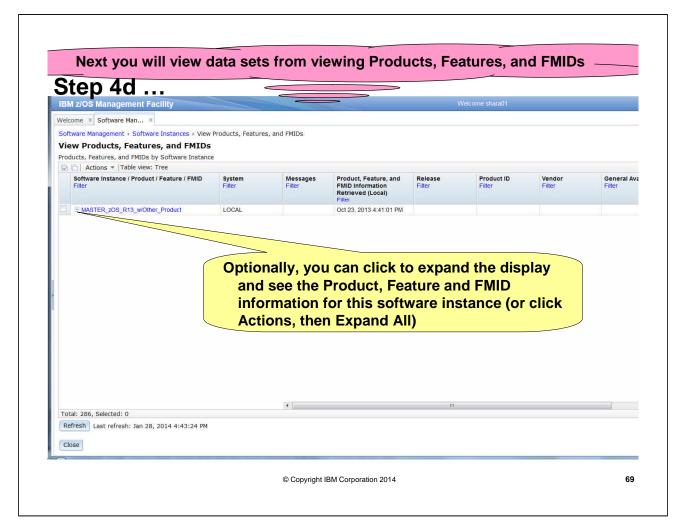


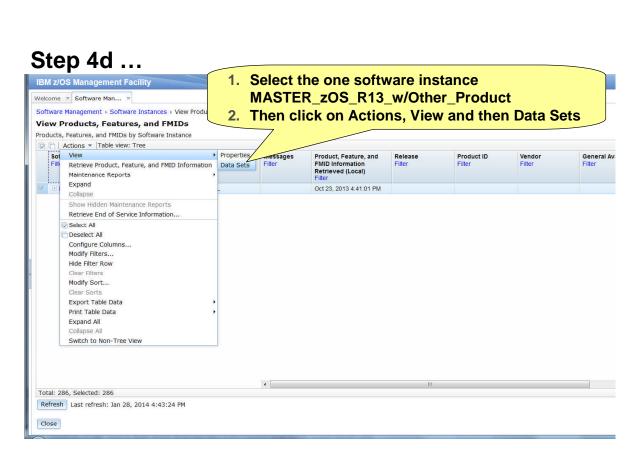


Step 4d: View the "Master" Software Instances' Data Sets

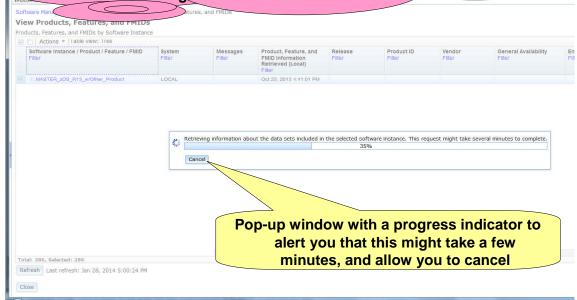
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Software Management dynamically analyzes the GLOBAL, target and distribution zones to determine the list of data sets that make up the software instance. The list is limited to those data sets (DDDEFs) that can possibly be updated using SMP/E commands and any non-SMP/E managed data sets that were defined.

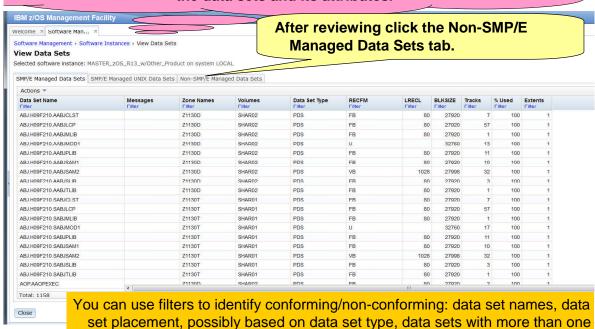


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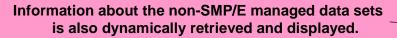
Step 4d ...

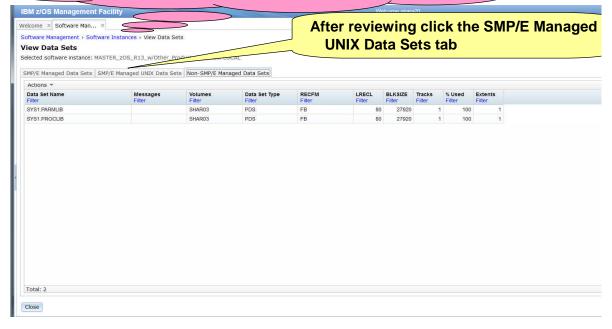
Data sets are displayed in ISPF Data Set List (3.4) like format showing the data sets and its attributes.



extent, etc. In the lab you will identify data sets with more than one extent.





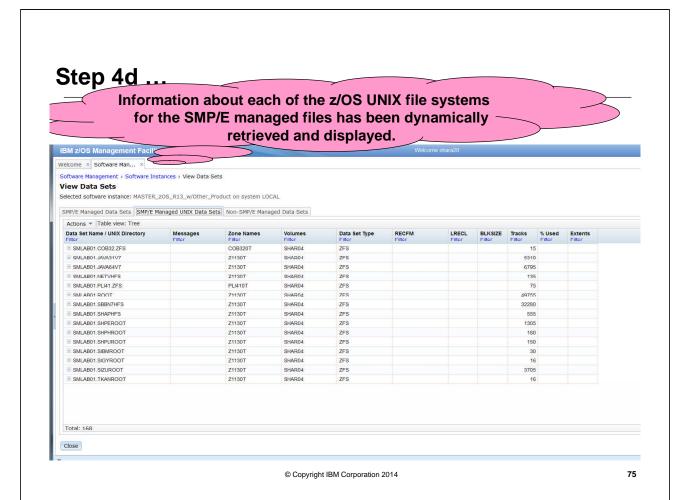


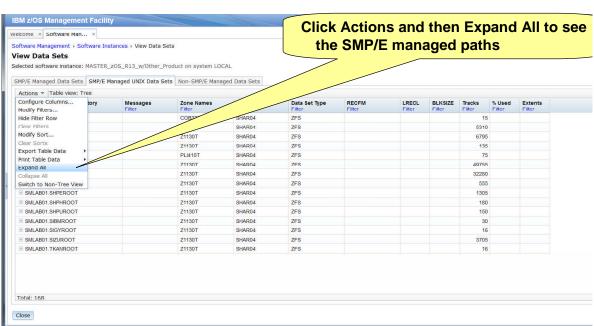
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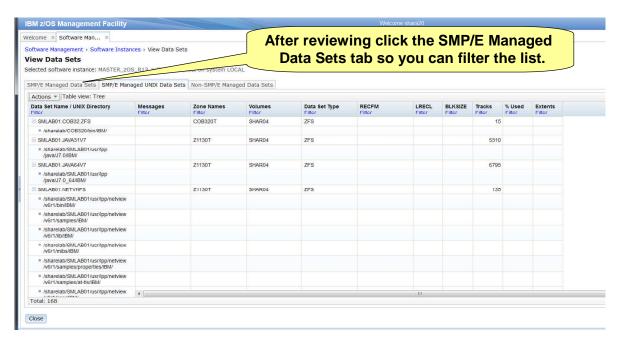
View Data Sets ...

- PTFs UI16044 and UI16028 enhance the View Data Sets function by adding an SMP/E Managed UNIX Data Set Tab
 - You can easily identify the z/OS UNIX data sets that are used for a specific software instance.
 - You can expand the view to show the SMP/E DDDEF path names that use each data set





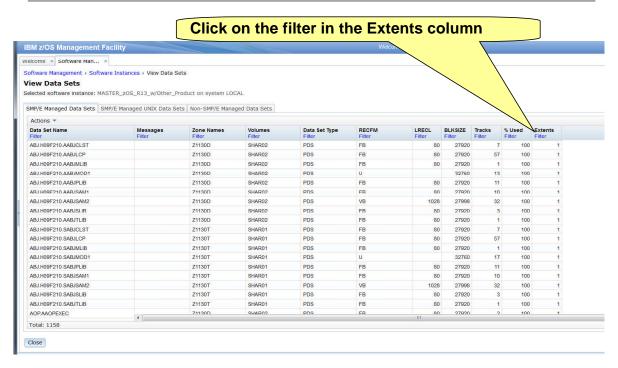
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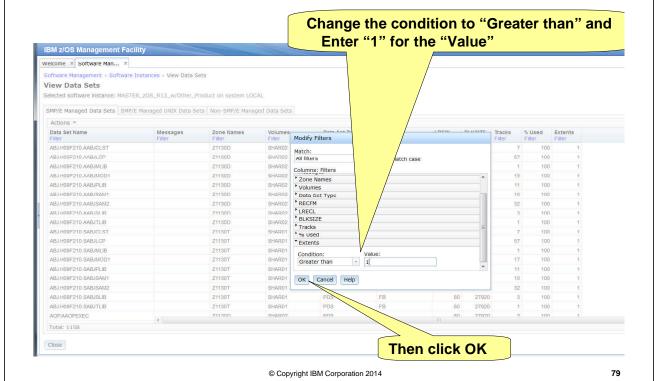


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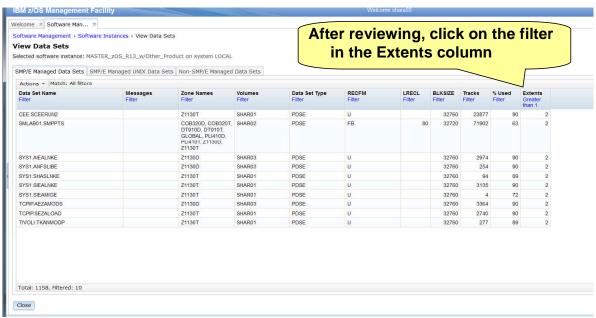
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Step 4d ...

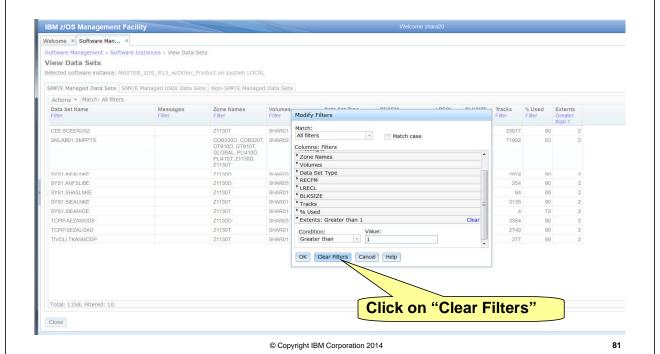




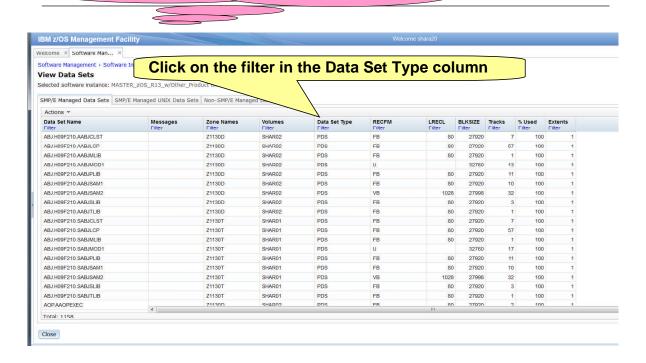
With the filter set, you can easily see the 10 (out of 1158) data sets that have secondary extents. You could further filter the Volumes column to identify those data sets with secondary extents that reside on the SYSRES.

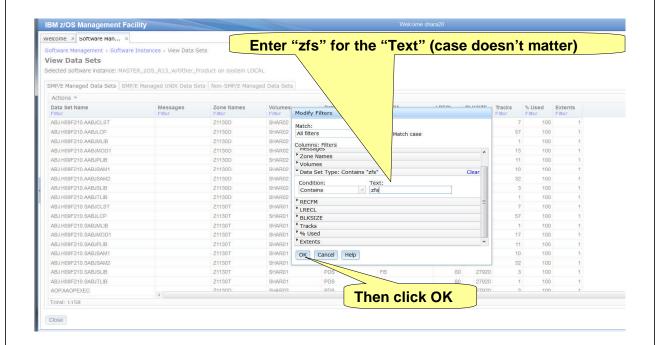


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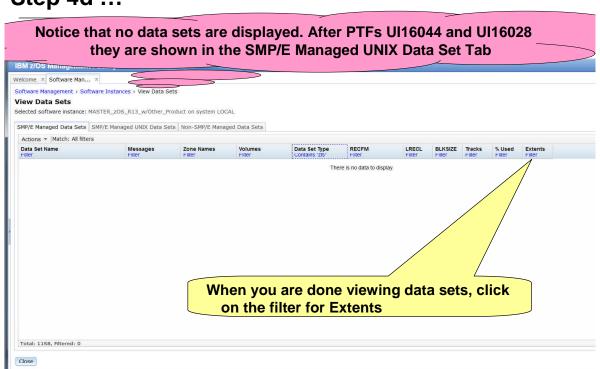
You are back to the original list of data sets. You will now use filtering to verify that all ZFS file systems are on volume SHAR04.

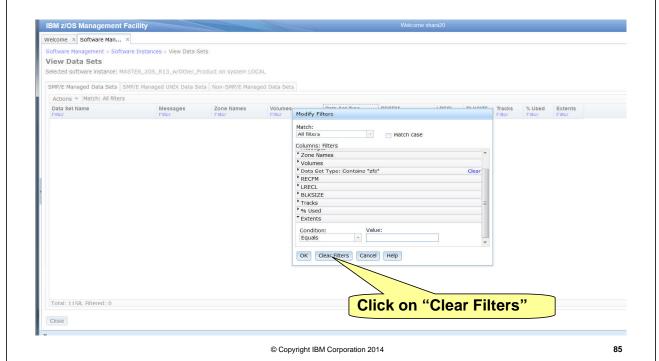




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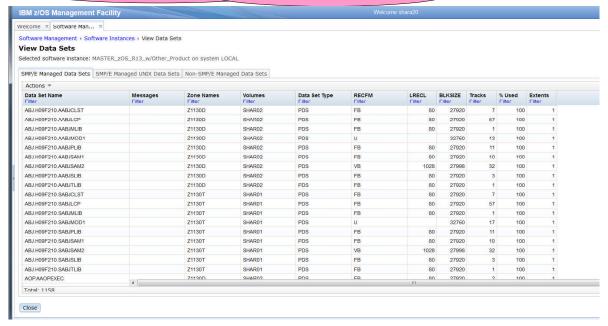
Step 4d ...





Step 4d ...

Notice that when you clear filters it clears <u>ALL</u> filters and not just the filter for the column you selected.



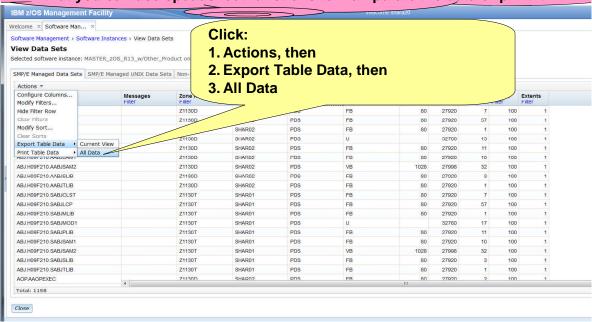
Step 4e: Export the "Master" Software Instances' Data Set Information

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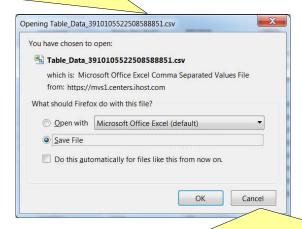
Step 4e

Now you will save the data set information in a file on your workstation so that you can use speadsheet functions to manipulate the data or print it



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Pop-up window will allow you to save the file or open it with a program such as Microsoft Office Excel. You also have the opportunity to cancel

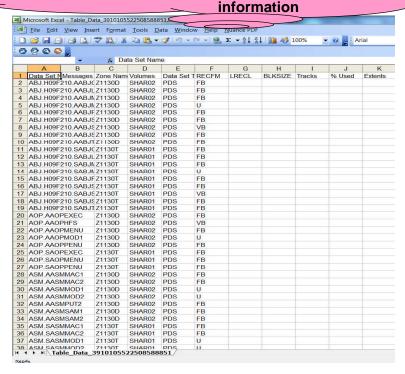


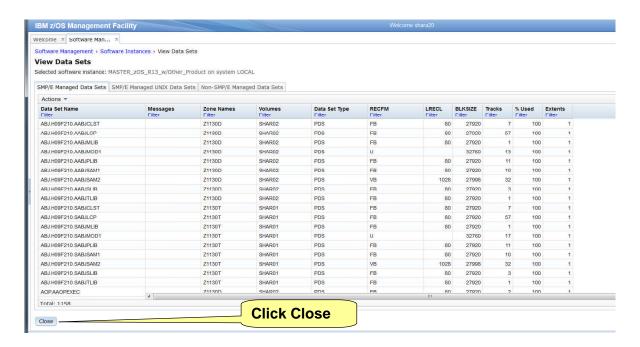
Since this is a lab, please click cancel. The next slide in the handout shows how the data set information would be displayed in a spread sheet.

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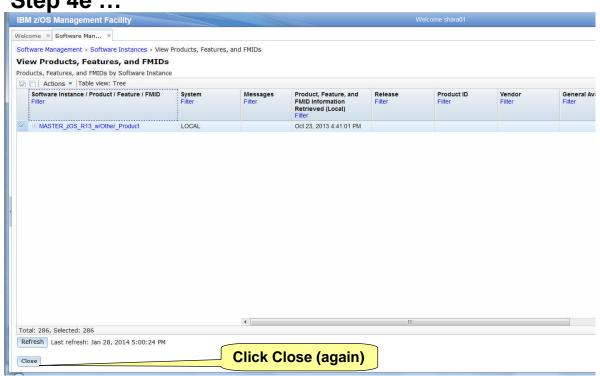
Now you would be able to launch a program like Microsoft Office Excel to view or manipulate the z/OSMF "Master" Software Instances' data set





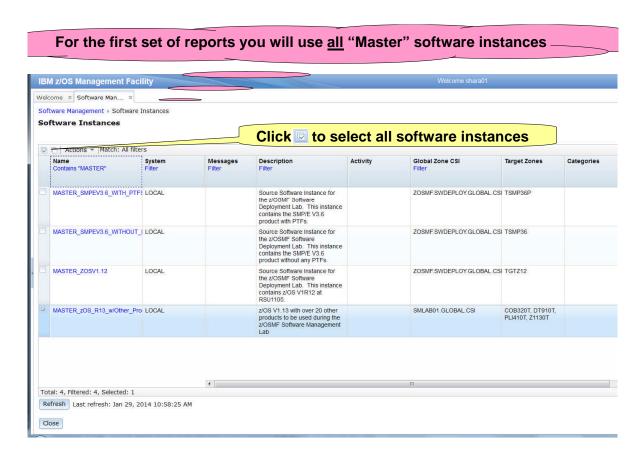
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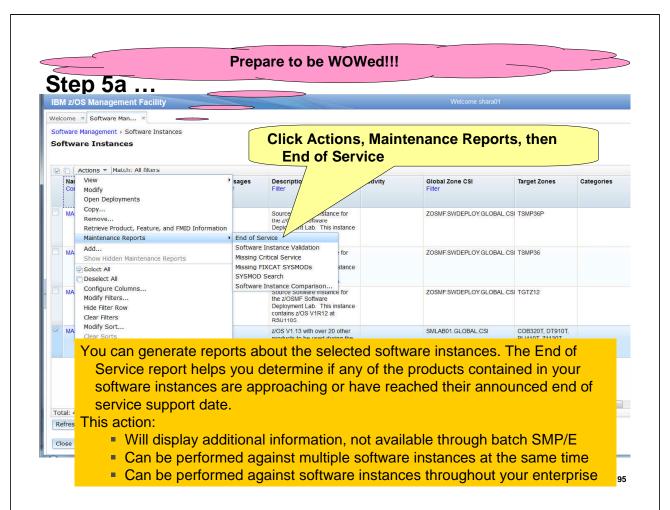


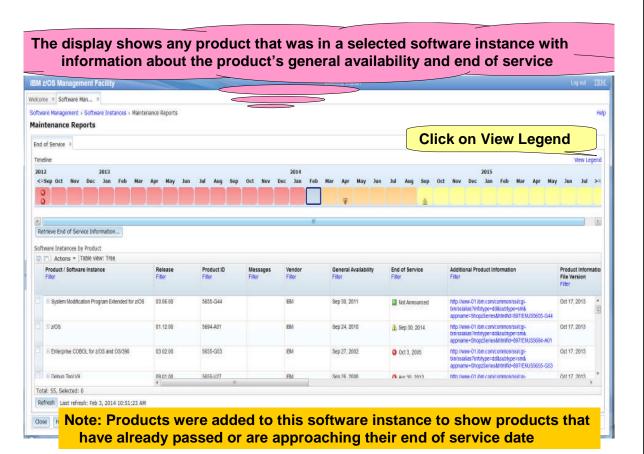


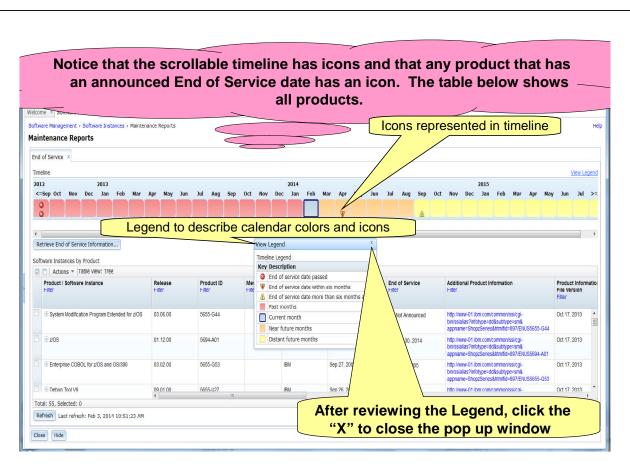
Step 5a: Report on "Master" Software Instances' End of Service

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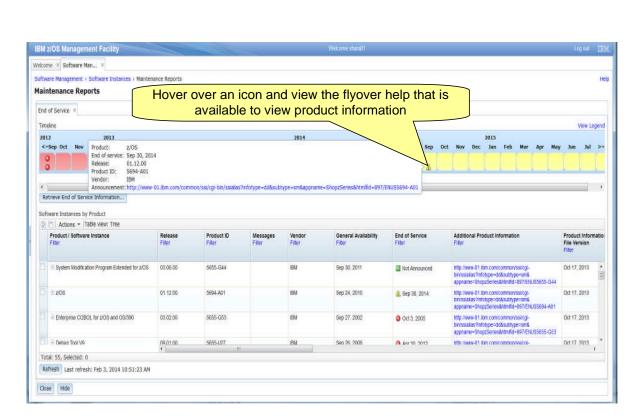


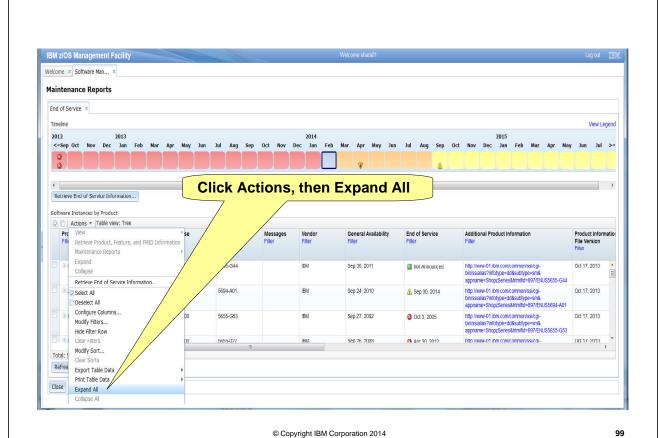




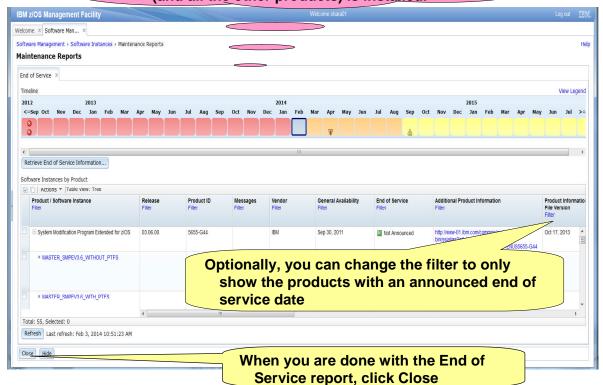


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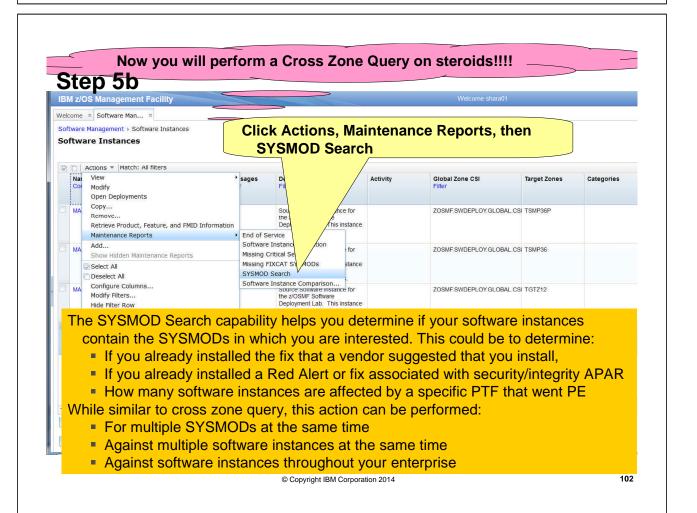
You can see all the software instances where SMP/E (and all the other products) is installed.



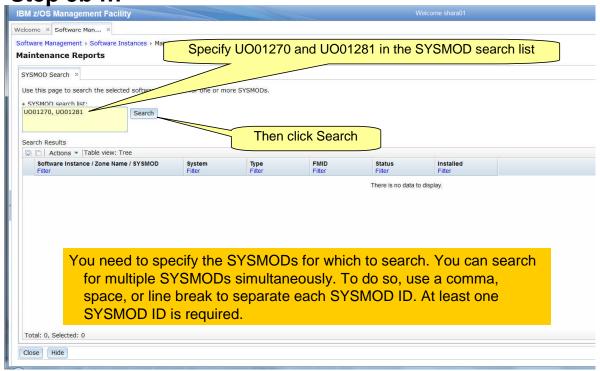
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Step 5b: Report on "Master" Software Instances' SYSMOD Search

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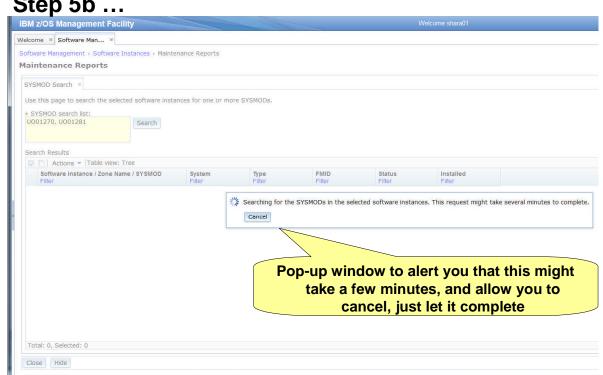


Step 5b ...



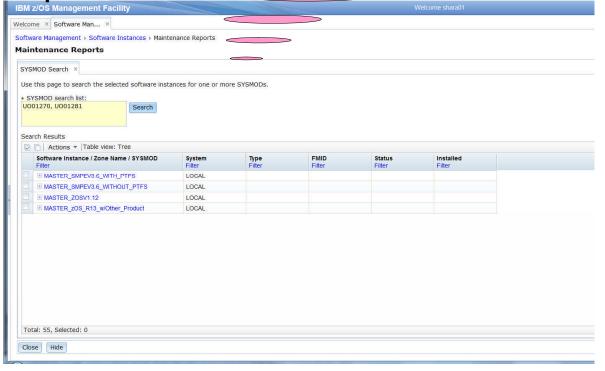
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Step 5b ...



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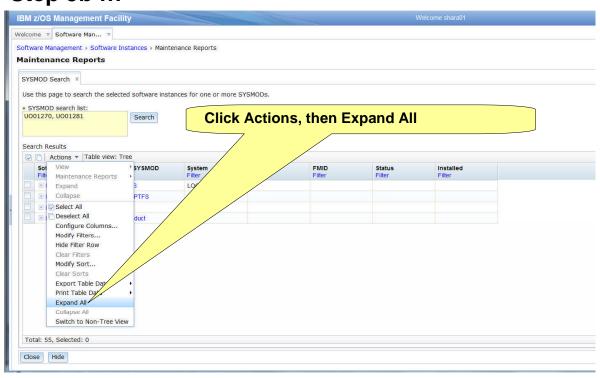
Results shown in a scrollable tree table. You will have to expand each row to see the actual results.



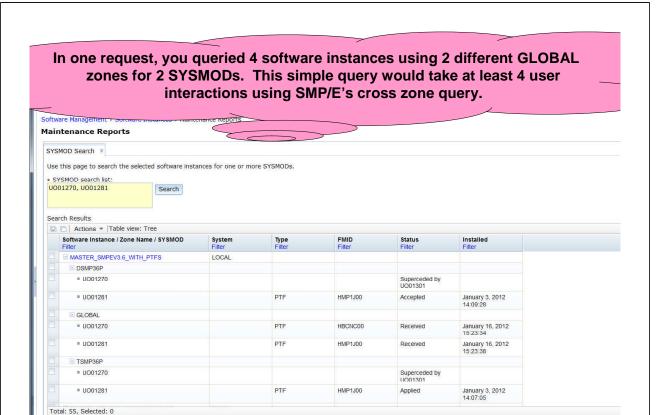
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Step 5b ...



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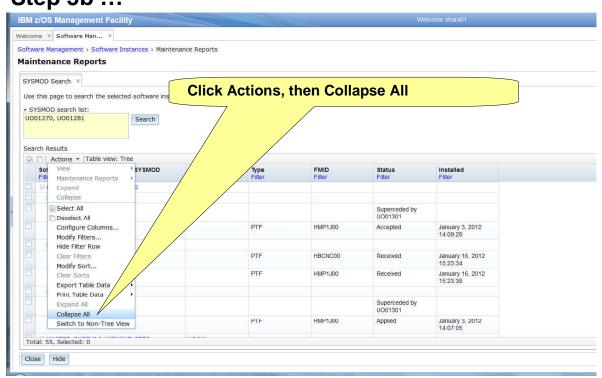


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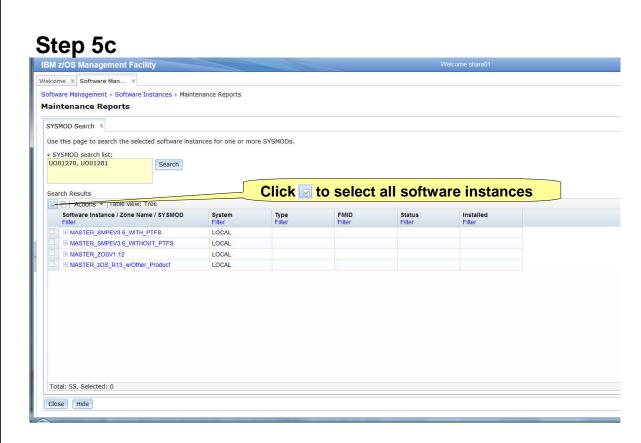
Step 5b ...

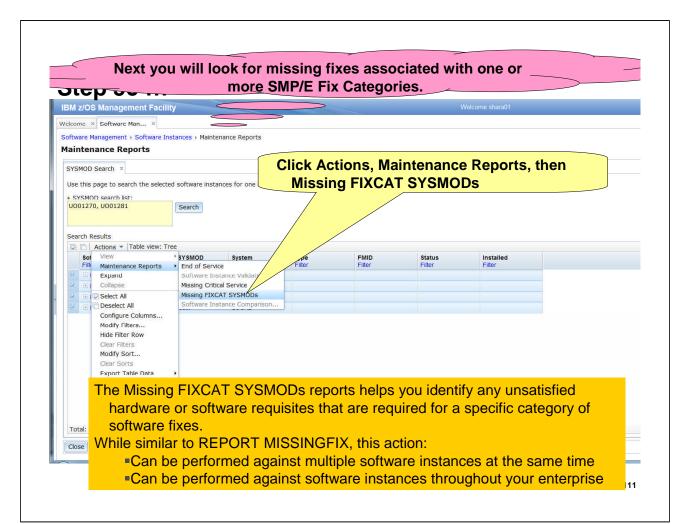
Close



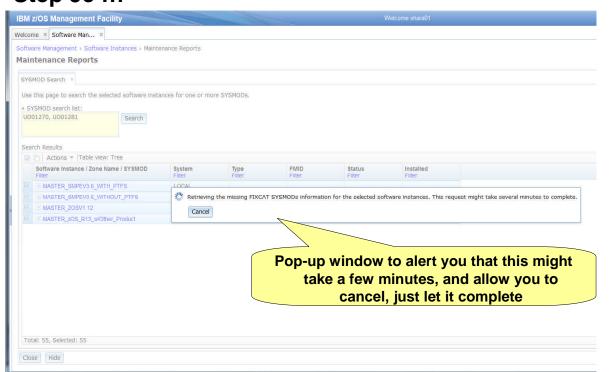
Step 5c: Report on "Master" Software Instances' Missing FIXCAT SYSMODs

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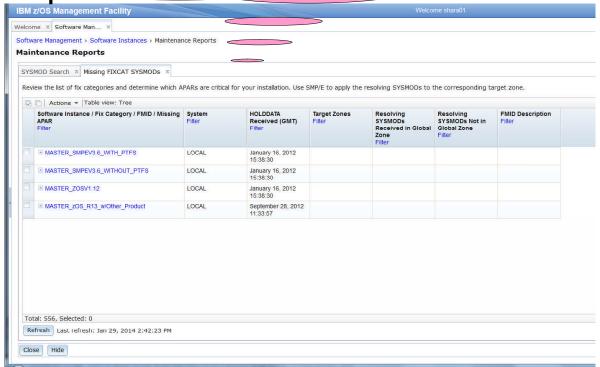




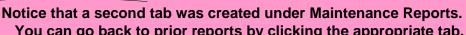
Step 5c ...

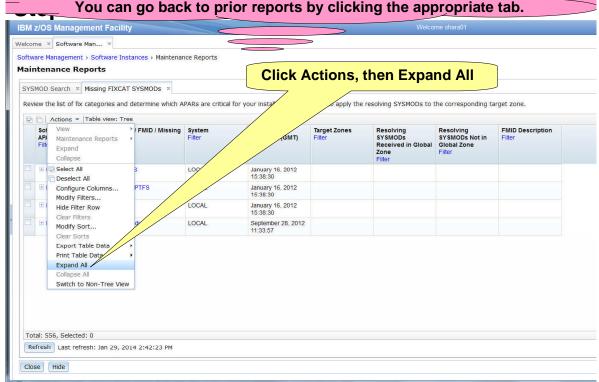


Results shown in a scrollable tree table. You will have to expand each row to see the actual results.

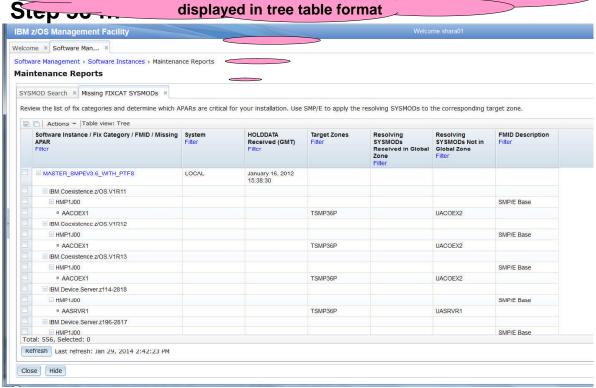


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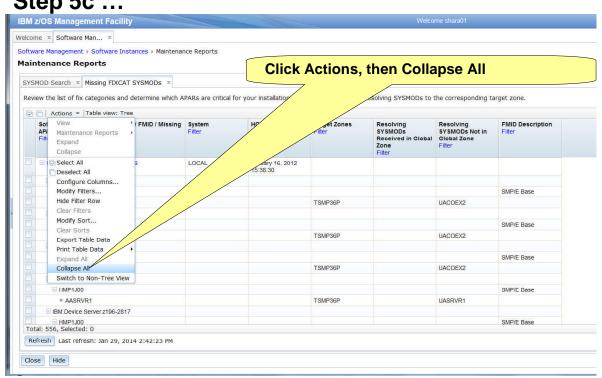


Similar to REPORT MISSINGFIX Output displayed in tree table format



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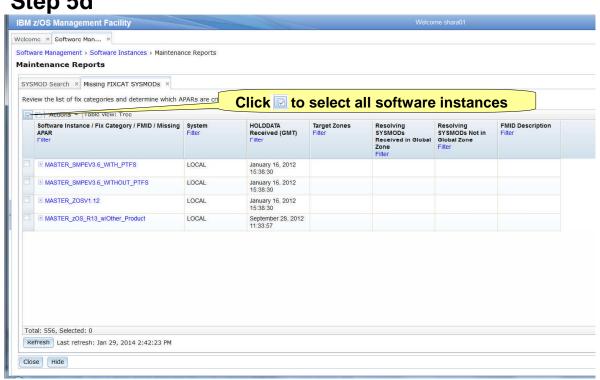


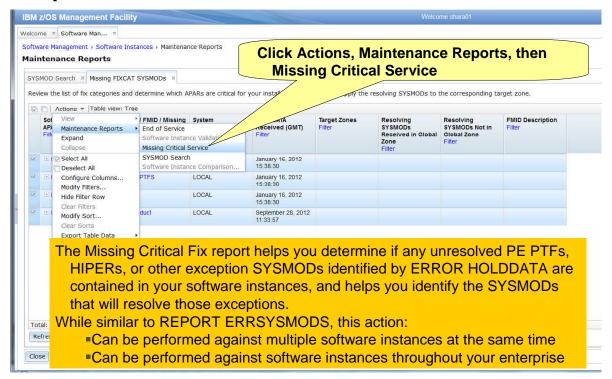


Step 5d: Report on "Master" Software **Instances' Missing Critical Fixes**

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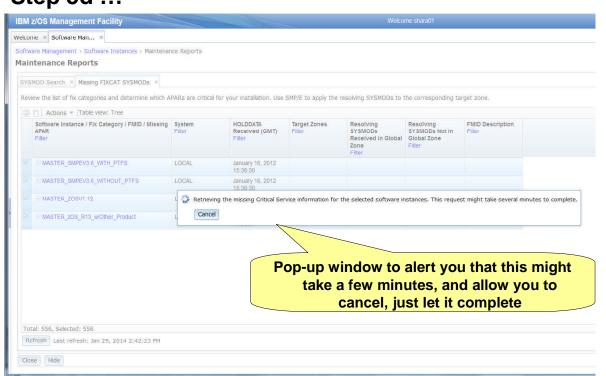




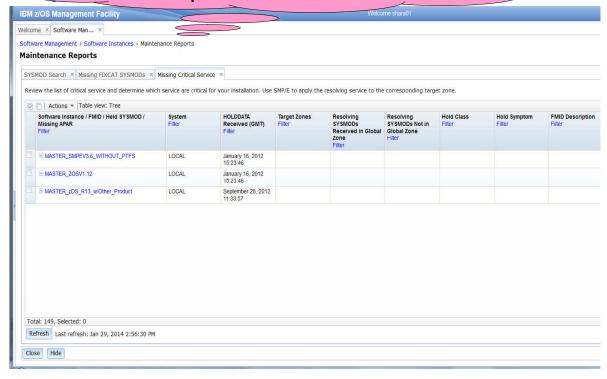
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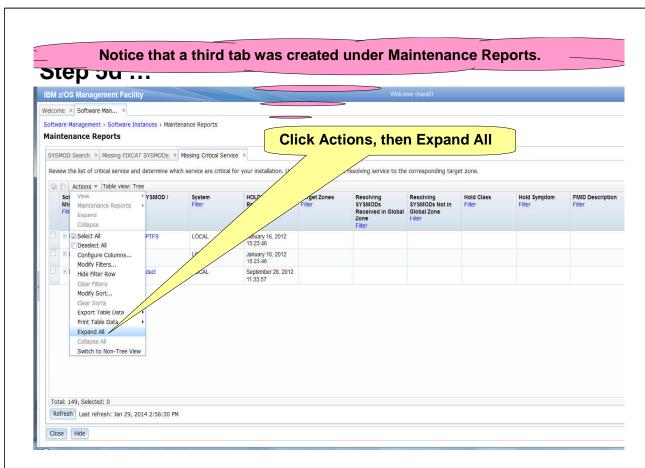
Step 5d ...



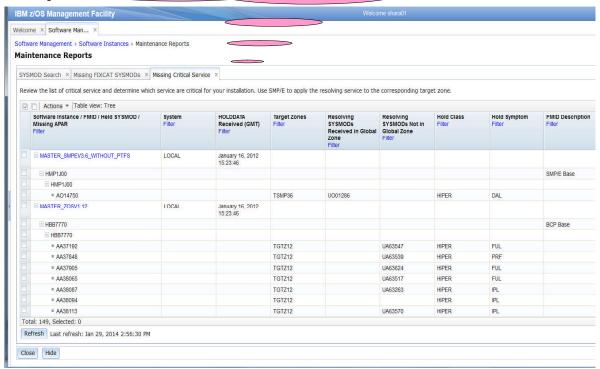
Results shown in a scrollable tree table. You will have to expand each row to see the actual results.



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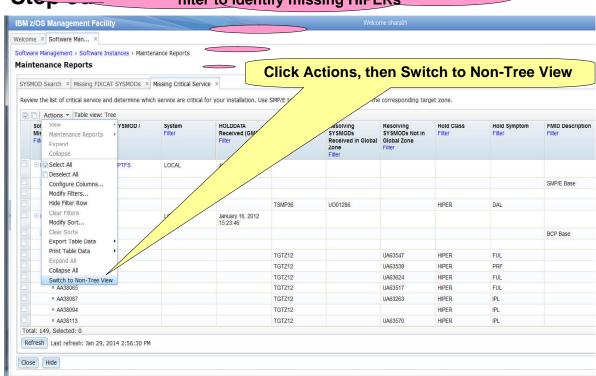
Similar to REPORT ERRSYSMODS Output displayed in tree table format

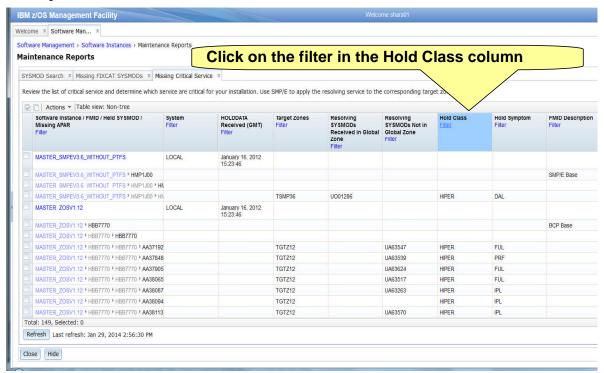


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Now you are going to change the view and add a filter to identify missing HIPERs

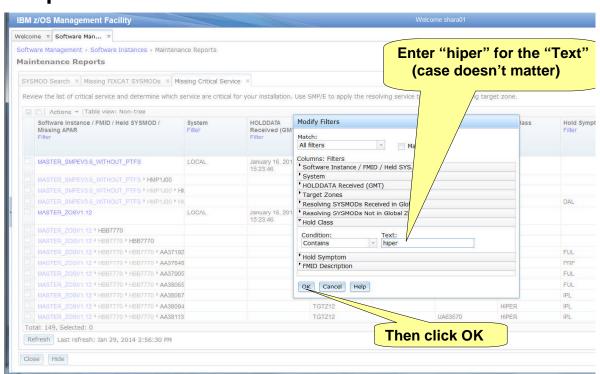




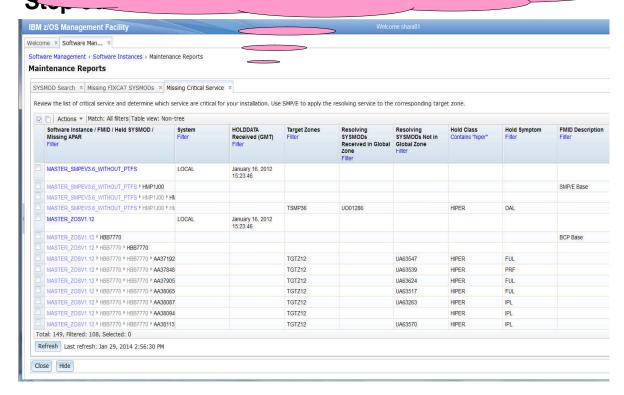
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Step 5d ...



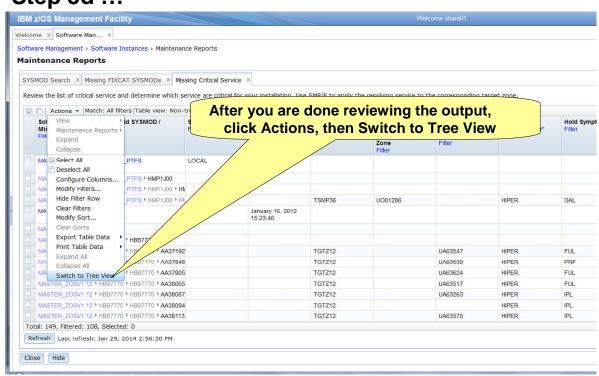
The table now identifies all mising HIPER fixes.



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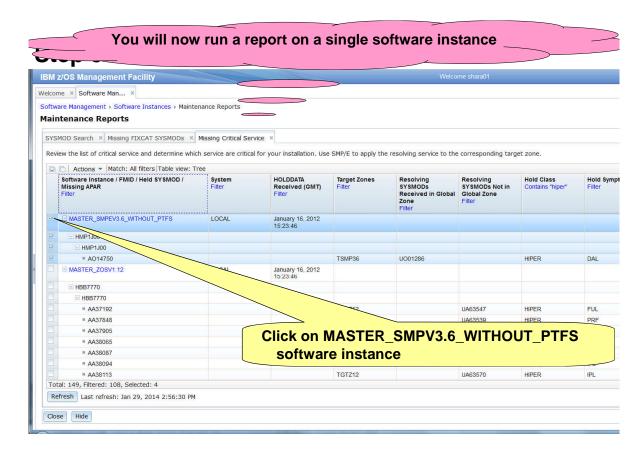
127

Step 5d ...

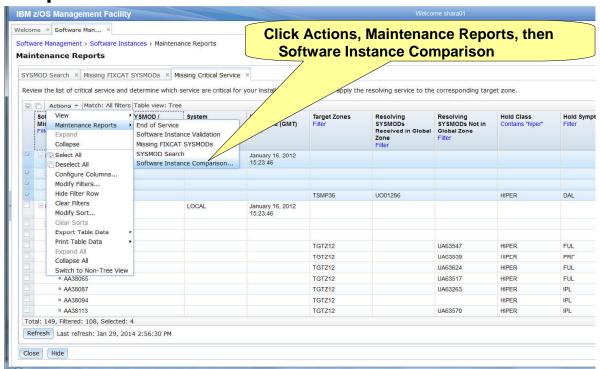


Step 5e: Report on "Master" Software Instances' Instance Comparison

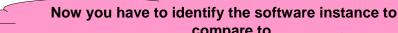
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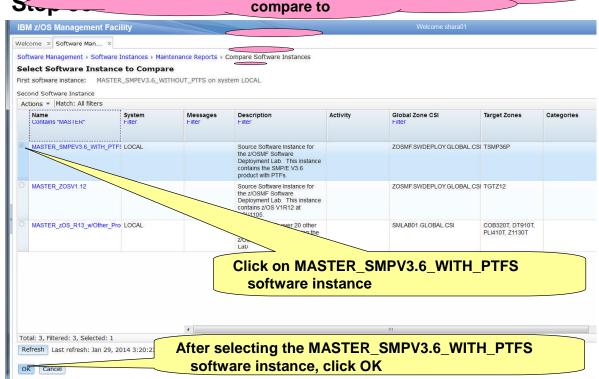


Step 5e ...



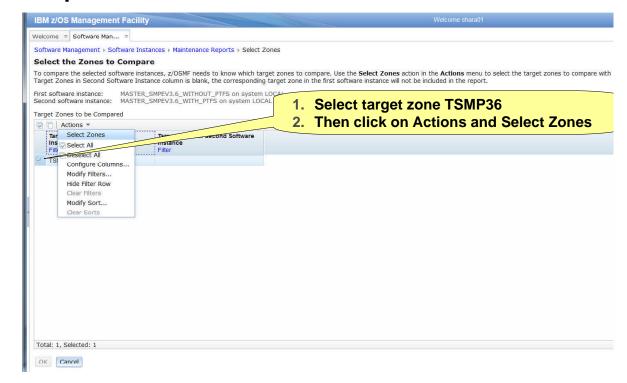
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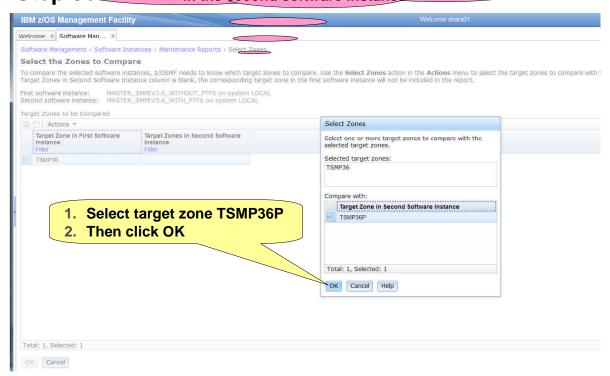
132

Step 5e ...



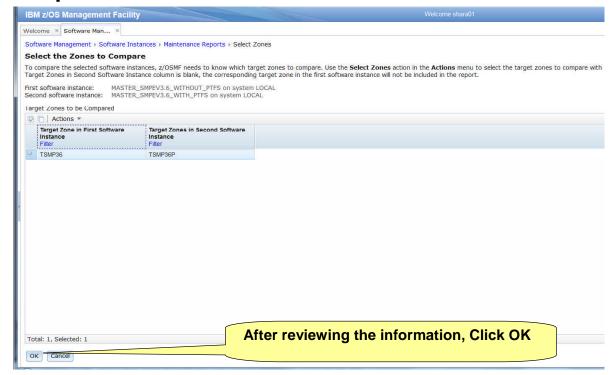
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A pop-up display allows you to select the target zone in the second software instance



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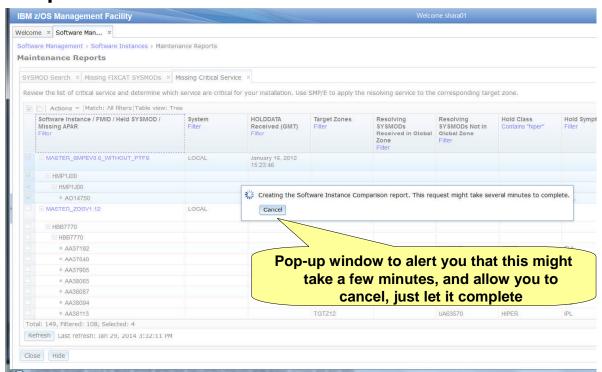
Step 5e ...



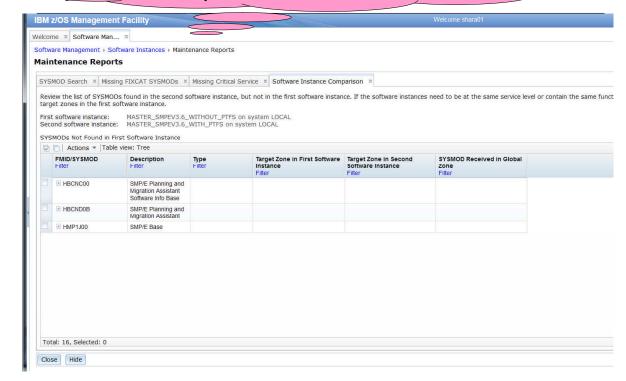
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135

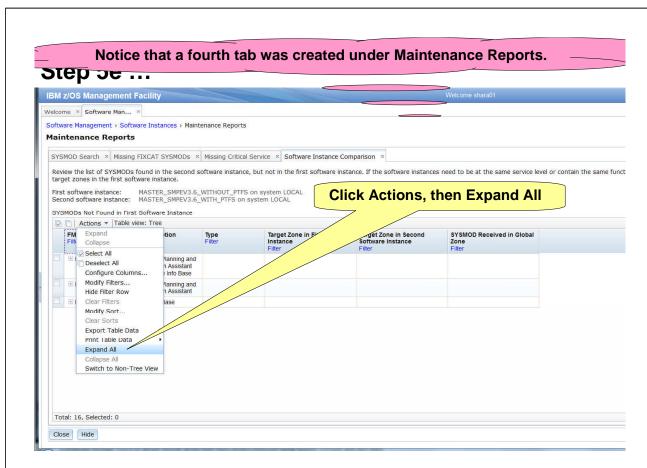
Step 5e ...



Results shown in a scrollable tree table. You will have to expand each row to see the actual results.

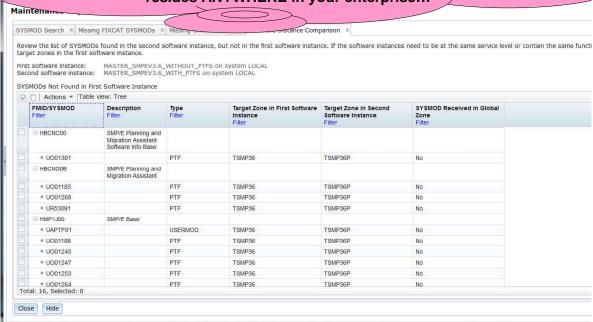


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Similar to REPORT SYSMODs Output

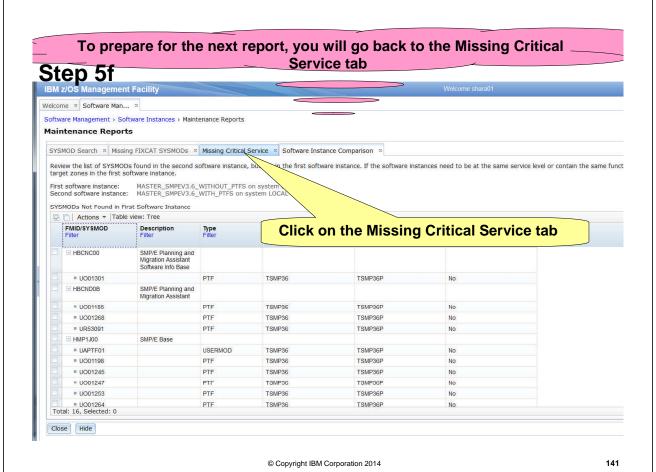
displayed in tree table format. The REPORT SYSMODs command only report on GLOBAL zones that are accessible where the command is run. Software Management can compare software instances where either one of them resides ANYWHERE in your enterprise!!!

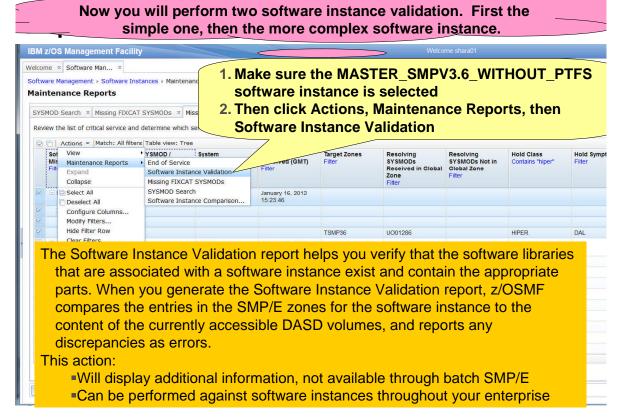


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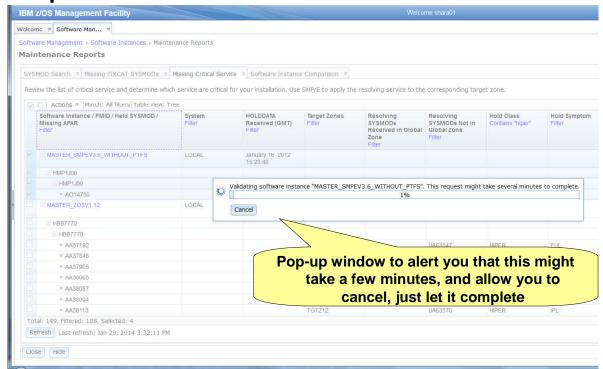
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Step 5f: Report on "Master" Software Instances' Instance Validation

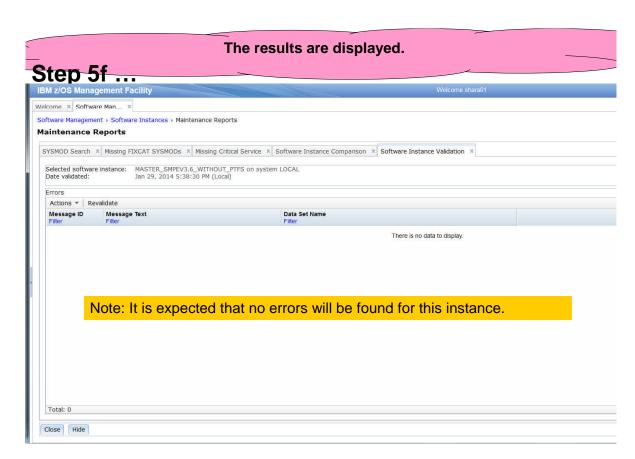


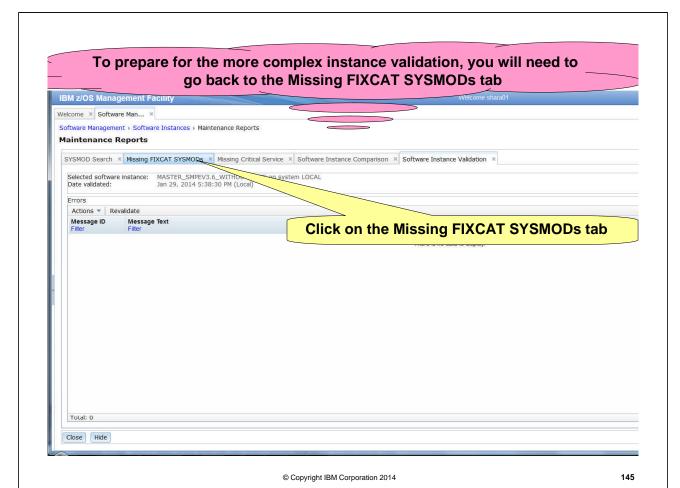


Step 5f ...

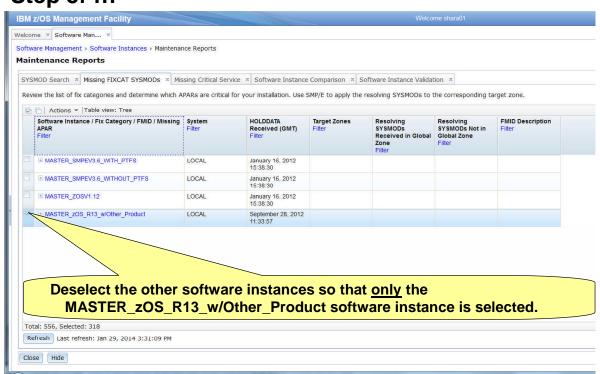


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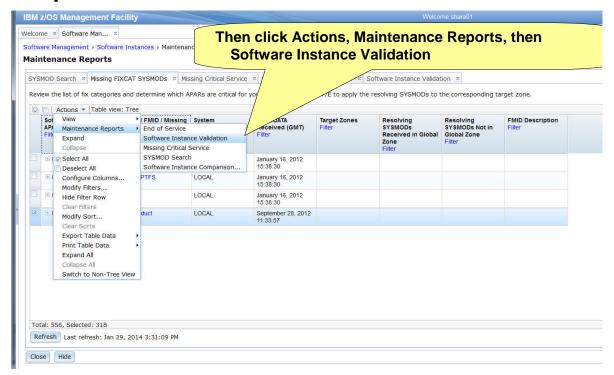




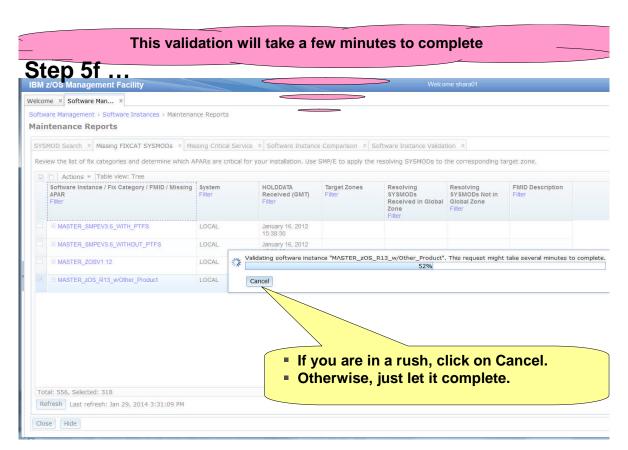
Step 5f ...



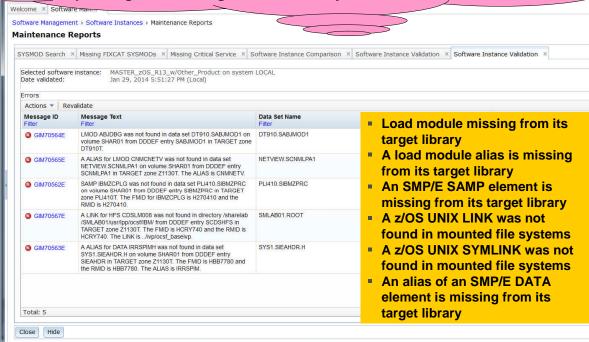
Step 5f ...



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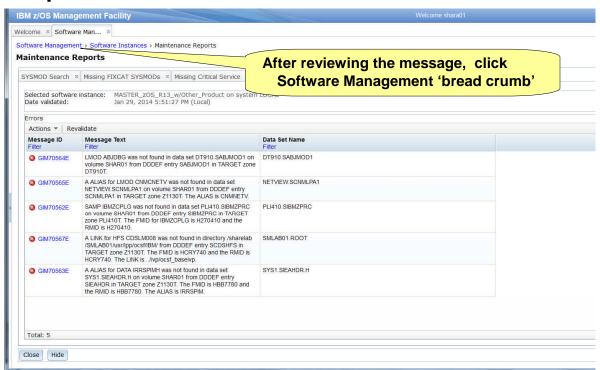
Note: Errors were introduced in the software instance to show errors. The kinds of validation errors that are identified include DDDEFs pointing to the wrong data sets, file systems not mounted, or ...



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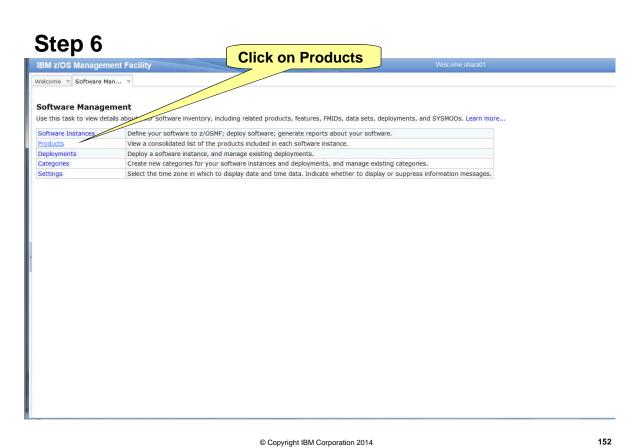
149

Step 5f

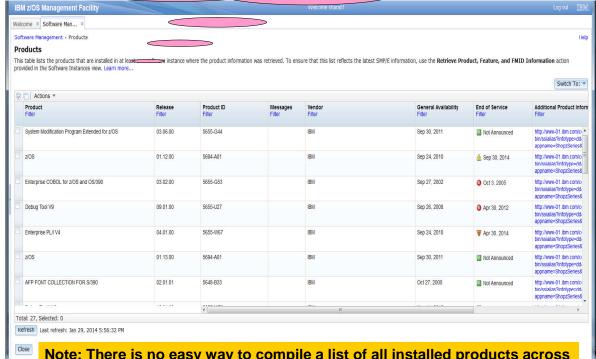


Step 6: View **Products**

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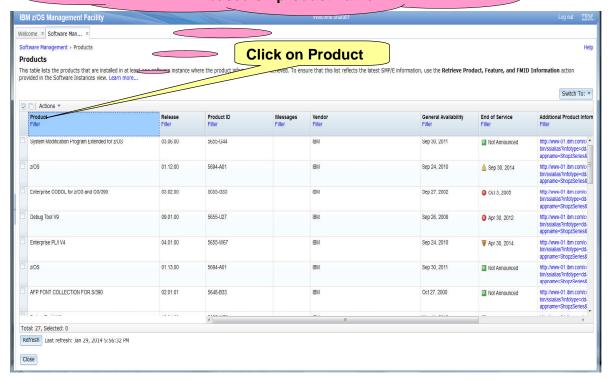
A list of installed products is displayed. It can be sorted using ANY column or filtered.



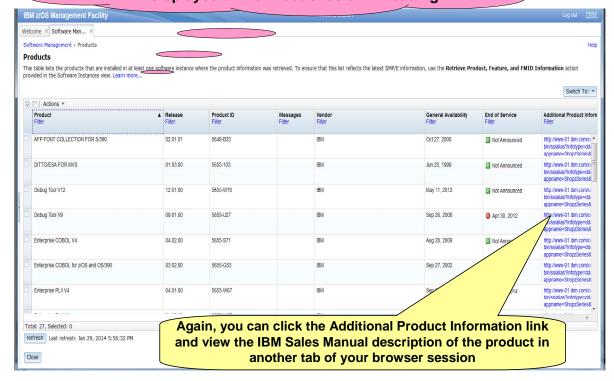
Note: There is no easy way to compile a list of all installed products across your enterprise using SMP/E list commands or query functions.

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For example clicking on Product will sort the table based on product name.



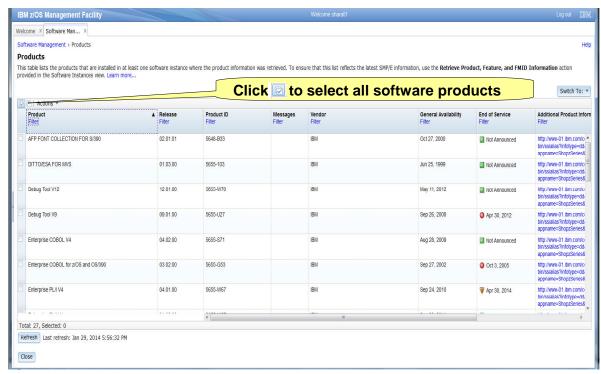
The table is now sorted and a triangle point up is now displayed in the Product column heading.



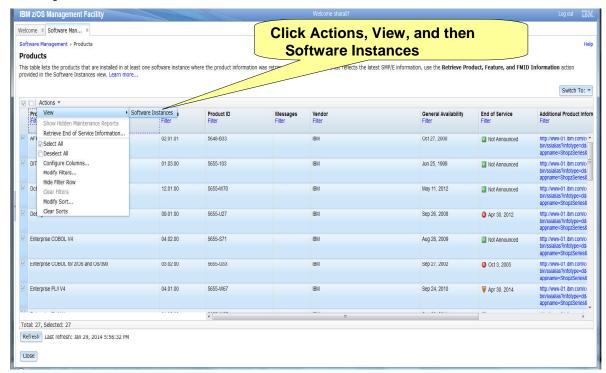
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Step 6 ...



Step 6 ...



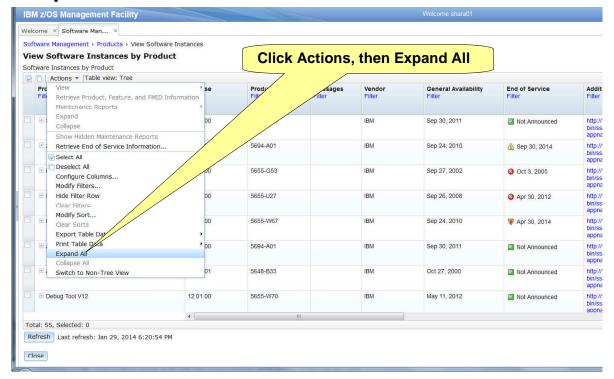
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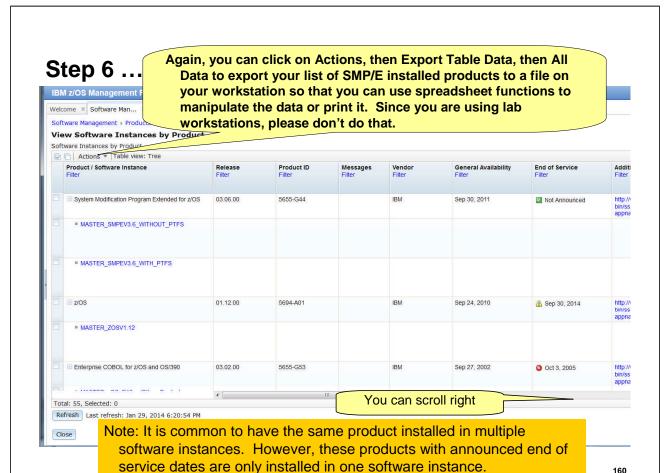
For each product, <u>all</u> the software instances where that product is installed will be displayed.

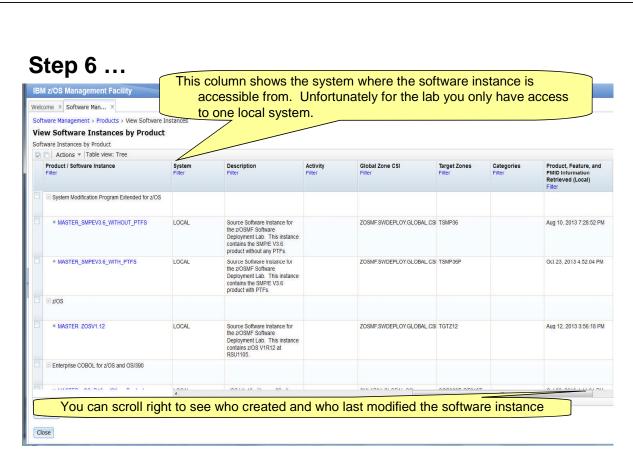


Step 6 ...



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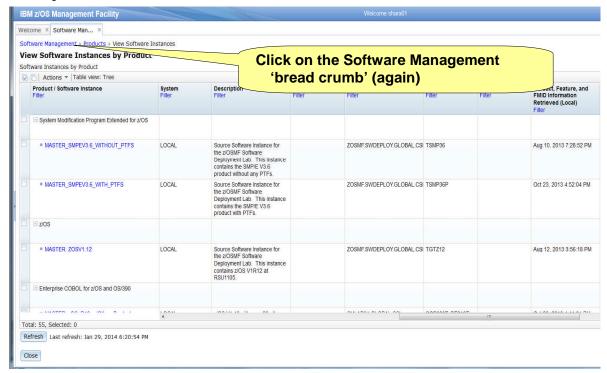


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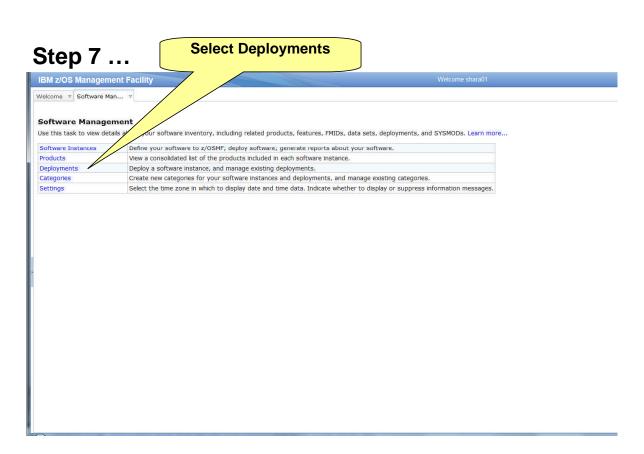
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Step 7: Deployments

Step 7

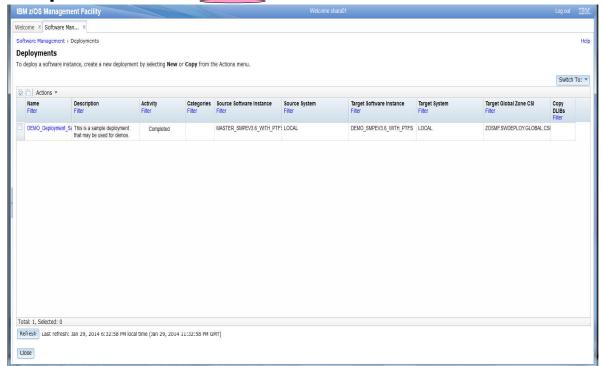


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You see a complete list of deployments.

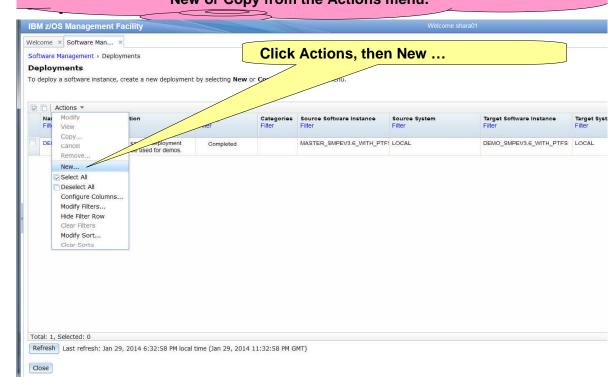
Step 7 ...



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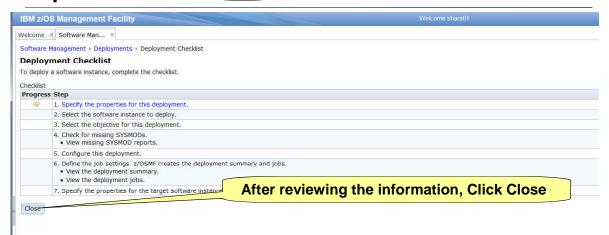
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To deploy a software instance, create a new deployment by selecting New or Copy from the Actions menu.



The deployment checklist leads you through the new deployment

Step 7 ...



Note: A separate lab is required to demonstrate how to add a software instance and perform a deployment. Lucky for you there is a z/OSMF Software Deployment Hands-on Lab for you to try at this conference!!! Go ahead and get the handout and try the lab.

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Thank You



Additional information

- z/OS Management Facility website
 - http://ibm.com/systems/z/os/zos/zosmf/
- IBM z/OS Management Facility education modules in IBM Education Assistant
 - http://publib.boulder.ibm.com/infocenter/ieduasst/stgv1r0/index.jsp
 - Scroll down to z/OS Management Facility
- IBM Publications Center
 - Program Directory for z/OS Management Facility (GI11-9847)
 - IBM z/OS Management Facility Configuration Guide (SA38-0657)
 - IBM z/OS Management Facility Programming (SA32-1066)
 - IBM z/OS V2R1.0 Management Facility License Information (GC52-1386)
 - http://www.ibm.com/e-business/linkweb/publications/servlet/pbi.wss
- IBM z/OS Management Facility Information center
 - http://pic.dhe.ibm.com/infocenter/zos/v2r1/index.jsp

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