

**z/OSMF labs:  
A smorgasbord of goodies to try out!**

**Using the z/OS Installation Strategy  
to:**

1. Role of the Software Vendor: define a Portable Software Instance
2. Role of the Customer: install a Portable Software Instance



TechU

2019 IBM Systems  
Technical University

IBM

**Abstract:**

You hopefully have heard about the z/OS Installation Strategy? This is an undertaking that is across the entire z/OS industry (with strong participation from both IBM and ISVs) to provide a common installation and packaging method that you use from z/OSMF.

First, imagine you work for Kitty Corp, and you have a fabulous new product that you want to package for your awaiting customers. How do you do that today following the z/OS Installation Strategy with z/OSMF? It's easy, and this lab can help you do just that by packaging the product into what is known as a **z/OSMF Software Management Portable Software Instance** (PSI, for short).

In order to show the most flexibility in the type of products that you can package, this lab will show how to create a PSI composed of one SMP/E-packaged and installed FMID and one product that is not SMP/E-packaged at all!

- The SMP/E-packaged product is a fictitious FMID called **HMLW100**.
- The non-SMP/E packaged product is simply a collection of data sets. It just so happens that we have a very good real-life example of a non-SMP/E packaged product: the **z/OS Cloud Data Access Beta** product.

Next, change sides in this scenario. Imagine that you are a customer and have purchased this wonderful product from Kitty Corp and want to install it on your system. How do you do that today, once you have received the product's Portable Software Instance from Kitty Corp?

This self-directed lab will take you through each step needed to create that PSI (from the point of view of a z/OS software vendor), and then how to install that PSI (from the point of view of a z/OS customer).

*What level of z/OSMF do you need to package or install a PSI? Ensure you have the appropriate z/OSMF Software Management support installed:*

- z/OSMF V2.2 with PTF UI44516 , or
- z/OSMF V2.1 with PTF UI42018

*What exactly are we packaging into a PSI for this lab?*

This imaginary product we are packaging is two very different “elements” to show the power of this new z/OS Installation Strategy, and how any z/OS software manufacturer can use it, and how a customer can handle all types of z/OS products. Here’s the details on what composes our lab’s PSI:

1. A beta product called **z/OS Cloud Data Access Beta**. This beta product contains the following six data sets which can be found on the lab system:
  - a. MWALLE.PSI.CDA.H
  - b. MWALLE.PSI.CDA.LINK
  - c. MWALLE.PSI.CDA.LPA
  - d. MWALLE.PSI.CDA.PANELS
  - e. MWALLE.PSI.CDA.PDSE.LOAD
  - f. MWALLE.PSI.CDA.REXX
2. An imaginary SMP/E-packaged product (FMID **HMLW100**) that is already SMP/E applied and ACCEPTed into an SMP/E CSI. This is to show that you could provide any preinstalled FMID you wanted, and include all the SMP/E information also into a PSI.including the SMP/E CSI! Of course, if you wanted to ship the uninstalled FMID (SMPMCS and RELFILEs), that would be fine too, but that’s not what we showing. This preinstalled SMP/E-packaged product can be found in the lab system in the following data sets:
  - a. MWALLE.PSI.AMLWHFS : dlib data set associated with the product.
  - b. MWALLE.PSI.CSI : CSI data set from the install
  - c. MWALLE.PSI.SMPLTS : associated SMPLTS
  - d. MWALLE.PSI.SMPMCS : associated SMPMCS
  - e. MWALLE.PSI.SMPPTS : associated SMPPTS
  - f. MWALLE.PSI.SMPSCDS : associated SMPSCDS
  - g. MWALLE.PSI.SMPSTS : associated SMPSTS
  - h. MWALLE.PSI.ZFS : file system where the product is installed.

When you follow this self-directed lab, here is a high level overview of what you will learn:

1. Logon to z/OSMF with your supplied lab id and password.
2. z/OS Software view: package a composite product into a Portable Software Instance (PSI).
3. z/OS Customer view: install a PSI provided from a software vendor using z/OSMF Software Management's deployment task.

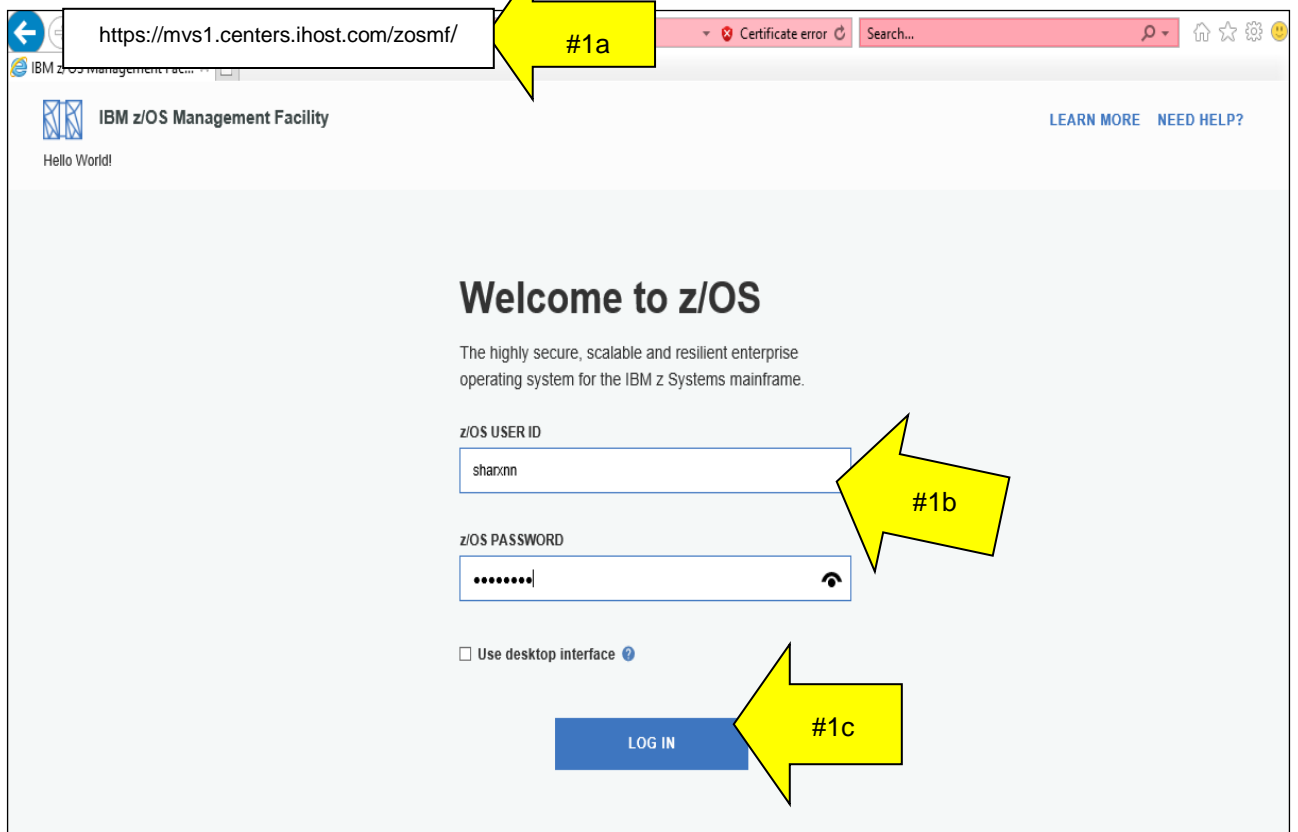
If you want to only do half of the lab (either #2 or #3) that is fine. You can jump in wherever you want, based on your interest.

However, if you want to understand well what is in a PSI and how to get one installed (deployed) both steps #2 and #3 are the best way to do that.

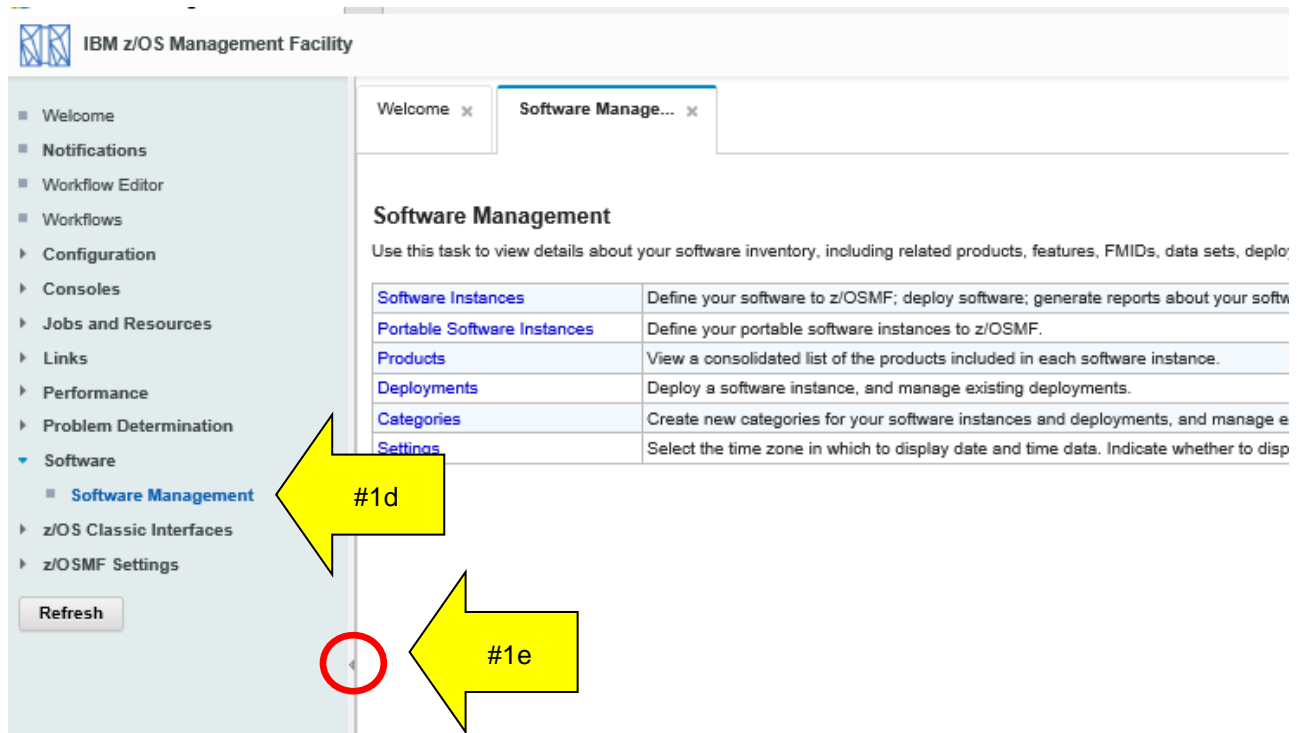
## 1. Logon to z/OSMF.

In this step, we will now go into z/OSMF to use the Software Management function. For this lab, we are using a z/OSMF V2.2 system.

- a. Go to <https://mvs1.centers.ihost.com/zosmf/> on the Firefox or IE web browser
- b. Using the userid you were given (SHARAnn, SHARBnn, or SHARCnn) and the password, logon to z/OSMF. The userid you were given is a regular z/OS userid on this system, and has been given access to z/OSMF. There is *no* z/OSMF code on this workstation, all executables (except the web browser) is on the z/OS system. The lab will show the usage of userid MWALLE.
- c. Click on “Log in”. (Do not click on “Use desktop interface”, to match this handout.



- d. Click on “Software”, to untwist the choices, then “Software Management” to launch the function.
- e. You can click on the “close” arrow head (in the red circle) below to show Software Management as the full screen.



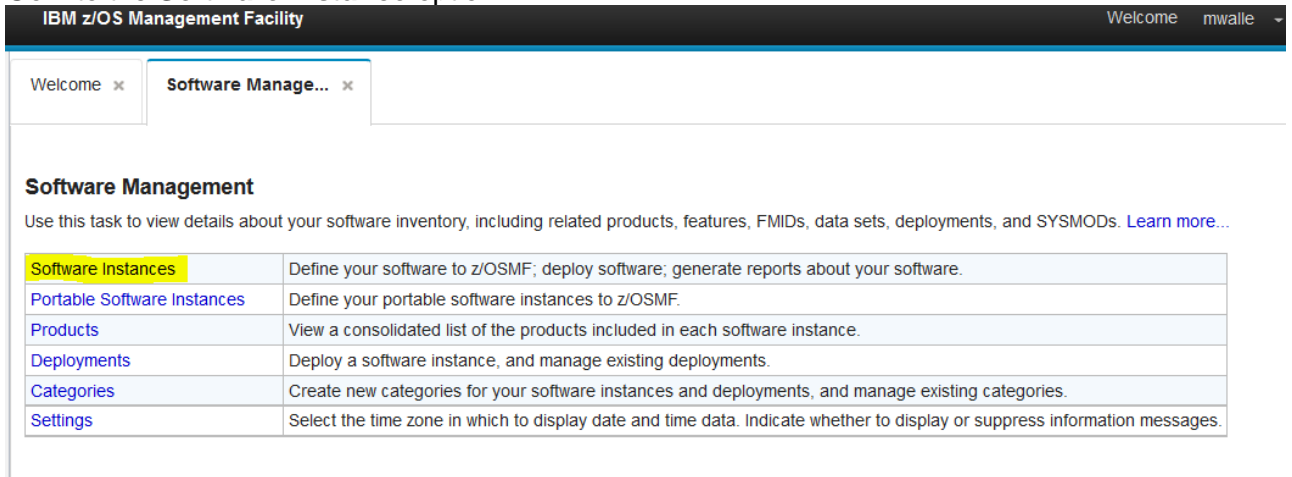
## Role of the Software Vendor: define a Portable Software Instance

First, let's see how anyone, including z/OS software vendor could provide the product we described before. There are two portions of defining a Portable Software instance:

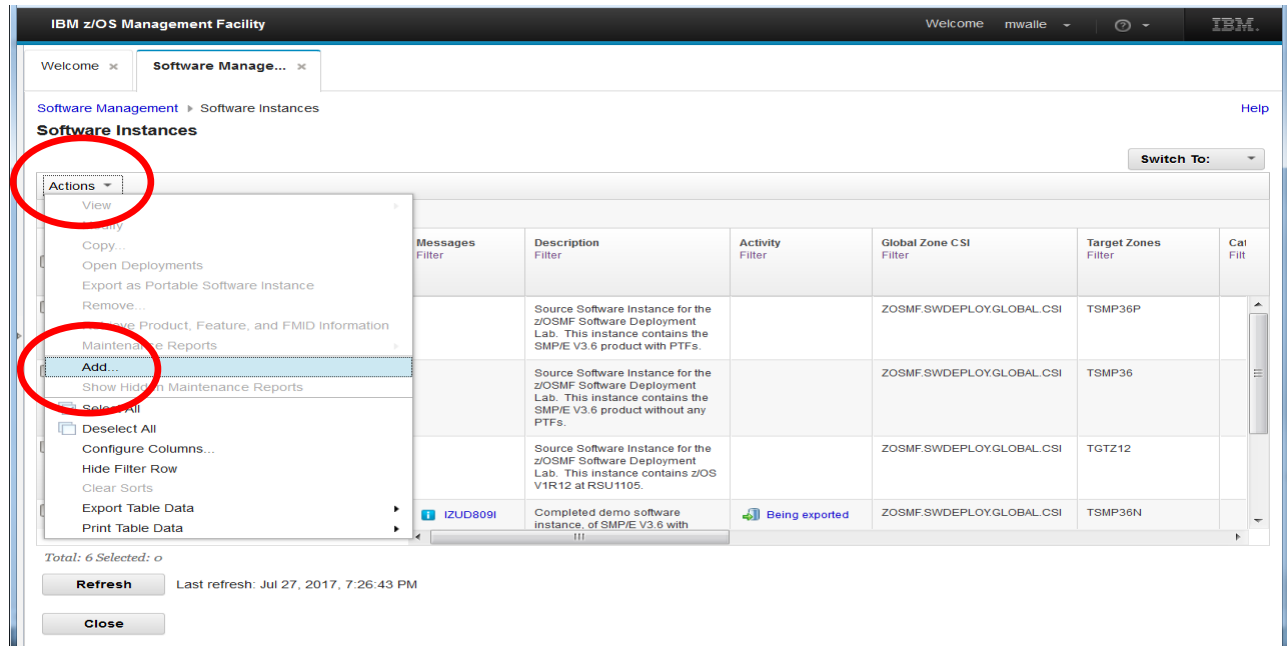
- 1) Creating a Software Instance, and
- 2) Taking that Software Instance and making it ("exporting") a Portable Software Instance.

We will now go through the creation of a Software Instance.

- a. Go into the **Software Instance** option.



- b. You will probably see many Software Instance already on the system. You want to create a new one. Click on Actions-> Add.



- c. Now, we have to provide some details for our Software Instance. You can see the mini-wizard on the left; the steps we need to go through. Provide the following information:
- Name** : use the userid you are logged onto z/OSMF with, and **-PSI-V1R1**. For instance, if you were logged on with SHARC19, your **Name** would be **SHARC19-PSI-V1R1**. We are putting the V1R1 to indicate the release level of this product.
  - Description** : give whatever description you like, to describe this product (Software Instance).
  - Click **Next>** to continue.

**IBM z/OS Management Facility**

Welcome x Software Manage... x

Software Management > Software Instances > Add Software Instance

### Add Software Instance

Welcome  
➔ **Name and Description**  
System and Global Zone  
Categories  
Non-SMP/E Managed Data Sets  
Summary

#### Name and Description

Enter the name and description of the software instance.

\* Name:  
MWALLE-PSI-V1R1

Description: (maximum 256 characters, currently 74 characters)  
MWALLE's Portable Software Instance to show the z/OS Installation Strategy

< Back    Next >    Finish    Cancel

- d. This is where you say what system contains the contents of your Software Instance. We are using the same system we are logged onto for this lab, so select **LOCAL** from the System pull-down.
- e. We need to add the name of the SMP/E CSI we have installed into. Everyone has to enter **MWALLE.PSI.CSI** here, because that is where the SMP/E-installed portion of our product has been installed for this lab. All lab user IDs have read access to this data set.
- f. Continue on with **Next>**.

The screenshot shows the 'Add Software Instance' configuration page in the IBM z/OS Management Facility. The breadcrumb trail is 'Software Management > Software Instances > Add Software Instance'. The left sidebar contains a navigation menu with 'System and Global Zone' selected. The main content area is titled 'System and Global Zone' and includes the instruction: 'Select the system and the global zone CSI associated with the product set. If the software instance Zone.' There are two dropdown menus: '\* System:' with 'LOCAL' selected and a 'Select...' button, and '\* Global Zone CSI (Learn more.):' with 'MWALLE.PSI.CSI' selected. At the bottom, there are four buttons: '< Back', 'Next >', 'Finish', and 'Cancel'.



- g. This is where you can say which zones you want of the CSI. We want to include all the zones, so select the box next to Target.
- h. Then click **Next>** .

IBM z/OS Management Facility Welcome mwalle

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Welcome x Software Manage... x

Software Management > Software Instances > Add Software Instance

### Add Software Instance

Welcome

✓ Name and Description

✓ System and Global Zone

➔ **Target Zones**

Categories

Non-SMP/E Managed Data Sets

Summary

#### Target Zones

Select the target zones that describe the target libraries associated with the product set.

Target Zones

Actions ▾

↔ No filter applied

	Name Filter	Description Filter	Messages Filter	Related DLIB Zone Filter	CSI Data Set Filter
<input checked="" type="checkbox"/>	TARGET			DLIB	MWALLE.PSI.CSI

Total: 1 Selected: 1

Last refresh: Jul 27, 2017, 7:50:11 PM local time (Jul 27, 2017, 11:50:11 PM GMT)

- i. The next screen is for a Category, if we wanted to specify one. We aren't going to use a Category for this lab, just click on **Next>**.

**IBM z/OS Management Facility**

Welcome x Software Manage... x

Software Management > Software Instances > Add Software Instance

**Add Software Instance**

- Welcome
- ✓ Name and Description
- ✓ System and Global Zone
- ✓ Target Zones
- ➔ **Categories**
- Non-SMP/E Managed Data Sets
- Summary

**Categories**

A category is a string or label used to organize and group software instances and deployments. A category might represent software life cycle state, business function, or geographic location. Select one or more categories to assign to the software instance.

Categories

Actions ▾

↕ No filter applied

Name Filter	Description Filter	Activity Filter	Last Modified (Local) Filter
There is no data to display.			

Total: 0 Selected: 0

**Refresh** Last refresh: Jul 27, 2017, 7:51:52 PM local time (Jul 27, 2017, 11:51:52 PM GMT)

< Back Next > Finish Cancel

- j. Now, we get to the part we have to add the non-SMP/E product to our Software Instance. Click on **Actions**, then, **Add**.

The screenshot shows the IBM z/OS Management Facility interface. The breadcrumb trail is "Software Management > Software Instances > Add Software Instance". The main heading is "Add Software Instance". On the left, a navigation pane shows a tree structure with "Non-SMP/E Managed Data Sets" selected. The main content area is titled "Non-SMP/E Managed Data Sets" and contains a text block explaining that z/OSMF automatically includes a data set if updated by SMP/E. Below this is a table titled "Data Sets" with a "Volume Filter" column. The table is currently empty, displaying "There is no data to display." An "Actions" dropdown menu is open over the table, with "Add..." selected. Other menu items include "Modify", "Remove...", "Select All", "Deselect All", "Hide Filter Row", "Clear Sorts", "Export Table Data", and "Print Table Data". At the bottom of the page are buttons for "< Back", "Next >", "Finish", and "Cancel".

- k. We need to add the location of all the **z/OS Cloud Data Access Beta** data sets. We know from the description of this lab, that all these six data sets start with MWALLE.PSI.CDA . Type **MWALLE.PSI.CDA** in the Data Set Qualifier field and then Search.

Then wait a minute or two for the system to find them...

IBM z/OS Management Facility Welcome mwalle

Welcome x Software Manage... x

Software Management > Software Instances > Add Software Instance > Add Data Set

### Add Data Set

To identify the data sets to be added to the software instance, specify a data set name qualifier, volume, or both, and click Search. Then, select the data sets you want to add. For more information on data set name qualifiers, select [Learn more...](#)

Data set name qualifier:  Volume:  \*Maximum data sets:

Select Data Sets to Add

Actions	
No filter applied	
Data Set Name Filter	Volume Filter
There is no data to display.	

Total: 0 Selected: 0

- l. This is what is returned. How convenient! Our six data sets for the **z/OS Cloud Data Access Beta** are found. Now, select all six by clicking on the box next to Data Set Name (to select all them), or you could just click six times next to each data set. For some reason, if you didn't want to include a data set in the Software Instance, you just wouldn't click it here.
- m. Click **OK**.

**IBM z/OS Management Facility** Welcome mwalle

Welcome x **Software Manage...** x

Software Management > Software Instances > Add Software Instance > Add Data Set

### Add Data Set

To identify the data sets to be added to the software instance, specify a data set name qualifier, volume, or both, and click Search. Then, select the data sets you want name qualifiers, select [Learn more...](#)

Data set name qualifier:  Volume:  \*Maximum data sets:

Select Data Sets to Add

Actions	
No filter applied	
<input checked="" type="checkbox"/> Data Set Name Filter	Volume Filter
<input checked="" type="checkbox"/> MWALLE.PSI.CDA.H	SHR003
<input checked="" type="checkbox"/> MWALLE.PSI.CDA.LINK	SHR003
<input checked="" type="checkbox"/> MWALLE.PSI.CDA.LPA	SHR001
<input checked="" type="checkbox"/> MWALLE.PSI.CDA.PANELS	SHR003
<input checked="" type="checkbox"/> MWALLE.PSI.CDA.PDSE.LOAD	SHR001
<input checked="" type="checkbox"/> MWALLE.PSI.CDA.REXX	SHR005

Total: 6 Selected: 6

Then click on **Next>** to move along, after confirming that your six data sets are shown:

**IBM z/OS Management Facility**

Welcome ×

Software Manage... ×

[Software Management](#) ▶ [Software Instances](#) ▶ Add Software Instance

### Add Software Instance

Welcome

✓ Name and Description

✓ System and Global Zone

✓ Target Zones

✓ Categories

➔ **Non-SMP/E Managed Data Sets**

Summary

#### Non-SMP/E Managed Data Sets

z/OSMF automatically includes a data set in the software instance if it is updated by SMP/E and is associated with a data set that is not updated by SMP/E but is associated with the software in the software instance, such as a product, use the Add action to explicitly add it to the software instance.

Data Sets

Actions ▾

➔ No filter applied

	Name Filter	Volume Filter
<input type="checkbox"/>	MWALLE.PSI.CDA.H	
<input type="checkbox"/>	MWALLE.PSI.CDA.LINK	
<input type="checkbox"/>	MWALLE.PSI.CDA.LPA	
<input type="checkbox"/>	MWALLE.PSI.CDA.PANELS	
<input type="checkbox"/>	MWALLE.PSI.CDA.PDSE.LOAD	
<input type="checkbox"/>	MWALLE.PSI.CDA.REXX	

Total: 6 Selected: 0

< Back
Next >
Finish
Cancel

We are almost done packaging up our Software Instance... This screen summarizes the contents of our package. You can browse through it. You'll see the SMP/E portion of our product (only the Global CSI), and the non-SMP/E portion of our product (the six data sets we added). Click **Finish** and we are done!

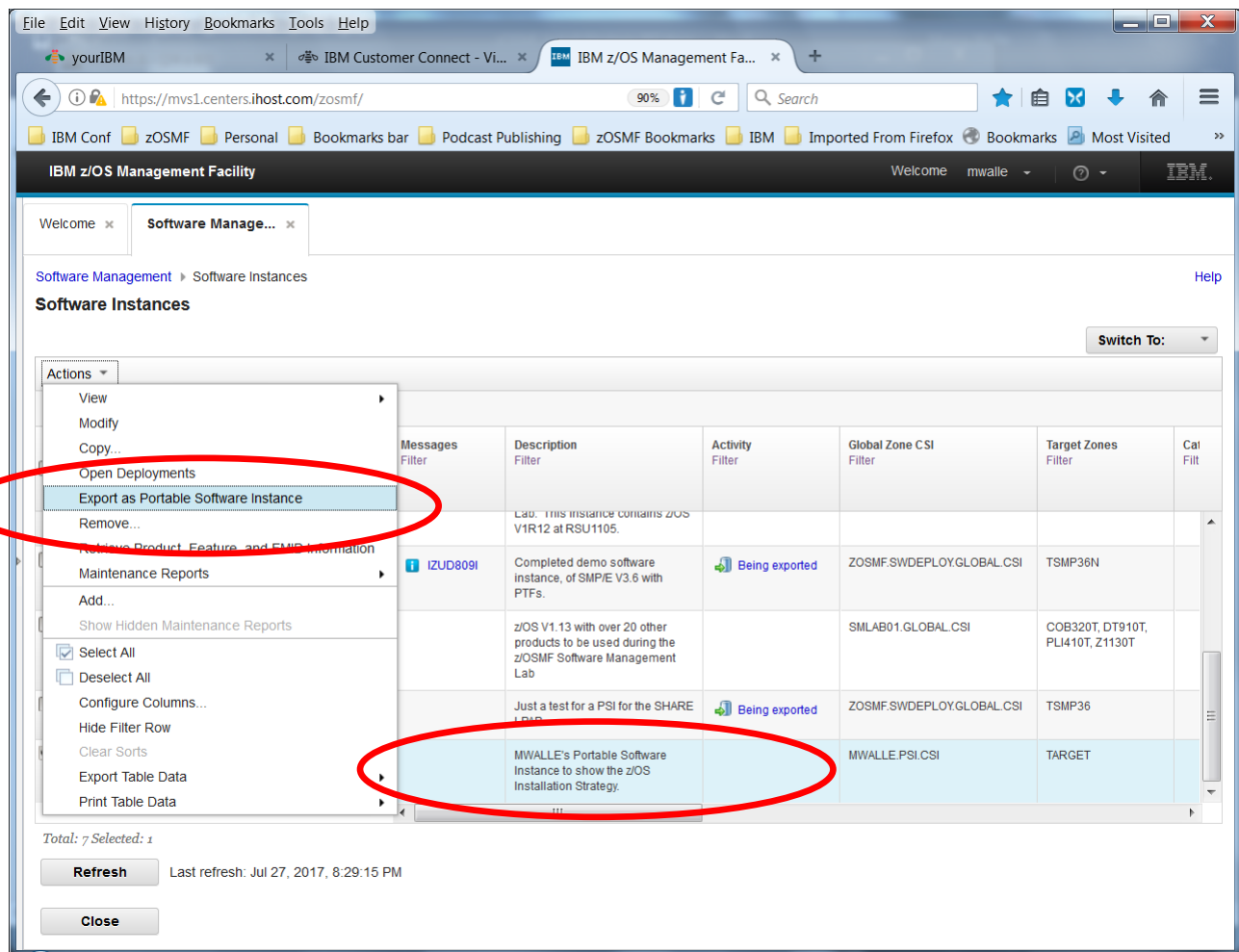
It might take a moment to finish, but you should see this when it is complete:

Let's recap: we packaged a product into a Software Instance that contained the contents we desired. This isn't new, and creating Software Instances is a very old function in z/OSMF Software Management. Now, let's get to the newer part specifically...taking that Software Instance and making it a **Portable Software Instance (PSI)**.

We need to make the PSI so that we can distribute it to our paying customers and they can use this great new product our company (Kitty Corp) has produced.

The PSI is a package that can be acquired by our paying customers, and stored into z/OSMF for installation. Creating a PSI is very easy, once you've got your Software Instance defined!

On the Software Instances main screen (where all the system's Software Instances have been defined), select your Software Instance (called something like **SHARC15-PSI-V1R1**), and then **Actions -> Export as Portable Software Instance**.





You need to provide some information. Say:

- **Yes**, for exporting the distribution zones and libraries. We definitely want our customers to have all the complete SMP/E installation information.
- a location where the PSI will be stored. This location will be filled in by default, however that default will not work on our lab system. Change the UNIX directory to be **/sharelab/sharc15/SHARC15-PSI-V1R1** , updating the purple part with the lower case of your assigned userid. This is case sensitive.
- The JCL data set name default should be fine. This is the location where the export JCL will be saved, in case you want to see it later.
- Click **Next>**.

[Software Management](#) > [Software Instances](#) > Export as Portable Software Instance

### Export as Portable Software Instance

- ➔ Export Properties
- ✓ Review
- ✓ Export Jobs

#### Export Properties

Specify the properties used for the export to a portable software instance of the selected software instance.

System:  
LOCAL

Do you want the export to copy the distribution zones and libraries associated with the source software?

- Yes  
 No

\* UNIX directory:


/shareuser/mwalle/MWALLE-PSI-V1R1

\* JCL data set name:

MWALLE.DM.D170727.T203243.CNTL

\* JOB statement:

```
-----1-----2-----3-----4-----5-----6-----7--  
//MWALLEP1 JOB (ACCOUNT), 'NAME'  
//*  
//*
```

 Retrieving information about the data sets included in the selected software instance. This request might take several minutes to complete.

1%

You should then see several review tabs. Click through each one...this is what will be put into your PSI. You can see that there is both SMP/E information, and non-SMP/E information included. We've even got a z/OS UNIX file system to include (from the SMP/E FMID). Just what we wanted! Notice, PSIs can be any type of data set: file system, VSAM, PDS, PDSE, sequential ...

Click **Next>**.

IBM z/OS Management Facility Welcome mwalles

Welcome x Software Manage... x

Software Management > Software Instances > Export as Portable Software Instance

### Export as Portable Software Instance

- ✓ Export Properties
- ➔ **Review**
- Export Jobs

#### Review

Review the summary of the contents for the software instance that will be exported.

SMP/E Zones | SMP/E Managed Data Sets | SMP/E Managed UNIX Data Sets | Non-SMP/E Managed Data Sets

Global Zone CSI Data Set: MWALLE.PSI.CSI on system LOCAL

Zones to Export

Actions ▾

↔ No filter applied

Zone Name Filter	Data Set Name Filter	Type Filter
TARGET	MWALLE.PSI.CSI	TARGET
DLIB	MWALLE.PSI.CSI	DLIB

< Back   Next >   Save   Finish   Cancel

You can now see the JCL that will do the export to the PSI. You can browse it if you like, by clicking on the blue job name:

JCL data set name: MWALLE.DM.D170727.T203243.CNTL  
 System: LOCAL

Jobs

Actions ▾					
No filter applied					
<input checked="" type="checkbox"/>	Sequence Filter	JCL Data Set Member Name Filter	Description Filter	System Filter	Status Filter
<input checked="" type="checkbox"/>	1	IZUD01EX	Export Software Instance: Create portable archives for each data set in the software instance.	LOCAL	

Then select it by clicking on the box on the left, and do **Actions -> Submit job.**

Messages ✖ 0 ⚠ 0 i 1

<b>i Job "IZUD01EX" (JOB17100) has been submitted.</b>	IZUD786I Jul 27, 2017, 8:43:19 PM
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JCL data set name: MWALLE.DM.D170727.T203243.CNTL  
 System: LOCAL

Jobs

Actions ▾					
No filter applied					
<input type="checkbox"/>	Sequence Filter	JCL Data Set Member Name Filter	Description Filter	System Filter	Status Filter
<input type="checkbox"/>	1	IZUD01EX	Export Software Instance: Create portable archives for each data set in the software instance.	LOCAL	<span style="color:green">■ Submitted</span>

Total: 1 Selected: 0

**Refresh** Last refresh: Jul 27, 2017, 8:40:51 PM local time (Jul 28, 2017, 12:40:51 AM GMT)

Give it a couple of minutes to run, and then you should see:

Jobs

Actions ▾						
No filter applied						
<input type="checkbox"/>	Sequence Filter	JCL Data Set Member Name Filter	Description Filter	System Filter	Status Filter	Messages Filter
<input type="checkbox"/>		IZUD01EX	Export Software Instance: Create portable archives for each data set in the software instance.	LOCAL	<span style="background-color: yellow; color: green;">✔ Complete</span>	

Click on **Finish** and you are done! You now have a PSI that you can sell to any happy customer in your UNIX file system `/sharelab/userid/USERID-PSI-V1R1` ! Remember that location for the next part of the lab...

*What happens now, to get the PSI to a paying customer?*

The PSI is in the file system into a zipped format that z/OSMF Software Management can understand. (It happens to be the GIMZIP format from SMP/E, but that is not something that is of concern here. Customers might not even be aware of that.) What is important is that a z/OS software vendor can take that format and send it to a customer for installation. There are a couple of ways to do that:

- One is to use the GIMGTPKG service routine, and it is probably the simplest, so Kitty Corp. sets up a download server and provides JCL like this for customers to run:

```
//job JOB ...
//GOGETIT EXEC PGM=GIMGTPKG
//SMPOUT DD SYSOUT=*
//SYSPRINT DD SYSOUT=*
//SMPNTS DD PATH='/u/usr01/pkgs/',PATHDISP=KEEP
//SMPCPATH DD PATH='/usr/lpp/smp/classes/',PATHDISP=KEEP
//SMPJHOME DD PATH='/usr/lpp/java/J6.0/',PATHDISP=KEEP
//SMPSRVR DD *
<SERVER host="host.sample.com"
user="usr01"
pw="n0peekng">
<PACKAGE file="CBPROC/O12345/RIMTAPE/GIMPAF.XML"
hash="1234567890123456789012345678901234567890"
id="O12345">
</PACKAGE>
</SERVER>
/*
//SMPCCLNT DD *
<CLIENT retry="3">
</CLIENT>
/*
```

- Another way is to perhaps use the pax utility to put it into a single MVS data set, such as:

```
//PAXITUP EXEC PGM=IKJEFT01,REGION=0K
//SYSPROC DD DSN=SYS1.SBPXEXEC,DISP=SHR
//SYSTSPRT DD DSN=&&HFSOUT,
// DISP=(NEW,PASS,DELETE),SPACE=(TRK,(10,10)),
// DCB=(RECFM=FB,LRECL=121,BLKSIZE=12100)
//SYSTSIN DD *
    oshell cd /KittyCorp/PSI-V1R1/ && +
    pax -wzvf "'PSIV1R1.ARCHIVE" *
//*
```

What is probably a very likely scenario is the following:

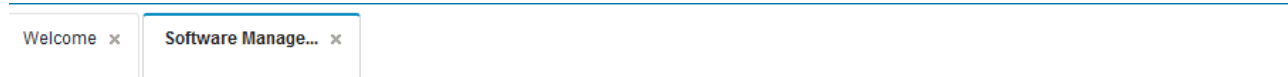
1. Kitty Corp. uses a utility (such as z/OS UNIX pax) to create an archive of that PSI in the file system. This will put it in a single file.
2. With fabulous advertising, the customers decide they want that PSI. The customers can FTP the PSI from the Kitty Corp to their own system, into a z/OS UNIX file location. How they transfer that single file from one place to another is a decision that vendor would take, but conceptually, think that FTP could be one method to get it from Kitty Corp to the customer.
3. Now that the customer has acquired the PSI from Kitty Corp...they unload the archive into the z/OS UNIX file system (perhaps using the z/OS UNIX pax command to un-archive it into several files in a directory).
4. The PSI is in the z/OS UNIX file system on z/OS and is ready for z/OSMF to install it.

Let's now see how that installation is done by a customer...

## 3. Role of the Customer: install a Portable Software Instance

So, you've bought a great new product from Kitty Corp! You've acquired the file (somehow, possibly via GIMGTPKG), and if necessary also un-archived it into your z/OS UNIX file system (if you received it as a single pax archive file). What's next? A very simple deployment with z/OSMF Software Management.

Ensure that you are on the primary Software Management screen, and select **Portable Software Instances**



### Software Management

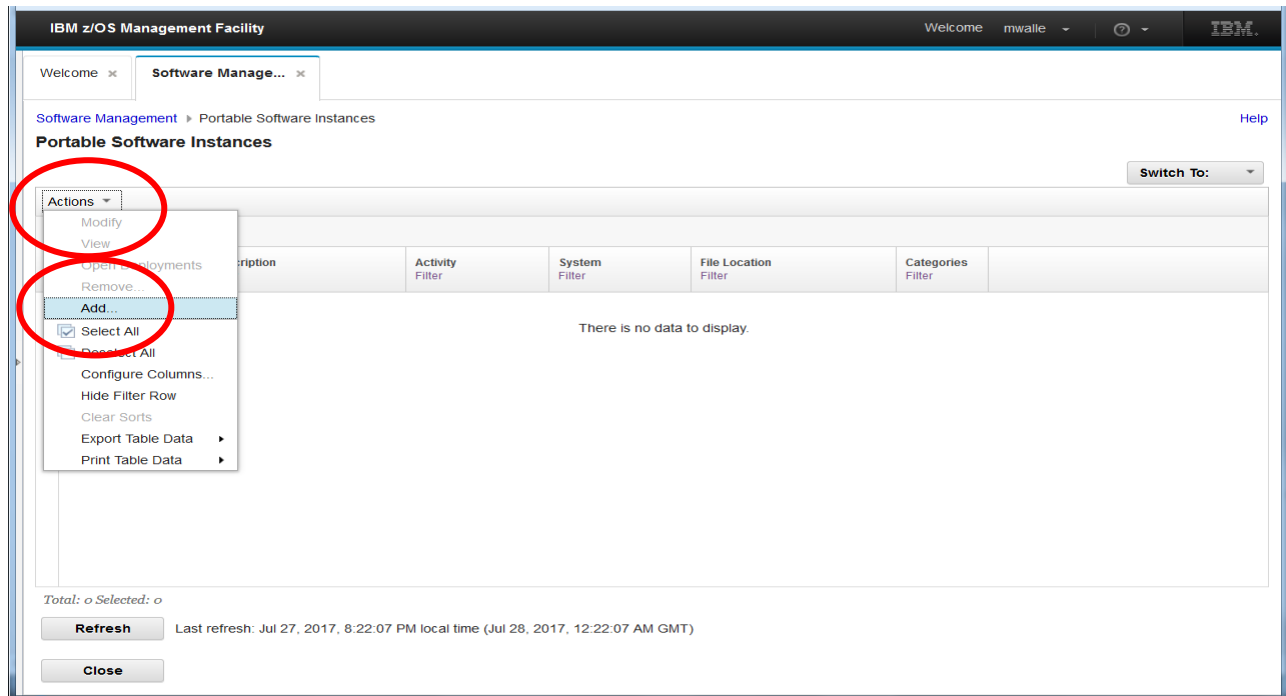
Use this task to view details about your software inventory, including related products, features, FMIDs, data sets, deployments, and SYSMODs. [Learn more...](#)

<a href="#">Software Instances</a>	Define your software to z/OSMF; deploy software; generate reports about your software.
<a href="#">Portable Software Instances</a>	Define your portable software instances to z/OSMF.
<a href="#">Products</a>	View a consolidated list of the products included in each software instance.
<a href="#">Deployments</a>	Deploy a software instance, and manage existing deployments.
<a href="#">Categories</a>	Create new categories for your software instances and deployments, and manage existing categories.
<a href="#">Settings</a>	Select the time zone in which to display date and time data. Indicate whether to display or suppress information messages.

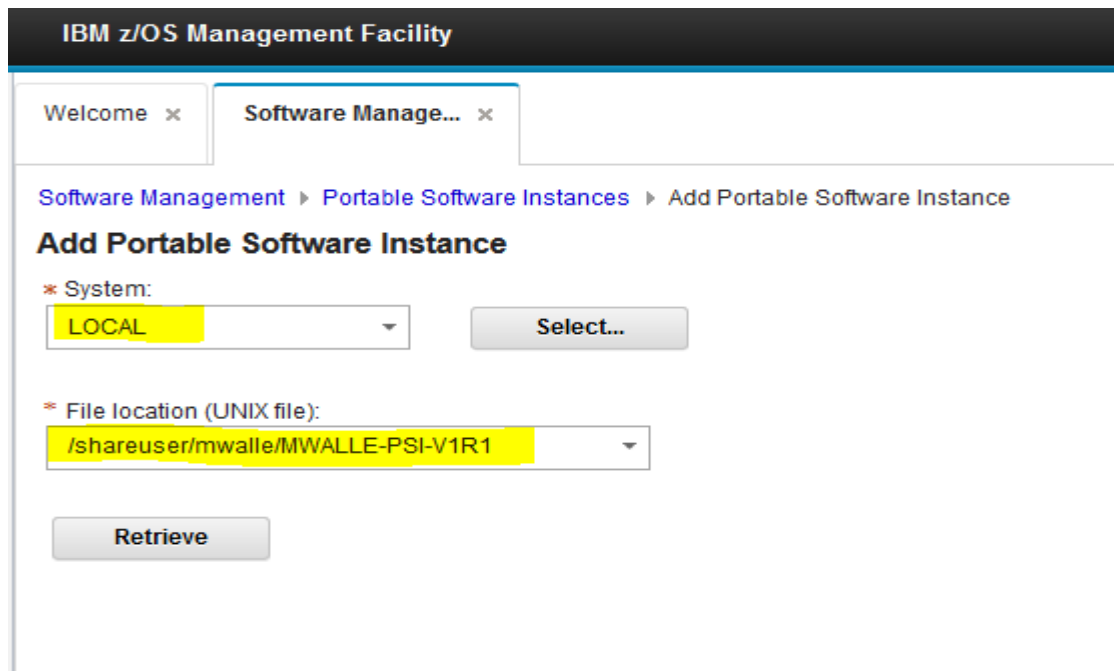
This is where all the Portable Software Instances (PSI) on this system can be found.

- If you are doing this lab from *only* the customer view and jumping into the middle of this lab, then your z/OS UNIX location will be **/shareuser/MWALLE/MWALLE-PSI-V1R1** . Remember that name.
- If you are doing this lab from the *beginning* (both the ISV and the customer view), then your z/OS UNIX location will be **/sharelab/*your\_userid*/YOUR\_USERID -PSI-V1R1** . Where *your\_userid* is your assigned userid, such as SHARC15. The name is case sensitive, so make sure you have the name in the correct case in both *your\_userid* locations. Remember that name.

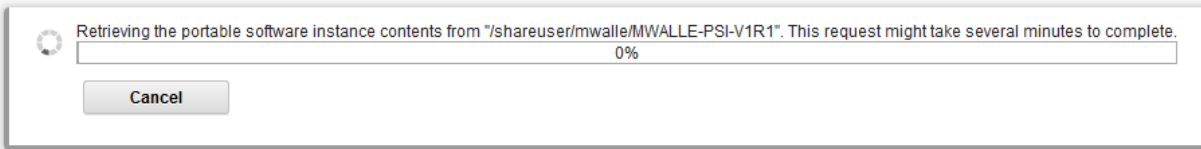
You know where your PSI has been stored (from one of the bullets above). Go to **Actions -> Add**. You are going to add your PSI to the inventory for installing.



On the next screen, select the **System** as **Local** (the only choice on our lab system), and then provide the z/OS UNIX location where you had your PSI. That is the name that you were to remember from above. For instance, `/sharelab/user_id/USER_ID-PSI-V1R1` or `/shareuser/mwalle/MWALLE-PSI-V1R1`  
Click on **Retrieve**.



It might take a moment or two:



When it has been successfully retrieved, you'll see some information (that you packaged with) in the PSI. Click on **OK**.

Welcome x Software Manage... x

Software Management > Portable Software Instances > Add Portable Software Instance

### Add Portable Software Instance

\* System:  
LOCAL Select...

\* File location (UNIX file):  
/shareuser/mwalle/MWALLE-PSI-V1R1

Retrieve

\* Name:  
MWALLE-PSI-V1R1

Description: (maximum 256 characters, currently 0 characters)  
MWALLE's Portable Software Instance to show the z/OS Installation Strategy.

Categories

Actions ▾

↔ No filter applied

Name Filter	Description Filter	Activity Filter	Last Modified (Local) Filter	Modified By Filter
There is no data to display.				

OK Cancel

Your PSI is ready to be installed!

[Software Management](#) ▶ Portable Software Instances

**Portable Software Instances**

Actions ▾						
↔ No filter applied						
<input type="checkbox"/>	Name Filter	Description Filter	Activity Filter	System Filter	File Location Filter	Categories Filter
<input type="checkbox"/>	MWALLE-PSI-V1R1	MWALLE's Portable Software Instance to show the z/OS Installation Strategy.		LOCAL	/shareuser/mwalle/MWALLE-PSI-V1R1	

Let's get the install (deployment) started. On the far right, click on the **Switch To:** drop down and select **Deployments**.

The screenshot shows the IBM z/OS Management Facility interface. The breadcrumb navigation is [Software Management](#) ▶ [Portable Software Instances](#). The page title is **Portable Software Instances**. The table below shows the same data as the previous image. On the right side, there is a 'Switch To:' dropdown menu that is open, showing options: Software Instances, Portable Software Instances, Products, and **Deployments** (which is highlighted).

You are now in the Deployment section. You will take the PSI and copy it onto your system. This Deployment function is rather old in z/OSMF, so you might be familiar with it already. From the **Actions** drop-down, select **New**.

The screenshot shows the IBM z/OS Management Facility interface. The breadcrumb navigation is [Software Management](#) ▶ [Deployments](#). The page title is **Deployments**. Below the title, there is a note: "To deploy software, create a new deployment by selecting New or Copy from the Actions menu." The table below shows a single deployment entry. The 'Actions' dropdown menu is open on the left, showing options: Modify, View, Copy..., Cancel..., Remove..., **New...** (highlighted), Select All, Deselect All, Configure Columns..., Hide Filter Row, Clear Sorts, Export Table Data, and Print Table Data.

<input type="checkbox"/>	Description	Activity Filter	Categories Filter	Source Software Filter	Source System Filter	Target Software Instance Filter	Target System Filter
<input type="checkbox"/>	is a sample deployment that be used for demos.	Completed		MASTER_SMPEV3.6_WITH_PTF	LOCAL	DEMO_SMPEV3.6_WITH_PTF	LOCAL



You have the mini-wizard for deploying (installing) the software instance. Select the first option, **Specify the properties for this deployment.**

[Software Management](#) > [Deployments](#) > [Deployment Checklist](#)

### Deployment Checklist

To deploy software, complete the checklist.

#### Checklist

Progress	Step
➔	Specify the properties for this deployment.
	Select the software to deploy.
	Select the objective for this deployment.
	Configure this deployment.
	Define the job settings. z/OSMF creates the deployment summary and jobs. <ul style="list-style-type: none"> <li>View the deployment summary.</li> </ul>
	Submit deployment jobs.
	Specify the properties for the target software instance.

Close

Fill in what you want to call the deployment. Since it's for Kitty Corp's Marna V1R1 PSI, that is decent name, but you have to pick a name that is unique since you can't have duplication deployment names. Perhaps put your assigned userid in the deployment name to make it unique. Click **OK**. Then progressing through the mini-wizard, select the next step: **Select the software to deploy.**

Welcome x

Software Manage... x

[Software Management](#) > [Deployments](#) > [Deployment Checklist](#) > Specify Deployment Properties

### Specify Deployment Properties

Enter a name and optional description for this deployment.

\* Name:

Description: (maximum 256 characters, currently 54 characters)

Categories

Actions ▾

↔ No filter applied

Name <small>Filter</small>	Description <small>Filter</small>	Activity <small>Filter</small>	Last Modified (Local) <small>Filter</small>	Modified By <small>Filter</small>	Lc <small>Filter</small>
There is no data to display.					

Now this part is new! You want to select the **Portable Software Instance** you just received from Kitty Corp (the name you used when you added the Portable Software Instance above!). Then Select **OK** to continue. Then proceed with **Set the object for this deployment**.

Software Management > Deployments > Deployment Checklist > Select Software

### Select Software

Select the type of software to deploy:

- Software Instance
- Portable Software Instance

Portable Software Instances

Actions ▾					
↔ No filter applied					
Name Filter	Description Filter	Activity Filter	System Filter	File Location Filter	Categories Filter
<input checked="" type="radio"/> MWALLE-PSI-V1R1	MWALLE's Portable Software Instance to show the z/OS Installation Strategy.		LOCAL	/shareuser/mwalle/MWALLE-PSI-V1R1	

Total: 1 Selected: 1

Last refresh: Jul 28, 2017, 3:55:30 PM local time (Jul 28, 2017, 7:55:30 PM GMT)

You are a customer, and you need to install this PSI. Select that you want to **Create a new software instance**, with **A new global zone CSI**, on your **LOCAL** system. Then **OK**. Continue on by clicking on **Check for missing SYSMODs** on the mini-wizard.

Welcome x Software Manage... x

Software Management > Deployments > Deployment Checklist > Select Deployment Objective

### Select Deployment Objective

This deployment creates a copy of the source software. The resulting copy is referred to as the target software instance. Indicate whether you want software instance.

Objective:

- Create a new software instance and connect it to the following global zone CSI. [Learn more...](#)
- A new global zone CSI
- Another existing global zone CSI
- Replace an existing software instance, and connect the new instance to the existing instance's global zone CSI. [Learn more...](#)

Select the system where the target software instance will reside.

\* Target system:

LOCAL ▾

We are going to move through this older function very quickly, since it not unique for PSI installations. Do note, however, what you are doing at each step during the deployment. Click on **Next**.

[Software Management](#) > [Deployments](#) > [Deployment Checklist](#) > [Check for Missing SYSMODs](#)

### Check for Missing SYSMODs

- ➔ Welcome
- Select Reports
- Define Data Set Settings
- Get HOLDDATA
- Summary

#### Welcome

Use this wizard to generate reports that help you identify if you are missing any SYSMODs in your source software or any related software instance.

This wizard guides you through the following steps:

- Select the reports to generate, and select the software instances to include.
- Define data set settings.
- Confirm that you received the latest HOLDDATA.
- Review your selections, and generate the reports.

This is where you can run various SMP/E reports to see if any dependencies are missing or regressions would happen between this software instance and other software instances you already have. We are going to skip this portion, so uncheck the two boxes, and click on **Finish**.

[Software Management](#) > [Deployments](#) > [Deployment Checklist](#) > [Check for Missing SYSMODs](#)

### Check for Missing SYSMODs

- ✔ Welcome
- ➔ Select Reports
- Define Data Set Settings
- Get HOLDDATA
- Summary

#### Select the Reports to Generate

Select the reports that you want this wizard to generate.

**Requisite SYSMODs and Fix Categories reports.**

The Requisite SYSMODs report will identify potential software compatibility issues (missing SYSMODs) for software instances that will share resource the dependencies of the target software instance.  
[Learn more...](#)

The fix categories report will identify missing SYSMODs for the software instance types and fix category combinations listed in the table below.  
[Learn more...](#)

Fix Categories Checked by Software Instance Type

Software Instance Type	Fix Categories to be Checked
Source	<ul style="list-style-type: none"> <li>• IBM.Device.*</li> <li>• IBM.Function.*</li> <li>• IBM.TargetSystem-RequiredService.*</li> </ul>
Shared Resources	<ul style="list-style-type: none"> <li>• IBM.Coexistence.*</li> <li>• IBM.Migrate-Fallback.*</li> </ul>
Satisfies Dependencies	<ul style="list-style-type: none"> <li>• IBM.TargetSystem-RequiredService.*</li> </ul>

**Regressed SYSMODs and HOLDDATA Delta reports.**

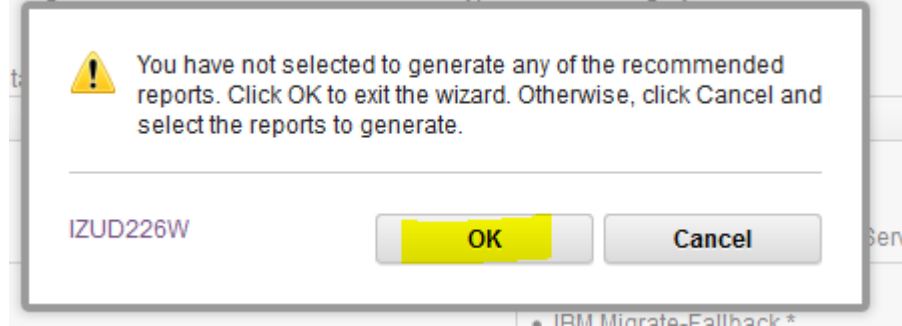
The Regressed SYSMODs report will identify the SYSMODs that will be lost, undone, or regressed when you migrate to the target software instance.  
[Learn more...](#)

The HOLDDATA Delta report will identify the USER and SYSTEM HOLD delta.  
[Learn more...](#)

-

We understand that it is not recommended to skip the dependency and regression reports, so click **OK**. Then back on the mini-wizard, select the next step: **Configure this deployment**.

[sing SYSMODs for the software instance types and fix category combinations listed](#)



This is where you can do a lot of customization for how you want this PSI installed! After reading through all the items that we are going to (briefly) go through, click **Next>**.

[Software Management](#) > [Deployments](#) > [Deployment Checklist](#) > Configure Deployment

### Configure Deployment for MWALLE-PSI-V1R1

**Welcome**

Use this wizard to configure the data set names, catalogs, volumes, mount points, and SMP/E zones to be used for the target software instance.

This wizard guides you through the following steps:

1. Indicate whether this deployment should copy the distribution zones and distribution libraries (DLIBs) that are associated with the source software.
2. Select the software to use as a model for configuring the target software instance.
3. Specify the SMP/E zone names to use.
4. Specify the data set names to use, and assign the data sets to a volume or storage class.
5. Assign each data set prefix to a catalog.
6. Ensure that the volumes and storage classes have enough space to store the target software instance.
7. Specify the mount point to use for each UNIX file system data set that will be included in the target software instance.

Select **Yes** because we want to take the DLIBs that Kitty Corp has sent us. Then **Next>**.

[Software Management](#) > [Deployments](#) > [Deployment Checklist](#) > Configure Deployment

### Configure Deployment for MWALLE-PSI-V1R1

**DLIBs**

Indicate whether you want this deployment to copy the distribution zones and the distribution libraries (DLIBs) that are associated with the source software.

Do you want to copy the distribution zones and libraries associated with the source software?

Yes

No

Assuming that this is the first time we've ever installed this Kitty Corp product, we are going to model this deployment on what Kitty Corp sent us. Select **The source software**, then **Next>**.

[Software Management](#) > [Deployments](#) > [Deployment Checklist](#) > Configure Deployment

### Configure Deployment for MWALLE-PSI-V1R1

- ✔ Welcome
- ✔ DLIBs
- ➔ **Model**
- SMP/E Zones
- Data Sets
- Catalogs
- Volumes and Storage Classes
- Mount Points

#### Model

Select the software to use as a model for configuring the target software instance. z/OSMF uses the data model to prime the corresponding values for the target software instance.

Select the software to use as a model.

- The source software**
- An existing software instance

Wait just a bit:

✳ Collecting data to prime the target software instance. This request might take several minutes to complete. Note that no changes are occurring on the target system.

To show how easy it is to decide your own target and dlib zones names, enter something new here. Then click **Next>**.

[Software Management](#) > [Deployments](#) > [Deployment Checklist](#) > Configure Deployment

### Configure Deployment for MWALLE-PSI-V1R1

- ✔ Welcome
- ✔ DLIBs
- ✔ Model
- ➔ **SMP/E Zones**
- Data Sets
- Catalogs
- Volumes and Storage Classes
- Mount Points

#### SMP/E Zones

The Zones table lists the names that will be used for the SMP/E zones included in the target software instance. Accept the default names, or modify the values. To modify the double click an editable cell, or select it and press **Enter**. To exit an editable cell and preserve your changes, click outside of the cell or press **Enter**.

Zones				
Actions ▾				
↔ No filter applied				
Target Target Zone Filter	Target DLIB Zone Filter	Messages Filter	Source Target Zone Filter	Source DLIB Zone Filter
MYTARG	MYDLIB		TARGET	DLIB

This is where you could spend a lot of time customizing the names and placements of data sets in your environment. Notice something interesting here: this PSI contains both SMP/E and non-SMP/E data sets, proving that the PSI doesn't care what it contains, and can handle both SMP/E and non-SMP/E data sets just fine. Of course, it doesn't even need to contain any SMP/E installed products if the ISV didn't want to package their product with SMP/E.

Software Management > Deployments > Deployment Checklist > Configure Deployment

Configure Deployment for MWALLE-PSI-V1R1

- ✓ Welcome
- ✓ DLIBs
- ✓ Model
- ✓ SMP/E Zones
- ➔ **Data Sets**
- Catalogs
- Volumes and Storage Classes
- Mount Points

**Data Sets**

The Data Sets table lists the names, volumes, and storage classes that will be used for the data sets included in the target software instance. Accept the default names, volumes, and storage classes, or use the **Modify** action to modify them.

Data Sets

Actions ▾

✚ No filter applied

<input type="checkbox"/>	Target Data Set Name Filter	Target Volume Filter	Target Storage Class Filter	Messages Filter	Source Data Set Name Filter	Source Volumes Filter	Source Class Filter
<input checked="" type="checkbox"/>	MWALLE.PSI.CDA.H		SHARE		MWALLE.PSI.CDA.H	SHR003	SHARE
<input type="checkbox"/>	MWALLE.PSI.CDA.LINK		SHARE		MWALLE.PSI.CDA.LINK	SHR003	SHARE
<input type="checkbox"/>	MWALLE.PSI.CDA.LPA		SHARE		MWALLE.PSI.CDA.LPA	SHR001	SHARE
<input type="checkbox"/>	MWALLE.PSI.CDA.PANELS		SHARE		MWALLE.PSI.CDA.PANELS	SHR003	SHARE
<input type="checkbox"/>	MWALLE.PSI.CDA.PDSE.LOAD		SHARE		MWALLE.PSI.CDA.PDSE.LOAD	SHR001	SHARE
<input type="checkbox"/>	MWALLE.PSI.CDA.REXX		SHARE		MWALLE.PSI.CDA.REXX	SHR005	SHARE
<input checked="" type="checkbox"/>	MWALLE.PSI.CSI		TSO		MWALLE.PSI.CSI	SHTSO6	TSO
<input type="checkbox"/>	MWALLE.PSI.SMPLTS		TSO		MWALLE.PSI.SMPLTS	SHTSO3	TSO
<input type="checkbox"/>	MWALLE.PSI.SMPMITS		TSO		MWALLE.PSI.SMPMITS	SHTSO5	TSO
<input type="checkbox"/>	MWALLE.PSI.SURSES		TSO		MWALLE.PSI.SURSES	SHTSO3	TSO

Total: 12 Selected: 0

< Back    Next >    Finish    Cancel

If you wanted to investigate renaming or moving data sets, select the data set(s) and then do **Actions->Modify**. To move through this lab quickly, though, we won't show that. It is pretty intuitive once you select the data set. Spend time on this option if you like. Click on **Next>** when you are done.

Configure Deployment for MWALLE-PSI-V1R1

- ✓ Welcome
- ✓ DLIBs
- ✓ Model
- ✓ SMP/E Zones
- ➔ **Data Sets**
- Catalogs
- Volumes and Storage Classes
- Mount Points

**Data Sets**

The Data Sets table lists the names, volumes, and storage classes that will be used for the data sets included in the target software instance. Accept the default names, volumes, and storage classes, or use the **Modify** action to modify them.

Data Sets

Actions ▾

- Modify**
- Select All
- Deselect All
- Configure Columns...
- Hide Filter Row
- Clear Sorts
- Export Table Data >
- Print Table Data >

<input type="checkbox"/>	Target Data Set Name Filter	Target Volume Filter	Target Storage Class Filter	Messages Filter	Source Data Set Name Filter	Source Volumes Filter	Source Class Filter
<input type="checkbox"/>	MWALLE.PSI.CDA.H		SHARE		MWALLE.PSI.CDA.H	SHR003	SHARE
<input type="checkbox"/>	MWALLE.PSI.CDA.LINK		SHARE		MWALLE.PSI.CDA.LINK	SHR003	SHARE
<input type="checkbox"/>	MWALLE.PSI.CDA.LPA		SHARE		MWALLE.PSI.CDA.LPA	SHR001	SHARE
<input type="checkbox"/>	MWALLE.PSI.CDA.PANELS		SHARE		MWALLE.PSI.CDA.PANELS	SHR003	SHARE

Here is where you would ensure the cataloging is as desired. If you want to investigate, just select the name, and then **Actions** -> and what you'd like to do. Click **Next>** to continue.

Software Management > Deployments > Deployment Checklist > Configure Deployment

**Configure Deployment for MWALLE-PSI-V1R1**

- ✓ Welcome
- ✓ DLIBs
- ✓ Model
- ✓ SMP/E Zones
- ✓ Data Sets
- ➔ **Catalogs**
- Volumes and Storage Classes
- Mount Points

**Catalogs**

The Target Data Set Name Prefixes table lists the catalogs where target data sets with the data set name prefixes will be cataloged. You can accept the default different catalogs, or select not to catalog the corresponding data sets.

Target Data Set Name Prefixes

Actions						
↔ No filter applied						
<input type="checkbox"/>	Prefix Filter	New or Existing Filter	Catalog the Data Sets? Filter	Catalog Name Filter	Catalog Type Filter	Messages Filter
<input type="checkbox"/>	MWALLE	Existing	Yes (Required)	UCAT.SHTSO	USER	

Next up is Volumes and Storage Classes. By default (unless you changed it back on the **Data Sets** step) this Kitty Corp product will use Storage Classes. You could change volumes or Storage Classes here if you wanted. Keep going. Click **Next>**. Then **Mount Points** to move along.

Software Management > Deployments > Deployment Checklist > Configure Deployment

**Configure Deployment for MWALLE-PSI-V1R1**

- ✓ Welcome
- ✓ DLIBs
- ✓ Model
- ✓ SMP/E Zones
- ✓ Data Sets
- ✓ Catalogs
- ➔ **Volumes and Storage Classes**
- Mount Points

**Volumes and Storage Classes**

The Target Volumes and Target Storage Classes tables list the volumes or storage classes where each target data set or new user catalog will reside. Accept the default volumes and classes, or use the **Modify** action to modify them.

Volume Filter	Total Capacity (MB) Filter	Current Allocated Space (MB) Filter	Current Allocated Space (%) Filter	Messages Filter	Allocated Space After Deployment (MB) Filter	Allocated Space After Deployment (%) Filter	Allocated Space Delta (MB) Filter	Planned Threshold (%) Filter	Initialize Volume Filter	Catalog Method Filter	Indirect Catalog Entry Symbol Filter
There is no data to display.											

Total: 0 Selected: 0  
Target Storage Classes

Actions	
↔ No filter applied	
Storage Class Filter	Space Required (MB) Filter
<input type="radio"/> TSO	18.76

Last refresh: Jul 28, 2017, 4:36:50 PM local time (Jul 28, 2017, 8:36:50 PM GMT)

We are now at the last configurable change to do for the deployment: Mount Points. Change the mountpoint here, if you like. Click **Finish**.

[Software Management](#) > [Deployments](#) > [Deployment Checklist](#) > [Configure Deployment](#)

**Configure Deployment for MWALLE-PSI-V1R1**

- ✓ Welcome
- ✓ DLIBS
- ✓ Model
- ✓ SMP/E Zones
- ✓ Data Sets
- ✓ Catalogs
- ✓ Volumes and Storage Classes
- ➔ **Mount Points**

**Mount Points**

The Mount Points table lists the mount points that will be used for the UNIX file system data sets included in the target software instance. Accept the default mount points, or **Mount Point** action to modify them.

Mount Points			
Actions ▾			
➔ No filter applied			
Target mount point Filter	Target Data Set Name Filter	Source mount point Filter	Source Data Set Name Filter
<input type="checkbox"/> /shareuser/mwalle/psi	MWALLE.PSIZFS	/shareuser/mwalle/psi	MWALLE.PSIZFS

Back on the Deployment Checklist, we are moving right along. Click on **Define the job settings. z/OSMF creates the deployment summary and jobs.**

The deployment process we just went through will create a series of jobs to run. You can indicate where you want the jobs stored, and the JOB statement to use. We are not going to really run the jobs for this lab, so you can click on **OK**.

[Software Management](#) > [Deployments](#) > [Deployment Checklist](#) > [Define Job Settings](#)

**Define Job Settings**

To specify the job settings, provide the information requested. Then, click **OK** to generate the deployment summary and jobs. TI

\* JCL data set name:

\* JOB statement:

```

-----+-----1-----+-----2-----+-----3-----+-----4-----+-----5-----+-----6-----+-----7--
//MWALLEP1 JOB (ACCOUNT), 'NAME'
//*
//*
//*
```

Jobs are created:

Creating the deployment summary and jobs. This request might take several minutes to complete.



At this point, because we did no customization on the data sets, z/OSMF will tell you there are already data sets on the system with those names. That is ok, because we are not going to continue on from here in this lab session.

Finishing up the deployment means running the produced JCL to copy the PSI from the z/OS UNIX directory onto DASD with the names and locations, and cataloging options you wanted.

When the jobs have been completed, your Kitty Corp product is ready for you to customize and use!

### **Clean up**

After you've done all the poking around that you like on this deployment, it would be nice of you to delete your deployment you just made to keep unnecessary deployments cleaned off the system. Click on your own deployment, then Actions -> Remove. Thank you for being a good user on our system!

### ***What about using z/OSMF to help with the customization at this point?***

Indeed! We would like, once the deployment jobs have been run and have been successful, to launch into a product-provided Workflow that accompanied the product to help with customization. That portion, however, is not ready to show in this lab at this time. However, just keep that in mind when you think about how many parts of z/OSMF can help with your overall install: not just putting the code in libraries (Software Management deployment), but beyond that with customization (z/OSMF Workflow).