

z/OSMF Hand-On Labs

- Choose Your Own Topic -

Learning z/OSMF Workflows (with the z/OS Upgrade Workflow)

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Introduction:

Want help with planning your z/OS 3.1 upgrade? You can have z/OSMF Workflow help you!

This lab is an introduction to using the z/OSMF Workflow function. You create a workflow, assign steps to different users, read notification messages, accept the assignment of a step, perform or skip a step, and provide feedback on a upgrade action (and the overall release upgrade).

Now included with z/OS: As of z/OS V2.5, IBM provides the z/OS Upgrade Workflow and the z/OS hardware server Upgrade Workflow as part of the z/OS product. Updates and fixes for the upgrade workflows are delivered through the standard z/OS service process.

To obtain the latest PTFs for the z/OS Upgrade Workflows, run the SMP/E REPORT MISSINGFIX command on your z/OS systems and specify a FIXCAT value of "**IBM.Coexistence.z/OS.***". The z/OS 3.1 Upgrade Workflow can be run on z/OS releases V2.4, V2.5, and 3.1.

Our lab environment:

Be aware, you are running on z/OS 3.1 system and “performing” a z/OS 3.1 upgrade. It is meant to show you how to do a Workflow in general (and how you could use the z/OS 3.1 Upgrade Workflow in particular!).

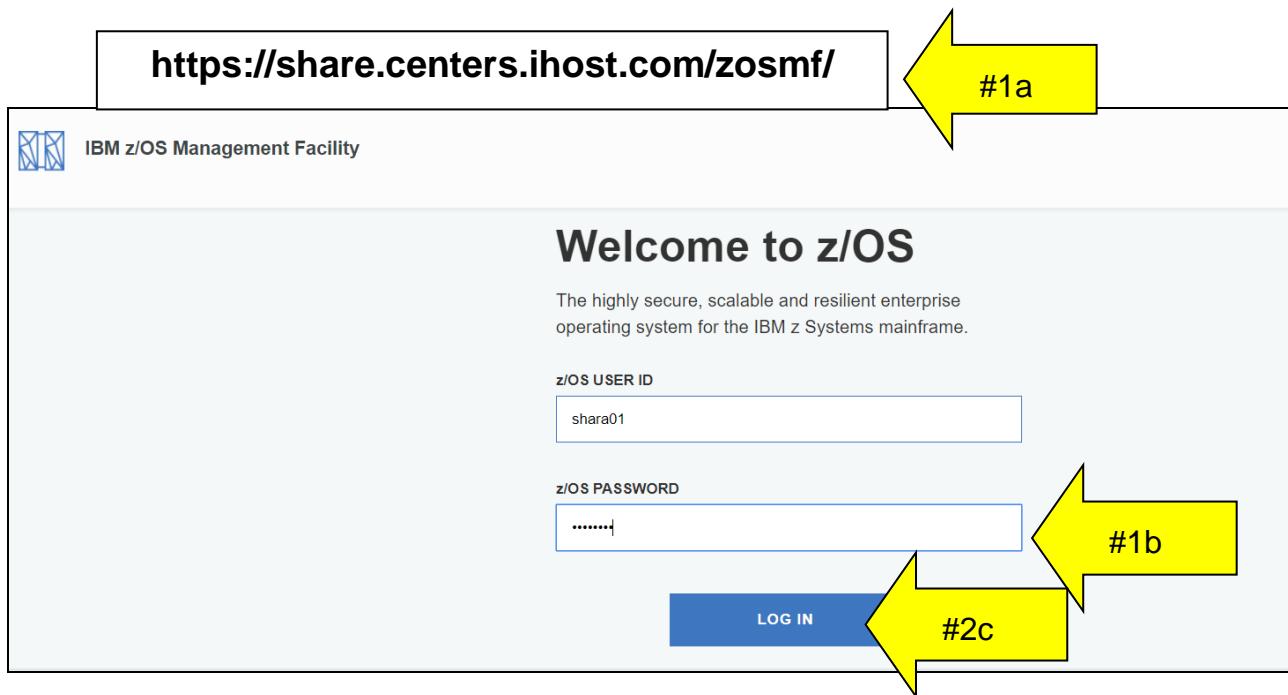
On your own system, there might be some health checks to run for a 3.1 upgrade, that are not available on your V2.4/V2.5 system or receive an exception. That is fine, and is just to show you what a health check failure might look like during a Workflow. The object of this lab is to teach you to feel comfortable doing a z/OSMF Workflow.

You will see in this booklet the use of **SHARA01** as the userid. Where you see this, you will have to substitute your own userid you were assigned.

Step 1: Logon to z/OSMF.

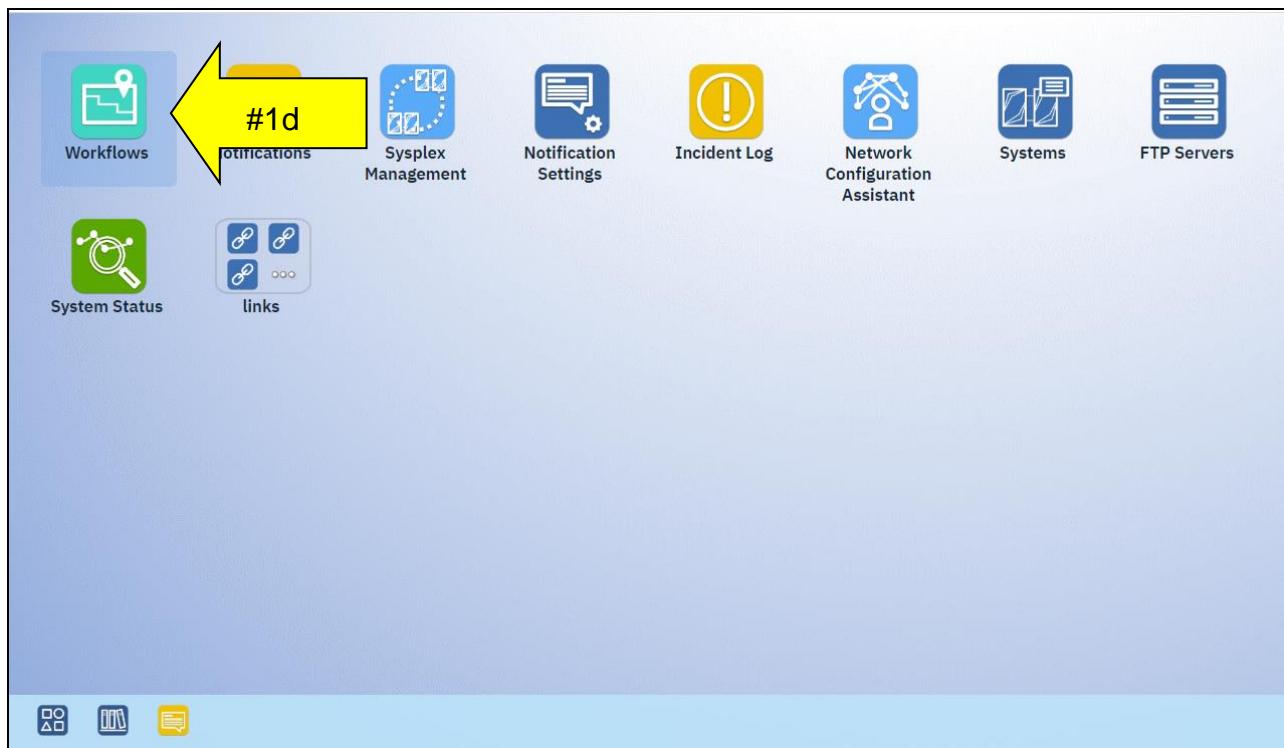
In this step, we will now go into z/OSMF to use the Workflow function. For this lab, we are using a z/OSMF 3.1 system.

- a. Go to <https://share.centers.ihost.com/zosmf/> on Chrome, Firefox, or IE.
- 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 the workstation.
- c. Click on “Log in”.



Enter into the Workflow function.

- d. Find and click on the “Workflows” icon.



- e. This brings you into the main Workflow screen. You can see there are already some workflows created from this screen. You may resize this window to your liking.

The screenshot shows the 'Workflows' screen with the following details:

Workflows
Simplifies tasks through guided step-based workflows, and provides administrative functions for assigning workflow responsibilities and tracking progress.

Actions ▾ Active ▾ All In Progress Failed Pending Completed All Search

No filter applied

Workflow Name Filter	Description Filter	Version Filter	Vendor Filter	Access Filter	Owner Filter	System Filter	Status	Percent Complete
<input type="checkbox"/> Customization for the zOSMF plug-ins - SHARE2	Customization for the zOSMF plug-ins	2.2.2(Pi69506)	IBM		danjast	SHARPLEX.S2		0%
<input type="checkbox"/> Provision a IBM zOS Container Extensions Appliance Instance - zCXINST1 remount	Provision a IBM zOS Container Extensions Appliance Instance.	1.0.18	IBM		danjast	SHARPLEX.S2		0%
<input type="checkbox"/> Reconfigure a IBM zOS Container Extensions Appliance Instance - zCXINST1 remount	Reconfigure a IBM zOS Container Extensions Appliance Instance.	1.0.4	IBM		danjast	SHARPLEX.S2		98%

Total: 3 Selected: 0

Refresh Last refresh: Jan 1, 2020, 4:24:09 PM local time (Jan 1, 2020, 9:24:09 PM GMT)

2.Create a z/OS 3.1 Upgrade Workflow instance.

In this step, we will create a specific workflow instance based on the supplied workflow definition file found on the lab system. When you upgrade to z/OS 3.1, you can find this workflow on your system in the same location, when you install z/OS 3.1 coexistence PTFs.

- a. Click on the Actions drop-down, then click on “Create Workflow...”

The screenshot shows a 'Workflows' page with a table listing three workflow instances. The table has columns for Description, Version Filter, and Vendor Filter. The first row describes customization for zOSMF plug-ins, the second for Container Extensions, and the third for Container Appliance Instances. A yellow arrow points from the text '#2a' to the 'Create Workflow...' option in the Actions dropdown menu, which is highlighted with a yellow box.

Description	Version Filter	Vendor Filter
Customization for the zOSMF plug-ins	2.2.2(PI59506)	IBM
Configure a IBM zOS Container Extensions Compliance Instance.	1.0.18	IBM
Configure a IBM zOS Container Appliance Instance.	1.0.4	IBM

Total: 3 Selected: 0

- b. Carefully enter in the location of the XML workflow file where the z/OS 3.1 Upgrade Workflow is found, where it says, “Workflow definition file:”. You only need to specify the XML file, as that one will pull in the other two files. The Workflow definition file for this lab is found here (pay attention to case).

/usr/lpp/bcp/upgrade/zOS_3.1_from_V2.5_Upgrade_Workflow.xml (for upgrades from V2.5 to 3.1)

Fyi: you would use

/usr/lpp/bcp/upgrade/zOS_3.1_from_V2.4_Upgrade_Workflow.xml (for upgrades from V2.4 to 3.1)

If you don't want to type the full name in, try to use the little magnifying glass to find it.

- c. For “System:”, on the dropdown, select “SHARPLEX.S2”, which might be the only choice. Leave “Workflow variable input file:” blank.
d. Then click “Next >”. (“Leaving Workflow variable input file” blank.)

The screenshot shows the 'Create Workflow' dialog box. It has three text input fields and several buttons at the bottom. Yellow arrows point to specific fields:

- #2c points to the first text field labeled "Location (system) of definition and variable input file" containing "SHARPLEX.S2".
- #2b points to the second text field labeled "Workflow definition file:" containing the path "/usr/lpp/bcp/upgrade/zOS_3.1_from_V2.5_Upgrade_Workflow.xml".
- #2d points to the "Next >" button at the bottom of the dialog.

The dialog also includes a "Cancel" button and a "Help" button.

Name the workflow and identify the system.

At this point, we'll provide some information about this workflow.

- e. Name your workflow instance: type a meaningful name under "Workflow name: " of whatever you want, but please put your userid in the name so we know which workflows to remove later. You must name your workflow. (A suggested name: **SHARAxz Upgrade Workflow Lab for zOS 3.1**, where SHARAxz is your designated userid.)
- f. Decide who you want the owner to be: type the owner's name on "Owner user id:". Usually, the owner would be the one that created the workflow, but you can make it some other user if you like. For this lab, keep it your assigned user ID. You must have an owner.
- g. Comments: put anything you wish here or leave it blank.
- h. Click "Finish" at this point. You might have to scroll a little to see the "Finish" box at the bottom of the window.

An Advanced Point! See the little checkbox "Assign all steps to owner user ID"? This is a very handy way of assigning all the steps (upgrade actions) initially to the owner. By doing this you immediately put all the steps into a "Ready" state for performing. Otherwise, you would have to assign steps, and have them accepted, to have them "Ready". We are going to not check this box, so you can see more of the entire process. But if you wanted to save time, you might want to use this option on your own system.

Create Workflow

Location (system) of definition and variable input files:
SHARPLEX.S2

Workflow definition file:
/usr/lpp/bcp/upgrade/zOS_3.1_from_V2.5_Upgrade_Workflow.xml

Description:
zOS 3.1 Upgrade Workflow from zOS V2R5

Vendor: IBM Version: 1.0 Is Callable: ?
Cannot be called by another workflow

* Workflow name:

SHARA01 Upgrade Workflow Lab for zOS 3.1

#2e

* Owner user ID:

shara01

#3f

* System where workflow steps will be performed:

SHARPLEX.S2

Comments:

* Access(Learn More):

Public

#3g

Save jobs output

Open workflow on finish Assign steps to owner user ID Delete workflow on completion

< Back

Next >

Finish

Cancel

Help

#3h

3. Looking at the workflow overall.

There are some things to notice at this point if you untwist the “**Workflow Details**” at the top:

- There are 86 steps in this workflow. (The number of steps might vary, based on the PTF level of the Workflow which we are using.)
- You have completed 0% of them: 0 of 86 steps.
- There are 7 major (or “parent”) steps. This may be confusing, as there are sub-steps that count as steps in that 86 total. The first step to help you tailor or Workflow for what is in use on the system (Discover...), and the 7th step being the overall instructions for sending your feedback back to IBM.
- These steps are in a state of “Unassigned”, meaning that no one has been tasked with doing them yet.
- Notes and History:** you can put any notes on this entire workflow here. Perhaps information on the entire schedule of this upgrade, or something else that is appropriate to make at the entire workflow level. Under History, you can see the history of this workflow: when it was created, who created it, etc.

The screenshot shows the z/OS Workflow interface with the following details:

Workflow Details:

- Description: z/OS 3.1 Upgrade
- Is Callable: Cannot be called by
- Steps complete: 0 of 86
- Workflow definition file: /usr/lpp/bcp/upgrade/zOS_3.1_from_v2.6_Upgrade_Workflow.xml
- Archive SAF ID: SHARA01
- Owner: shar01
- Contains Parallel Steps: No
- Status: In Progress
- System of workflow definition file: SHARPLEX.S2
- System: SHARPLEX.S2
- Percent complete: 0%
- Access (Learn More): Public
- Delete workflow on completion: No

Workflow Steps:

Action	No. Filter	State	No. in use	CalledWorkflow	Automated	Use RunAsUser ID	Owner	Skill Category	Assignees	Feedback status
Filter	1	Unassigned	1	Discovering the z/OS 3.1 Upgrade Workflow	Yes		z/OS Systems Programmer			noFeedback
Filter	2	Unassigned	2	Discover what APAR(PTFS)s are installed to allow for possible skipping of step(s)						noFeedback
Filter	3	Unassigned	3	Discover what APAR(PTFS)s are installed to allow for possible skipping of step(s)	Yes		z/OS Systems Programmer			noFeedback
Filter	4	Unassigned	4	Upgrade actions before installing z/OS 3.1						noFeedback

Total 121 Selected: 0

Return to Workflows Refresh Last refresh: Feb 23, 2024, 4:05:55 PM local time (Feb 23, 2024, 9:05:55 PM GMT)

Click on Step 1 “Discover z/OS features in use” (the blue part) so that we can examine it.

There's not much we can see, because we haven't been assigned this step. Notice that the “Perform” tab has been grayed out. If we want to perform this step, we must be assigned to it, and must agree to do it.

Click on Close at the bottom to exit out.

The screenshot shows a 'Properties for Workflow Step' dialog for '1. Discover z/OS features in use'. The title bar includes 'WORKFLOWS' and the path 'Workflows > SHARA01 Upgrade Workflow Lab for zOS V2.4 > 1. Discover z/OS features in use'. The dialog has tabs for General, Details, Dependencies, Notes, Perform, Status, Input Variables, and Feedback. The 'General' tab is selected. A yellow arrow points to the 'Perform' tab, which is grayed out. The 'Title' field contains 'Discover z/OS features in use'. The 'Description' field contains the text: 'In this step, you execute a JCL job to generate an output property' followed by a long URL. At the bottom is a 'Close' button.

4. Assigning a step.

Let's get to the real work – assigning those steps to get them performed. You can assign a group of upgrade actions (say, all the Communications Server upgrade actions), or individual upgrade actions to one or more z/OSMF users. You select which steps to assign based on what steps are checked – a higher level step (which would include all the sub-steps), or on the smallest sub-step ("leaf") itself. The idea is the same.

Let's do the first step in the z/OS 3.1 Upgrade Workflow – the Discovery step. This step is a prerequisite for several other steps, so it is natural that it is first. (z/OSMF Workflow would tell you if you tried to execute a step that had a pre-req step and that pre-req step wasn't completed.)

We will assign this Discovery step to a lucky person (ourselves) in this lab.

You should be back on the panel where the steps are shown:

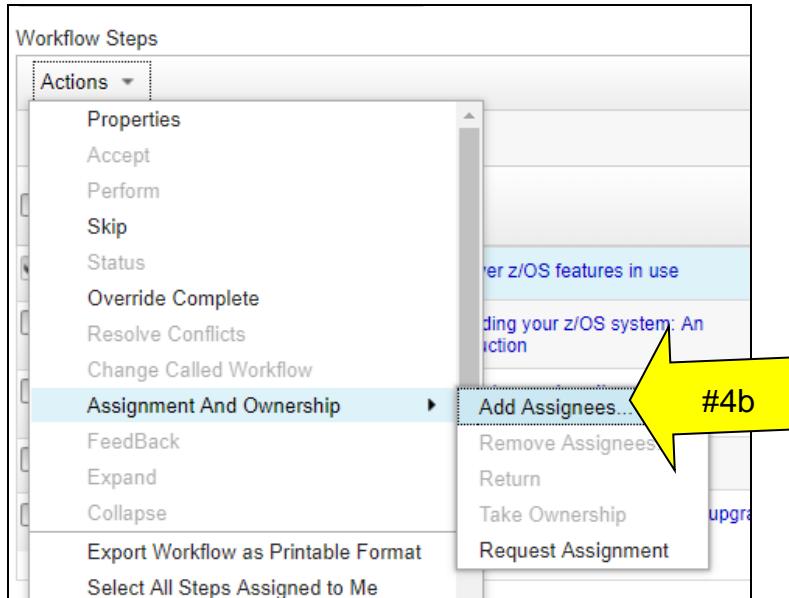
- Click the box at the left of step 1 "Discovery z/OS features in use".
- Then click on **Actions -> Assignment and Ownership** -> **"Add Assignees..."**

The screenshot shows the 'Workflow Details' section of the z/OSMF interface. The title bar says 'Workflows > SHARA01 Upgrade Workflow Lab for zOS 3.1'. The main area is titled 'SHARA01 Upgrade Workflow Lab for zOS 3.1'. Below this, there's a 'Workflow Steps' table with the following columns: State Filter, No. Filter, Title Filter, CalledWorkflow Filter, and Automated Filter. The table contains seven rows, each representing a workflow step. The first row has a checked checkbox in the 'State Filter' column, with a yellow arrow pointing to it labeled '#4a'. The other rows have unchecked checkboxes. The steps are: 1. Discover z/OS features in use, 2. Introducing the z/OS 3.1 Upgrade Workflow, 3. Discover what APAR(PTFS)s are installed to allow for possible skipping of step(s), 4. Upgrade actions before installing z/OS 3.1, 5. Upgrade actions before the first IPL of z/OS 3.1, 6. Upgrade actions after the first IPL of z/OS 3.1, and 7. Provide feedback to IBM on your upgrade experience. At the bottom of the table, it says 'Total: 121 Selected: 1'. At the very bottom, there are buttons for 'Return to Workflows', 'Refresh', and a timestamp: 'Last refresh: Feb 23, 2024, 4:10:21 PM local time (Feb 23, 2024, 9:10:21 PM GMT)'.

Workflow Steps				
Actions	No. Filter	Title Filter	CalledWorkflow Filter	Automated Filter
<input type="checkbox"/>	State Filter			
<input checked="" type="checkbox"/>	Unassigned	#4a	Discover z/OS features in use	
<input type="checkbox"/>	Unassigned		+ Introducing the z/OS 3.1 Upgrade Workflow	
<input type="checkbox"/>	Unassigned	3	+ Discover what APAR(PTFS)s are installed to allow for possible skipping of step(s)	Yes
<input type="checkbox"/>	Unassigned	4	+ Upgrade actions before installing z/OS 3.1	
<input type="checkbox"/>	Unassigned	5	+ Upgrade actions before the first IPL of z/OS 3.1	
<input type="checkbox"/>	Unassigned	6	+ Upgrade actions after the first IPL of z/OS 3.1	
<input type="checkbox"/>	Unassigned	7	+ Provide feedback to IBM on your upgrade experience	No

Total: 121 Selected: 1

Return to Workflows Refresh Last refresh: Feb 23, 2024, 4:10:21 PM local time (Feb 23, 2024, 9:10:21 PM GMT)



This is an interface you are probably familiar with.

- c. Click on userid in the list (SHARAnn, for instance), and if you wish, you can click on more than one userid. These people you add will be assigned to this upgrade action (step). **If you don't see your userid on the list...then add it! (Actions -> Add... -> then for SAF User ID, type your SHARAnn userid and "OK". Now, it should appear on the list.).** We are assigning to one person, so you can learn how to accept an upgrade action (step) assigned to you.
- d. Click on the "Add >" button and see that one person has been added to the yellow box on the right. You could assign this step to multiple people if you wanted.
- e. Type a friendly note, if you want, and then click on "OK". If you left the "Send z/OSMF notifications to assignees..." box checked, this person will be notified he/she has something to do. The Notification is sent.

Workflows > SHARA01 Upgrade Workflow Lab for zOS V2.4 > Add Assignees

Add Assignees

Select one or more SAF user IDs, SAF groups or z/OSMF roles to be assigned to the selected steps.

Selected Steps

Available assignees

Actions	
<input type="checkbox"/>	No filter applied
<input type="checkbox"/>	Name Filter
<input checked="" type="checkbox"/>	shara01
<input type="checkbox"/>	z/OS Security Administrator
<input type="checkbox"/>	z/OSMF Administrator
<input type="checkbox"/>	z/OSMF User

Total: 4 Selected: 1

#4c

#4d

#4e

Comments:

Send z/OSMF notifications to assignees (comments are not included on notifications)

OK Cancel

* Assignees to be added:
shara01

- f. Now you are back into the workflow. Scroll to the columns on the right, until you see “Assignees”. You can see the name you put there.
- g. Notice also that the State is now “Assigned” on *all* this section’s upgrade actions (steps), because we selected the entire section’s parent step.

Workflows > SHARA01 Upgrade Workflow Lab for zOS 3.1
SHARA01 Upgrade Workflow Lab for zOS 3.1

Workflow Details

Workflow Steps

Actions ▾

No filter applied

<input type="checkbox"/> State Filter	No. Filter	Title Filter	CalledWorkflow Filter	Automated Filter	Use RunAsUser ID Filter	Owner Filter	Skill Category Filter	Assignees Filter
<input checked="" type="checkbox"/> Assigned	1	Discover z/OS features in use		Yes			z/OS Systems Programmer	shara01
<input type="checkbox"/> Unassigned	2	Introducing the z/OS 3.1 Upgrade Workflow						
<input type="checkbox"/> Unassigned	3	Discover what APAR(PTFS)s are installed to allow for possible skipping of step(s)		Yes			z/OS Systems Programmer	
<input type="checkbox"/> Unassigned	4	Upgrade actions before installing z/OS 3.1						
<input type="checkbox"/> Unassigned	5	Upgrade actions before the first IPL of z/OS 3.1						
<input type="checkbox"/> Unassigned	6	Upgrade actions after the first IPL of z/OS 3.1						
<input type="checkbox"/> Unassigned	7	Provide feedback to IBM on your upgrade experience		No			z/OS Systems Programmer	

5. Accepting a step.

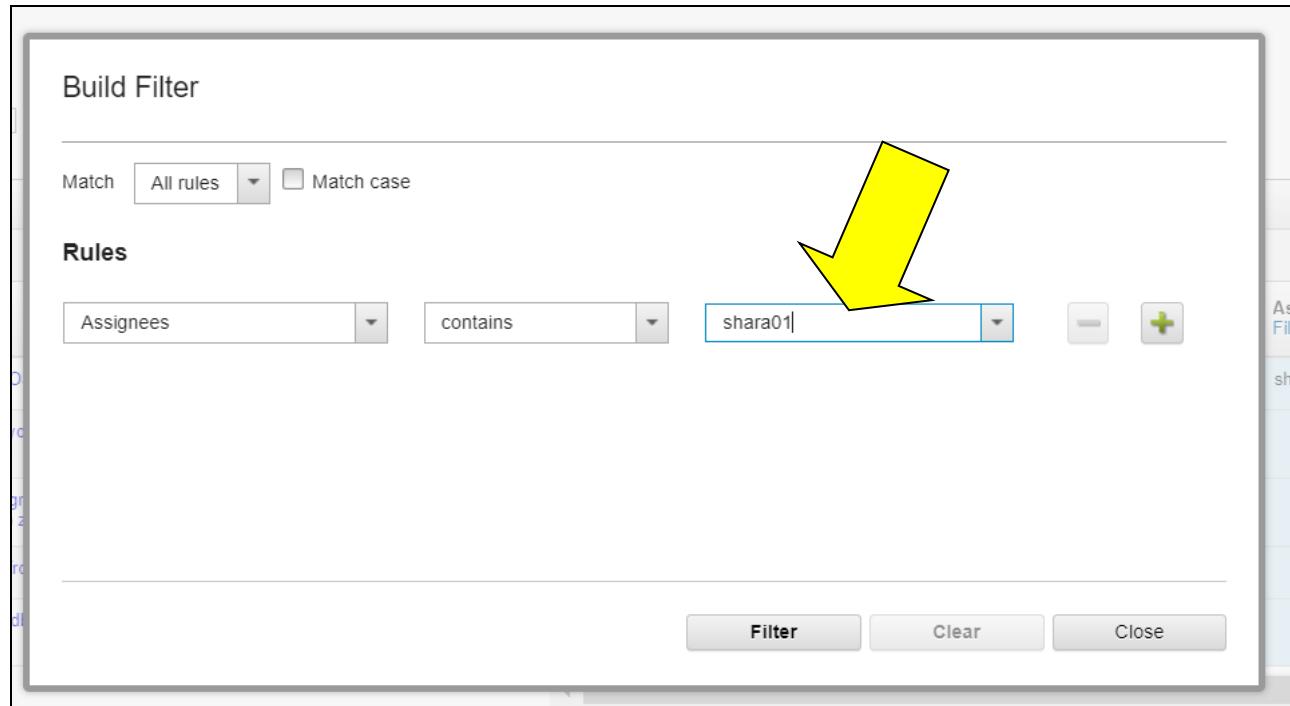
“Assigned” isn’t enough to perform an action (step). The step also needs to be **Accepted** by the assignee.

Let’s see how to find what was assigned to our userid and how to use workflow filtering, which is very powerful. Scroll to the right to find the “Assignees” column and click on “Filter”. This would be helpful if many different people were assigned a step in a large workflow.

The screenshot shows a web-based application interface for managing workflow steps. At the top, there's a navigation bar with 'Workflows' and 'SHARA01 Upgrade Workflow Lab for zOS V2.5'. On the right side of the header are links for 'Help', 'Notes | History', and a search bar. Below the header, there's a section titled 'Workflow Details' with a sub-section 'Workflow Steps'. This section contains a table with the following columns: 'Actions', 'State Filter', 'No. Filter', 'Title Filter', 'CalledWorkflow Filter', 'Category', and 'Assignee Filter'. The 'Assignee Filter' column has a dropdown menu open, showing the value 'shara01'. A large yellow arrow points from the left towards this dropdown menu. The table rows list five workflow steps, each with a checkbox, a number (1-5), a title, and a category ('stems Programmer').

Actions	State Filter	No. Filter	Title Filter	CalledWorkflow Filter	Category	Assignee Filter
	<input type="checkbox"/> Assigned	1	Discover z/OS features in use		stems Programmer	shara01
	<input type="checkbox"/> Unassigned	2	Introducing the z/OS V2R5 Upgrade Workflow			
	<input type="checkbox"/> Unassigned	3	General upgrade actions for everyone migrating to z/OS V2R5			
	<input type="checkbox"/> Unassigned	4	Upgrading from z/OS V2R4 to z/OS V2R5			
	<input type="checkbox"/> Unassigned	5	Provide feedback to IBM on your upgrade experience		stems Programmer	

Then, under the “Assignees” blank area on the right, type your userid (SHARAnn, SHARBnn, SHARCnn), to filter on upgrade actions that are assigned to you, and then click on “Filter”.



- a. You should see only the steps that are assigned to you because of the filter. We are going to accept the step assigned to us. Check the step 1 box ("Discover z/OS features in use").
- b. Then click on the "Actions" drop-down, then "Accept". If "Accept" is grayed out, you have not selected any steps, so verify that step 1 has a check on it before trying to do an action on it.

The screenshot shows the 'Workflows' application interface. The title bar says 'Workflows'. The main area is titled 'SHARA01 Upgrade Workflow Lab for zOS V2.5'. On the left, there's a 'Workflow Details' sidebar. The main content area shows a table of 'Workflow Steps'. The table has columns: State Filter, No. Filter, Title Filter, CalledWorkflow Filter, Category, and Assignees. There is one row visible, which is highlighted with a blue border. The 'State Filter' column shows a checked checkbox and 'Assigned'. The 'Title Filter' column shows 'Discover z/OS features in use'. The 'Category' column shows 'Programmer'. The 'Assignees' column shows 'shara01'. At the top of the table, there's a note: '* 1 of 204 items shown. Clear filter'. To the right of the table, there are 'Search' and 'All step content' buttons. Below the table, there are 'Notes' and 'History' links. Two yellow arrows with the label '#5b' point to the 'Actions' dropdown menu and the 'Assigned' status respectively.

State Filter	No. Filter	Title Filter	CalledWorkflow Filter	Category	Assignees
<input checked="" type="checkbox"/> Assigned	1	Discover z/OS features in use		Programmer	shara01

- c. You can make a comment when you accept any steps, then click on OK.

Workflows > SHARA01 Upgrade Workflow Lab for zOS V2.4

SHARA01 Upgrade Workflow Lab for zOS V2.4

Description:
zOS V2R4 Upgrade Workflow from zOS V2R3
Percent complete:
0%

Workflow Steps

Actions ▾

No filter applied

<input type="checkbox"/> State Filter	No. Filter	Title Filter
<input checked="" type="checkbox"/> Assigned	1	Discover z/OS features in
<input type="checkbox"/> Unassigned	2	+ Upgrading your z/OS system introduction
<input type="checkbox"/> Unassigned	3	+ General upgrade actions for migrating to z/OS V2R4
<input type="checkbox"/> Unassigned	4	+ Upgrading from z/OS V2R3 to V2R4
<input type="checkbox"/> Unassigned	5	■ Provide feedback to IBM on your experience

Total: 278 Selected: 1

Return to Workflows Refresh Last refresh: Jan 16, 2024

Accept Step

Selected Steps

Comments:

I hereby swear that I will do this step to the best of my ability.

#5c

OK Cancel Help

You see now that the state of step 1 is “Ready”. If you don’t see “Ready”, there was a problem with assignment and acceptance. Let’s perform this step now.

Click on the blue part of “Discover z/OS features in use” to open up the step.

(You might want to remove your Filter in the Assignee column so you can see the entire workflow instance again. Filter, then Clear in the pop-up.)

The screenshot shows a 'Workflow Details' page with a table of 'Workflow Steps'. The table has columns: Actions, State Filter, No. Filter, Title, Category, and Assignees. One row is selected, showing 'Ready' in the State Filter column, '1' in the No. Filter column, and 'Discover z/OS features in use' in the Title column. A large yellow arrow points to the 'Discover z/OS features in use' text.

Workflow Steps					
Actions	State Filter	No. Filter	Title	Category	Assignees
<input checked="" type="checkbox"/> Filter	Ready	1	Discover z/OS features in use	System Programmer	shara01

Now, since the step was assigned and accepted, you can see that the Perform tab can be clicked on. Click on the Perform tab:

The screenshot shows the 'Properties for Workflow Step 1. Discover z/OS features in use' dialog. The 'Perform' tab is selected. The 'Title' field contains 'Discover z/OS features in use'. The 'Description' field contains the text: 'In this step, you execute a JCL job to generate an output property file that will reflect the current status of a priced feature on your system.'

The reason why we have selected this Workflow for our lab is because it shows you how a workflow can do some discovery to skip certain steps you don’t need to do.

Following along with the guidance on the left-hand side, we are going to Review Instructions now. This step tells us what will happen when the discovery job is run. Read this information. Click on **Next**.

Workflows

Workflows > SHARA01 Upgrade Workflow Lab for zOS V2.5 > 1. Discover z/OS features in use

Properties for Workflow Step 1. Discover z/OS features in use

General Details Dependencies Notes **Perform** Status Input Variables Feedback

Input Variables
✓ Step Discovery Options
Review Instructions
Edit Output File Path
Create JOB statement
Review JCL
Submit and Save JCL

Review Instructions

To proceed with the guided path through creating and executing the REXX on SHARPLEX.S2 (S2), click **Next**. Or, you can choose to bypass this step. If so, first review and confirm that the instructions below have been done. Then, click **Finish** to mark the step complete.

Instructions:

This step of the workflow will determine which z/OS priced features are currently enabled on the running system. Using this information (which you control with your IFAPRDxx parmlib member), associated steps with DISABLED features will be marked as Skipped. The objective of this step is to automatically reduce the number of non-applicable upgrade steps that you need to review.

Review the output of this step to see which priced features were determined to be disabled on this system, and to see which steps have had their state changed.

If you determine that you later want to perform those steps that were marked as Skipped, you can change the status and perform those steps, after they have been assigned.

Note: This step writes the output property file to the location indicated in Output File Path. You can modify the file path as appropriate for your environment. If you are running the workflow on another z/OS system, ensure that the output file path is shared with the system that you are upgrading. If you are using the tmp directory, be sure to include the system name in the directory path. Example:
/SYSTEM/tmp/migration_inputfile.txt

< Back **Next >** Save Finish Cancel

You must provide an Output File Path. This job will need to write some information that the workflow will need. There is a default provided, but you should supply your own unique one, since many people are probably doing this lab at the same time, and we would all overlay each other. Put your assigned userid in the field, so yours is unique, such as **/tmp/shara01_migration_inputfile.txt** where **shara01** is your userid. Then click on **Next**.

Workflows

Workflows > SHARA01 Upgrade Workflow Lab for zOS V2.5 > 1. Discover z/OS features in use

Properties for Workflow Step 1. Discover z/OS features in use

General	Details	Dependencies	Notes	Perform	Status	Input Variables	Feedback
---------	---------	--------------	-------	---------	--------	-----------------	----------

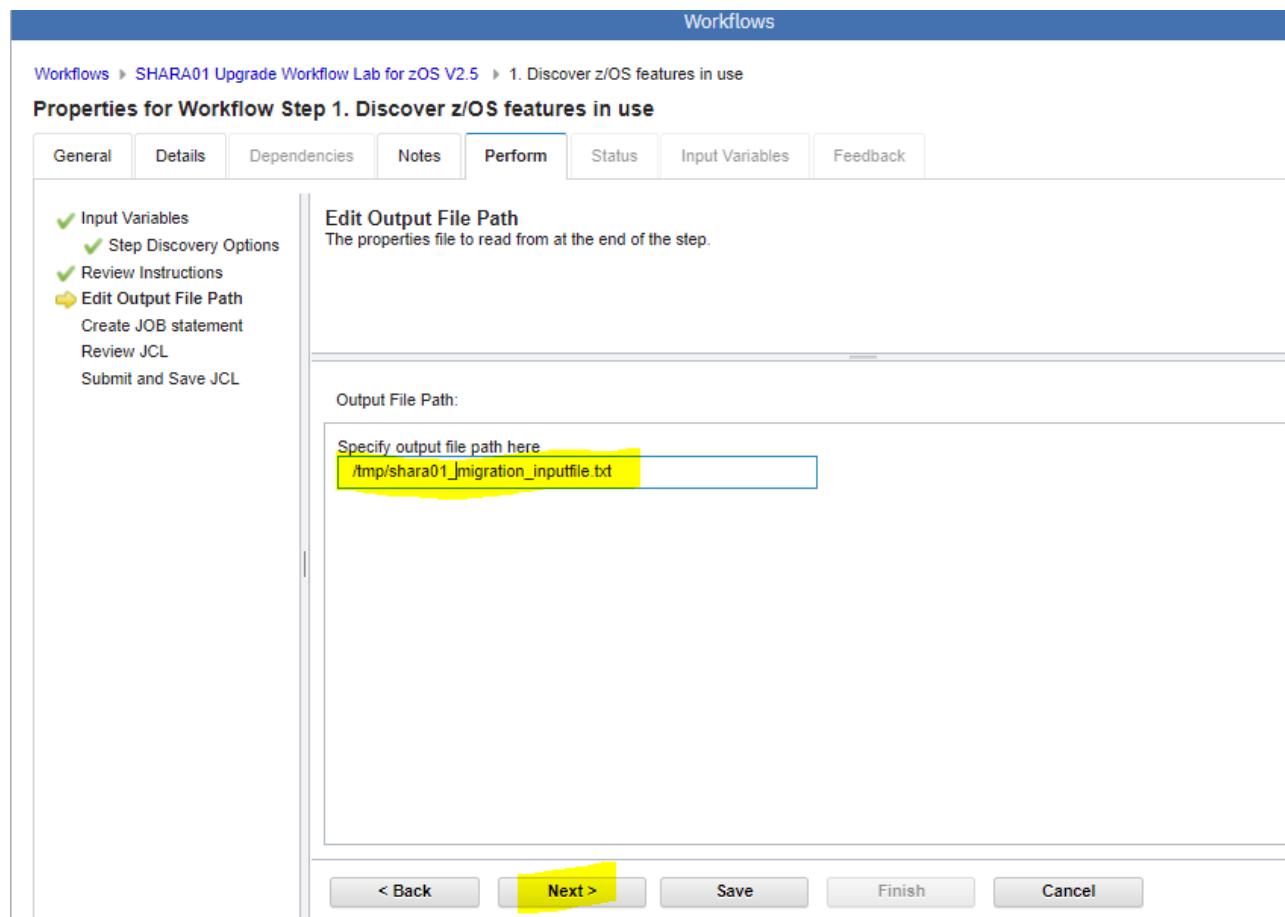
Input Variables
 Step Discovery Options
 Review Instructions
 Edit Output File Path
Create JOB statement
Review JCL
Submit and Save JCL

Edit Output File Path
The properties file to read from at the end of the step.

Output File Path:

Specify output file path here
`/tmp/shara01_migration_inputfile.txt`

< Back Next > Save Finish Cancel



We are almost ready to submit our discovery job. The next is the jobcard. You can keep that as you wish, or perhaps change the jobname because the default is not very helpful. Also, it is helpful that if you change to jobcard, make it applicable to all future jobs in this workflow if you like. Then click **Next**.

Then review the JCL. You should not need to edit it, but you can browse it if you like. Then click **Next**.

Now, the job will be submitted. Click on **Finish**.

The job was submitted! It should run quickly, but click on **Refresh**, if you don't see it done.

Where is this job running? This is a normal JCL batch job that MVS is running on the host system under your userid. If you wanted to look at it under your spool product (like SDSF) you could. z/OSMF is just handling the submission and retrieval of the job for you.

Workflows ▶ SHARA01 Upgrade Workflow Lab for zOS V2.4 ▶ 1. Discover z/OS features in use

Properties for Workflow Step 1. Discover z/OS features in use

General	Details	Dependencies	Notes	Perform	Status	Input Variables	Feedback
Name: SHARA01W	ID: JOB09633	Class: A	Type: JOB	Status: ACTIVE	Return code:		

Refresh Last refresh: Jan 1, 2020, 5:26:02 PM local time (Jan 1, 2020, 10:26:02 PM GMT)

After the job has run, you should see some **Status**. Click on **Status**. (If you don't see anything, click on "Refresh" to see if it has finished.)

You can click on each of the tabs to see the output from the job. You should see return codes of 0000 for both steps – GENER and RUNIT. Click on **Close** when you are satisfied.

At this point, something interesting has happened. If you untwist the **Workflow Details**, look how 4 of 86 steps are completed, and 4% of our work is done! That is the beauty of discovery, because not applicable steps have been skipped. (You can still view them if you want, or even perform them, but that is your choice.)

Workflows > SHARA01 Upgrade Workflow Lab for zOS 3.1 Settings | Hr

SHARA01 Upgrade Workflow Lab for zOS 3.1 Notes | Hist

Workflow Details

Description: zOS 3.1 Upgrade Workflow from zOS V2R5	Owner: shara01	System: SHARPLEX S2
Is Callable: Cannot be called by another workflow	Contains Parallel Steps: No	Percent complete: <div style="width: 4%; background-color: #0070C0; height: 10px; display: inline-block;"></div> 4%
Steps complete: 4 of 86	Status: In Progress	Access (Learn More): Public
Workflow definition file: <code>/usr/lpp/bcp/upgrade/zOS_3.1_from_V2.5_Upgrade_Workflow.xml</code>	System of workflow definition file: SHARPLEX S2	Delete workflow on completion: No
Archive SAF ID: SHARA01		

Workflow Steps

Actions ▾ Search All step content ?

No filter applied

<input type="checkbox"/> State Filter	No. Filter	Title Filter	CalledWorkflow Filter	Automated Filter	Use RunAsUser ID Filter	Owner Filter	Skill Category Filter	Assignees Filter	Feedback status Filter
<input checked="" type="checkbox"/> Complete	1	<input checked="" type="checkbox"/> Discover z/OS features in use		Yes		shara01	z/OS Systems Programmer	shara01	noFeedback
<input type="checkbox"/> Unassigned	2	<input checked="" type="checkbox"/> Introducing the z/OS 3.1 Upgrade Workflow							noFeedback
<input type="checkbox"/> Unassigned	3	<input checked="" type="checkbox"/> Discover what APAR(PTFS)s are installed to allow for possible skipping of step(s)		Yes			z/OS Systems Programmer		noFeedback
<input checked="" type="checkbox"/> In Progress	4	<input checked="" type="checkbox"/> Upgrade actions before installing z/OS 3.1							noFeedback

Total: 121 Selected: 0

Return to Workflows Refresh Last refresh: Feb 23, 2024, 4:26:12 PM local time (Feb 23, 2024, 9:26:12 PM GMT)

6a. Do another step by yourself.

You know the basics now. Let's test your skills. Do another workflow step all by yourself (with the guidance below). This step you are doing will show off the capability to invoke a IBM Health Check for z/OS from within a workflow step and mark the step according to whether it was success (Complete) or an exception (Failed).

- a. Find **step 4.1.6 “Verify you have enough XCF groups and XCF group members”** in your workflow. You might have to do some untwisting to find it, but use the numbering scheme to help you find it. (Hint: step 4, step 4.1, step 4.1.6 – keep untwisting until you find 3.1.1.6.) Or you could filter on “XCF groups” in the title column or from the search box.
- b. Assign yourself to step 4.1.6. (Hint: start with the Actions drop down.)
- c. Accept step 4.1.6. (Hint: start with the Actions drop down.)
- d. Read the upgrade action under the “General” tab. For the z/OS Upgrade Workflow, you should always read the “General” tab to understand the upgrade action, and to perhaps manually perform it.
- e. Perform step 4.1.6. (There will be no questions to answer for this step.)
- f. What was the result of this health check associated with this step? (Hint: look at the output in **Status** under **SYSTSPRT**.)
 - If it was successful, did you see the step marked as Complete?
 - If it was an exception, did you see the step marked as Failed?

In general, for any Workflow, if you find that a step is failed, you'll need to fix the condition that made it fail and re-run the step until it is Complete.

Usually, on this lab system, this health check completes successfully so you will see the workflow step marked as Complete.

You can continue to Assign → Accept → Perform other steps as you wish. In this specific Workflow, some steps invoke health checks, and some do not. It depends on the step and what is related to that z/OS 3.1 Upgrade action.

It really is that easy as you know have the basics understood.

Provide feedback to the workflow author!

Many times, a workflow author might want to provide the capability for you to provide your feedback about his/her workflow. You can do that with the Feedback tab, once you're inside a workflow step, and you have **Accepted** the step. (The **Feedback** folder will be grayed out if the step isn't ready to be performed.)

We always welcome comments about your z/OS 3.1 Upgrade experience, and this is a great time to just that, as the step is fresh in your mind! Pick a step you have **Performed** (like Step 4.1.6).

[Workflows](#) > [SHARA01 zOS 3.1 Upgrade Workflow Lab](#) > 4.1.6. Verify that you have enough XCF groups and XCF group members

Properties for Workflow Step 4.1.6. Verify that you have enough XCF groups and XCF group members

General	Details	Dependencies	Notes	Perform	Status	Input Variables	Feedback
Name: SHARA01W	ID: JOB30187	Class: A	Type: JOB	Status: OUTPUT	Return code: CC 0000		
JESMSGLG	JESJCL	JESYSMSG	SYSPRINT	SYSTSPRT	SYSOUT		
DD name: SYSTSPRT	Step name: RUNIT	Procedure step name:		Dataset ID: 105	Class: 0	Record count: 91	
Output (2.474KB of 2.474KB shown) REASON FOR CHECK: Check sysplex CDS capacities. MODIFIED BY: N/A DEFAULT DATE: 20070425 ORIGIN: HZSADDCK LOCALE: HZSPROC DEBUG MODE: OFF VERBOSE MODE: NO ----- End Command Response -----							
The status of the Check is STATUS: SUCCESSFUL. Exiting with return code 0 READY END							
<input type="button" value="Refresh"/>		Last refresh: Feb 26, 2024, 10:18:33 AM local time (Feb 26, 2024, 3:18:33 PM GMT)					
<input type="button" value="Close"/>							

-
- a. Click on the **Feedback** tab for any step in the workflow. If you want to give feedback on the step, answer any of the questions you like. **Save** will just save your results so you can add more later. **Submit** “turns in” your results and you cannot change your answers after they have been submitted.

Let's **Submit** and then **OK** so we can see what we will gather later.

The screenshot shows a web-based workflow interface. At the top, there is a blue header bar with the word "Workflows". Below it, a breadcrumb navigation shows: Workflows > SHARA01 zOS 3.1 Upgrade Workflow Lab > 4.1.6. Verify that you have enough XCF groups and XCF group members. The main content area has a title "Properties for Workflow Step 4.1.6. Verify that you have enough XCF groups and XCF group members". Below the title is a horizontal navigation bar with tabs: General, Details, Dependencies, Notes, Perform, Status, Input Variables, and Feedback. The Feedback tab is currently selected and highlighted in blue. A sub-instruction below the tabs says "Please provide feedback for this workflow step by answering the question below." The first question asks "1. Did you complete this step?" with four radio button options: "Yes" (selected), "No, not applicable. Skip to Comments.", "No, don't know if needed. Skip to comments.", and "No, will defer to later. Skip to Comments.". The second question asks "2. How difficult was performing this upgrade action?" with four radio button options: "Easier than expected" (selected), "More difficult than expected", "About what was expected", and "other: [text input field]". The text input field has the placeholder "Please input text, the maxLength is 500 characters.". At the bottom of the form are three buttons: "Save" (disabled), "Submit" (highlighted in yellow), and "Close".

For this z/OS 3.1 Upgrade Workflow, the very last step of the workflow is asking about the overall z/OS release upgrade experience (Step 7, “**Provide feedback to IBM on your upgrade experience.**”). If you wish to provide your feedback on the entire z/OS upgrade experience, this is the spot to do that.

- b. **Perform** (making sure to **Assign** and **Accept** the step) this last step 7. This step will also give you instructions on how to email all your feedback results to IBM, on the “**Review instructions**” location.
- c. Collecting your feedback to send to IBM. Once your feedback from all the steps is collected, you can then collect it to send back to IBM. This is easy to do. “**Return to Workflows**” (at the bottom to exit from this z/OS 3.1 Upgrade Workflow, to return to the overall Workflow screen.) You are now back on the main Workflow screen. Make sure the workflow you want to collect feedback on is checked:

The screenshot shows the 'Workflows' interface with a list of workflow entries. The 'Actions' dropdown menu is open, displaying various options: View Properties, Open, Modify..., Cancel, Delete, Archive, Stop Automation, Generate Feedback Summary (which is highlighted with a yellow box), Create New Based on Existing, Reactivate..., Update Workflow Steps, Create Workflow..., Customize JOB Statement, and Workflows View.

Workflow Name Filter	Description Filter	Version Filter	Vendor Filter	Access Filter	Owner Filter	System Filter	Status	Percent Complete	Date Filter
<input type="checkbox"/> zOS V2R5 Upgrade Workflow from zOS V2R4 - Workflow_6	zOS V2R5 Upgrade Workflow from zOS V2R4	3.0	IBM	Public	sharal01	SHARPLEX.S2	In Progress	42%	20
<input type="checkbox"/> OS310808_YOURORDER	This Workflow describes your z/OS ServerPac Order. OS310808	1.0	ServerPac	Public	bulilis	SHARPLEX.S2	Complete	100%	20
<input type="checkbox"/> OS310808_POSTDEPLOY	Configuration and setup workflow for MVS	1.0	IBM ServerPac	Public	bulilis	SHARPLEX.S2	Complete	100%	20
<input type="checkbox"/> OS310812_YOURORDER	This Workflow describes your z/OS ServerPac Order. OS310812	1.0	ServerPac	Public	bulilis	SHARPLEX.S2	Complete	100%	20
<input type="checkbox"/> OS310812_POSTDEPLOY	Configuration and setup workflow for MVS	1.0	IBM ServerPac	Public	bulilis	SHARPLEX.S2	Complete	100%	20
<input type="checkbox"/> Reconfigure an IBM zOS Container Extensions Appliance Instance - Workflow_2	Reconfigure an IBM zOS Container Extensions Appliance Instance.	1.1.8	IBM	Public	swarren	SHARPLEX.S2	In Progress	1%	20
<input type="checkbox"/> Reconfigure an IBM zOS Container Extensions Appliance Instance - Workflow_3	Reconfigure an IBM zOS Container Extensions Appliance Instance.	1.1.8	IBM	Public	swarren	SHARPLEX.S2	In Progress	1%	20
<input checked="" type="checkbox"/> SHARA01 zOS 3.1 Upgrade Workflow Lab	zOS 3.1 Upgrade Workflow from zOS V2R5	1.0	IBM	Public	shara01	SHARPLEX.S2	In Progress	6%	20

Total: 109 Selected: 1

Refresh Last refresh: Feb 26, 2024, 10:32:21 AM local time (Feb 26, 2024, 3:32:21 PM GMT)

- d. Click Actions → Generate feedback summary.

The screenshot shows the 'Workflows' interface with a list of workflow entries. The 'Actions' dropdown menu is open, displaying various options: View Properties, Open, Modify..., Cancel, Delete, Archive, Stop Automation, Generate Feedback Summary (which is highlighted with a yellow box), Create New Based on Existing, Reactivate..., Update Workflow Steps, Create Workflow..., Customize JOB Statement, and Workflows View.

- e. You can now see everything that was collected in a simple readable text file. You can also notice that some step owners may not have completed feedback, and you

can **Notify Step Owners** at this time. This will remind them to do feedback before you send the actual feedback to the Workflow owner.

Workflows

Workflows > Generate Feedback Summary

Generate Feedback Summary

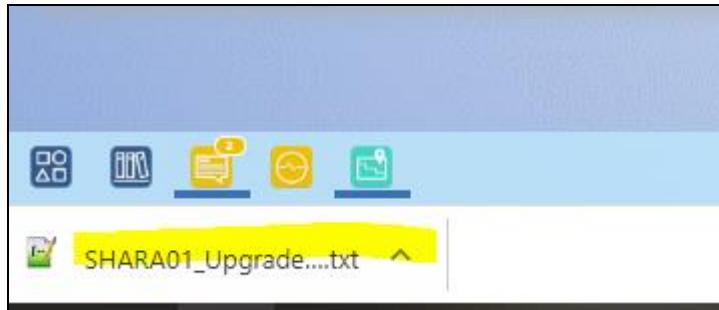
Steps with user feedback not completed : **Notify Step Owners**

Results :

```
# PROPRIETARY STATEMENT:  
# Licensed Material - Property of IBM  
# 5650-ZOS  
# Copyright IBM Corp. 2016, 2018  
#  
# Status = HSMA227  
#  
Feedback Summary for Workflow : SHARA01 zOS 3.1 Upgrade Workflow Lab  
Date generated(GMT): Mon Feb 26 15:37:01 GMT 2024  
Workflow description: zOS 3.1 Upgrade Workflow from zOS V2R5  
Workflow Owner: shara01  
  
BEGINNING OF SPECIFIC FEEDBACK FOR step_4_1_1(Review PSP buckets)  
-----  
Question: 1. Did you complete this step??  
Question: 2. How difficult was performing this upgrade action??  
Question: 3. How would you best describe your experience with this upgrade action??  
Question: 4. How long did this upgrade action take to complete (end to end)??  
Question: 5. If you'd like to add additional information about this upgrade action, provide it here.?  
END OF SPECIFIC FEEDBACK FOR step_4_1_1(Review PSP buckets)  
-----  
BEGINNING OF SPECIFIC FEEDBACK FOR step_4_1_2(Install coexistence and fallback PTFs)  
-----  
Question: 1. Did you complete this step??  
Question: 2. How difficult was performing this upgrade action??  
Question: 3. How would you best describe your experience with this upgrade action??  
Question: 4. How long did this upgrade action take to complete (end to end)??  
Question: 5. If you'd like to add additional information about this upgrade action, provide it here.?
```

Close **Export**

- f. Click on **Export** to put this data into a simple text file and it will be automatically downloaded to your workstation. You can edit this simple text file to remove any information you do not wish to share at this time. Click on it to see what it has gathered. Do you see your feedback from the steps you did **Feedback** on?



- g. Send back to IBM (to zosmig@us.ibm.com) if you wish! We welcome your feedback!

Please clean up from your lab, as we like a tidy lab system 😊 Back on the Workflows main panel, select your Workflow, then select the Workflow and then **Actions-> Delete**. Thank you for tidying up.

Exercise review and wrap-up

By completion of this lab, you now know how to:

1. Logon to z/OSMF. Enter into the Workflow function. You know what the Notification function is, and how to use it.
2. Create a z/OS 3.1 Upgrade Workflow within z/OSMF.
3. Look at some of the z/OSMF workflow functions, and generally how to maneuver around a workflow. Understanding the concept of states and steps (and sub-steps). Understand what the tabs for a step (z/OS upgrade action) are, and how they are used.
4. Assign steps (upgrade actions) to different users.
5. Accept the assignment of a step (upgrade action).
6. Perform a step (upgrade action).
7. Provide feedback for a workflow, and how to provide feedback for the entire release, if you like.

End of exercise