

z/OS Management Services Catalog

A z/OSMF plug-in

Part 1: Submit and run a service

Part 2: Create, test, and publish a service

A new way to manage your z/OS environment for:

Early tenure z/OS system programmers

**Experienced z/OS system programmers looking
to pass down knowledge to their early-tenure
colleagues**

Welcome to the z/OS Management Services Catalog Lab!

What is z/OS Management Services Catalog?

IBM z/OS Management Services Catalog assists z/OS system programmers in managing their z/OS environment using services. Service can streamline both repetitive and frequent tasks as well as complex, infrequent tasks. Associated institutional knowledge and processes are embedded in services, helping z/OS system programmers adhere to best practices and internal standards.

What this lab includes

Part 1 is submitting and running a service to complete a task on z/OS. You will run a Create a zFS file system service and verify that your new file system is created. Anyone who has access to z/OS Management Services Catalog can run the published services. This is intended to be accessible to z/OS system programmers of all skill levels.

Part 2 is creating a service. You will create a Hello World service and test run it. Administrator-level privileges are needed to create and manage services in z/OS Management Services Catalog. Although z/OS system programmers of all skill levels are encouraged to participate in the lab, we expect experienced and potentially mid-level z/OS system programmers to become administrators for z/OS Management Services Catalog and create services in your own environments. All user ids in this lab have Administrator-level privileges.

Part 1

Submit and run a service to create a zFS file system

You are creating this zFS file system on z/OS by running a published service.

1. Log in to z/OSMF

Test system: <https://share.centers.ihost.com/zosmf/LogOnPanel.jsp>

Use the user ID and password shared with you by the lab facilitator

2. Open z/OS Management Services Catalog

- a. If z/OS Management Services Catalog icon  is not shown in the desktop, open the z/OSMF App Center (bottom left)



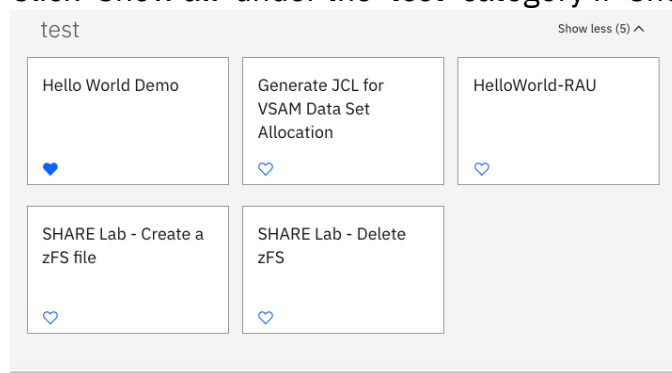
- 1) Drag the z/OS Management Services Catalog icon to the desktop



- 2) Close App Center

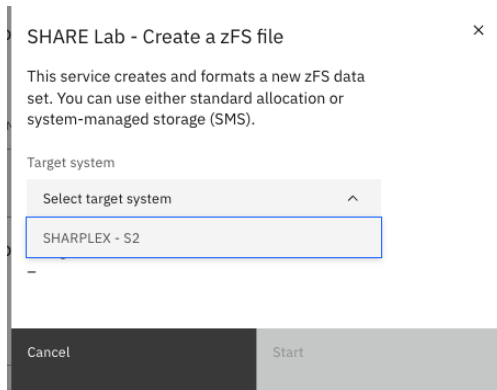
- b. Double click on z/OS Management Services Catalog icon 

- c. Click 'Show all' under the 'test' category if 'Show all' is displayed



3. Select and start the “SHARE Lab - Create a zFS file system” service

Select the target system *SHARPLEX-S2* and click ‘Start’



4. Enter and select input values

💡 *Inputs are organized across multiple pages. After entering values for all required inputs, you can advance to the next page.*

a. Use the following input values:

(Do not enter values for optional inputs in this lab)

Data set name: <USERID>.SHARELAB.ZFS

Primary allocation size: 2

Allocation type: Non SMS-managed (this is selected by default)

Disk names: S2LA3A or S2TSO1

💡 *Select SMS-managed for Allocation type to see how logic works on inputs. Certain inputs can appear or not appear based on previous input selections.*

b. Click ‘Next’

5. Set run properties

💡 *Run properties are information about how the service submission runs. Run properties are different than the service inputs and the same Run properties page appears for every service you submit.*

- a. For **Run window**, select *Run service immediately when submitted*
- b. Leave JOB statement empty for this lab

6. Click “Run now” to submit the service

7. Click Activity in the navigation bar and find your service submission

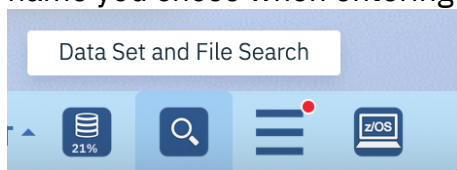
💡 Activity includes active service submissions from all members of your team. You might see service submissions from other people in this lab. Find your service submission by locating your user ID in the “Submitter” column.

If you can’t find your service submission in **Activity**, check **History**. This service runs quickly, so it might finish before you can find your service submission.

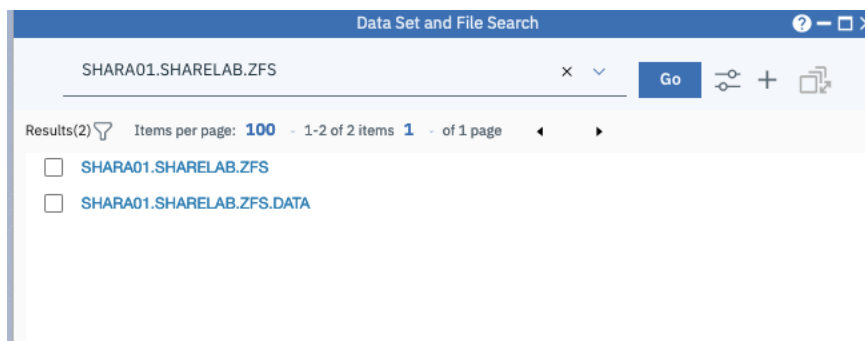
Double click to Open your service submission. The status should be “Running” and the Timeline says how long it has been running for. When it is done, the status changes to “Completed”. Your service submission is now in **History**.

8. Find your newly created file system

Minimize z/OS Management Services Catalog. Open the **Data Set and File Search** in z/OSMF (lower right corner of the desktop) and look up the file system name you chose when entering input values in step 4: <USERID>.SHARELAB.ZFS



Click “Go” to list newly created file system.



Congratulations!

You created a zFS file system using
z/OS Management Services Catalog

9. (Optional) View the underlying workflow instance

- Open z/OS Management Services Catalog and go to **History**
- Open your service submission (double-click)
- Click Open in Workflows to explore the results of the underlying workflow instance of your service submission.



10. Delete your zFS file system

- Go to the Catalog and select “SHARE Lab - Delete zFS” service
- Select the target system *SHARPLEX-S2* and click ‘Start’
- Enter the name of the zFS file system you created and click ‘Next’
<USERID>.SHARELAB.ZFS
- Submit and run the SHARE Lab - Delete zFS service
- Select ‘History’ in navigation bar and check status of the service

Please give us your feedback:

(If you plan on completing Part 2,
please fill out the survey at the end)



[Link to survey](#)

Visit the content solutions homepage to learn more about z/OS Management Services Catalog

<https://www.ibm.com/support/z-content-solutions/management-services/>

Create, test, and publish a “Hello World” service

You are creating and publishing a new service “Hello World” that writes a text greeting to either a file or data set on a z/OS system.

1. Log in to z/OSMF if you are not logged on.

Test system: <https://share.centers.ihost.com/zosmf/LogOnPanel.jsp>

Use the user ID and password shared with you by the lab facilitator.

2. Open z/OS Management Services Catalog if catalog was not opened before

- a. If z/OS Management Services Catalog icon  is not shown in the desktop, open the z/OSMF App Center (bottom left)



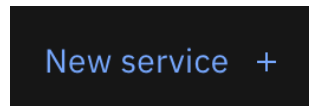
- Drag the z/OS Management Services Catalog icon to the desktop



- Close App Center

- b. Double click on z/OS Management Services Catalog icon 

3. Click “New service”



4. Enter the workflow definition file and service name to start building

Workflow definition file path: `/u/hiren/helloworld_service.xml`

Service name: *Hello World* <USERID>

Category: *test*

Click “Start Building”.

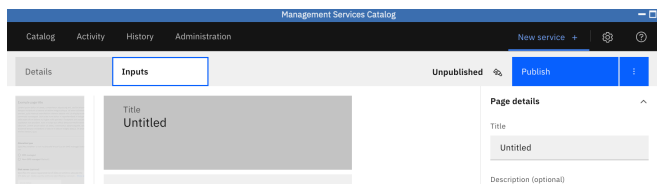
💡 If you enter the workflow definition file path incorrectly, you will see an error message and cannot click “Start building”

💡 When creating services in the future, you need to first create the workflow definition file

5. Edit inputs

💡 z/OS Management Services Catalog parses the workflow definition file. Any variables in the file become inputs in the service. You can format and add constraints to the inputs, making the service easier to run.

Go to the **Inputs** tab



a. Create and organize pages

- i. Select the “Untitled” page name, rename your page title “Location,” and add a description

For example: This page contains inputs that determine the location of the Hello World greeting.

A screenshot of the 'Page details' form. It has a title field with the text 'Untitled' and a description field labeled 'Description (optional)' which is currently empty. There is a small upward arrow icon in the top right corner of the form.

- ii. Create a new page

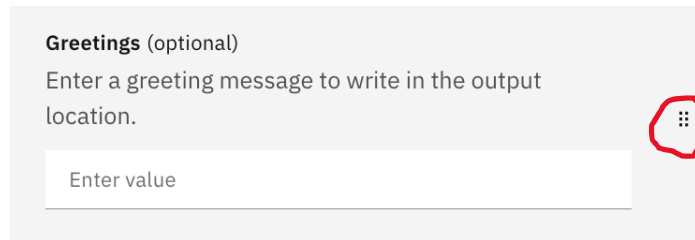
A screenshot of a button labeled 'New page' with a plus sign icon next to it.

Title your new page “Select greeting” and add a description.

For example: This page determines the Hello World greeting that is

written to the output location.

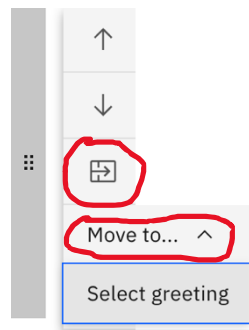
- iii. Return to the **Location** page and move the “Greetings (optional)” input to the **Select Greeting** page



Greetings (optional)
Enter a greeting message to write in the output location.

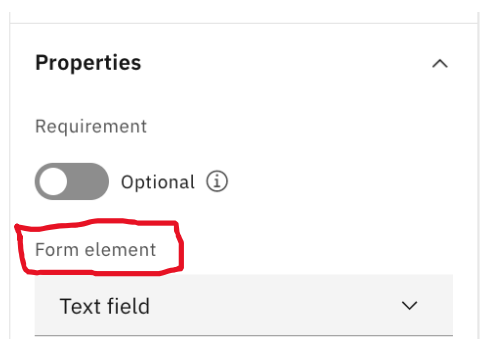
Enter value

A red circle highlights the menu icon (three dots) in the top right corner of the input field.



b. Add greeting options

- i. Click on “Select Greetings” page created before.
- ii. Select the “Greetings” input
- iii. Find ‘Form element’ located under “Properties” on right hand side



Properties

Requirement

☐ Optional ⓘ

Form element

Text field

A red circle highlights the 'Form element' option in the 'Properties' panel.

- iv. Change the form element from “Text field” to “Selection”

Form element

Selection	^
Text field	
Selection	✓

- v. Enter options and click “Add” for each option

For example: “Hello World” “Hi” “Hey there”

Click “Add” for each option entered.

☒ Custom option enabled ⓘ

Enter option	Add
Hello World	
Hi	

- vi. Set or change the default value for an input

☒ Custom option enabled ⓘ

Clear

Hello My Friend

Hello World

Hi

Hey there

Hey there

1

- vii. Observe the selection you created also showing up on left hand side under Greetings

Greetings (optional)
Enter a greeting message to write in the output location.

☐ Hello My Friend

☐ Hello World

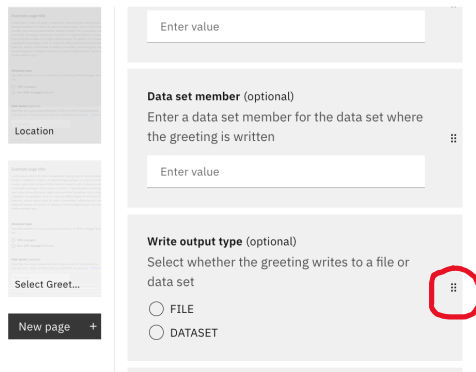
☐ Hi

☒ Hey there

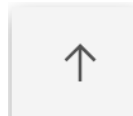
c. Add logic to inputs.


Do not specify any values for input fields. You will provide values when you run the service.

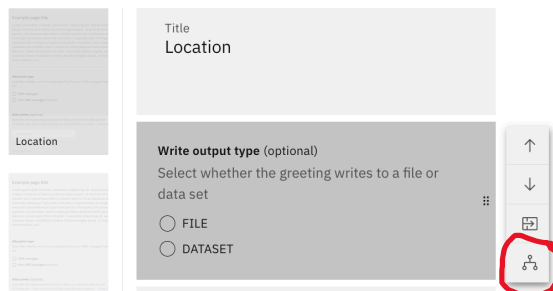
- i. Click on **“Location”** page
- ii. Select the **“Write output type”** input



- ii. Move **“Write output type”** input to the top of the page under Title. Use the **“Move up”** icon

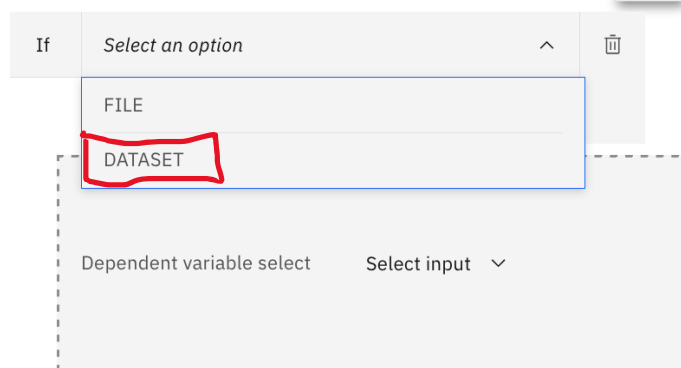
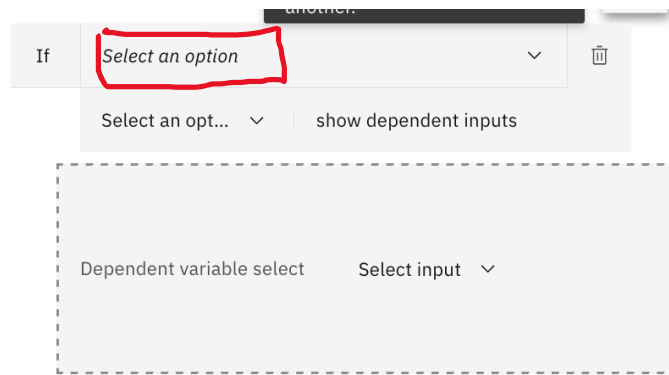


- ii. Click the **New logic condition** button  on the **“Write output type”** input

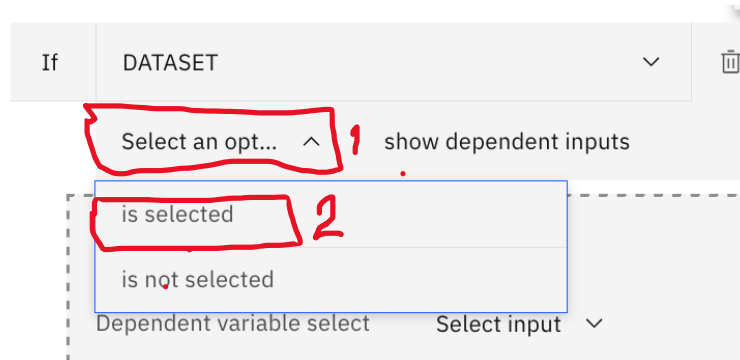


- iii. Add the following logic condition:

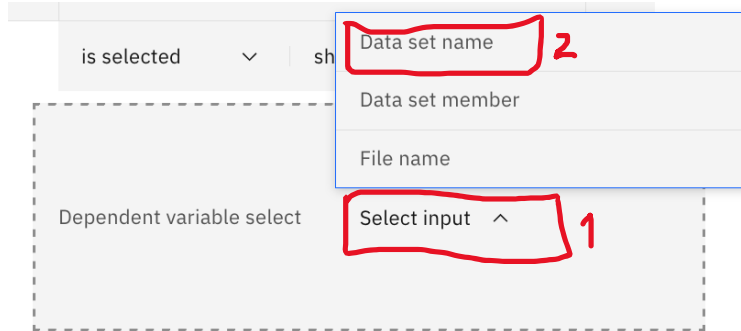
Click on **“Select an option”** and select **“DATASET”**




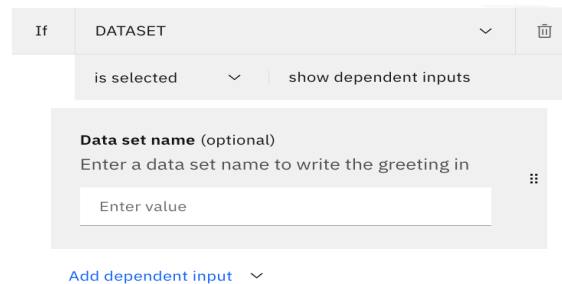
Click on “Select an option” again shown under “If DATASET” and click “is selected”



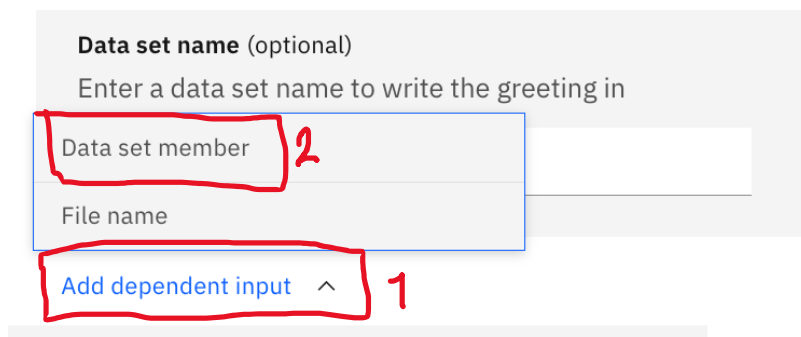
Click on “Select input” in the next box and select “Data set name”




Logic will look as shown below after you complete above steps. If it does not look like as shown, click ‘delete’ icon  and create logic again as described above



Click on “Add dependent input” and select “Data set member”



Logic will look like as shown below. If it does not look like as shown, click ‘delete’ icon  and create logic again as described above

Write output type (optional)
Select whether the greeting writes to a file or data set

☒ FILE
☐ DATASET

If DATASET is selected show dependent inputs

Data set name (optional)
Enter a data set name to write the greeting in
Enter value

Data set member (optional)
Enter a data set member for the data set where the greeting is written
Enter value

iv. Click the **New logic condition** button again for “Write output type” input and add the following logic condition following steps described above:

Click on “Select an option” and select “FILE”

If **Select an option** is selected show dependent inputs

Dependent variable select Select input

Click on “Select an option” again under “If FILE” and click “is selected”

If	FILE	▼	🗑️
1	Select an opt... ^	show dependent inputs	
	is selected 2		
	is not selected		

Click on “Select input” and select “File name”

is selected ▼	st	Data set name
		Data set member
		File name 2
Dependent variable select	Select input ^ 1	

Logic will look like as shown below.

If	FILE	▼	🗑️
is selected ▼	show dependent inputs		
File name (optional) Enter a file name to write the greeting in. Specify file name in /tmp/< userid >/filename format where < userid > is your userid... Show all			
<input type="text" value="Enter value"/>			
Add dependent input ▼			

d. Set all the inputs as “Required”

Select “Write output type” and locate “Requirement” under “**Properties**” on right hand side. Slide the button to mark field “required”.

The screenshot shows the 'Management Services Catalog' interface. The top navigation bar includes 'Catalog', 'Activity', 'History', and 'Administration'. The main header shows 'Hello World SHARA01' with a timestamp 'Last saved on 7/14/2022, 12:39:52 PM'. The 'Inputs' tab is selected, displaying a 'Location' input with a description: 'This page contains inputs that determine the location of the Hello World greeting.' Below this, the 'Write output type' section allows selecting between 'FILE' (selected) and 'DATASET'. A logic condition is shown: 'If FILE is selected, show dependent inputs'. On the right, the 'Details' panel shows the 'Required' toggle switch for the 'Location' input, which is highlighted with a red box and is currently turned on.

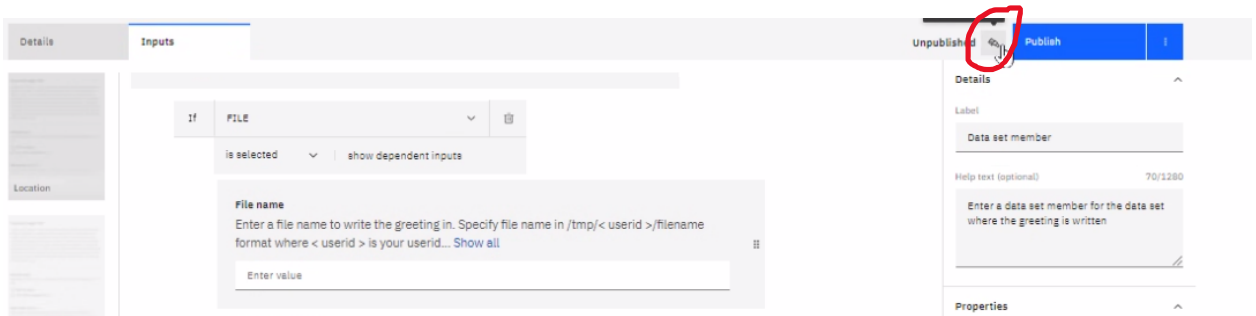
Follow the above step for “File name (optional)”, “Data set name (optional)”, “Member name (optional)” inputs and for “Greetings (optional)” input under “Select greeting” page.

💡 *Required inputs in logic conditions are only required if the logical condition is met. For example, if “File name” is required, it is only required when shown (that is, when “FILE” is selected in the parent input*

6. Now that you have created the service, test your service

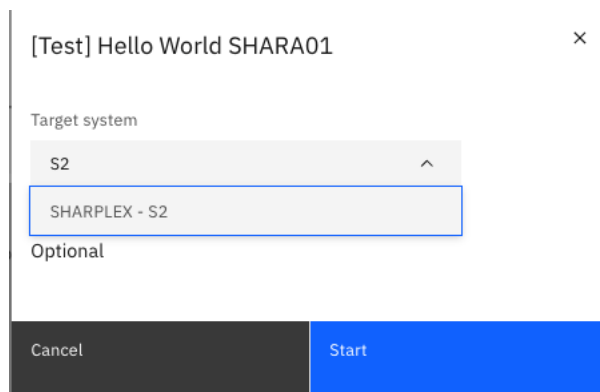
a. Click the “Test service” icon





b. Use target system: *SHARPLEX-S2* and click “Start”

💡 *Testing a service allows you to run it before it is published in the Catalog for others to run as well. You can ensure all your inputs are well-formatted, logic is correct, and that it completes successfully.*



a. Enter input

Use the following input values on the **Location** page:

If you select “File” for Location

Make sure userid is entered in lower case. Service will fail if you enter userid in upper case.

File path: */tmp/<userid>/helloworld.txt*

If you select “Data set” for Location

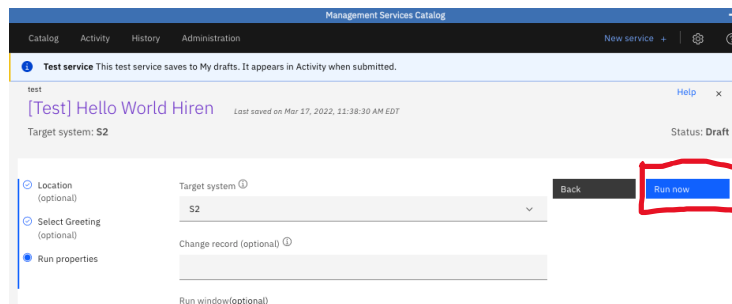
Data set name: *<USERID>.HELLO.TEXT*

Data set member: *TEST*

Select any Greeting on the **Select Greeting** page

b. Submit the service

Click “Run now”. Increase window size if you don’t see “Run now”



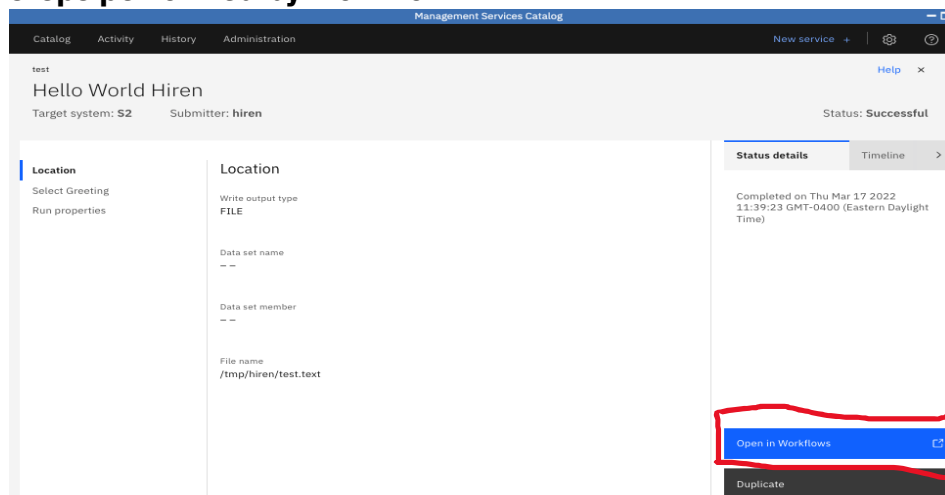
c. Open Activity and select your test service submission

💡 *Activity includes active service submissions from all members of your team. You might see service submissions from other people in this lab. Find your service submission by locating your user ID in the “Submitter” column.*

If you can’t find your service submission in **Activity**, check **History**. This service runs quickly, so it might finish before you can find your service submission.

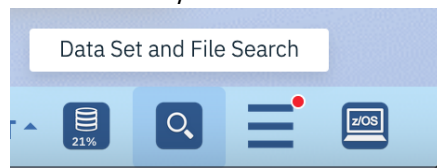
Double click to Open your service submission. If you are in **Activity**, the status should be “Running” and the Timeline says how long it has been running for. When it is done, the status changes to “Completed”. Your service submission is now in **History**.

d. You could examine workflow by clicking “Open in Workflow” to see the steps performed by workflow



e. Find your Hello World greeting

- i. Minimize z/OS Management Services Catalog and open the Data Set and File Search in z/OSMF



- ii. Search for your data set or file name

If greeting is written to a file path enter `/tmp/<userid>` to locate the `helloworld.txt` file

If the greeting is written to a data set, enter `<USERID>.HELLO.TEXT` to locate member `TEST`


- iii. Open the file or data set member to see your selected greeting.

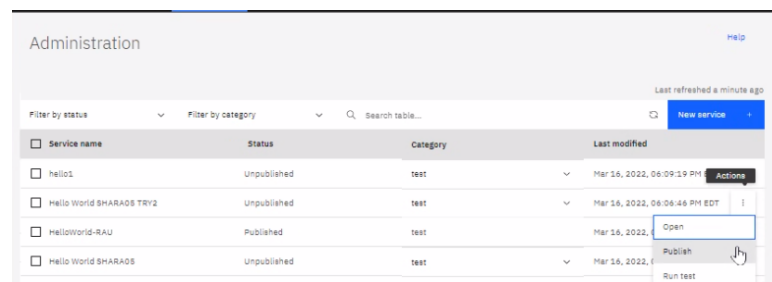
7. Publish your service


- a. Click on “Administration” in navigation bar at the top. Find your service in Administration

Administration contains all services. Find your service using the service name: **Hello World <USERID>**

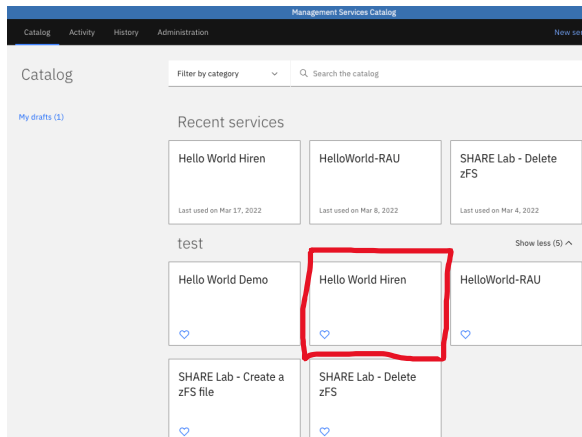
- b. Open the Action overflow menu and click Publish

The Action overflow menu icon  is at the right of the entry for the service in the Administration table.



 *Current settings allow administrators for z/OS Management Services Catalog to publish services. You can change the settings to require approval from other administrators.*

c. Go to the Catalog and see your “Hello World <USERID>” published service



Congratulations!

You created, tested, and published a Hello World service!

**Please give us your
feedback:**



[Link to survey](#)

Visit the content solutions homepage to learn more about z/OS Management Services Catalog

<https://www.ibm.com/support/z-content-solutions/management-services/>