

# z/OS 2.4 IBM Education Assistant (IEA)

Solution (Epic) Name: Export Workflow as Printable Format

Element(s)/Component(s): z/OSMF Workflows



# Agenda

- Trademarks
- Session Objectives
- Overview
- Usage & Invocation
- Interactions & Dependencies
- Session Summary
- Appendix

# Trademarks

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- Additional Trademarks:
  - If you need to list any that aren't included on the website above, please do so here. If not, remove the text in this bullet and just say “None”.

# Session Objectives

- Explain the purpose of working on z/OSMF Workflows V2R4 Epic 210810

# Overview

- Who (Audience)
  - System administrators and other z/OS management staff
- What (Solution)
  - z/OSMF Workflows task is enhanced to support exporting workflow information and steps information into a HTML page in readable and printable format, workflow users can print the HTML page directly as a book format.
- Wow (Benefit / Value, Need Addressed)
  - Workflow information and steps information can be easily exported from workflow instance into a HTML page for long time keep, and can be printed in readable book format.

# Usage & Invocation – Export Workflow Process

1. Open a workflow instance which needs to be exported.
2. Setup the filter if you don't want to export all steps but some specified steps by column using filter function. Or just leave it by default to export all steps.

The screenshot displays a workflow management interface. At the top, there's a header 'Actions' with a dropdown arrow. Below it, a filter status bar shows 'No filter applied' with a filter icon. The main area is a table with columns: 'State Filter', 'No. Filter', 'Title Filter', 'CalledWorkflow Filter', and 'Automated Filter'. The table lists six steps with their respective states and titles. A 'Build Filter' dialog box is open in the foreground, allowing users to define filters based on rules.

State Filter	No. Filter	Title Filter	CalledWorkflow Filter	Automated Filter
Ready	1	Simple automatable step		
In Progress	2	Root Step		
Ready	3	Non-automated Step		
Complete	4	Submit an empty JCL job		
Complete	5	Verify the UID of the user using a shell script		
Complete	6	Define the RACF group using a JCL job		

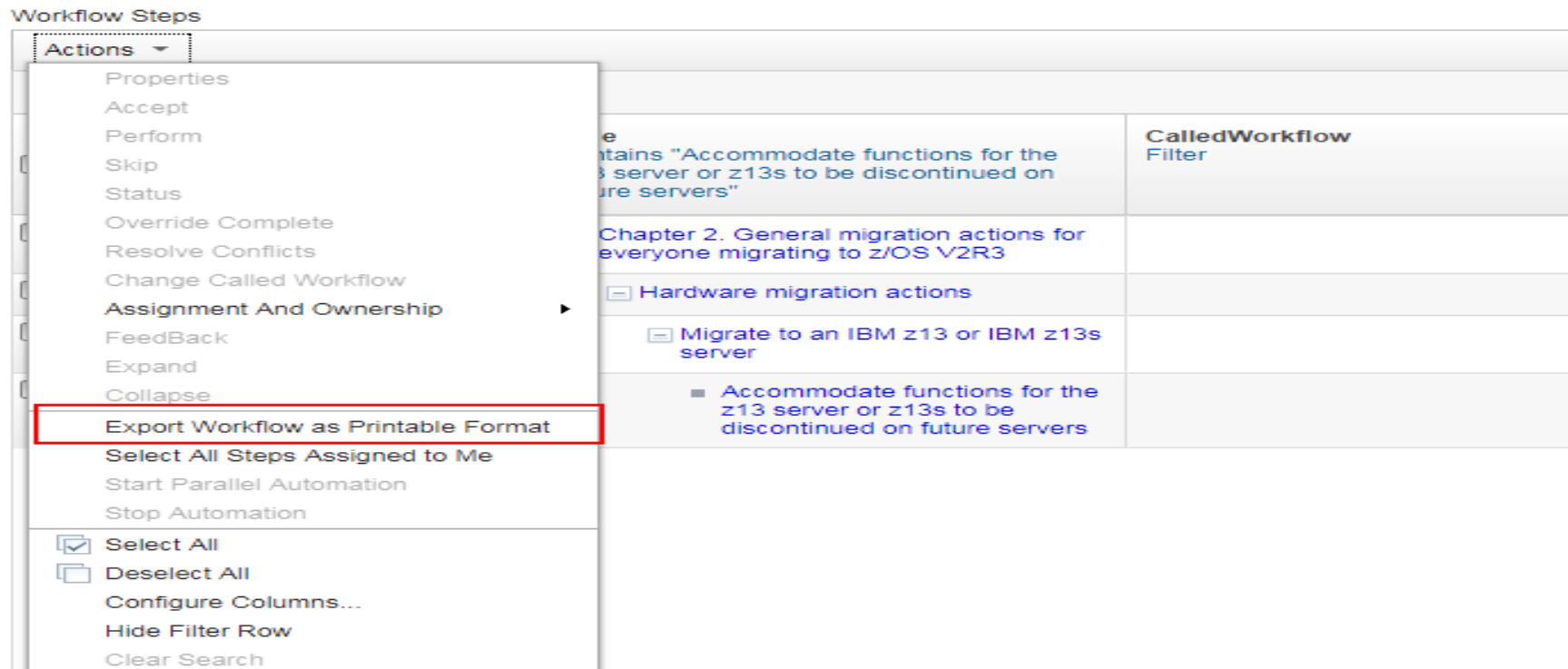
### Build Filter

Match  ☐ Match case

**Rules**

# Usage & Invocation – Export Workflow Process

3. A new menu item is added in “Actions” called **Export Workflow as Printable Format**. Click Actions->Export Workflow as Printable Format.



# Usage & Invocation – Export Workflow Process

4. The **Export This Workflow in a Printable Format** dialog is opened to collect more input from the workflow users.

The screenshot shows a dialog box titled "Export This Workflow in a Printable Format". It contains three sections: "Export workflow steps:", "Export Table of Contents:", and "Export additional information:". The "Export workflow steps:" section has two radio buttons: "All steps" (selected) and "As filtered". The "Export Table of Contents:" section has a checkbox labeled "Include the Table of Contents". The "Export additional information:" section has two checkboxes: "Include JCL, REXX, and UNIX shell contents from templates, and information from REST steps" (unchecked) and "Include cover, frontmatter, backmatter and back cover" (checked). Below these checkboxes are two text input fields: "Logo:" with the value "/tmp/logo.png" and "Barcode:" with the value "/tmp/barcode.png". At the bottom are three buttons: "OK", "Cancel", and "Help".

Export all steps or filtered steps?

Include the table of content?  
(The page numbers may not be accurate based on browser settings)

Include JCL, REXX, UNIX-shell or Restful request information?

Include the cover, frontmatter, backmatter and back cover?  
(logo image and barcode image can be customized)



# Usage & Invocation – Export Workflow Process

5. If the validation is successful, the workflow information and steps information are exported in a printable HTML format. The HTML optionally contains cover, front letter, back letter, back cover, table of content besides the body content.

Each item in the table of content is clickable and links to corresponding step information in the body content.

e0zm100\_v2r3 - Workflow\_0

Description : e0zm100\_v2r3

Status: In Progress

Owner: zosmfad

System: DUMBLEX.DUMBNODE (DUMBNODE\_0041)

Version: Local build - 2018/08/23 15:08:19

Steps complete: 0 of 223

Export time: 2018-08-23 15:08:19

Filters :

### Contents

<Note: page numbers may not be accurate. >

Step 1 : Discover z/OS features in use	10
Step 2 : Chapter 1. Migration: Introduction	11
Step 2.1 : Typical migration steps	21
Step 2.2 : Using IBM Health Checker for z/OS for migration checking	23
Step 2.2.1 : System REXX considerations	25
Step 2.3 : Elements and features that do not have migration actions	26
Step 3 : Chapter 2. General migration actions for everyone migrating to z/OS V2R3	27
Step 3.1 : Migration actions for everyone moving to z/OS V2R3	27
Step 3.1.1 : Migration actions for everyone before installing z/OS V2R3	27
Step 3.1.1.1 : Review PSP buckets	28
Step 3.1.1.2 : Install coexistence and fallback PTFs	30
Step 3.1.1.3 : Use zSoftCap to identify the effect of capacity changes	32
Step 3.1.1.4 : Add or change volumes to keep your z/OS root file system in a single data set	34
Step 3.1.1.5 : Verify that you have enough XCF groups and XCF group members	36
Step 3.1.1.6 : Ensure that the CustomPac Installation Dialog is updated	38
Step 3.1.1.7 : Consider using the new IOR statement for the CustomPac installation dialog	41

### Step 1 : Discover z/OS features in use

Step State:	Step Owner:	Step Assignee:	Step Feedback:	Step Skills:	Has called workflow:
Ready	zosmfad	zosmfad	noFeedback		No

#### Description:

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.

#### 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 parm lib 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 migration 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.

#### Template Content:

```
//*****  
//* COPY STEP - IEBGENER - *  
//*****  
//GENR EXEC PGM=IEBGENER  
//*  
//SYSPRINT DD SYSOUT=*  
//*  
//SYSIN DD DUMMY  
//*  
//SYSUT1 DD DNAME=TSOREXX  
//*  
//SYSUT2 DD DISP=(NEW,PASS),DSN=&TMP(TSOREXX),  
// UNIT=SYSALLDA,SPACE=(1024,(1000,500,1)),  
// DCB=(RECFM=FB,LRECL=1024,BLKSIZE=0)  
//*
```

### Step 1 : Create a data set

Step State:	Step Owner:	Step Assignee:	Step Feedback:	Step Skills:	Has called workflow:
Ready	zosmfad	zosmfad	noFeedback	z/OS data set	No

#### Instructions:

Generated instruction text for step: CreateDataSetUpdate this field with your own text

#### Restful Request Information:

POST /zosmf/restfiles/ds/IBMUSER.IZUDSAPI.ZTRIALDS

#### Expected Status Code

201

#### RequestBody

```
{  
  "unit": "SYSALLDA",  
  "dsorg": "PS",  
  "alccunit": "TRK",  
  "primary": 20,  
  "secondary": 10,  
  "avgblk": 500,  
  "recfm": "FB",  
  "blksize": 510,  
  "lrecl": 255  
}
```

# Usage & Invocation – Export Workflow Process

6. exportWorkflow directory is created (/var/zosmf/data/externalapps/exportWorkflow) to temporarily persist the generated HTML files. The files are deleted every time the workflow main panel is refreshed.

The browser build-in print function(e.g. Firefox) can be leveraged to print the exported workflow like below. The page numbers can also be displayed in the print preview.

<b>e0zm100_v2r3 - Workflow_0</b>	
<b>Description :</b> e0zm100_v2r3	
<b>Status:</b> In Progress	<b>Steps complete:</b> 0 of 223
<b>Owner:</b> zosmfad	<b>Export time:</b> 2018-08-28 14:18:57
<b>System:</b> DUMBLEPLEX.DUMBNODE (DUMBNODE_0041)	
<b>Version:</b> Local build - 2018/08/28 14:18:57	
<b>Filters :</b>	
<b>Contents</b>	
< Note: page numbers may not be accurate. >	
Step 1 : Discover z/OS features in use .....	10
Step 2 : Chapter 1. Migration: Introduction .....	11
Step 2.1 : Typical migration steps .....	21
Step 2.2 : Using IBM Health Checker for z/OS for migration checking .....	23
Step 2.2.1 : System REXX considerations .....	25
Step 2.3 : Elements and features that do not have migration actions .....	26
Step 3 : Chapter 2. General migration actions for everyone migrating to z/OS V2R3 .....	27
Step 3.1 : Migration actions for everyone moving to z/OS V2R3 .....	27
Step 3.1.1 : Migration actions for everyone before installing z/OS V2R3 .....	27
Step 3.1.1.1 : Review PSP buckets .....	28
Step 3.1.1.2 : Install coexistence and fallback PTFs .....	30
Step 3.1.1.3 : Use zSoftCap to identify the effect of capacity changes .....	32
Step 3.1.1.4 : Add or change volumes to keep your z/OS root file system in a single data set .....	34
Step 3.1.1.5 : Verify that you have enough XCF groups and XCF group members .....	36
Step 3.1.1.6 : Ensure that the CustomPac Installation Dialog is updated .....	38
Step 3.1.1.7 : Consider using the new JOB statement for the CustomPac installation dialog .....	41
Step 3.1.1.8 : Prepare for the discontinuation of tape delivery .....	43
Step 3.1.2 : Migration actions for everyone before the first IPL of z/OS V2R3 .....	45
Step 3.1.2.1 : Set up an IPCS environment .....	46
Step 3.1.2.2 : Use IBM-supplied parmlib and proclib members .....	50
Step 3.1.2.3 : Migrate /etc and /var system control files .....	52
Step 3.1.2.4 : Update automation and procedures for changed and deleted messages .....	55
Step 3.1.2.5 : Rework and install user modifications .....	57
Step 3.1.2.6 : Reconnect non-IBM products .....	60
Step 3.1.2.7 : Reconnect subsystems .....	62
Step 3.1.2.8 : Update operational and other procedures .....	64
Step 3.1.2.9 : Verify that virtual storage limits are set properly .....	66
Step 3.1.2.10 : Back virtual storage with sufficient real and auxiliary storage .....	70

Step State:	Step Owner:	Step Assignee:	Step Feedback:	Step Skills:	Has called workflow low:
Ready	zoomfd	zoomfd	incomplete		No

**Description:**

For Support Elements that run on the z14™, the setting for the "Cross Partition Authority" option is replaced by new security settings on the System Details panel and the Customize Image Profiles panel. For more information, see the step *"Enable BCPii communications on the support element."*

**Instructions:**

This information was provided for your understanding and possible further action as dictated by your site policies

### Step 3.2.6 : Accommodate functions for the z14 to be discontinued on future servers

Step State:	Step Owner:	Step Assignee:	Step Feedback:	Step Skills:	Has called workf low:
In Progress			noFeedback		No

**Description:**

Note: IBM's statements regarding its plans, directions, and intent are subject to change or withdrawal without notice at IBM's sole discretion. Information regarding potential future products is intended to outline our general product direction and it should not be relied on in making a purchasing decision. The information mentioned regarding potential future products is not a commitment, promise, or legal obligation to deliver any material, code, or functionality. Information about potential future products may not be incorporated into any contract. The development, release, and timing of any future features or functionality described for our products remains at our sole discretion.

The steps in this section involve changes in hardware support that could affect your environment. Make the appropriate changes, as needed.

# Usage & Invocation – New Workflow Elements

1. New elements are introduced in workflow schema to support for more user friendly print format.

The main element is “exportDocMeta”, which is at the same level with the “workflowInfo” element. It is optional, the workflow author can specify it or not.

```
<xs:element name="workflow">
  <xs:complexType>
    <xs:sequence>
      <!-- whether allow user can request assignment by itself skip workflow Owner -->
      <xs:element name="autoTakeOwnership" type="workflowBooleanType" default="false" minOccurs="0" maxOccurs="1"/>
      <!-- workflow config, used to contain some setting info in one definition file -->
      <xs:element name="workflowSettingInfo" type="workflowSettingInfoType" minOccurs="0" maxOccurs="1"/>
      <!-- Workflow meta data -->
      <xs:element name="workflowInfo" type="workflowInfoType"/>

      <!-- Export workflow meta data -->
      <xs:element name="exportDocMeta" type="exportDocMetaType" minOccurs="0" maxOccurs="1"/>

      <!-- A "manifest" of translated text files. -->
      <xs:element name="translatedTextFiles" type="textFileType" minOccurs="0"/>
    <!--
```

Added

# Usage & Invocation – New Workflow Elements

2. The type of the “exportDocMeta” is “exportDocMetaType”, it is as follows:

```
<!--  
    exportDocMeta is the element that control what information will appear  
    in the exported workflow HTML file.  
-->  
<xs:complexType name="exportDocMetaType">      <!-- export workflow enhancement -->  
    <xs:sequence>  
        <!-- The cover of the exported workflow HTML file -->  
        <xs:element name = "cover" type = "coverType" minOccurs="0" maxOccurs="1" />  
        <!-- The frontmatter of the exported workflow HTML file -->  
        <xs:element name = "frontmatter" type = "frontmatterType" minOccurs="0" maxOccurs="1" />  
        <!-- The backmatter of the exported workflow HTML file -->  
        <xs:element name = "backmatter" type = "backmatterType" minOccurs="0" maxOccurs="1" />  
        <!-- The back cover of the exported workflow HTML file -->  
        <xs:element name = "backCover" type = "backCoverType" minOccurs="0" maxOccurs="1" />  
    </xs:sequence>  
</xs:complexType>
```

# Usage & Invocation – New Workflow Elements

3. All new tags are optional. The type of these tags are as follows, they are at the same level with the existing element, such as “workflowInfoType”, “variableType”

## 3.1 coverType

```
<!--  
    Definition of cover.  
-->  
<xs:complexType name="coverType" <!-- export workflow enhancement -->  
    <xs:sequence>  
        <!-- Specifies the image file, such as a company logo.  
            If specified, the image file must be included with the workflow  
            definition file. -->  
        <xs:element name = "logo" type = "unboundedNonNullString" minOccurs="0" maxOccurs="1"/>  
        <!-- Specifies the primary title information for the workflow print file. -->  
        <xs:element name = "mainTitle" type = "NonNull1KString" minOccurs="0" maxOccurs="1" />  
        <!-- Specifies the alternative title, subtitle, or short title for the  
            workflow print file. -->  
        <xs:element name = "shortTitle" type = "NonNull1KString" minOccurs="0" maxOccurs="1"/>  
        <!-- Specifies information about the series, library, or collection of  
            workflows to which the workflow belongs. -->  
        <xs:element name = "collection" type = "nlsRichString" minOccurs="0" maxOccurs="1"/>  
        <!-- Specifies the copyright year. Can be one value or two (first year  
            and last year). -->  
        <xs:element name = "copyright" type = "nlsRichString" minOccurs="0" maxOccurs="1"/>  
        <!-- Specifies the contact information for the workflow author, such as  
            a name and an email address. -->  
        <xs:element name = "contactInfo" type = "nlsRichString" minOccurs="0" maxOccurs="1"/>  
    </xs:sequence>  
</xs:complexType>
```

# Usage & Invocation – New Workflow Elements

## 3.2 frontmatterType

```
<!--  
  Definition of frontmatter.  
-->  
<xs:complexType name="frontmatterType" <!-- export workflow enhancement -->  
  <xs:sequence>  
    <!-- Contains the edition notice for the document, which includes any  
      legally required statements about intended use, updates, and so on. -->  
    <xs:element name = "editionNotice" type = "nlsRichString" minOccurs="0" maxOccurs="1"/>  
    <!-- A place for the workflow author to provide introductory information  
      to the intended users of the workflow. -->  
    <xs:element name = "preface" type = "nlsRichString" minOccurs="0" maxOccurs="1"/>  
    <!-- Specifies a paragraph or two that briefly describes the purpose of  
      the workflow. -->  
    <xs:element name = "abstract" type = "nlsRichString" minOccurs="0" maxOccurs="1"/>  
    <!-- Provides a place for the workflow author to list the latest changes  
      to the workflow. -->  
    <xs:element name = "whatsNew" type = "nlsRichString" minOccurs="0" maxOccurs="1"/>  
  </xs:sequence>  
</xs:complexType>
```

# Usage & Invocation – New Workflow Elements

## 3.3 backmatterType

```
<!--  
    Definition of backmatter.  
-->  
<xs:complexType name="backmatterType" <!-- export workflow enhancement -->  
    <xs:sequence>  
        <!-- Some notices for the workflow. -->  
        <xs:element name = "notices" type = "nlsRichString" minOccurs="0" maxOccurs="1"/>  
        <!-- Some trademarks for the workflow. -->  
        <xs:element name = "trademarks" type = "nlsRichString" minOccurs="0" maxOccurs="1"/>  
        <!-- A list of terms that are important to understanding how to perform  
            the workflow. -->  
        <xs:element name = "glossary" type = "nlsRichString" minOccurs="0" maxOccurs="1"/>  
    </xs:sequence>  
</xs:complexType>
```

# Usage & Invocation – New Workflow Elements

## 3.4 backCoverType

```
<!--  
    Definition of back cover.  
-->  
<xs:complexType name="backCoverType" <!-- export workflow enhancement -->  
    <xs:sequence>  
        <!-- Specifies the image file that represents the bar code  
            for the printed output. -->  
        <xs:element name = "barcode" type = "unboundedNonNullableString" minOccurs="0" maxOccurs="1"/>  
    </xs:sequence>  
</xs:complexType>
```



# Usage & Invocation – New Workflow Elements

4. The workflow author can specify the newly introduced elements in the workflow definition file to export cover, front letter, back letter and back cover.

Cover



IBM z/OS Management Facility  
Configuration Guide  
Version 2 Release 3

Front Letter

This edition applies to Version 2 Release 3 of z/OS (5650-ZOS) and to all subsequent releases and modifications until otherwise indicated in new editions.

**About this document**

This document provides information for configuring IBM® z/OS® Management Facility (z/OSMF).

This document also provides information for troubleshooting problems related to the use of z/OSMF.

**Who should use this document**

This document provides information for the person who is responsible for setting up z/OSMF on a z/OS system and for diagnosing problems with the product. This document assumes that the user is familiar with the z/OS operating system and its accompanying products.

For ServerPac installers, if you select the ServerPac full system replacement installation type, a base configuration is created through a ServerPac post-installation job, that uses IBM defaults. The default instance of z/OSMF does not include any of the optional plug-ins, such as Network Configuration Assistant, Incident Log, and so on. After you complete the ServerPac installation, you can add plug-ins to z/OSMF, as described in this document.

If you install z/OSMF from a Custom-Built Product Delivery Option (CBPDO) software delivery package, or from a ServerPac order using the ServerPac software upgrade installation type method of installation, you must manually create an instance of z/OSMF, using the planning and configuration information in this document.

**What's new**

For more information about the new tasks, see the online help that ships with z/OSMF. Begin with the topics

What's new and z/OSMF tasks at a glance. The z/OSMF online help is also available in IBM Knowledge

Center at: IBM Knowledge Center ([www.ibm.com/support/knowledgecenter/SSLTBW/welcome](http://www.ibm.com/support/knowledgecenter/SSLTBW/welcome)).

Before using this information and the product it supports, read the information in "Notices" on page 309.

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# Usage & Invocation – New Workflow Elements

## Back Letter

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### Glossary:

A list of terms that are important to understanding how to configure IBM® z/OS® Management Facility (z/OSMF).

## Back Cover



# Usage & Invocation – New Workflow Elements

Restrictions for the new elements:

- The maximum length of the mainTitle and shortTitle cannot exceed 1000 characters.
- The image format of logo and barcode must be one of the following image formats: png, jpeg, jpg, gif or bmp.
- The size of logo and barcode should not exceed 1M.

# Interactions & Dependencies

- To exploit this item, all systems in the Plex must be at the new z/OS level: No
- Software Dependencies
  - None
- Hardware Dependencies
  - None
- Exploiters
  - z/OS Upgrade Workflow and etc.

# Session Summary

- The following z/OS V2R4 z/OSMF Workflows Epic has been explained:
  - **210810 Export Workflow As Printable Format**

# Appendix

- Book updates
  - z/OSMF Programming Guide