

z/OS 3.1 IBM Education Assistant

Solution Name: z/OSMF WLM Policy Advisor

Solution Element(s): z/OSMF Workload Management

July 2023



Agenda

- Trademarks
- Objectives
- Overview
- Usage & Invocation
- Interactions & Dependencies
- Upgrade & Coexistence Considerations
- Installation & Configuration
- Summary
- Appendix

Trademarks

- See url <http://www.ibm.com/legal/copytrade.shtml> for a list of trademarks.
- Additional Trademarks:
 - None.

Objectives

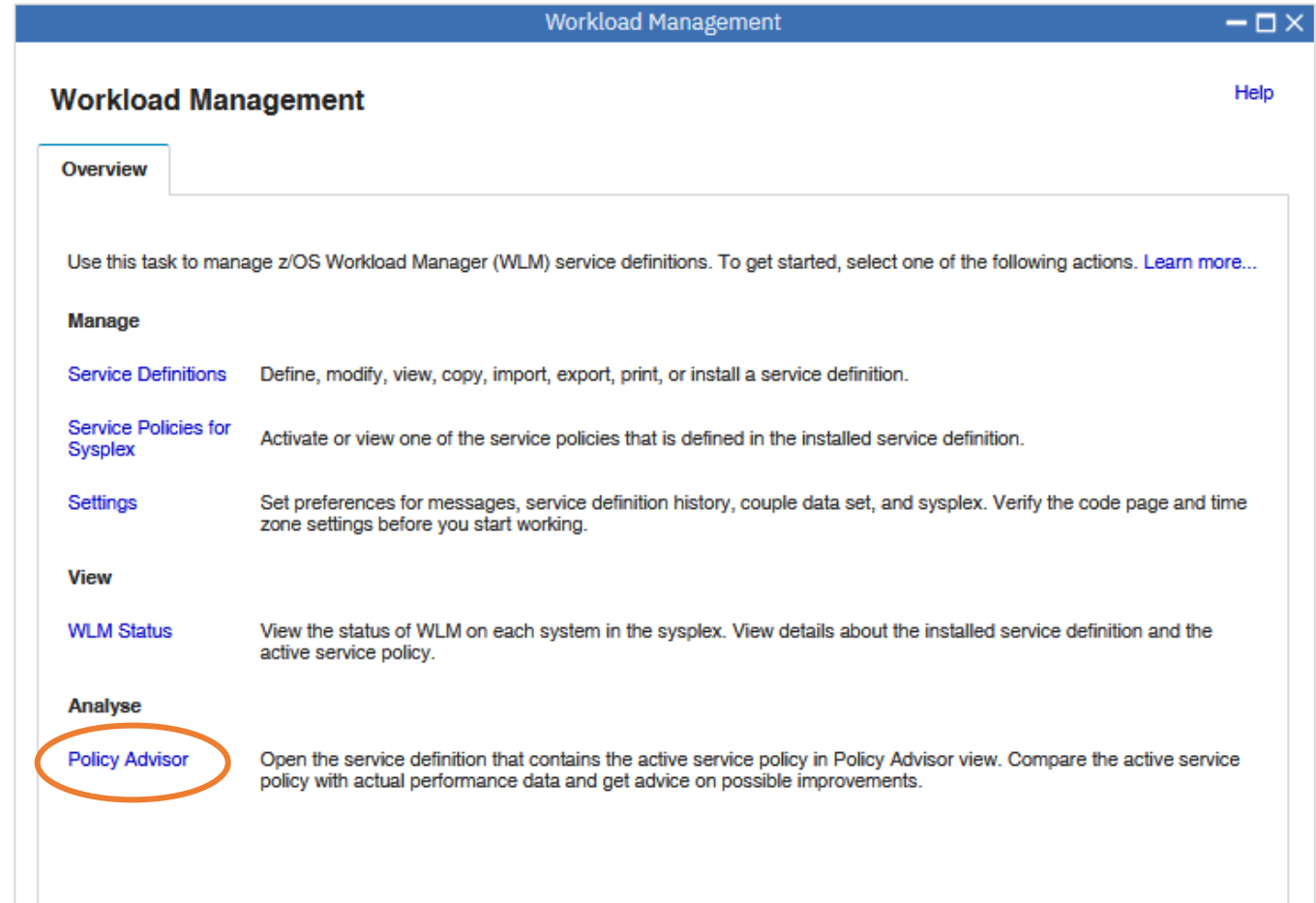
- New function in z/OSMF Workload Management to examine a WLM service definition
- Uses SMF type 72 subtype 3 performance data to analyze the quality of a WLM policy and visualize possible weaknesses

Overview

- Who (Audience)
 - z/OS system programmers looking to simplify the definition of their WLM policy and adapt it to challenging performance situations
- What (Solution)
 - New z/OSMF view launched from z/OSMF WLM takes selected WLM Service Definition and visualizes key SMF 72 performance data
 - Examines selected WLM policy and analyses possible weaknesses based on the SMF data
- Wow (Benefit / Value, Need Addressed)
 - The z/OSMF WLM Policy Advisor assists with proactive problem determination and prevention, and therefore supports the simplification of the WLM policy definition task

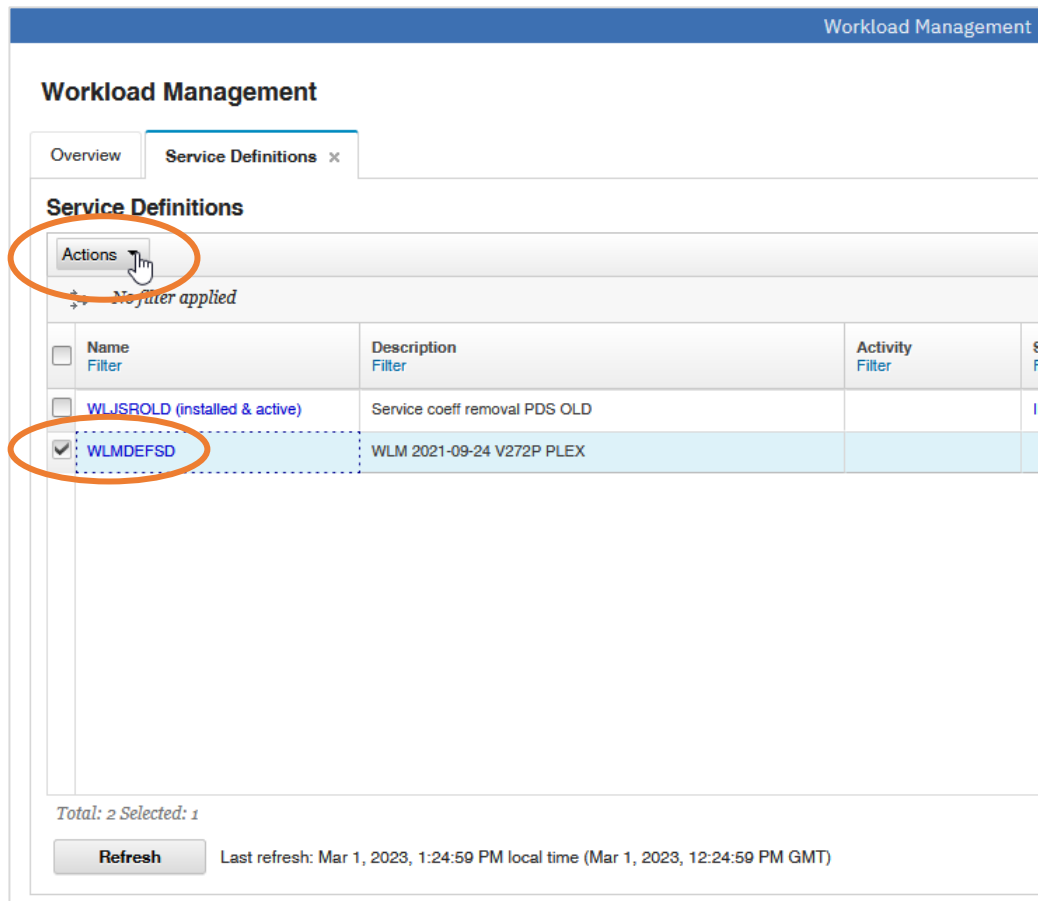
Usage & Invocation: Invocation (1 of 3)

- Invoke a new Policy Advisor view from the z/OSMF Workload Management task:
Click “Policy Advisor” at the bottom of the Overview panel to start a new Policy Advisor view with the currently installed service definition



Usage & Invocation: Invocation (2 of 3)

- Invoke a new Policy Advisor view from the z/OSMF Workload Management task: Select the WLM service definition you want to examine and select the new action “Open Policy Advisor”



Workload Management

Overview Service Definitions x

Service Definitions

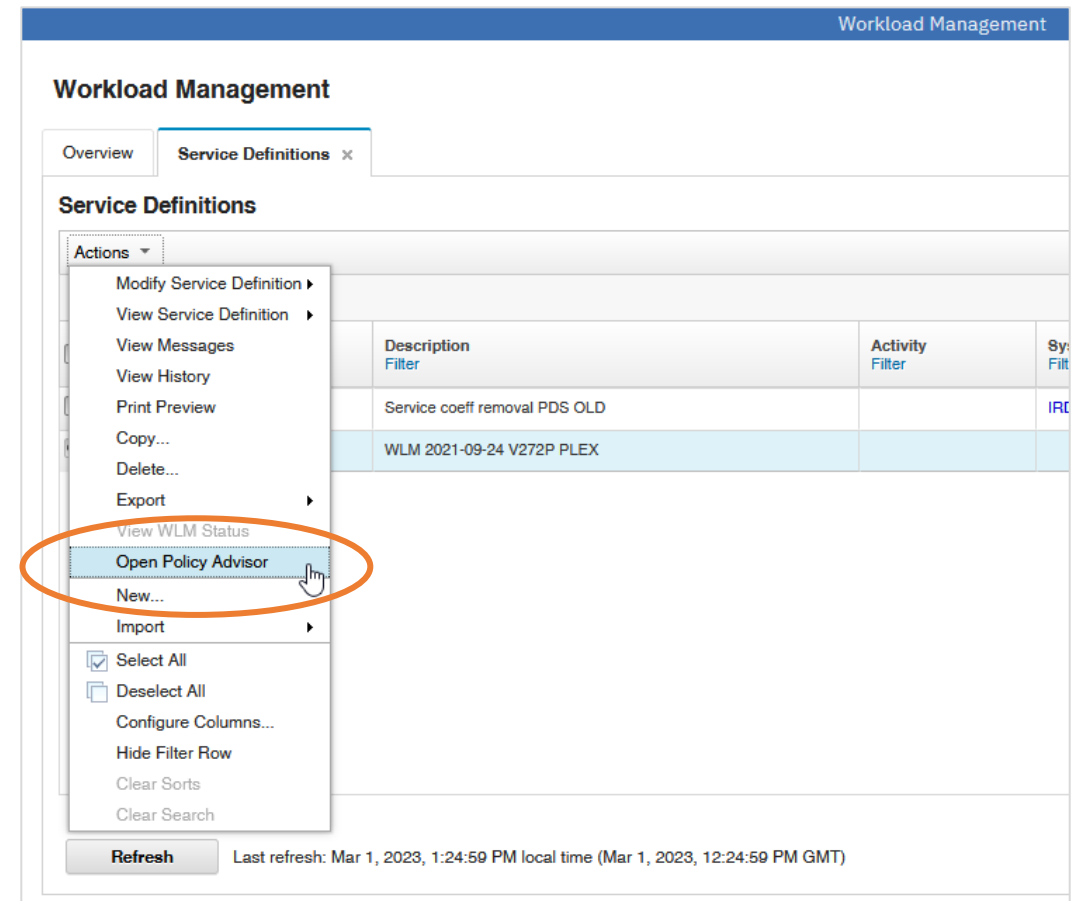
Actions

No filter applied

Name	Description	Activity	System
WLSROLD (installed & active)	Service coeff removal PDS OLD		IR
<input checked="" type="checkbox"/> WLMDEFSD	WLM 2021-09-24 V272P PLEX		

Total: 2 Selected: 1

Refresh Last refresh: Mar 1, 2023, 1:24:59 PM local time (Mar 1, 2023, 12:24:59 PM GMT)



Workload Management

Overview Service Definitions x

Service Definitions

Actions

- Modify Service Definition
- View Service Definition
- View Messages
- View History
- Print Preview
- Copy...
- Delete...
- Export
- View WLM Status
- Open Policy Advisor**
- New...
- Import
- Select All
- Deselect All
- Configure Columns...
- Hide Filter Row
- Clear Sorts
- Clear Search

Name	Description	Activity	System
WLSROLD (installed & active)	Service coeff removal PDS OLD		IR
WLM 2021-09-24 V272P PLEX			

Refresh Last refresh: Mar 1, 2023, 1:24:59 PM local time (Mar 1, 2023, 12:24:59 PM GMT)

Usage & Invocation: Invocation (3 of 3)

- Invoke a new Policy Advisor view from the z/OSMF Workload Management task:
Right click on the WLM service definition you want to examine and select the new action “Open Policy Advisor”

The screenshot displays the 'Workload Management' interface with the 'Service Definitions' tab selected. A table lists service definitions, including 'WLMDEFS' which is selected. A right-click context menu is open over this row, showing various actions. The 'Open Policy Advisor' option at the bottom of the menu is highlighted in blue and circled in orange, indicating the action to be taken.

Name Filter	Description Filter	Activity Filter	Sys Filter
<input type="checkbox"/> WLJSROLD (installed & active)	Service coeff removal PDS OLD		IRC
<input checked="" type="checkbox"/> WLMDEFS	WLM 2021-09-24 V272P PLEX		

Context Menu Options:

- Modify Service Definition
- View Service Definition
- View Messages
- View History
- Print Preview
- Copy...
- Delete...
- Export
- View WLM Status
- Open Policy Advisor**

Total: 2 Selected: 1

Refresh Last refresh: Mar 1, 2023, 1:24:59 PM local time (Mar 1, 2023, 12:24:59 PM GMT)

Usage & Invocation: Data

- On the Data panel of the Policy Advisor, load the SMF type 72 subtype 3 performance data you want to use for the analysis of the selected WLM service definition

General introduction to the Policy Advisor

Information about the selected WLM service definition

Here you can provide a data set with SMF 72.3 data and select the data for analysis

The screenshot displays the 'Policy Advisor - WLMDEFSD (Active Policy: WLMPOL01)' window. The 'Data' tab is selected in the top navigation bar. The main content area is titled 'Service definition and performance data' and includes instructions to load SMF performance data and choose a tab for analysis. Below this, a table shows details for service definition WLMDEFSD, including its description, last modified date, and user. The 'Select SMF data for analysis' section contains a text input for the data set name (WLM.WLMPA.MVS1.SMF72), a 'Scan SMF data' button, and a section for selecting the service policy (WLMPOL01), system(s) (1 x Select system(s)), and day(s) (3 x Select day(s)). A 'Load SMF data' button is at the bottom.

Policy Advisor - WLMDEFSD (Active Policy: WLMPOL01)

IBM WLM Policy Advisor | Data | Importance | Performance Index | Goal

Service definition and performance data

First, load SMF performance data for the analysis of WLM service definition WLMDEFSD.
Then choose one of the following tabs to start your detailed analysis:

- 'Importance' helps to balance the importance levels used in the service definition.
- 'Performance Index' helps to examine the performance achievement of your workload.
- 'Goal' helps to review the defined goals in a policy.

Details for service definition WLMDEFSD

Description	WLM 2021-09-24 V272P PLEX
Last modified	Thu Sep 23 08:25:30 GMT 2021
Last modified by	XCH2033

Select SMF data for analysis:

Data set name

WLM.WLMPA.MVS1.SMF72

Scan SMF data

Service policy: WLMPOL01

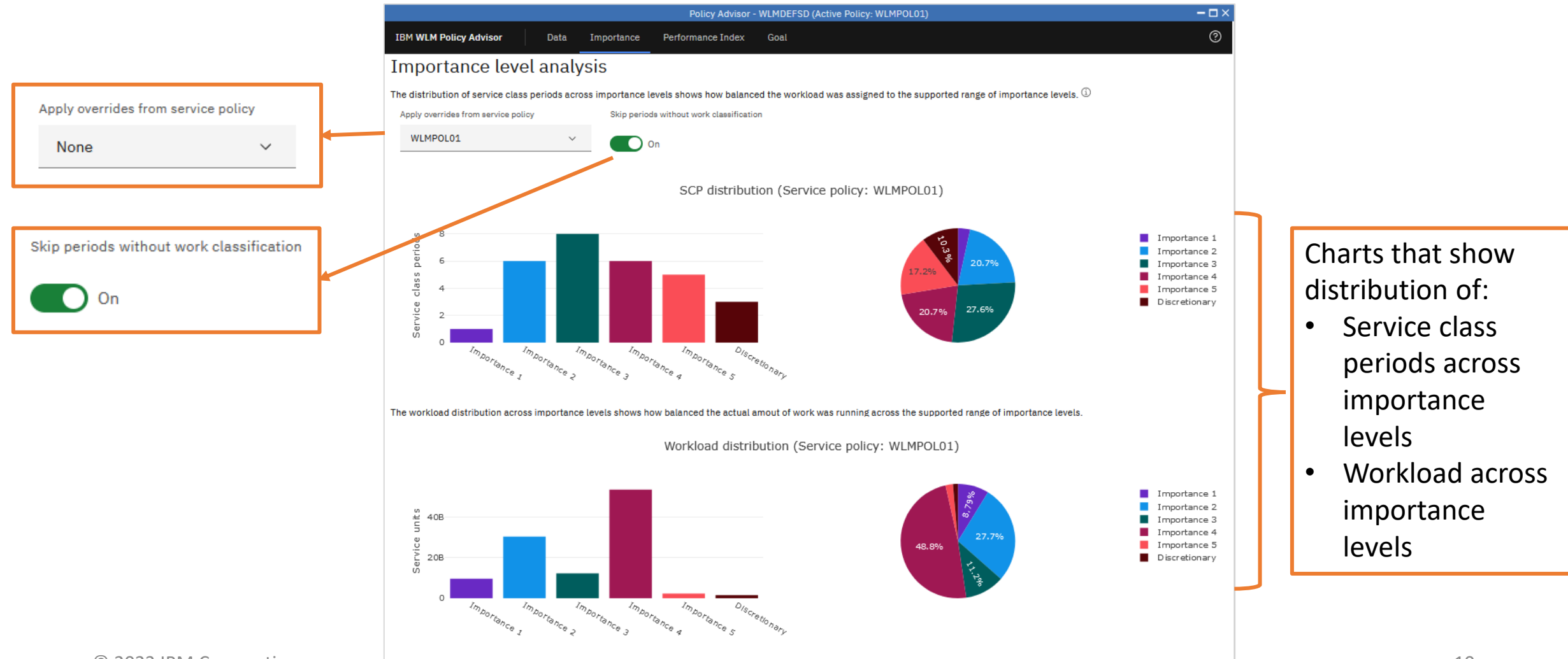
System(s): 1 x Select system(s)

Day(s): 3 x Select day(s)

Load SMF data

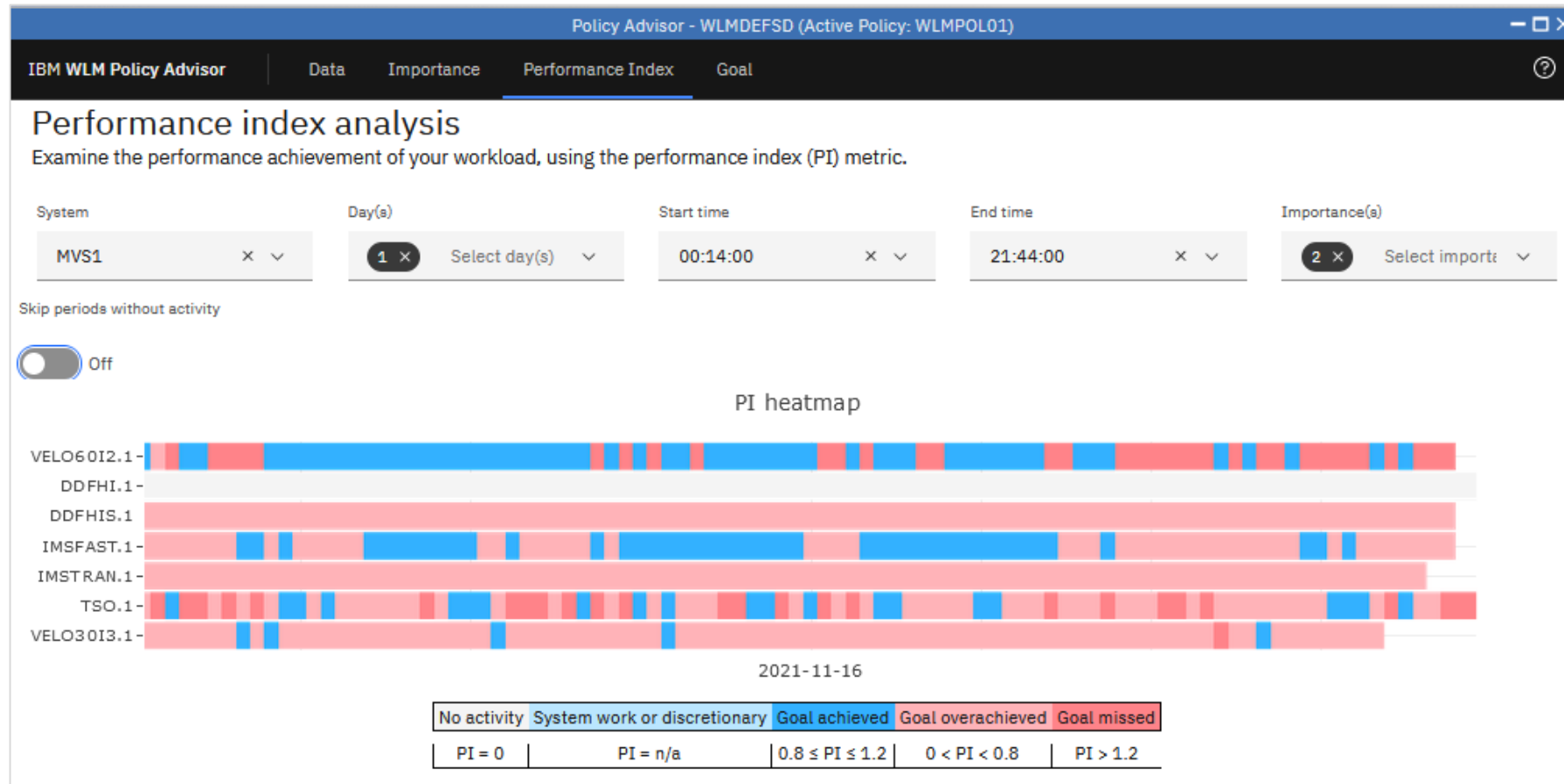
Usage & Invocation: Importance

- On the Importance panel of the Policy Advisor, examine the distribution of service class periods and workload across importance levels:



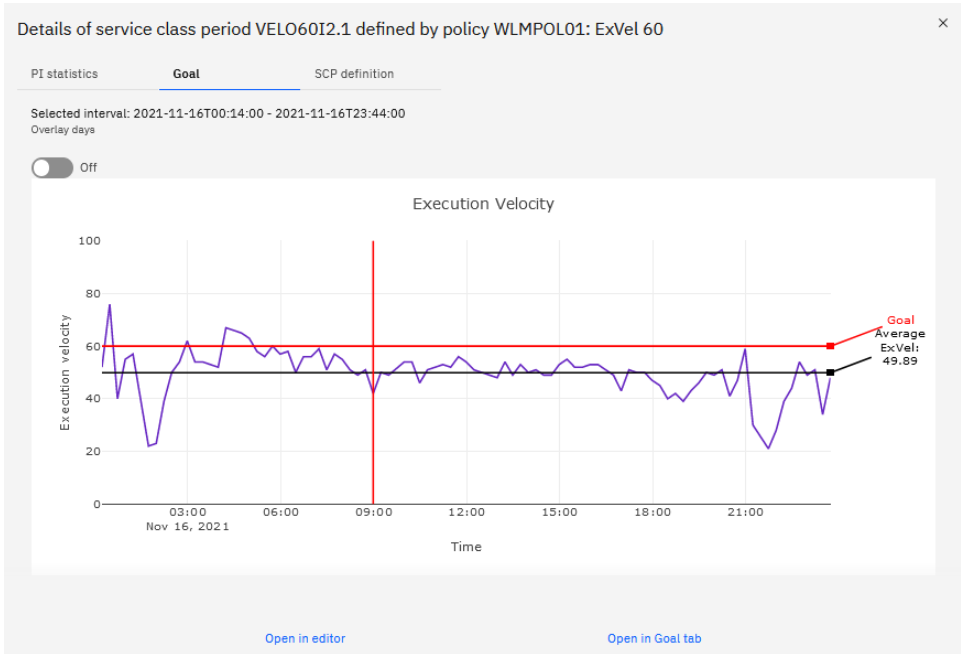
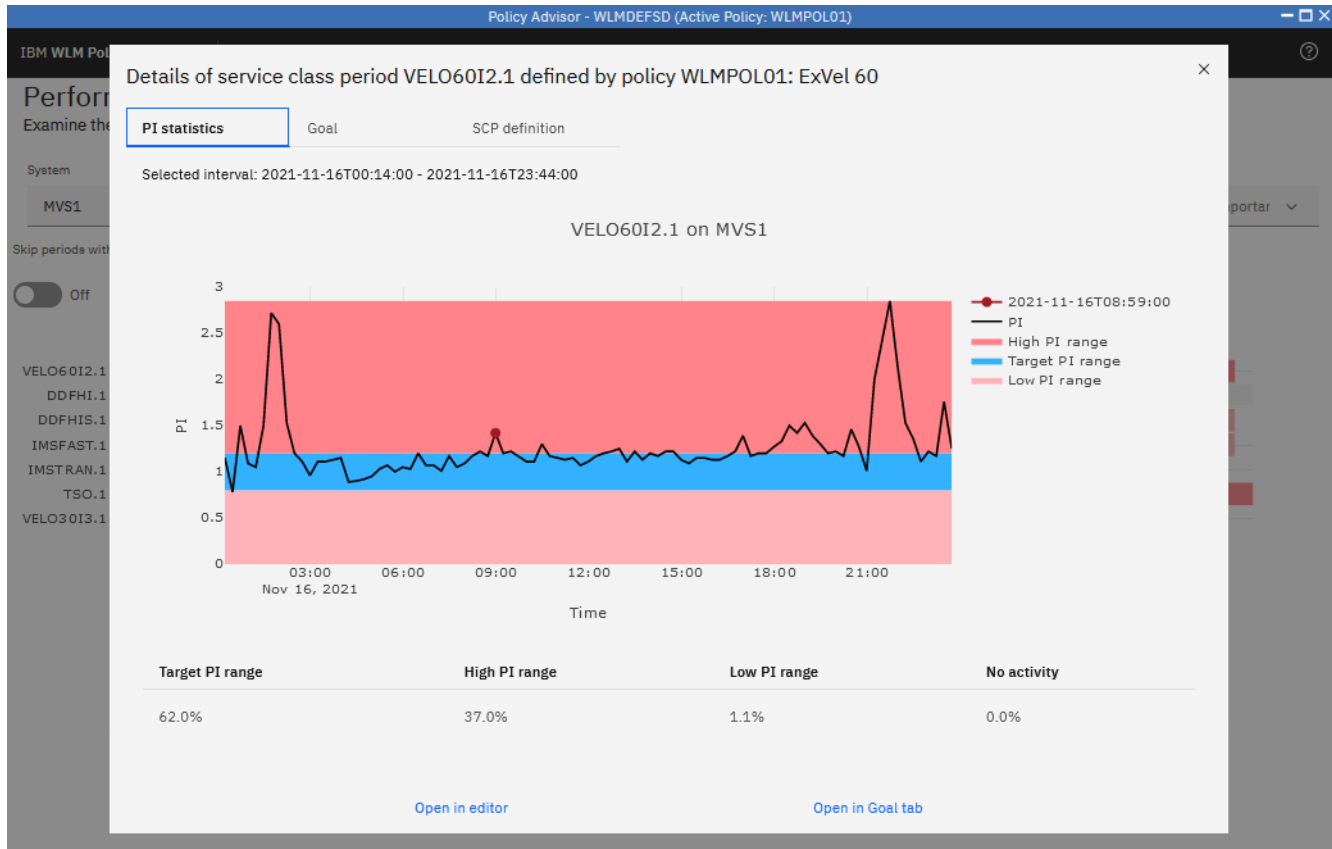
Usage & Invocation: Performance Index (1 of 2)

- On the Performance Index panel of the Policy Advisor, examine how service classes are performing over time. Filter by time and importance to investigate the performance of your workload. Click on any colored tile within the heatmap to drill down...



Usage & Invocation: Performance Index (2 of 2)

...and get further information about performance index and goal fulfillment. Click on “Open in editor” to jump back to the z/OSMF WLM task, in case you want to modify this service class.



Details of service class period CICTRAN.1 defined by policy WLMPOL01: PercRt 75% < 10000ms

PI statistics | Goal | SCP definition

Attributes

Workload	Name	Period	Imp	GoalType	PercentileGoal	ResponseTime	Duration	CpuCritical	IoPriorityGroup	Hono
ONLINE	CICTRAN	1	3	PercRT	75	00:00:10.000	n/a	No	Normal	n/a

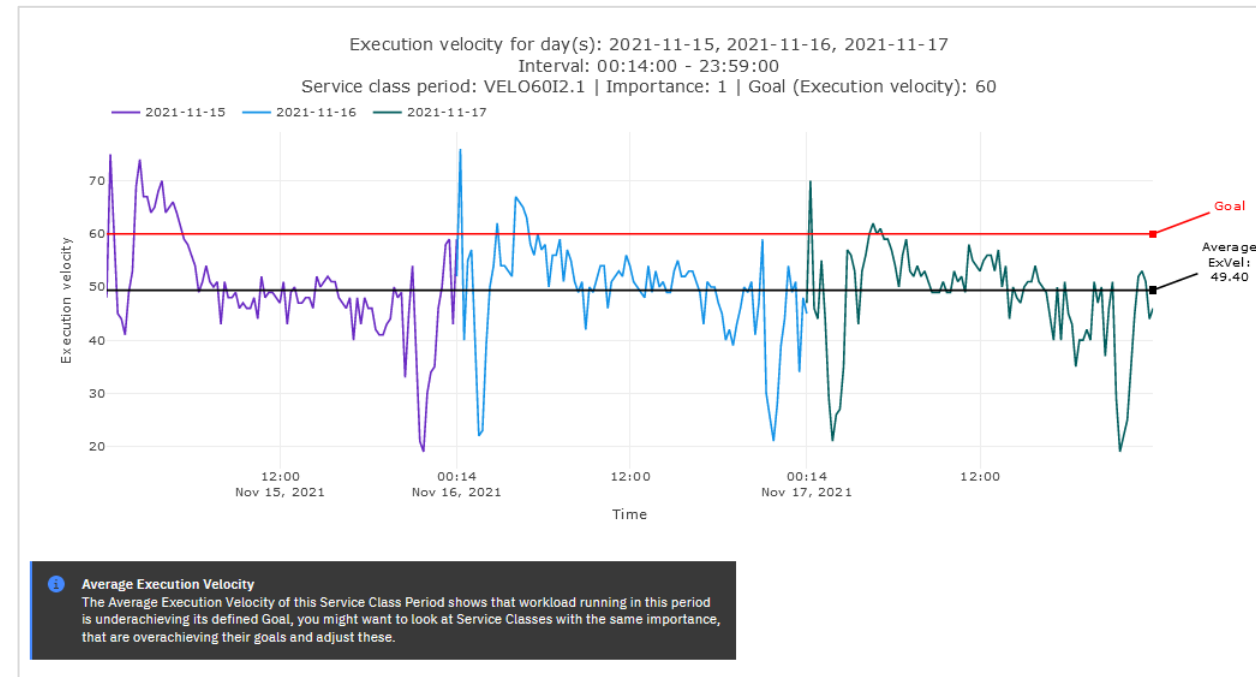
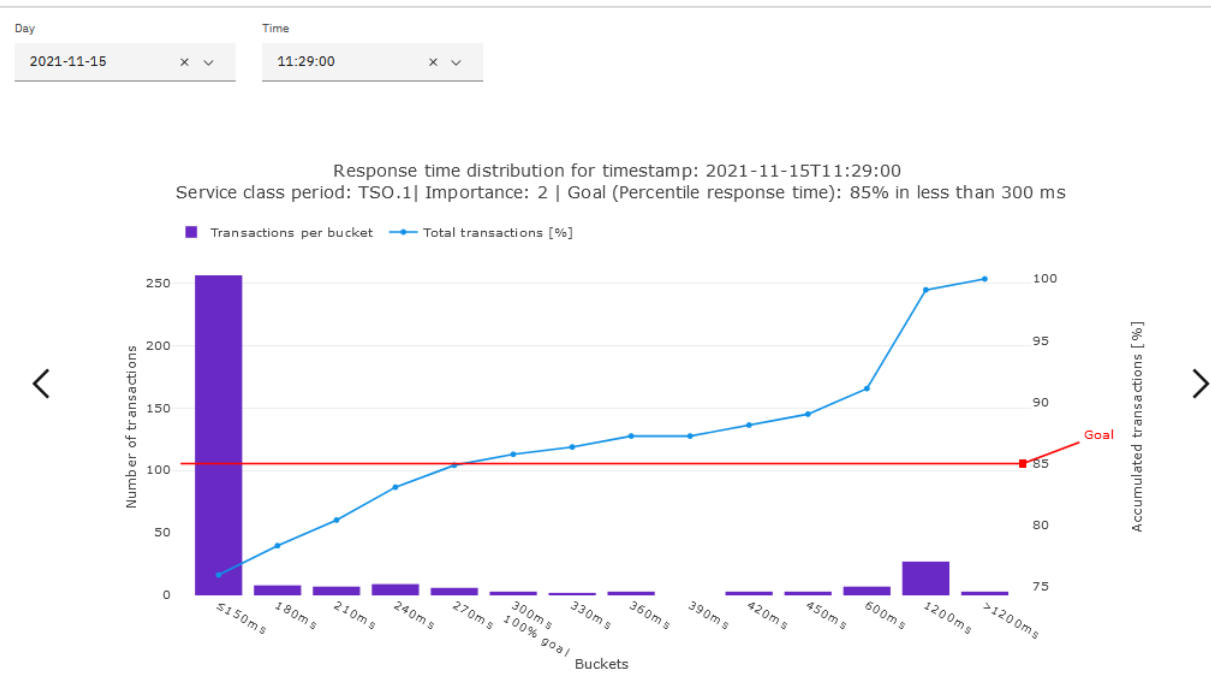
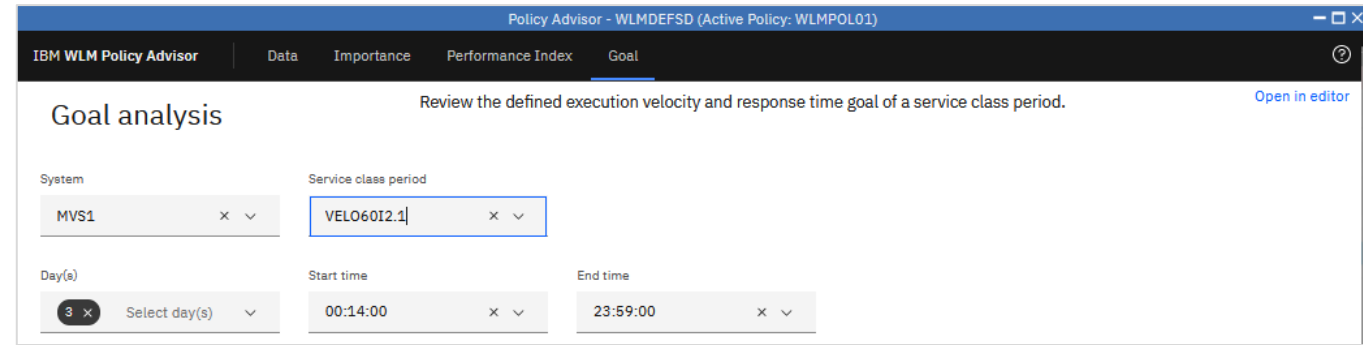
Classifications

Subsystem	Level	QualifierType	QualifierValue	ServiceClass	ReportClass	Start	StorageCritical	Description
CICS	0	n/a	n/a	CICTRAN	CICTRAN	n/a	n/a	CICS Tran. rules

Open in editor | Open in Goal tab

Usage & Invocation: Goals

- On the Goals panel of the Policy Advisor, examine individual service class periods and how well they perform. Filter to get detailed insights into goal fulfillment for different goal types on interval level



Interactions & Dependencies

- Software Dependencies
 - None.
- Hardware Dependencies
 - None.
- Exploiters
 - None.

Upgrade & Coexistence Considerations

- To exploit this solution, all systems in the Plex must be at the new z/OS level: No.

Installation & Configuration

- None.

Summary

- The z/OS 3.1 enhancement “z/OSMF WLM Policy Advisor” has been introduced.
- This functionality can be invoked from the z/OSMF Workload Management task and examines the selected WLM service definition.
- It helps a z/OS system programmer to analyze the quality of a WLM policy based on key SMF 72 performance data.

Appendix

- Book updates
 - IBM z/OS Management Facility Online Help