

This is the tutorial for IBM's Application Performance Analyzer for z/OS[®], one of the IBM zSeries[®] problem determination tools.

Application Performance Analyzer training sections



- Introduction
- The application tuning process
- **Entering observation requests**
 - Navigation and options
 - Entering requests
 - Examples
- Viewing analysis reports
- An analysis walkthrough
- Printing analysis reports
- Working with program source



2

IBM Application Performance Analyzer for z/OS tutorial

© 2010 IBM Corporation

In this section: “Entering observation requests”, you will learn how to initiate observation requests, to have APA monitor an application and collect performance data. You will start with learning how to navigate the APA panels and how to enter a new request. Then you will go through some examples of how to enter various types of requests.

The Observation List display panel



File View Navigate Help

R02: IBM APA for z/OS Observation Lis
Command ==>

NEW To define a new measurement
TNEW To define a threshold measur
CONNECT To connect to another instanc
VERSION To display version information for all instances
IMPORT To IMPORT a previously Exp
HIDE To remove these command
/ On top of any ReqNum to

ReqNum	Owned By	Description
1580	MACHIN2	v10ref8-uc29
1575	MACHIN2	v10ref8-uc20-v
1568	KOEHLER	DDF
1566	KOEHLER	DDF
1528	MACHIN2	v10ref8-uc21x5
1519 +	TSS03	XSAMAPA - CRUN
1507 +	TSS13	
1501	TSS21	CPU Bound Samp
1497	AGM01	CICS MASS #2

3 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

The Observation List Panel is the initial display panel in APA

Use the **SHOW** and **HIDE** primary commands to display and hide the list of commands

Line commands are entered in the **ReqNum** heading field and on the **ReqNum** field in each detail line

Enter these commands in the **ReqNum** heading field:
SD -to sort the list by date/time
SJ -to sort the list by job name
SR -to sort the list by request number

The person who installed APA on your system will have set up an option on your ISPF menus to get to APA. When you get there, this is the first panel that is presented, the observation list. This panel displays a list of observation requests. At the top portion of the screen, there is a list of commands along with their description that can be used on this panel. For example, you can use the Show and Hide primary commands to display and hide the list of commands on this panel. Once you become familiar with these commands, you should use the Hide command to remove these commands from your display. That way you can see more of your observation requests upon your initial display of this panel. Notice the Request Number field along the left side of the panel. Line commands can be entered in the ReqNum heading field and on each detail line of the request number.

Customizing the observation list display



File **View** Navigate Help

R02: IBM APA for z/OS Observation List (CAZA) Row 00145 of 00161
Command ==> Scroll ==> CSR

ReqNum	Owned By	Description	Job Name	Date/Time	Samples	Status
1580	MACHIN2	v10ref8-uc2				Ended
1575	MACHIN2	v10ref8-uc2				Ended
1568	KOEHLER	DDF				Ended
1566	KOEHLER	DDF				Ended
1528	MACHIN2	v10ref8-uc2				REPEAT
1519	+ TSS03	XSAMAPA - C				STEPS
1507	+ TSS13					STEPS
1501	TSS21	CPU Bound Sampl	TSS21A	Oct-12 12:33	50,000	Ended
1497	AGM01	CICS MASS #2	CICS32B	Oct-9 9:50	1,000	Ended
1496	AGM01				0,000	Ended
1495	AGM01	DB2 MASS #2	DBAC27	Oct-9 9:47	984	Ended
1494	AGM01	DB2 MASS #2	DBAC27	Oct-9 9:47	825	Ended
1493	AGM01	DB2 MASS #1	DB8GWL1	Oct-9 9:48	7,652	Ended
1492	AGM01	DB2 MULTIPLE AD	DBACS27	Oct-9 9:47	7,776	Ended
1491	AGM01	DB2 SP Call	DBACS27	Oct-9 9:47	7,776	Er
1490	MACHIN2	APA V7 FILE	DB2V9TEP	Oct-8 10:15	10,043	Er
1489	A27	KNLIN SPLIT MOD	DB8LOCKT	Oct-8 10:05	5,153	Er

Method 1: Put your cursor on the View menu, and press enter...

ENTER

4 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

Be aware that a lot of the screens and reports in APA can be customized. Each report or screen can have its own set of options, and you can customize them on each screen's individual options panel. There are two ways to bring up a screen's options panel. The first method is to pull down the view menu. Just put your cursor on the word View at the top of the screen, and press Enter.

Method 1: The View pull down



File View Navigate Help

R02: 1. Report Setup (SETUP) t (CAZA) Row 00145 of 00161
Comma Scroll ==> CSR

ReqNum	Owned By	Description	Job Name	Date/Time	Samples	Status
1580	MACHIN2	v10ref8-uc2				Ended
1575	MACHIN2	v10ref8-uc2				Ended
1568	KOEHLER	DDF				Ended
1566	KOEHLER	DDF				Ended
1528	MACHIN2	v10ref8-uc2				REPEAT
1519 +	TSS03	XSAMAPA - C				STEPS
1507 +	TSS13					STEPS
1501	TSS21	CRU Bound Sampl	TSS21A	Oct-12 12:33	50,000	Ended
1497	AGM01	CICS MASS #2	CICS32B	Oct-9 9:50	1,000	Ended
1496	AGM01	CICS MASS #2	CICS32B	Oct-9 9:50	1,000	Ended
1495	AGM01	DB2 MASS #2	DBAC27	Oct-9 9:47	984	Ended
1494	AGM01	DB2 MASS #2	DBAC27	Oct-9 9:47	825	Ended
1493	AGM01	DB2 MASS #1	DB8GWM1	Oct-9 9:48	7,652	Ended
1492	AGM01	DB2 MULTIPLE AD	DBACS27	Oct-9 9:47	7,776	Ended
1491	AGM01	DB2 SP Call	DBACS27	Oct-9 9:47	7,776	Ended
1490	MACHIN2	APA V7 FILE	DB2V9TEP	Oct-8 10:15	10,043	Ended
1489	A27	KNLIN SPLIT MOD	DB8LOCKT	Oct-8 10:05	5,153	Ended

5 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

In the pull down menu, select the option for SETUP. For this screen, it is option one. Press Enter.

Options panel using method 1



```
File View Navigate Help
-
R  Options for Observation Session List          145 of 00161
C                                     11 ==> CSR
R                                     Status
  Display requests according to 'wildcard' patterns:
  Owner User Id . . . *
  Job Name . . . . *

Enter "/" to select an option
- Automatically launch Realtime Monitor for new
  active measurement.
- Prompt for confirmation before deleting
  measurement request.
- Sort observation list by date/time default
  is by request number.

1494  AGM01  DB2 MASS #2  DB8GWLM1  Oct-9  9:49  5,825  Ended
1493  AGM01  DB2 MASS #1  DB8GWLM1  Oct-9  9:48  7,652  Ended
1492  AGM01  DB2 MULTIPLE AD DBACS27  Oct-9  9:47  7,776  Ended
1491  AGM01  DB2 SP Call  DBACS27  Oct-9  9:47  7,776  En
1490  MACHIN2 APA V7 FILE  DB2V9TEP  Oct-8  10:15  10,043  Er
1489  A27  KNLIN SPLIT MOD DB8LOCKT  Oct-8  10:05  5,153  Er
```

The Options panel is displayed

PF3

6 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

That displayed the setup panel for the current screen, the observation list. You have options here to filter the observations that are displayed. By default, there are asterisks in the “owner user ID” and “job name” options. That means that all observation requests are displayed in your list. You might prefer to limit your list, so you do not have to display everyone else’s observations. For example, you might want to enter your TSO ID in the “owner user ID” option, so that only your requests are shown. PF3 to return.

Method 2: The SETUP command



File View Navigate Help

R02: IBM APA for z/OS Observation List (CAZA) Row 00145 of 00161
Command ==> **SETUP** Scroll ==> CSR

ReqNum	Owned By	Description	Job Name	Date/Time	Samples	Status
1580	MACHIN2	v10ref8-uc29				Ended
1575	MACHIN2	v10ref8-uc20				Ended
1568	KOEHLER	DDF				Ended
1566	KOEHLER	DDF				Ended
1528	MACHIN2	v10ref8-uc20				REPEAT
1519 +	TSS03	XSAMAPA - CI				STEPS
1507 +	TSS13					STEPS
1501	TSS21	CPU Bound Sampl	TSS21H	Oct-12 12:33	50,000	Ended
1497	AGM01	CICS MASS #2	CICS32B	Oct-9 9:50	1,000	Ended
1496	AGM01	CI			000	Ended
1495	AGM01	DB			984	Ended
1494	AGM01	DB			825	Ended
1493	AGM01	DB2 MASS #1	DB8GWM1	Oct-9 9:48	7,652	Ended
1492	AGM01	DB2 MULTIPLE AD	DBACS27	Oct-9 9:47	7,776	Ended
1491	AGM01	DB2 SP Call	DBACS27	Oct-9 9:47	7,776	Er
1490	MACHIN2	APA V7 FILE	DB2V9TEP	Oct-8 10:15	10,043	Er
1489	A27	KNLIN SPLIT MOD	DB8LOCKT	Oct-8 10:05	5,153	Er

Method 2: Use the **SETUP** command

ENTER

7 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

The other way to display the setup panel for a screen is with the SETUP command. Just type SETUP on the command line, and press Enter.

Options panel using method 2



The Options panel is displayed

```
File View Navigate Help
-
R Options for Observation Session List 001 of 00081
C                                     11 ==> CSR
R                                     Status
  Display requests according to 'wildcard' patterns:
  Owner User Id . . . MACHIN*
  Job Name . . . . *
Enter "/" to select an option
- Automatically launch Realtime Monitor for new
  active measurement.
- Prompt for confirmation before deleting
  measurement request.
- Sort observation list by date/time, default
  is by request number.
                                     Ended
                                     Ended
                                     Ended
                                     Ended
                                     STEPS
                                     Thresh
                                     Ended
                                     Thresh
```

You can limit the display to only your requests

An * wildcard can be used

```
2774 ECSLJ0 ECLEAR FFES
2766 + MACHIN2 v9-uc3
2760 + MACHIN2 v9-uc3 MQPUT Jan-4 6:23 11,111 STEPS
2759 CHIDGEY CHIDGEYX Dec-17 13:29 10,000 Ended
2757 CHIDGEY Start monitorin CHIDGEYM Dec-16 13:30 5,000 Thresh
2756 CHIDGEY CICSC32F Dec-16 13:01 10,000 Ended
```

Enter

8 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

And that displayed the setup panel again.

In this example, a filter is specified by typing the first few letters of the user ID followed by an asterisk in the "owner user ID" field. Then Enter is pressed.

The observation list filtered by request owner



File View Navigate Help

R02: IBM APA for z/OS Observation List (CAZA) Row 00001 of 00138
 Command ==> Scroll ==> CSR

ReqNum	Owned By	Description	Job Name	Date/Time	Samples	Status
2684	MACHIN2	- tes				Ended
2682	MACHIN2	v10				Ended
2681	MACHIN2	v10re				Ended
2680	MACHIN2	v9re				Ended
2679	MACHIN2	v9-uc				Ended
2678	MACHIN2	v10re				Ended
2677	MACHIN2	v10re				Ended
2671 +	MACHIN2	v10re				EPS
2542 +	MACHIN2	v10ref2-uc19v1	STEPS	Dec-8 9:02	11,111	STEPS
2541	MACHIND	v10ref2-uc15v2	DB2DATA	Dec-8 8:20	66,750	Ended
2540	MACHIND	v10ref2-uc15	DB2DATA	Dec-8 8:12	76,475	Ended
2539	MACHIN2	vq10ref2-uc26	DB2V9TEP	Dec-8 7:53	19,314	Ended
2538	MACHIN2	v10ref2-uc30v4	-	Dec-8 6:47	149	Ended
2537	MACHIN2	v10ref2-uc30v3	-	Dec-8 6:37	144	Ended
2534 +	MACHIN2	v10ref2-uc30	DSNTEJ6U	Dec-8 6:33	639	Ended
2533 +	MACHIN2	v10ref2-uc30	DSNTEJ6R	Dec-8 6:31	1,944	Ended
2532	MACHIN2	v10ref2-uc13v2	DONDRVRN	Dec-7 14:15	80,666	Ended

Many of the other panels and reports in APA can also be customized

Customize them the same way... with the SETUP command or from the View menu

9
IBM Application Performance Analyzer for z/OS tutorial
© 2010 IBM Corporation

Now, the observation list is only showing requests where the owner ID matches the filter. Consider setting it up this way if there are so many observation requests on your system making it hard to find your own. The options that you specify are just for you, and they are permanent settings. Remember that a lot of the other panels and reports in APA can also be customized, not just the observation list. Just bring up the panel or report that you want to customize, and then use the SETUP command or select SETUP from the view menu.

Find an observation in the list



ROZ: IBM APP FOR Z/OS 100

Command ==> **F CICSC32** **ENTER**

Row 00001 of 00138
Scroll ==> CSR

ReqNum	Owned By	Description	Job Name	Date/Time	Samples	Status
2684	MACHIN2	- test	-	Dec-9 7:53	155	Ended
2682	MACHIN2	V10	CICSC41F	Dec-8 11:11	11,111	Ended
2681	MACHIN2	v10ref7-uc7	CICSC32F	Dec-8 11:09	99,999	Ended
2680	MACHIN2	v9ref-uc17	CICSC32F	Dec-8 11:09	99,999	Ended
2679	MACHIN2	v9-uc3	MQPUT	Dec-8 11:09	774	Ended
2678	MACHIN2	v10ref2-uc18	DBJOB8	Dec-8 14:25	236	Ended
2677	MACHIN2	v10ref2-uc14				
2671 +	MACHIN2	v10ref2-uc19v1				
2542 +	MACHIN2	v10ref2-uc19v1				
2541	MACHIND	v10ref2-uc15v2	DB2DATA	Dec-8 8:20	66,750	Ended
2540	MACHIND	v10ref2-uc15	DB2DATA	Dec-8 8:12	76,475	Ended
2539	MACHIN2	vq10ref2-uc26	DB2V9TEP	Dec-8 7:53	19,314	Ended
2538	MACHIN2	v10ref2-uc30v4	-	Dec-8 6:47	149	Ended
2537	MACHIN2	v10ref2-uc30v3	-	Dec-8 6:37	144	Ended
2534 +	MACHIN2	v10ref2-uc30	DSNTEJ6U	Dec-8 6:33	639	Ended
2533 +	MACHIN2	v10ref2-uc30	DSNTEJ6R	Dec-8 6:31	1,944	Ended
2532	MACHIN2	v10ref2-uc13v2	DONDRVRN	Dec-7 14:15	80,666	Ended

The FIND command is an easy way to find a session.

10 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

Of course, one easy way to find a request that you are looking for is with the “find” command. For example, here, just type “F space and a character search string”, and Enter. The character string is found in any of the columns on the panel. So remember, you can always use the find command if there are a lot of entries in the list.

The / (slash) line command



File View Navigate Help

R02: IBM APA for z/OS Observation List (CAZA) Row 00001 of 00138
Command ==> Scroll ==> CSR

ReqNum	Owned By	Description	Job Name	Date/Time	Samples	Status
<u>/ 2684</u>	MACHIN2	- test	-	Dec-9 7:53	155	Ended
<u>2682</u>	MACHIN2	V10	CICSC41F	D		
<u>2681</u>	MACHIN2	v10ref7-uc7	CICSC32F	D		
<u>2680</u>	MACHIN2	v9ref-uc17	CICSC32F	D		
<u>2679</u>	MACHIN2	v9-uc3	MQPUT	D		
<u>2678</u>	MACHIN2	v10ref2-uc18	DBJOB8	D		
<u>2677</u>	MACHIN2	v10ref2-uc14	MACHIND	D		
<u>2671</u> +	MACHIN2	v10ref2-uc19v1	STEPS	D		
<u>2542</u> +	MACHIN2	v10ref2-uc19v1	STEPS	D		
<u>2541</u>	MACHIND	v10ref2-uc15v2	DB2DATA	Dec		
<u>2540</u>	MACHIND	v10ref2-uc15	DB2DATA	Dec-8 8:12	76,475	Ended
<u>2539</u>	MACHIN2	vq10ref2-uc26	DB2V9TEP	Dec-8 7:53	19,314	Ended
<u>2538</u>	MACHIN2	v10ref2-uc30v4	-	Dec-8 6:47	149	Ended
<u>2537</u>	MACHIN2	v10ref2-uc30v3	-	Dec-8 6:37	144	Ended
<u>2534</u> +	MACHIN2	v10ref2-uc30	DSNTEJ6U	Dec-8 6:33	639	Er
<u>2533</u> +	MACHIN2	v10ref2-uc30	DSNTEJ6R	Dec-8 6:31	1,944	Er
<u>2532</u>	MACHIN2	v10ref2-uc13v2	DONDRVRN	Dec-7 14:15	80,666	Er

The / (slash) line command is the only one you need to remember!
It displays a list of all the line commands

ENTER

11 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

You can work with entries by typing line commands in the leftmost column. There are a lot of things you can do, and so there are a lot of line commands. The only line command that you really need to remember is the slash. It displays a list of all the line commands. Just type “slash” as a line command next to an entry, and press Enter.

Result of the / line command (1 of 2)



The / (slash) line command shows you a list of all of the line commands

File View Navigate Help

001 of 00138

ll ==> CSR

Enter S to select a function from this menu. The line command (Yellow) can also be entered on the main panel.

S	To Perform the Following	LineCmd	Status
-	display context help information	?	Ended
-	show additional details about this line	++	Ended
-	expand to reveal next level entries	+	Ended
-	collapse to hide next level entries	-	Ended
-	delete the request	D	Ended
-	analysis reports or realtime monitor	R	Ended
-	analysis reports or realtime monitor	S	STEPS
-	create new observation request	NEW	STEPS
-	cancel active request	CAN	Ended

You can select from the list

2539	MACHIN2	vq10ref2-uc26	DB2V9TEP	Dec-8	7:53	19,314	Ended
2538	MACHIN2	v10ref2-uc30v4	-	Dec-8	6:47	149	Ended
2537	MACHIN2	v10ref2-uc30v3	-	Dec-8	6:37	144	Ended
2536	MACHIN2	v10ref2-uc30	DSNTEJ6U	Dec-8	6:33	639	Er
2535	MACHIN2	v10ref2-uc30	DSNTEJ6R	Dec-8	6:31	1,944	Er
2532	MACHIN2	v10ref2-uc13v2	DONDRVRN	Dec-7	14:15	80,666	Er

PF8

12 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

A pop-up window is displayed showing all of the line commands you can use for that entry, and you can select one from the list. Over on the right side, the actual line command is indicated that you can use instead of a "/". For example, you can use a plus sign as a line command to expand an entry, or an "R" to view analysis reports or the real-time monitor. There are even a few more, just scroll down to display them by pressing PF8.

Result of the / line command (2 of 2)



File View Navigate Help

R	—	modify queued request	MOD	001 of 00138
C	—	do not auto delete request file	KEEP	11 ==> CSR
	—	Run this sample again immediately	SUB	
R	—	Export this sample file	EXP	Status
	—	Tag measurement	T	Ended
	—	Variance (comparison) report	V	Ended
	—	Set Trigger requirements	TR	Ended

Additional line commands (after PF8)

2539	MACHIN2	vq10ref2-uc26	DB2V9TEP	Dec-8	7:53	19,314	Ended
2538	MACHIN2	v10ref2-uc30v4	-	Dec-8	6:47	149	Ended
2537	MACHIN2	v10ref2-uc30v3	-	Dec-8	6:37	144	Ended
2536	MACHIN2	v10ref2-uc30	DSNTEJ6U	Dec-8	6:33	639	Er
2535	MACHIN2	v10ref2-uc30	DSNTEJ6R	Dec-8	6:31	1,944	Er
2532	MACHIN2	v10ref2-uc13v2	DONDRVRN	Dec-7	14:15	80,666	Er

You can select from the list

PF7

13 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

And here are the rest of the line commands that are available for this entry. Press PF7 to scroll back up.

Select a line command



The / (slash) line command shows you a list of all of the line commands

```
File View Navigate Help
-
R
C Enter S to select a function from this menu. The line
  command (Yellow) can also be entered on the main panel.
R
  S To Perform the Following LineCmd Status
  - - - - -
  / display context help information ? Ended
  ++ show additional details about this line ++ Ended
  + expand to reveal next level entries + Ended
  - collapse to hide next level entries - Ended
  D delete the request D Ended
  R analysis reports or realtime monitor R Ended
  S analysis reports or realtime monitor S STEPS
  NEW create new observation request NEW STEPS
  CAN cancel active request CAN Ended
  Ended
2539 MACHIN2 vq10ref2-uc26 DB2V9TEP Dec-8 7:53 19,314 Ended
2538 MACHIN2 v10ref2-uc30v4 - Dec-8 6:47 149 Ended
2537 MACHIN2 v10ref2-uc30v3 - Dec-8 6:37 144 Ended
2536 MACHIN2 v10ref2-uc30 DSNTEJ6U Dec-8 6:33 639 Ended
2535 MACHIN2 v10ref2-uc30 DSNTEJ6R Dec-8 6:31 1,944 Ended
2532 MACHIN2 v10ref2-uc13v2 DONDRVRN Dec-7 14:15 80,666 Ended
```

You can select from the list

Enter

14 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

To select one of the line commands enter an “S” in the prefix area. Here, the “++” line command is selected to show additional details. Enter.

Result of the ++ line command



File View Navigate Help

More: +

General

Request Number 2684
Request Description - test
Request Status Ended
Owner Id MACHIN2
Time of Request Wednesday Dec 9 2009 7:44:35.44
Session Start Time Wednesday Dec 9 2009 7:53:25.40
Session End Time Wednesday Dec 9 2009 7:53:47.39
Session Duration 0 minutes, 21.99 seconds
Session Delete Date Friday Jan 8 2010 7:53:49.81

Measurement Criteria

Select by Job Name -
Select by Sys Name STLABF6
Sample Interval 1980 microseconds
Duration 22 seconds

The ++ line command shows details.

2534	+	MACHIN2	v10ref2-uc30	DSNTEJ6U	Dec-8	6:33	639	Er
2533	+	MACHIN2	v10ref2-uc30	DSNTEJ6R	Dec-8	6:31	1,944	Er
2532		MACHIN2	v10ref2-uc13v2	DONDRVRN	Dec-7	14:15	80,666	Er

15 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

PF3

The “++” line command shows detailed information. When you use “++” on an observation request, as was done here, it shows you details about the request. Press PF3 to return.

Application Performance Analyzer training sections



- Introduction
- The application tuning process
- Entering observation requests
 - Navigation and options
 - Entering requests
 - Examples
- Viewing analysis reports
- An analysis walkthrough
- Printing analysis reports
- Working with program source



Next, you will explore the process of entering new observation requests.

Enter a NEW observation session using method 1



File View Navigate Help

R02: IBM APA for z/OS Observation List (CAZA) Row 00010 of 00051
 Command ==> _____ Scroll ==> CSR

ReqNum	Owned By	Description	Job Name	Date/Time	Samples	Status
<u>2760</u> +	MACHIN2	v9-uc3	MQPUT	Jan-4 6:23	11,111	STEPS
NEW <u>2</u>	MACHIN2	V10	CICSC41F	Dec-8 11:11	11,111	Ended
<u>2681</u>	MACHIN2	v10ref7-uc7	CICSC32F	Dec-8 11:09	99,999	Ended
<u>2680</u>	MACHIN2	v9ref-uc17	CICSC32F	Dec-8 11:09	99,999	Ended
<u>2679</u>	MACHIN2	v9-uc3				Ended
<u>2528</u> +	MACHIN2	v10ref2-uc29				
<u>2525</u> +	MACHIN2	v10ref2-uc29				
<u>2516</u> +	MACHIND	v10ref2-uc29				
<u>2515</u> +	MACHIND	v10ref2-uc29				
<u>2514</u> +	MACHIND	v10ref2-uc29				
<u>2505</u> +	MACHIN2	v10ref2-uc29				
<u>2504</u> +	MACHIN2	v10ref2-uc29				
<u>2503</u> +	MACHIN2	v10ref2-uc2916				USS
<u>2440</u>	MACHIN2	v10ref2-uc21x10	CICSC41F	Dec-3 6:21	99,999	REPEAT
<u>2274</u> +	MACHIND	v10ref-uc2917	JAVATST3	Nov-24 11:49	9,999	USS
<u>2270</u> +	MACHIND	v10ref-uc2917	JAVATST2	Nov-24 11:44	9,999	USS ENTER
<u>2265</u> +	MACHIND	v10ref-uc2917	JAVATST1	Nov-24 11:37	9,999	USS

There are 2 ways to enter a *new* observation session

Method 1: Use the **NEW** line command to create a new request, **using an old request as a model**

17
IBM Application Performance Analyzer for z/OS tutorial
© 2010 IBM Corporation

On this screen, APA is showing a list of observation requests that have already been entered in the past. An “observation request” is a request from a user for APA to monitor an application.

-

There are two ways to enter a new observation request, and they both use the command: “NEW”. If you have already entered an observation session in the past, you can use an existing one as a model for a new one. In this example, “NEW” is typed on the line command next to an existing request, and Enter is pressed.

"Schedule New Measurement" panel using method 1



Method 1: In this example, info was copied from an existing request

```
File View Navigate Help
R03: Schedule New Measurement
Command ==> _____ Scroll ==> CSR

● 1. Job Information      3. Multi Steps      5. Subsystems      7. Schedule
● 2. Options             4. Active Jobs      6. Sysplex         8. Sched Options

Panel 1. Job Information      Input more data or ENTER to submit

Job Name/Pattern . . . ICSC41F      System Name . . . STLABF6
(Active)

Step Specification
Step No. . . . . _____      Specify step number, program name,
Program Name . . . _____      step name or step name + Proc step
Step Name . . . . . _____      name. Use panel 3 to specify more
ProcStepName . . . _____      than one step.

Description . . . . . V10
Number of Samples . 11111      Measure to step end . . . N
Duration (min:sec) . 15:00      Delay by (secs) . . . . . _____
Notify TSO User . . . CHIDGEY      Retain file for (days) . 90
USS observations . . . . . 0 Max
```

PF3 will exit without submitting the request

18 | IBM Application Performance Analyzer for z/OS tutorial | © 2010 IBM Corporation

This will display the "Schedule new measurement" panel where you can enter details about the application that you want to monitor, and specify how APA should perform its monitoring. This is the first way to enter a new request, using an existing one as a model with the "NEW" line command. In this example, the request is not going to be entered yet, so PF3 is pressed to return to the observation list.

Enter a NEW observation session using method 2



File View Navigate Help

R02: IBM APA for z/OS Observation List (CAZA) Row 00010 of 00051
Command ==> **NEW** Scroll ==> CSR

ReqNum	Owned By	Description	Job Name	Date/Time	Samples	Status
2760	+ MACHIN2	v9-uc3	MQPUT	Jan-4 6:23	11,111	STEPS
2682	MACHIN2	V10	CICSC41F	Dec-8 11:11	11,111	Ended
2681	MACHIN2	v10ref7-uc7	CICSC32F	Dec-8 11:09	99,999	Ended
2680	MACHIN2	v9ref-uc17	CICSC32F	Dec-8 11:09	99,999	Ended
2679	MACHIN2	v9-uc3				Ended
2528	+ MACHIN2	v10ref2-uc29				
2525	+ MACHIN2	v10ref2-uc29				
2516	+ MACHIND	v10ref2-uc29				
2515	+ MACHIND	v10ref2-uc29				
2514	+ MACHIND	v10ref2-uc29				
2505	+ MACHIN2	v10ref2-uc29				
2504	+ MACHIN2	v10ref2-uc2916	JAVATST2	Dec-7 11:34	9,999	USS
2503	+ MACHIN2	v10ref2-uc2916	JAVATST1	Dec-7 11:34	9,999	USS
2440	MACHIN2	v10ref2-uc21x10	CICSC41F	Dec-3 6:21	99,999	REPEAT
2274	+ MACHIND	v10ref-uc2917	JAVATST3	Nov-24 11:49	9,999	US
2270	+ MACHIND	v10ref-uc2917	JAVATST2	Nov-24 11:44	9,999	US
2265	+ MACHIND	v10ref-uc2917	JAVATST1	Nov-24 11:37	9,999	US

There are 2 ways to enter a new observation session
Method 2: Use the **NEW** command to create a new request

ENTER

19 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

The second way to enter a new observation request is to use the “NEW” command. In this example, “NEW” is typed on the command line, and enter is pressed.

"Schedule New Measurement" panel using method 2



```
File View Navigate Help
R03: Schedule New Measurement Row 00001 of 00013
Command ==> _____ Scroll ==> CSR
1. Job Information 3. Multi Steps 5. Subsystems 7. Schedule
● 2. Options 4. Active Jobs 6. Sysplex 8. Sched Options
Panel 1. Job Information
Job Name/Pattern . . . _____ System Name . . . * _____
(Inactive)
Step Specification
Step No. . . . . _____ Specify step number, program name,
Program Name . . . _____ step name or step name + Proc step
Step Name . . . _____ name. Use panel 3 to specify more
ProcStepName . . . _____ than one step.
Description . . . . _____
Number of Samples . _____ Measure to step end . . . N
Duration (min:sec) . _____ Delay by (secs) . . . . _____
Notify TSO User . . CHIDGEY Retain file for (days) . 90
USS observations . . . . _____ Max. 25
```

20

IBM Application Performance Analyzer for z/OS tutorial

© 2010 IBM Corporation

When you do it that way, the same panel is displayed. But this time, it is starting with default settings.

"Schedule New Measurement": enter a job name IBM

There are 8 panels
Each one controls different aspects of the request

```

File View Naviga
R03: Schedule New Measurement
Command ==> Scroll ==> CSR

1. Job Information      3. Multi Steps      5. Subsystems      7. Schedule
2. Options              4. Active Jobs      6. Sysplex         8. Sched Options

Panel 1. Job Information

Job Name/Pattern . . . (Inactive) System Name . . .
Step Specification
Step No. . . . . Specify step
Program Name . . . step name or
Step Name . . . name. Use par
ProcStepName . . . than one step

Description . . .
Number of Samples . . . Measure to s
Duration (min:sec) . . . Delay by (sec
Notify TSO User . . . CHIDGEY Retain file
USS observati

```

The job name is required. Enter the name of the job, region, or STC

Use a * wildcard to display a list of active jobs (shortcut to panel 4)

For online applications, enter the name of the CICS® or IMS™ region

21 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

There are eight panels where you can enter information for a request. Each panel is listed near the top of the screen. For example, the first panel is "Job information, and the 2nd panel is "Options". Right now, the "Job information" panel is displayed on the lower part of the screen. Notice that the words "Job information" on the top part of the screen are highlighted, indicating which panel is being displayed. You will always start with this panel, "Job information".

When you enter a new observation request, a job name is required. Type in the name of the job, region, or started task that you want to monitor in the "job name/pattern" field. You can type in a partial job name with a wildcard. For example, if you type in ABC*, then you can obtain a list of running jobs that start with ABC. Just enter * into the job field to display a list of all jobs. For online applications, enter the name of the CICS or IMS region that you want to monitor.

"Schedule New Measurement": specify job steps to measure



By default, APA will monitor only one step:

- For an active job: the current step
- For a scheduled request: the first step

You can enter any of these:

- * (asterisk) in Step No for all steps
- Step No. by itself
- Program Name by itself
- Step Name by itself
- Step Name and ProcStepName

To schedule measurement of multiple steps in the same job, use panel 3

22 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

A little further down on the panel is the step specification area. By default, APA will monitor only one step. For an active job, it will monitor the step that is running at the time that you enter the request. If you schedule a request for a job that will run at some point in the future, the default is to monitor only the first step. To take the default, just leave all of the fields in the step specification area blank.

Or, you can enter any of these. Type an * in the step number field to monitor every step in the job, or enter a number to monitor any individual step number. Or you can enter a program name by itself in the program name field, or a step name by itself in the step name field, or a combination of step name and procstep name. There are more options for monitoring multiple steps in the same job on panel three, which you will see in a moment.

"Schedule New measurement": enter sampling data



File View Navigate Help

R03: Schedule New Measurement
Command ==>

1. Job Information 3. Multi
2. Options 4. Acti

Panel 1. Job Information

The number of samples to be taken

The measurement duration. Examples:
135 = 135 seconds
2:15 = 2 minutes and 15 seconds
2: = 2 minutes

Continue measuring after the end of "Duration"?

Number of Samples
Duration (min:sec)
Measure to step end N
Delay by (secs)
Retain file for (days) . . . 90
Notify TSO User . . . CHIDGEY
USS observatio

23 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

In the "Number of samples" field, specify the total number of samples that APA should snapshot during its monitoring session. Also specify the measurement duration. For example, enter the number 135 in the "Duration" field to monitor the application for a total of 135 seconds. Enter 2:15 to monitor for two minutes and 15 seconds, or 2: to monitor for a total of two minutes. For a typical application, you will only need APA to monitor the application for a few minutes. However, sometimes, you might want to continue monitoring until the job or step ends. To do that, type "Y" (for yes) in the "measure to step end" field.

About the sampling frequency



- The sampling frequency is determined by:
 - "Number of Samples" divided by "Duration"
 - Example. Using the values:

```
Number of Samples : 1000
Duration (min:sec): 50
```

- The sampling freq. is **1000** samples / **50** seconds
= **20 samples per second**
- For simple applications, a relatively low frequency might be OK
- For complex applications, you might want to have a higher sampling frequency

Here is a little more detail about the sampling frequency. You control how often APA takes snapshot samples with the "Number of sample" and "Duration" fields. To determine the sampling frequency, divide the number of samples by the duration. For example, if you request 1000 samples and a duration of 50 seconds, then the sampling frequency is 20 samples per second, which is 1000 divided by 50.

There are not any general rules for choosing how many samples to request. Keep in mind that APA is collecting statistical information about where your application is spending its time. So you will want to specify enough samples to get significant readings. For simple applications, where only a few programs are running, a relatively low sampling frequency might be okay. However, for complex applications with dozens or hundreds of programs interacting, you might need a higher sampling frequency.

Again, there really are not any general rules for what is right or wrong when it comes to the number of samples and the duration, since every application is different. However, if you are just looking for a broad brush recommendation, here is a place to start. For a typical batch application, try starting by specifying 10,000 samples, and a duration of one or two minutes. If that does not collect enough detailed data, you can always try again with a higher number of samples or a longer duration. Also as a general rule, for most applications, you will not need more than 100,000 samples. A number larger than that, most often will not provide better statistics.

Sampling examples



■ Example 1. Using the values:

```
Number of Samples : 2000   Measure to step end: N
Duration (min:sec): 1:35
```

- The sampling frequency is **2000 / 95** seconds
= @ **21.05 samples per second**
- Measurement will STOP after 2000 samples

■ Example 2. Using the values:

```
Number of Samples : 10000  Measure to step end: Y
Duration (min:sec): 20:00
```

- The sampling frequency is **10,000 / 1200** seconds
= @ **8.3 samples per second**
- Measurement will CONTINUE at the same sampling rate until the end of the step (or max # of samples)

Here are a couple of examples for entering the number of samples and the duration. In the first example, 2000 samples is requested with a duration of one minute and 35 seconds. Notice that “N” (for No) was specified in the “Measure to step end” field. In this case, the sampling frequency is a little over 21 samples per second, which is 2000 divided by 95 seconds. After the 95 seconds is up, sampling will stop, and the measurement session is over.

In the second example, 10,000 samples is requested along with a duration of 20 minutes. The sampling frequency is about 8.3 samples per second, which is 10,000 samples divided by 20 minutes, or 1200 seconds. This time, “Y” (for Yes) is specified in the “measure to step end” field. Because of that ‘yes’, measurement will continue at the same sampling rate of 8.3 per second until the end of the step, or until the maximum number of samples allowed by APA is reached.

"Schedule New Measurement" panel: additional options



File View Navigate Help

R03: Schedule New Measurement Row 00001 of 00013
Command ==> Scroll ==> CSR

1. Job Information 3. Multi 7. Schedule
2. Options 4. Acti 8. Sched Options

A TSO user to be notified at the end of the session
Default is your ID

A delay time, in seconds, to occur before initiation of the measurement

Specify a value here, and APA will automatically delete your Measurement Datasets

Program Name
Step Name
ProcStepName

Description
Number of Samples
Duration (min:sec)
Notify TSO User . . . CHIDGEY

Specify step number, program name, step name or step name + program name. Use panel 3 to specify more than one step.

Measure to step end N
Delay by (secs)
Retain file for (days) . . . 90
USS observations Max. 25

26 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

Back to the job information panel. You have a few other options here. By default, your TSO ID is specified in the "notify TSO user" field. That means that you are notified when APA completes its monitoring session. Blank it out if you do not want to be notified, or enter someone else's ID to have them notified instead. In the "Delay by" field, you can also enter a delay time, in seconds, that will elapse before APA begins taking samples. In the "Retain file" field, you can specify the number of days, after which APA will automatically delete the measurement data sets it used to collect its monitoring information. Keep in mind that even if you do not specify anything here, measurement data sets are deleted automatically if you delete the observation from the list.

"Schedule New Measurement" panel example



File View Navigate Help

R03: Schedule New Measurement Row 00001 of 00013
Command ==> Scroll ==> CSR

1. Job Information 3. Multi Steps 5. Subsystems 7. Schedule
2. Options 4. Active Jobs 6. Sysplex 8. Sched Options

Panel 1. Job Information

Job Name/Pattern . . . CHIDGEYA (Inactive) System Name . . . STLABF6
Job Name

Step Specification

Step No. Specify step number, program name,
Program Name . . . step name or step name + Proc step
Step Name . . . name. Use panel 3 to specify more
ProcStepName . . . than one step.

Description . . . Measure SAM1V Application Performance


Number of Samples . 10000 Measure to step end . . . N
Duration (min:sec) . 2:00 Delay by (secs)
Notify TSO User . . CHIDGEY Retain file for (days) . 90
USS observations Max. 25

Take 10,000 samples in 2 minutes

27 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

In this example, the name of a job to be monitored is entered. Entries were also made on the panel to collect a total of 10,000 samples over a duration of two minutes.

The "Measurement Options" panel



Command ==> 2 ENTER

File View Navigate Help

R03: Schedule New Measurement Row 00001 of 00027
 Command ==> _____ Scroll ==> CSR

● 1. Job Information	3. Multi Steps	5. Subsystems	7. Schedule
● 2. Options	4. Active Jobs	6. Sysplex	8. Sched Options

Panel 2. Measurement Options Input more data or ENTER to submit

Data Extractors. '/' to select extended measurement options:

/ CICS CICS information	/ MQ MQSe
/ DB2 SQL call information	/ DB2+ SQL
CDB2 Collateral DB2 activity	DB2V SQL
IMS DLI call information	IMS+ DLI
- Java Java information	

100 DB2+ Maximum number of trace entries in thousands
 100 IMS+ Maximum number of trace entries in thousands

Specify up to 10 load libraries, or up to 440 bytes of HFS directories, to search for external symbol information. The load libraries apply only to sampled modules that are fetched from dynamically allocated load libraries. The directories apply only to sampled HFS programs that do not have absolute

To get detailed info about CICS, DB2[®], IMS, or MQ, or Java[™], you MUST select options on this panel!

28
IBM Application Performance Analyzer for z/OS tutorial
© 2010 IBM Corporation

So far, option one: Job Information panel has been covered. There are actually eight panels where you can specify your observation request. To get to any of the eight panels, just type the panel number on the command line and Enter. In this example, the number two is typed on the command line and Enter is pressed. Now panel number two, the Options panel, is displayed.

On this panel, you tell APA to collect detailed information about CICS, DB2, IMS, Java or MQSeries[®]. It is very important that you know that APA will not collect information about any of these subsystems by default. So for example, if you monitor a CICS application that accesses DB2 databases, by default you are not able to capture any details about CICS transactions or SQL statements. Do not forget to specify any of the data extractors that you need on this panel.

Notice that there are several levels of data extractors for DB2 and IMS. As a general rule, if your application uses DB2 or IMS, then you should turn on all of the extractors for DB2 or IMS. By doing that, you are asking APA to do a little more work, but you are rewarded with a lot more in-depth information about your application. You might be tempted to turn on all of the extractors for every application. In practice you probably will not notice an excessive amount of extra monitoring overhead. But of course it is best to only request the extractors that your application really needs.

The "Measurement Options" panel data extractors



Data extractor:	Collects:
CICS	Transaction and EXEC CICS statement activity
DB2	Basic SQL statement activity
DB2+	Exact call counts, SQL service and CPU time
DB2V	SQL host variable names
CDB2	Collateral DB2 Activity
IMS	Basic IMS call activity
IMS+	Exact call counts, IMS service and CPU time
MQ	MQSeries queue activity
Java	Java program information

29

IBM Application Performance Analyzer for z/OS tutorial

© 2010 IBM Corporation

If panel two on your system does not have all of the data extractors that is indicated on this slide, that might be because the person who installed APA did not enable them. If you are missing data extractors on panel two, consider calling your systems programmer to ask them to enable all of the extractors.

The "Active Jobs" panel



File View Navigate Help

Command ==> 4 ENTER

R03: Schedule New Measurement Row 00001 of 00001
Command ==> Scroll ==> CSR

1. Job Information 3. Multi Steps 5. Subsystems 7. Schedule
2. Options 4. Active Jobs 6. Sysplex 8. Sched Options

Panel 4. Active Jobs

Enter S to select an active job step to be measured. Prefix . . CHIDGEY*

JobName	Type	JobId	StepName	ProcStep	ASIDX	System	CPU%	SIO
---------	------	-------	----------	----------	-------	--------	------	-----

Use this panel to select an active (running) job

Use a wildcard in the prefix to display a list of active jobs
For example: ABC*

ENTER

31 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

Here is panel number four: "Active jobs". To get here, type the number four on the command line, and press Enter. This panel displays a list of jobs that are running right now, and you can select a job in the list to monitor. To get a list of jobs, first enter a job name mask in the prefix field. Type in the first few letters of a job name followed by an asterisk and press Enter.

The "Active Jobs" panel after using a wildcard



File View Navigate Help

R03: Schedule New Measurement Row 00001 of 00003
Command ==> Scroll ==> CSR

1. Job Information 3. Multi Steps 5. Subsystems 7. Schedule
2. Options 4. **Active Jobs** 6. Sysplex 8. Sched Options

Panel 4. Active Jobs

Enter S to select an active job step to be measured. Prefix . . CHIDGEY*

JobName	Type	JobId	StepName	ProcStep	ASIDX	System	CPU%	SIO
CHIDGEY	TSO	TSU00193	TPROC02		00AF	STLABF6	0.00	0.00
S CHIDGEYA	JOB	JOB00194	RUNSAM		003A	STLABF6	98.00	2.00

32 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

You can use this panel to select an active (running) job

Use a wildcard in the prefix to display a list of active jobs
For example: ABC*

Now a list of jobs that match the job name mask is displayed.

You can select a job to monitor by a typing an "S" (for Select) line command next to the job you are interested in.

The "CICS Subsystem and Measurement Criteria" panel



File View Navigate Help

Command ==> 5 ENTER

R03: Schedule New Measurement Row 00001 of 00019
Scroll ==> CSR

Use this panel to select CICS transactions and terminals to monitor

Steps 5. Subsystems 7. Schedule
Jobs 6. Sysplex 8. Sched Options

Panel 5. Subsystem Measurement Criteria

You can use a * wildcard

Specify up to 16 CICS transcodes for which measurement data is to be recorded.

01 *	02	03	04	05	06	07	08
09	10	11	12	13	14	15	16

Include CICS system transactions in measurement (Y/N): N

Wildcard character '*' can be specified at the end of a partial name.
'*' by itself specifies all transactions or terminals.


Specify up to 8 CICS terminal ids for which measurement data is to be recorded.

01 *	02	03	04	05	06	07	08
------	----	----	----	----	----	----	----

33 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

This is panel number five: CICS Options. Of course, you only use this panel when you are monitoring CICS applications. You can use it to limit which CICS transactions and which CICS terminals are monitored. If the CICS data extractor is on, then by default, all CICS transaction codes and all CICS terminals are monitored. If you are working with an application that is running in a CICS region with an extremely high transaction volume, you might find it handy to monitor only specific transactions and terminals. However, a lot of people prefer to always monitor all transactions and terminals. Even when all data is collected, it will still be very easy to look at specific transactions when you are viewing APA reports.

The "Sysplex" panel



File View Navigate Help

Command ==> 6 ENTER

R03: Schedule New Measurement Row 00001 of 00003
Command ==> _____ Scroll ==> CSR

● 1. Job Information ● 2. Options

● 3. Multi Steps ● 4. Active Jobs

● 5. Subsystems ● 6. **Sysplex**

● 7. Schedule ● 8. Sched Options

Panel 6. Sysplex

Target System. 'S' to select one option from the list (scrollable):

- ALL All Sysplex members eligible
- STLABF7
- STLABF6

Use this panel to select a z/OS system

If you are not running in a SYSPLEX, this panel is blank

34
IBM Application Performance Analyzer for z/OS tutorial
© 2010 IBM Corporation

Here is panel six: Sysplex. You can use this panel if the job or region that you want to monitor is running on a different system from where you are logged on to TSO. A list of z/OS systems on your Sysplex is shown, and you can select the z/OS system with an "S" (for Select) line command. If you are not running on a Sysplex system, then this panel is disabled.

The "Schedule" panel



File View Navigate Help

Command ==> **7** **ENTER**

R03: Schedule New Measurement Row 00001 of 00001
Command ==> Scroll ==> CSR

- 1. Job Information
- 2. Options
- 3. Multi Steps
- 4. Active Jobs
- 5. Subsystems
- 6. Sysplex
- 7. **Schedule**
- 8. Sched Options

Panel 7. Schedule

Date/time of first in sequence	Measurement repetitions
Date (yy mm dd)	Repeat times
Time (hh mm)	After days . . . minutes

Use this panel to specify a schedule for repetitions of the measurement. Input the above fields and press ENTER to generate dates and times for each of the measurements. These dates/times will be shown below in a scrollable table which you can add to by repeating this input process.

You can schedule a measurement

APA will monitor the first job with the right name that starts after the date and time you specify

35 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

Here is the Schedule panel, number seven. Use this panel to schedule observation sessions that you want to add at some time in the future. More about scheduling observation sessions is covered a little later.

The "Schedule Options" panel



File View Navigate Help

Command ==> 8 ENTER

R03: Schedule New Measurement Row 00001 of 00004
Command ==> Scroll ==> CSR

1. Job Information 3. Multi Steps 5. Subsystems 7. Schedule
2. Options 4. Active Jobs 6. Sysplex 8. Sched Options

Panel 8. Schedule Options

Specify if the job is active and is to be measured immediately (Y) or if IBM APA for z/OS is to wait for the job to be submitted (N):

Measure active job (Y/N) Y

N: APA will start monitoring the next time the job starts (even if it is already running)
Y: Start monitoring a job that is running now

36 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

Here is the last panel, scheduling options, number eight. On this one, you specify an option that controls when APA starts its monitoring sessions. It is very important that you understand this option. Because it controls when APA monitors an application, and when it does not. Setting this option incorrectly can prevent APA from monitoring your application. It all has to do with whether the job you want to monitor is already running, or if it is not running now it is going to start later.

In the "Measure active job" field, specify "Y" (for Yes) if the job you want to monitor is already running now. When you enter the observation request, then APA will immediately begin its monitoring session on the job. If you specify "N" (for No), you are telling APA to start monitoring the job the next time that it starts. Be very careful about this, because if you specify "N" (for No), APA will not monitor your job if it is running right now. It will wait until the next time a job by the same name starts.

About active versus scheduled jobs



- APA is notified when jobs **START**
 - By default, APA will initiate an observation session only when a job starts
- To monitor an **active** job, you **MUST** tell APA that the job is already running:

- On **panel 8**:

```
Measure active job (Y/N) . . . . Y
```

- Or by selecting an active job on **panel 4**:

```
Enter S to select an active job ste
```

<u>JobName</u>	<u>Type</u>	<u>JobId</u>	<u>StepName</u>
CHIDGEY	TSO	TSU04678	TPROC02
S CHIDGEYA	JOB	JOB04679	RUNSAM
CHIDGEYB	JOB	JOB04680	CUSTKSDS

37

IBM Application Performance Analyzer for z/OS tutorial

© 2010 IBM Corporation

When you enter an observation request, you enter it for either an active job or a scheduled job. APA is notified when jobs start. By default, APA will initiate its monitoring only when a job starts. If you want to monitor an active job, a job that is running right now, you have to tell APA that the job is already running. There are two ways to do that. On panel eight, which you just saw, you specify “Y” (for Yes) in the “measure active job” field. Or, you can select an active job on panel four, the panel that displays a list of running jobs and regions.

Back to panel 1

IBM

File View Navigate Help

Command ==> **1** ENTER

R03: Schedule New Measurement Row 00001 of 00013
 Command ==> Scroll ==> CSR

● 1. Job Information ● 3. Multi Steps ● 5. Subsystems ● 7. Schedule
 ● 2. Options ● 4. Active Jobs ● 6. Sysplex ● 8. Sched Options

Panel 1. Job Information Input more data or ENTER to submit

Job Name/Pattern . . . CHIDGEYA System Name . . . STLABF6
 (Inactive)

Step Specification

Step No. * Specify step number

Program Name . . . _____ step name or step name + Proc step

Step Name . . . _____ name. Use panel 3 to specify more

ProcStepName . . . _____ than one step.

Description Measure SAM1V Application Performance

Number of Samples . 10000 Measure to step end . . . N

Duration (min:sec) . 2:00 Delay by (secs) _____

Notify TSO User . . CHIDGEY Retain file for (days) . 90

USS observations _____ Max ENTER

ENTER to submit the request

38
IBM Application Performance Analyzer for z/OS tutorial
© 2010 IBM Corporation

At this point, all of the options panels you can use when you enter a new observation request have been covered. Of course, for a typical request, you will only need to use one or two panels. But it is good to understand your options.

Now back to the first panel, “job information” . You get there by typing one on the command line, and press Enter. After you have specified all of the data for your request, just leave the command line blank and hit Enter again. You will get the message that is displayed here. “Input more data or ENTER to submit”. When this message is displayed, APA is ready to accept your new observation request. It is also a warning. Do not hit Enter now unless you mean it. In this example, the request is ready to be entered for the new observation request, so Enter is pressed.

A new request is added



File View Navigate Help

R02: IBM APA for z/OS Observation List (CAZA) New request added

Command ==> Scroll ==> CSR

ReqNum	Owned By	Description	Job Name	Date/Time	Samples	Status
2708	CHIDGEY	Measure SAM1V A	CHIDGEYA	Dec-10 14:06	10,000	Sched
2684	MACHIN2	- test	-	Dec-9 7:53	155	Ended
2682	MACHIN2	V10	CICSC41F	Dec-8 11:11	11,111	Ended
2681	MACHIN2	v10ref7-		11:09	99,999	Ended
2680	MACHIN2	v9ref-uc		11:09	99,999	Ended
2679	MACHIN2	v9-uc3		11:09	774	Ended
2678	MACHIN2	v10ref2-uc18	DBJOB8	Dec-8 14:25	236	Ended
2677	MACHIN2	v10ref2-uc14	MACHIND	Dec-8 10:03	99,999	Ended
2671 +	MACHIN2	v10ref2-uc19v1	STEPS	Dec-8 9:06	11,111	STEPS
2542 +	MACHIN2	v10ref2-uc19v1	STEPS	Dec-8 9:02	11,111	STEPS
2541	MACHIND	v10ref2-uc15v2	DB2DATA	Dec-8 8:20	66,750	Ended
2540	MACHIND	v10ref2-uc15	DB2DATA	Dec-8 8:12	76,475	Ended
2539	MACHIN2	vq10ref2-uc26	DB2V9TEP	Dec-8 7:53	19,314	Ended
2538	MACHIN2	v10ref2-uc30v4	-	Dec-8 6:47	149	Ended
2537	MACHIN2	v10ref2-uc30v3	-	Dec-8 6:37	144	Ended
2534 +	MACHIN2	v10ref2-uc30	DSNTEJ6U	Dec-8 6:33	639	Ended
2533 +	MACHIN2	v10ref2-uc30	DSNTEJ6R	Dec-8 6:31	1,944	Ended

39 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

The new request was added, and it is displayed at the top of the list. Also, notice the message: "new request added".

Application Performance Analyzer training sections



- Introduction
- The application tuning process
- Entering observation requests
 - Navigation and options
 - Entering requests
 - Examples
- Viewing analysis reports
- An analysis walkthrough
- Printing analysis reports
- Working with program source



40

IBM Application Performance Analyzer for z/OS tutorial

© 2010 IBM Corporation

Next, you are presented with a few examples of how to enter new observation sessions.



- Enter an observation request for a job that is already running
- Enter an observation request for a job that is not running yet
- Enter an observation request for multiple jobs
- Schedule future observation requests
- Enter an observation session to monitor CICS applications
- Enter a threshold observation request

You will go through several walk-throughs of entering observation requests. First, how to enter an observation request for an active job. After that, how to enter a request for a job that is not running yet. After that, how to enter a single request to monitor more than one job. After that, how to schedule requests for one or more jobs that will run much later. After that, how to enter a request for CICS applications and finally, how to enter a request using a threshold.

Let's start with entering an observation request for a job that is currently active in the CPU.

Enter a NEW observation request



```
File View Navigate Help
R02: IBM APA for z/OS Observation List (CAZA) Row 00001 of 00149
Command ==> NEW Scroll ==> CSR
```

ReqNum	Owned By	Description	Job Name	Date/Time	Samples	Status
2708	CHIDGEY	Measure SAM1V A	CHIDGEYA	Dec-15 12:20	6	Ended
2684	MACHIN2	- test	-	Dec-9 7:53	155	Ended
2682	MACHIN2	V10	CICSC41F	Dec-8 11:11	11,111	Ended
2681	MACHIN2	v10ref7-uc7	CICSC32F	Dec-8 11:09	99,999	Ended
2680	MACHIN2	v9ref-uc17	CICSC32F	Dec-8 11:09	99,999	Ended
2679	MACHIN2	v9-uc3	MQPUT	Dec-8 11:09	774	Ended
2678	MACHIN2	v10ref2-uc18	DBJOB8	Dec-8 14:25	236	Ended
2677	MACHIN2	v10ref2-uc14	MACHIND	Dec-8 10:03	99,999	Ended
2671 *	MACHIN2	v10ref2-uc19v1	STEPS	Dec-8 9:06	11,111	STEPS
2542 *	MACHIN2	v10ref2-uc19v1	STEPS	Dec-8 9:02	11,111	STEPS
2541	MACHIND	v10ref2-uc15v2	DB2DATA	Dec-8 8:20	66,750	Ended
2540	MACHIND	v10ref2-uc15	DB2DATA	Dec-8 8:12	76,475	Ended
2539	MACHIN2	vq10ref2-uc26	DB2V9TEP	Dec-8 7:53	19,314	Ended
2538	MACHIN2	v10ref2-uc30v4	-	Dec-8 6:47	149	Ended
2537	MACHIN2	v10ref2-uc30v3	-	Dec-8 6:37	144	Er
2534 *	MACHIN2	v10ref2-uc30	DSNTEJ6U	Dec-8 6:33	639	Er
2533 *	MACHIN2	v10ref2-uc30	DSNTEJ6R	Dec-8 6:31	1,944	Er

42 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

Remember, there are two ways to enter a new observation request. You can enter "NEW" as a line command next to an existing request, to use it as a model. This can save you some time if you have already monitored an application before. In this example, "if you want to start with all of the defaults, type "NEW" on the command line, and press Enter.

The "Job Information" panel



File View Navigate Help

R03: Schedule New Measurement 0013
Command ==> Scroll ==> CSR

1. Job Information 3. Multi Steps 5. Subsystems 7. Schedule
● 2. Options 4. Active Jobs 6. Sysplex 8. Sched Options

Panel 1. Job Information

Job Name/Pattern . . . CHIDG* (Inactive) System Name . . . STLABF6

Step Specification

Step No. Specify step number, program name,
Program Name . . . step name or step name + Proc step
Step Name . . . name. Use panel 3
ProcStepName . . . than one step.

Description . . .

Number of Samples . . . 2000 Measure to step end . . . N
Duration (min:sec) . . . 60 Delay by (secs) . . .
Notify TSO User . . . CHIDGUY Retain file for (days) . . . 90
USS observations . . . Max

ENTER


43 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

In the "Number of samples" field, 2,000 is entered, and in the "Duration" field 60 seconds is entered. That means that a total of 2,000 samples is requested, and APA will monitor the application for 60 seconds. After 60 seconds, it will stop monitoring. The job to monitor is an active job, that is, it is already running. Do not forget that you have to tell APA if you want to monitor an active job. One way is to use panel four, the panel that displays a list of active jobs and regions. Here is a tip. Use an asterisk wildcard in the job name field to display a list of active jobs. It is a shortcut to panel four. In this example, the first few letters of the job name is typed in the job name field followed by an asterisk and Enter is pressed.

The "Active Jobs" panel



```
File View Navigate Help
R03: Schedule New Measurement Row 00001 of 00003
Command ==> Scroll ==> CSR
1. Job Information 3. Multi Steps 5. Subsystems 7. Schedule
2. Options 4. Active Jobs 6. Sysplex 8. Sched Options
Panel 4. Active Jobs
Enter S to select an active job step to be measured. Prefix . . CHIDG*
JobName Type JobId StepName ProcStep ASIDX System CPU% SIO
CHIDGEY TSO TSU00193 TPROC02 00AF STLABF6 0.00 0.00
S CHIDGEYA JOB JOB00200 RUNSAM 003A STLABF6 98.59 0.00
```



44

IBM Application Performance Analyzer for z/OS tutorial

© 2010 IBM Corporation

That took you right to panel four where a list of matching jobs and region names are displayed.

To select a job use an S line command and press Enter.

The "Selected Jobs List" is displayed; Navigate to "Options" panel



```
File View Navigate Help
R03: Schedule New Measurement Row 00001 of 00008
Command ==> 2| Scroll ==> CSR
1. Job Information 3. Multi Steps 5. Subsystems 7. Schedule
2. Options 4. Active Jobs 6. Sysplex 8. Sched Options
Panel 4. Active Jobs
Enter S to select an active job step to be measured. Prefix . . CHIDG*
JobName Type JobId StepName ProcStep ASIDX System CPU% SIO
- CHIDGEY TSO TSU02492 TPROC02 0.00
- CHIDGEYA JOB JOB02519 RUNSAM 0.00
Selected Jobs List
Enter D to remove an active job from the list.
JobName System
- CHIDGEYA STLABF6
```

The active job that was selected is now displayed in Selected Jobs List

ENTER

45

IBM Application Performance Analyzer for z/OS tutorial

© 2010 IBM Corporation

Notice that the active job you selected is now displayed in the lower half of the panel in Selected Jobs List.

From this panel, you can go directly to any of the other panels. For example, if you know that your job accesses DB2 databases, you will want to turn on the DB2 data extractors. You can do that in panel two.

Just type a two on the command line, and press Enter. Like so.

Panel two is the options panel, where you can select the extended data extractors.

In this example, the DB2 extractors are selected. The other ones are not needed for this application, since it does not run in CICS, it does not use IMS or MQSeries, and it is not written in Java. At this point, your new request is ready.

Notice that the message “Input more data or ENTER to submit” is displayed. When you get this message, pressing enter will add the new request, unless you change selections or type a command on the command line. Press Enter...

Request is added



File View Navigate Help

R02: IBM APA for z/OS Observation List (CAZA) New request added

Command ==> █ Scroll ==> CSR

ReqNum	Owned By	Description	Job Name	Date/Time	Samples	Status
<u>2711</u>	CHIDGEY		CHIDGEYA	Dec-15 12:38	2,000	Sched
<u>2708</u>	CHIDGEY	Measure SAM1V A	CHIDGEYA	Dec-15 12:20	6	Ended
<u>2684</u>	MACHIN2	- test	-	Dec-9 7:53	155	Ended
<u>2682</u>	MACHIN2	V10	CICSC41F	Dec-8 11:11	11,111	Ended
<u>2681</u>	MACHIN2	v10ref7-uc7	CICSC32F	Dec-8 11:09	99,999	Ended
<u>2680</u>	MACHIN2	v9ref-uc17	CICSC32F	Dec-8 11:09	99,999	Ended
<u>2679</u>	MACHIN2	v9-uc3	MQPUT	Dec-8 11:09	774	Ended
<u>2678</u>	MACHIN2	v10ref2-uc18	DBJ			
<u>2677</u>	MACHIN2	v10ref2-uc14	MAC			
<u>2671</u> +	MACHIN2	v10ref2-uc19v1	STE			
<u>2542</u> +	MACHIN2	v10ref2-uc19v1	STE			
<u>2541</u>	MACHIND	v10ref2-uc15v2	DB2			
<u>2540</u>	MACHIND	v10ref2-uc15	DB2DATA	Dec-8 8:12	76,475	Ended
<u>2539</u>	MACHIN2	vq10ref2-uc26	DB2V9TEP	Dec-8 7:53	19,314	Ended
<u>2538</u>	MACHIN2	v10ref2-uc30v4	-	Dec-8 6:47	149	Er
<u>2537</u>	MACHIN2	v10ref2-uc30v3	-	Dec-8 6:37	144	Er
<u>2534</u> +	MACHIN2	v10ref2-uc30	DSNTEJ6U	Dec-8 6:33	639	Er

The observation session starts.
The observation session starts

Press ENTER to refresh the display

ENTER

47 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

And the new request was added. It is displayed at the top of the observation list. You can refresh the observation list just by hitting Enter.

Observation session is active



File View Navigate Help

R02: IBM APA for z/OS Observation List (CAZA) Row 00001 of 00150
Command ==> Scroll ==> CSR

ReqNum	Owned By	Description	Job Name	Date/Time	Samples	Status
<u>2711</u>	CHIDGEY		CHIDGEYA	Dec-15 12:38	1,524	Active
<u>2708</u>	CHIDGEY	Measure SAM1V A	CHIDGEYA	Dec-15 12:20	6	Ended
<u>2684</u>	MACHIN2	- test	-	Dec-9 7:53	155	Ended
<u>2682</u>	MACHIN2	V10	CICSC41F	Dec-8 11:11	11,111	Ended
<u>2681</u>	MACHIN2	v10ref7-uc7	CICSC32F	Dec-8 11:09	99,999	Ended
<u>2680</u>	MACHIN2	v9ref-uc17	CICSC32F	Dec-8 11:09	99,999	Ended
<u>2679</u>	MACHIN2	v9-uc3	MQPUT	Dec-8 11:09	774	Ended
<u>2678</u>	MACHIN2	v10ref2-uc18	DBJOB8	Dec-8 14:25	236	Ended
<u>2677</u>	MACHIN2	v10ref2-uc14	MACHIND	Dec-8 10:03	99,999	Ended
<u>2671</u> +	MACHIN2	v10ref2-uc19v1	STEPS	Dec-8 9:06	11,111	STEPS
<u>2542</u> +	MACHIN2	v10ref2-uc19v1	STEPS	Dec-8 9:02	11,111	STEPS
<u>2541</u>	MACHIND	v10ref2-uc15v2	APA is monitoring the application			
<u>2540</u>	MACHIND	v10ref2-uc15	DB2DATA	Dec-8 8:12	76,475	Ended
<u>2539</u>	MACHIN2	vq10ref2-uc26	DB2V9TEP	Dec-8 7:53	19,314	Ended
<u>2538</u>	MACHIN2	v10ref2-uc30v4	-	Dec-8 6:47	149	Er
<u>2537</u>	MACHIN2	v10ref2-uc30v3	-	Dec-8 6:37	144	Er
<u>2534</u> +	MACHIN2	v10ref2-uc30	DSNTEJ6U	Dec-8 6:33	639	Er

ENTER

48 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

Since the job that is being monitored is already running, and it was specified that it was an active job, the monitoring session immediately goes active. APA is now monitoring the application and collecting performance data.

So that was the first example, entering a new observation request for a job that was already running.

Examples of entering observation requests



- Enter an observation request for a job that is already running
- Enter an observation request for a job that is not running yet
- Enter an observation request for multiple jobs
- Schedule future observation requests
- Enter an observation session to monitor CICS applications
- Enter a threshold observation request

Next, you are guided through how to enter an observation request for a job that is not yet running.

Enter a NEW observation request




File View Navigate Help

R02: IBM APA for z/OS Observation List (CAZA) Row 00001 of 00150
Command ==< > NEW Scroll ==> CSR

ReqNum	Owned By	Description	Job Name	Date/Time	Samples	Status
2711	CHIDGEY		CHIDGEYA	Dec-15 12:39	2,000	Ended
2708	CHIDGEY	Measure SAM1V A	CHIDGEYA	Dec-15 12:20	6	Ended
2684	MACHIN2	- test	-	Dec-9 7:53	155	Ended
2682	MACHIN2	V10	CICSC41F	Dec-8 11:11	11,111	Ended
2681	MACHIN2	v10ref7-uc7	CICSC32F	Dec-8 11:09	99,999	Ended
2680	MACHIN2	v9ref-uc17	CICSC32F	Dec-8 11:09	99,999	Ended
2679	MACHIN2	v9-uc3	MQPUT	Dec-8 11:09	774	Ended
2678	MACHIN2	v10ref2-uc18	DBJOB8	Dec-8 14:25	236	Ended
2677	MACHIN2	v10ref2-uc14	MACHIND	Dec-8 10:03	99,999	Ended
2671 +	MACHIN2	v10ref2-uc19v1	STEPS	Dec-8 9:06	11,111	STEPS
2542 +	MACHIN2	v10ref2-uc19v1	STEPS	Dec-8 9:02	11,111	STEPS
2541	MACHIND	v10ref2-uc15v2	DB2DATA	Dec-8 8:20	66,750	Ended
2540	MACHIND	v10ref2-uc15	DB2DATA	Dec-8 8:12	76,475	Ended
2539	MACHIN2	vq10ref2-uc26	DB2V9TEP	Dec-8 7:53	19,314	Ended
2538	MACHIN2	v10ref2-uc30v4	-	Dec-8 6:47	149	Er
2537	MACHIN2	v10ref2-uc30v3	-	Dec-8 6:37	144	Er
2534 +	MACHIN2	v10ref2-uc30	DSNTEJ6U	Dec-8 6:33	639	Er

50 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation



You start the same way as in the last example. Type the NEW command on the command line, and press Enter.

Specify the job name and options



File View Navigate Help

R03: Schedule New Measurement Row 00001 of 00013
Command ==> Scroll ==> CSR

1. Job Information 3. Multi Steps 5. Subsystems 7. Schedule
2. Options 4. Active Jobs 6. Sysplex 8. Sched Options

Panel 1. Job Information

Job Name/Pattern . . . CHIDGEYB System Name
(Inactive)

Step Specification

Step No. * Specify step number, program name,
Program Name step name or step name + Proc step
Step Name name. Use panel 3 to specify more
ProcStepName than one step.

Description SAM1V program is using too much CPU time

Number of Samples . . . 10000 Measure to step end . . . N

Duration (min:sec) . . . 1:30 Delay by (secs)

Notify TSO User . . . CHIDGEY Retain file for (days) . 90

USS observations Max

ENTER

51 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

Panel one, Job Information, is displayed.

You must type in the name of the job that you want to monitor. In this example, the job is not running yet. An asterisk was also entered in the “step number” field. By default, APA only monitors the first step in the job. The asterisk will make APA Monitor all of the steps in the job. Notice also that some text was entered in the “Description” field. That is optional, but you might find it handy to enter a description as a reminder to yourself about why you entered this request. Finally, notice that 10,000 samples and a duration of one minute and 30 seconds were entered. Press Enter.

Ready to submit the new request



```
File View Navigate Help
R03: Schedule New Measurement Row 00001 of 00013
Command ==> _____ Scroll ==> CSR
1. Job Information 3. Multi Steps 5. Subsystems 7. Schedule
2. Options 4. Active Jobs 6. Sysplex 8. Sched Options
Panel 1. Job Information Input more data or ENTER to submit
Job Name/Pattern . . . CHIDGEYB System Name . . . STLABF6
(Inactive)
Step Specification
Step No. . . . . * Specify step number, program name,
Program Name . . . _____ step name or step name + Proc step
Step Name . . . _____ name. Use panel 3 to specify more
ProcStepName . . . _____ than one step.
Description . . . . SAM1V program is using too much CPU time
Number of Samples . 10000 Measure to step end . . . N
Duration (min:sec) . 1:30 Delay by (secs) . . . .
Notify TSO User . . CHIDGEY Retain file for (days) . 90
USS observations . . . . Max
ENTER
```

Since the message “Input more data or Enter to submit” is now displayed, APA is ready to accept the request. In this example, the job does not need any of the data extractors, that is to say that it does not use DB2, IMS, or anything else that requires an extractor to be selected. Press Enter.

The new request has been submitted



File View Navigate Help

R02: IBM APA for z/OS Observation List (CAZA) New request added

Command ==> █ Scroll ==> CSR

ReqNum	Owned By	Description	Job Name	Date/Time	Samples	Status
2839	CHIDGEY	SAM1V program i	CHIDGEYB	Jan-15 10:04	10,000	STEPS
2793	CHIDGEY		CHIDGEYX	Jan-14 9:44	9	Ended
2792	MACHIN2	v10-uc13-4K	DONDRVRN	Jan-12 12:01	80,258	Ended
2791	MACHIN2	v10-uc14	MACHIND	Jan-12 11:43	99,999	Ended
2790	MACHIN2	v10-uc20	CICSC41F	Jan-12 9:57	50	Ended
2784 +	MACHIN2	v10-uc3	MQPUT	Jan-12 6:27	11,111	STEPS
2782 +	MACHIN2	v10-uc23-v3	DONDRVRN	Jan-11 16:04	33,333	Thresh
2781	MACHIN2	v10-uc18	DBJOB8	Jan-11 20:30	271	Ended
2779 +	MACHIN2	v10-uc23-v2	COBOLPLI	Jan-11 15:17	33,333	Thresh
2777 +	MACHIN2	v10-uc23v1	COBOLPLI	Jan-11 14:42	55,555	Thresh
2776	ECSLJO	ECLLEAR IIK90A0	IIK99A01	Jan-7 13:09	10,000	Ended
2775	ECSLJO	ECLLEAR IIK10A	IIK10A01	Jan-7 13:08	10,000	Ended
2774	ECSLJO	ECLLEAR FFESAP	FFESAP00	Jan-7 13:07	10,000	Ended
2766 +	MACHIN2	v9-uc3	MQPUT	Jan-4 6:25	11,111	STEPS
2760 +	MACHIN2	v9-uc3	MQPUT	Jan-4 6:23	11,111	STEPS
2759	CHIDGEY		CHIDGEYX	Dec-17 13:29	10,000	Ended
2757	CHIDGEY	Start monitorin	CHIDGEYM	Dec-16 13:30	5,000	Thresh

53
IBM Application Performance Analyzer for z/OS tutorial
© 2010 IBM Corporation

And the new request was added, and is displayed at the top of the observation list. APA will patiently wait for the job to run. APA is notified by the system every time a job starts, and when the right job starts, monitoring will begin. APA observation requests never expire. You can run the job in a minute or in a year, and either way, APA will start monitoring when the job starts. The request will still be there even if the system is IPLed. If you change your mind, you can delete your observation request. You can do that here in the observation list with a "D" (for delete) line command.

Submit a job that APA will measure



```
File View Navigate Help
R02: IBM APA for z/OS Observation List (CAZA)           New request added
Command ==> _____ Scroll ==> CSR
```

ReqNum	Owned By	Description	Job Name	Date/Time	Samples	Status
2839	CHIDGEY	SAM1V program i	CHIDGEYB	Jan-15 10:04	10,000	STEPS
2793	CHIDGEY		CHIDGEYX	Jan-14 9:44	9	Ended
2792	MACHIN2	v10-uc13-4K	DONDRVRN	Jan-12 12:01	80,258	Ended
2791	MACHIN2	v10-uc14	MACHIND	Jan-12 11:43	99,999	Ended
2790	MACHIN2	v10-uc20	CICSC41F	Jan-12 9:57	50	Ended
2784 +	MACHIN2	v10-uc3	MQPUT	Jan-12 6:27	11,111	STEPS

```
File Edit Edit_Settings Menu Utilities Compilers Test Help
EDIT CHIDGEY.ADLAB.JCL (XSAMAPA) - 01.07           Columns 00001 00072
Command ==> SUB
*****
==MSG> -Warning- The UNDO command
==MSG> your edit profil
000001 //CHIDGEYB JOB (CHIDGEY,H2
000002 // MSGCLASS=H,TIME=59,REG
000003 //* - - - ADD A JOB C
```

APA waits for the job to start
It will wait indefinitely
It will start monitoring when the job runs

54 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

When you are ready, you can submit the job so that APA will monitor it. If you split the screen, you can bring up the JCL in the editor, and submit it. APA does not care how a job is submitted. It can be submitted by you, by someone else, or by a job scheduling system.

The observation session started



```
File View Navigate Help
R02: IBM APA for z/OS Observation List (CAZA) Row 00001 of 00082
Command ==> Scroll ==> CSR
```

ReqNum	Owned By	Description	Job Name	Date/Time	Samples	Status
+839	CHIDGEY	SAM1V program i	CHIDGEYB	Jan-15 10:04	10,000	STEPS
2793	CHIDGEY		CHIDGEYX	Jan-14 9:44	9	Ended
2792	MACHIN2	v10-uc13-4K	DONDRVRN	Jan-12 12:01	80,258	Ended
2791	MACHIN2	v10-uc14	MACHIND	Jan-12 11:43	99,999	Ended
2790	MACHIN2	v10-uc20	CICSC41F	Jan-12 9:57	50	Ended
2784	MACHIN2	v10-uc3	MQPUT	Jan-12 6:27	11,111	STEPS
2782	MACHIN2	v10-uc23-v3	DONDRVRN	Jan-11 16:04	33,333	Thresh
2781	MACHIN2	v10-uc18	DBJOB8	Jan-11 20:30	271	Ended
2779	MACHIN2	v10-uc23-v2	COBOLPLI	Jan-11 15:17	55,555	Thresh
2777	MACHIN2	v10-uc23v1	COBOLPLI	Jan-11 14:42	10,000	Ended
2776	ECLEAR	FFESAP	IIK99A01	Jan-7 13:09	10,000	Ended
2775	ECLEAR	FFESAP	IIK10A01	Jan-7 13:08	10,000	Ended
2774	ECLEAR	FFESAP	FFESAP00	Jan-7 13:07	10,000	Ended
2766	MACHIN2	v9-uc3	MQPUT	Jan-4 6:25	11,111	STEPS
2760	MACHIN2	v9-uc3	MQPUT	Jan-4 6:23	11,111	STEPS
2759	CHIDGEY		CHIDGEYX	Dec-17 13:29	10,000	Ended
2757	CHIDGEY	Start monitorin	CHIDGEYM	Dec-16 13:30	5,000	Thresh

Expand (+) the entry to display each step

The color changed when the session became active

ENTER

55 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

As soon as the job started to run, APA started to monitor it. Notice that the request's number of samples color changed when the monitoring session became active. Since APA is monitoring multiple steps for this job, you can expand the entry to display each step monitored. To expand an entry, overtype the first position of the request number field with a "+" and press Enter.

Steps in the monitored job



File View Navigate Help

R02: IBM APA for z/OS Observation List (CAZA) Row 00001 of 00093
Command ==> Scroll ==> CSR

ReqNum	Owned By	Description	Job Name	Date/Time	Samples	Status
<u>2839</u> +	CHIDGEY	SAM1V program i	CHIDGEYB	Jan-15 10:04	10,000	STEPS
→ <u>2840</u>	0001	IKJEFT01	CUSTKSDS CHECKV	Jan-15 10:06	6	Ended
→ <u>2841</u>	0002	IEFBR14	CUSTKSDS ALLOCV	Jan-15 10:06	2	Ended
→ <u>2842</u>	0003	IDCAMS	CUSTKSDS COPYV	Jan-15 10:06	16	Ended
→ <u>2843</u>	0004	IKJEFT01	CUSTKSDS CHECKV	Jan-15 10:06	4	Ended
→ <u>2844</u>	0005	IEFBR14	CUSTKSDS ALLOCV	Jan-15 10:06	2	Ended
→ <u>2845</u>	0006	IDCAMS	CUSTKSDS COPYV	Jan-15 10:06	20	Ended
→ <u>2846</u>	0007	IDCAMS	CUSTKSDS COPYV	Jan-15 10:06	14	Ended
→ <u>2847</u>	0008	SAM1V	CUSTKSDS COPYV	Jan-15 10:06	940	Active
<u>2793</u>	CHIDGEY		CHIDGEYX	Jan-14 9:44	9	Ended
<u>2792</u>	MACHIN2	v10-uc13-4K	DO			
<u>2791</u>	MACHIN2	v10-uc14	MA			
<u>2790</u>	MACHIN2	v10-uc20	CI			
<u>2784</u> +	MACHIN2	v10-uc3	MQPUT	Jan-12 6:27	11,111	STEPS

"Ended" status is shown for steps when monitoring is completed

"Active" status is shown for the step that is currently being monitored

56 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

The entry is expanded in the list, and each step monitored is shown. As monitoring completes for each step, the step's status changes to "Ended". And that is how to enter a new request for a job that is not running yet.

Examples of entering observation requests



- Enter an observation request for a job that is already running
- Enter an observation request for a job that is not running yet
- Enter an observation request for multiple jobs
- Schedule future observation requests
- Enter an observation session to monitor CICS applications
- Enter a threshold observation request

Next, you are guided through how to enter an observation request for multiple jobs.

Enter a NEW observation request



File View Navigate Help

R02: IBM APA for z/OS Observation List (CAZA) Row 00001 of 00150
Command ==> **NEW** Scroll ==> CSR

ReqNum	Owned By	Description	Job Name	Date/Time	Samples	Status	
2740	+	CHIDGEY	SAM1V program i	CHIDGEYB	Dec-15 14:51	10,000	STEPS
2711		CHIDGEY		CHIDGEYA	Dec-15 12:39	2,000	Ended
2708		CHIDGEY	Measure SAM1V A	CHIDGEYA	Dec-15 12:20	6	Ended
2684		MACHIN2	- test	-	Dec-9 7:53	155	Ended
2682		MACHIN2	V10	CICSC41F	Dec-8 11:11	11,111	Ended
2681		MACHIN2	v10ref7-uc7	CICSC32F	Dec-8 11:09	99,999	Ended
2680		MACHIN2	v9ref-uc17	CICSC32F	Dec-8 11:09	99,999	Ended
2679		MACHIN2	v9-uc3	MQPUT	Dec-8 11:09	774	Ended
2678		MACHIN2	v10ref2-uc18	DBJOB8	Dec-8 14:25	236	Ended
2677		MACHIN2	v10ref2-uc14	MACHIND	Dec-8 10:03	99,999	Ended
2671	+	MACHIN2	v10ref2-uc19v1	STEPS	Dec-8 9:06	11,111	STEPS
2542	+	MACHIN2	v10ref2-uc19v1	STEPS	Dec-8 9:02	11,111	STEPS
2541		MACHIND	v10ref2-uc15v2	DB2DATA	Dec-8 8:20	66,750	Ended
2540		MACHIND	v10ref2-uc15	DB2DATA	Dec-8 8:12	76,475	Ended
2539		MACHIN2	vg10ref2-uc26	DB2V9TEP	Dec-8 7:53	19,314	Er
2538		MACHIN2	v10ref2-uc30v4	-	Dec-8 6:47	149	Er
2537		MACHIN2	v10ref2-uc30v3	-	Dec-8 6:37	144	Er

ENTER

58 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

In APA, you can enter one request to monitor multiple jobs simultaneously. You start the same way as in the last example. Type the NEW command on the command line, and press Enter.

Specify the job name pattern and options



File View Navigate Help

R03: Schedule New Measurement
Command ==>

1. Job Information 3. Multi Steps 5. Subsystems 7. Schedule
2. Options 4. Active Jobs 6. Sysplex 8. Sched Options

Panel 1. Job Information

Job Name/Pattern . . . TST%A% System Name . . . STLABF6
(Inactive)

Step Specification

Step No. _____ Specify step number, program name,
Program Name _____ step name or step name + Proc step
Step Name _____ name. Use panel 3 to specify more
ProcStepName _____ than one step.

Description _____

Number of Samples . . . 10000 Measure to step end . . . N
Duration (min:sec) . . . 2:00 Delay by (secs) _____
Notify TSO User . . . CHIDGEY Retain file for (days) . . . 90
USS observations _____ Max _____

ENTER

59 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

Enter % as a wildcard in the Job Name to capture multiple jobs

Panel one, Job Information, is displayed. In order to set up this request to monitor multiple jobs, a wildcard is used in the job name field. Entering a percent sign as a wildcard in the jobname field indicates to APA that multiple jobs are to be monitored.

You must type in the name pattern of the jobs that you want to monitor using the percent sign as the wildcard character. In this example, all jobs beginning with jobname TST and containing an "A" somewhere after that are monitored. Finally, notice that 10,000 samples and a duration of two minutes were entered. These are the number of samples and the duration to be taken for each job being monitored.

You need to be aware that when a percent sign is used as a wildcard character in the jobname, APA assumes the jobs that match the pattern are active.

If no active jobs match the pattern, Panel four, Active Jobs, is displayed. Press enter.

Ready to submit the new request



```
File View Navigate Help
R03: Schedule New Measurement Row 00001 of 00013
Command ==> _____ Scroll ==> CSR
1. Job Information 3. Multi Steps 5. Subsystems 7. Schedule
2. Options 4. Active Jobs 6. Sysplex 8. Sched Options
Panel 1. Job Information Input more data or ENTER to submit
Job Name/Pattern . . . TST%A% System Name . . . STLABF6
(Inactive)
Step Specification
Step No. . . . . _____ Specify step number, program name,
Program Name . . . _____ step name or step name + Proc step
Step Name . . . _____ name. Use panel 3 to specify more
ProcStepName . . . _____ than one step.
Description . . . > _____
Number of Samples . 10000 Measure to step end . . . N
Duration (min:sec) . 2:00 Delay by (secs) . . . . . _____
Notify TSO User . . CHIDGEY Retain file for (days) . 90
USS observations . . . . . _____ Max
ENTER
```

Since the message “Input more data or Enter to submit” is now displayed, APA is ready to accept the request. In this example, the job does not need any of the data extractors, that is to say that it does not use DB2, IMS, or anything else that requires an extractor to be selected. Press Enter.

The new request has been submitted



File View Navigate Help

R02: IBM APA for z/OS Observation List (CAZA)
 Command ==> █

New request added
 Scroll ==> CSR

ReqNum	Owned By	Description	Job Name	Date/Time	Samples	Status
<u>2851</u>	CHIDGEY		TST%A%	Jan-15 11:46	10,000	MultJb
<u>2839</u> +	CHIDGEY	SAM1V program i	CHIDGEYB	Jan-15 10:04	10,000	STEPS
<u>2793</u>	CHIDGEY		CHIDGEYX	Jan-14 9:44	9	Ended
<u>2792</u>	MACHIN2	v10-uc13-4K	DONDRVRN	Jan-12 12:01	80,258	Ended
<u>2791</u>	MACHIN2	v10-uc14	MACHIND	Jan-12 11:43	99,999	Ended
<u>2790</u>	MACHIN2	v10-uc20	C		50	Ended
<u>2784</u> +	MACHIN2	v10-uc3	MQPUI	Jan-12 16:27	11,111	STEPS
<u>2782</u> +	MACHIN2	v10-uc23-v3	DONDRVRN	Jan-11 16:04	33,333	Thresh
<u>2781</u>	MACHIN2	v10-uc18	DBJOB8	Jan-11 20:30	271	Ended
<u>2779</u> +	MACHIN2	v10-uc23-v2	COBOLPLI	Jan-11 15:17	33,333	Thresh
<u>2777</u> +	MACHIN2	v10-uc23v1	COBOLPLI	Jan-11 14:42	55,555	Thresh
<u>2776</u>	ECSLJO	ECLEAR IIK90A0	IIK99A01	Jan-7 13:09	10,000	Ended
<u>2775</u>	ECSLJO	ECLEAR IIK10A	IIK10A01	Jan-7 13:08	10,000	Ended
<u>2774</u>	ECSLJO	ECLEAR FFESAP	FFESAP00	Jan-7 13:07	10,000	Ended
<u>2766</u> +	MACHIN2	v9-uc			11,111	S
<u>2760</u> +	MACHIN2	v9-uc			11,111	S
<u>2759</u>	CHIDGEY				10,000	En

The new request.

PF1 (help) to display information about the warning.

PF1

61 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

The new request was added, and is displayed at the top of the observation list. When a request is entered to monitor multiple jobs, it is indicated in the status column.

The observation session started



File View Navigate Help

R02: IBM APA for z/OS Observation List (CAZA) New request added
Command ==> _____ Scroll ==> CSR

ReqNum	Owned By	Description	Job Name	Date/Time	Samples	Status
<u>+851</u>	CHIDGEY		TST%A%	Jan-15 11:46	10,000	MultiJob
<u>2879</u>	+ CHIDGEY	SAM1V program i	CHIDGEYB	Jan-15 10:04	10,000	STEPS
<u>2793</u>	CHIDGEY		CHIDGEYX	Jan-14 9:44	9	Ended
<u>2792</u>	MACHIN2	v10-uc13-4K	DONDRVRN	Jan-12 12:01	80,258	Ended
<u>2791</u>	MACHIN2			Jan-12 11:43	99,999	Ended
<u>2790</u>	MACHIN2			Jan-12 9:57	50	Ended
<u>2784</u>	+ MACHIN2			Jan-12 6:27	11,111	STEPS
<u>2782</u>	+ MACHIN2			Jan-11 16:04	33,333	Thresh
<u>2781</u>	MACHIN2	v10-uc18	DBJOB8	Jan-11 20:30	271	Ended
<u>2779</u>	+ MACHIN2	v10-uc23-v2	COBOLPLI	Jan-11 15:17	33,333	Thresh
<u>2777</u>	+ MACHIN2	v10-uc23v1	COBOLPLI	Jan-11 14:42	55,555	Thresh
<u>2776</u>	EC SLJ0	ECLEAR IIK90A0	IIK99A01	Jan-7 13:09	10,000	Ended
<u>2775</u>	EC SLJ0	ECLEAR IIK10A	IIK10A01	Jan-7 13:08	10,000	Ended
<u>2774</u>	EC SLJ0	ECLEAR FFESAP	FFESAP00	Jan-7 13:07	10,000	Ended
<u>2766</u>	+ MACHIN2	v9-uc3	MQPUT	Jan-4 6:25	11,111	STEPS
<u>2760</u>	+ MACHIN2	v9-uc3	MQPUT	Jan-4 6:23	11,111	STEPS
<u>2759</u>	CHIDGEY		CHIDGEYX	Dec-17 13:29	10,000	Ended

Expand (+) the entry to display each job being monitored

ENTER

62 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

APA will start monitoring any active jobs that match the jobname pattern. Since APA is possibly monitoring multiple jobs, you can expand the entry to display each job monitored and to see their status. To expand an entry, overwrite the first position of the request number field with a "+" and press Enter.

Jobs being monitored simultaneously



File View Navigate Help

R02: IBM APA for z/OS Observation List (CAZA) Row 00001 of 00088
Command ==> Scroll ==> CSR

ReqNum	Owned By	Description	Job Name	Date/Time	Samples	Status
2851 +	CHIDGEY		TST% A	Jan-15 11:46	10,000	MultJb
→ 2852			TSTJOBAP	Jan-15 11:46	6,459	Active
→ 2853			TSTJOBAPV	Jan-15 11:46	1	Active
2839 +	CHIDGEY	SAM1V program i	CHIDGEYB	Jan-15 10:04	10,000	STEPS
2792	CHIDGEY		CHIDGEYX	Jan-14 9:44	9	Ended
				Jan-12 12:01	80,258	Ended
				Jan-12 11:43	99,999	Ended
				Jan-12 9:57	50	Ended
2784 +	MACHIN2	v10-uc3	MOBUT	Jan-12 9:07	14,444	STEPS
2782 +	MACHIN2	v10-uc23-v3	DC			
2781	MACHIN2	v10-uc18	DE			
2779 +	MACHIN2	v10-uc23-v2	COBOLPLI	Jan-11 15:17	33,333	Thresh
2777 +	MACHIN2	v10-uc23v1	COBOLPLI	Jan-11 14:42	55,555	Thresh
2776	ECSLJ0	ECLLEAR IIK90A0	IIK99A01	Jan-7 13:09	10,000	Ended

Multiple jobs are being monitored simultaneously

"Active" status is shown for each job that is currently being monitored

63 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

The entry is expanded in the list, and each job being monitored is shown. As monitoring completes for each job, the job's status changes to "Ended". Remember, that the number of samples and duration specified applies to each individual job being monitored. In this case, 10,000 samples for a duration of two minutes is taken for each of these jobs. And that is how to enter a new request to monitor multiple jobs.

Examples of entering observation requests



- Enter an observation request for a job that is already running
- Enter an observation request for a job that is not running yet
- Enter an observation request for multiple jobs
- Schedule future observation requests
- Enter an observation session to monitor CICS applications
- Enter a threshold observation request



Schedule future observation requests

In the next walk-through, you will learn how to schedule future observation requests.

Enter a NEW observation request



File View Navigate Help

R02: IBM APA for z/OS Observation List (CAZA) Row 00001 of 00083
Command ==<> **NEW** Scroll ==> CSR

ReqNum	Owned By	Description	Job Name	Date/Time	Samples	Status
2851	+ CHIDGEY		TST%A%	Jan-15 11:46	10,000	MultiJb
2839	+ CHIDGEY	SAM1V program i	CHIDGEYB	Jan-15 10:04	10,000	STEPS
2793	CHIDGEY		CHIDGEYX	Jan-14 9:44	9	Ended
2792	MACHIN2	v10-uc13-4K	DONDRVRN	Jan-12 12:01	80,258	Ended
2791	MACHIN2	v10-uc14	MACHIND	Jan-12 11:43	99,999	Ended
2790	MACHIN2	v10-uc20	CICSC41F	Jan-12 9:57	50	Ended
2784	+ MACHIN2	v10-uc3	MQPUT	Jan-12 6:27	11,111	STEPS
2782	+ MACHIN2	v10-uc23-v3	DONDRVRN	Jan-11 16:04	33,333	Thresh
2781	MACHIN2	v10-uc18	DBJOB8	Jan-11 20:30	271	Ended
2779	+ MACHIN2	v10-uc23-v2	COBOLPLI	Jan-11 15:17	33,333	Thresh
2777	+ MACHIN2	v10-uc23v1	COBOLPLI	Jan-11 14:42	55,555	Thresh
2776	EC SLJ0	ECLEAR IIK90A0	IIK99A01	Jan-7 13:09	10,000	Ended
2775	EC SLJ0	ECLEAR IIK10A	IIK10A01	Jan-7 13:08	10,000	Ended
2774	EC SLJ0	ECLEAR FFESAP	FFESAP00	Jan-7 13:07	10,000	Ended
2766	+ MACHIN2	v9-uc3	MQPUT	Jan-4 6:25	11,111	STEPS
2760	+ MACHIN2	v9-uc3	MQPUT	Jan-4 6:23	11,111	STEPS
2759	CHIDGEY		CHIDGEYX	Dec-17 13:29	10,000	Ended

65 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

ENTER

By now, you know how to enter a new observation request. Type “new” on the command line, and press Enter.

Specify the Job Name and options



File View Navigate Help

R03: Schedule New Measurement Row 00001 of 00013
Command ==> 7 Scroll ==> CSR

1. Job Information 3. Multi Steps 5. Subsystems 7. Schedule
2. Options 4. Active Jobs 6. Sysplex 8. Sched Options

Panel 1. Job Information

Job Name/Pattern . CHIDGEYS System Name . . . STLABF6
(Inactive)

Step Specification

Step No. _____ Specify step number, program name,
Program Name _____ step name or step name + Proc step
Step Name _____ name. Use panel 3 to specify more
ProcStepName _____ than one step.

Description _____

Number of Samples . 10000 Measure to step end . . . N
Duration (min:sec) . 3:00 Delay by (secs) _____
Notify TSO User . . CHIDGEY Retain file for (days) . 90
USS observations _____ Max

ENTER

66 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

Panel one, Job information is displayed.

You must type in the job name, the number of samples that you want to have collected, and the duration. To schedule a future observation request, go to panel seven: the scheduling panel. Just type the number seven on the command line, and press Enter.

Schedule an observation session



File View Navigate Help

R03: Schedule New Measurement Row 00001 of 00001
Command ==> Scroll ==> CSR

- 1. Job Information
- 2. Options
- 3. Multi Steps
- 4. Active Jobs
- 5. Subsystems
- 6. Sysplex
- 7. **Schedule**
- 8. Sched Options

Panel 7. Schedule

Date/time of first in sequence Measurement repetitions

Date (yy mm dd) . 10 02 03 Repeat . . . times

Time (hh mm) . 12 00 After . . . days minutes

Use this panel to specify a schedule for repetitions of the measurement. Input the above fields and press ENTER to generate dates and times for each of the measurements. These dates/times will be shown below in a scrollable table which you can add to by repeating this input process.

APA will start looking for the Job to start beginning at this Date and Time

ENTER

67 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

Here is the schedule panel. If all you want to do is have APA monitor a job the next time it starts, then you do not need to use this panel. Just add your new request, and APA will monitor the job the next time it starts, whenever it starts. So if APA will automatically monitor an application when it starts at any time in the future, when should you use this panel to schedule a request? The purpose of this panel is to allow you to delay the entry of a request. You might do that if you do not want APA to monitor a job or region the next time it starts, but you want monitoring to be done at some later time. You might also do it if you have, for example, a job that will run once every night for a week.

In this example, the date and time was entered to add the observation request. Notice that the date is in year month day format. Once enter is pressed...

A schedule has been entered



```
File View Navigate Help
R03: Schedule New Measurement
Command ==>
New dates generated
Scroll ==> CSR

1. Job Information      3. Multi Steps      5. Subsystems      7. Schedule
2. Options             4. Active Jobs     6. Sysplex        8. Sched Options

Panel 7. Schedule      Input more data or ENTER to submit
Date/time of first in sequence  Measurement repetitions
Date (yy mm dd) . _ _ _ Repeat . . _ times
Time (hh mm) . . _ _ After . . . _ days _ minutes

Measurement Schedule (/ for line command list, UP/DOWN to scroll)
SeqN  Date/Time      Status
0001  Wed Feb-03-10 12:00  Pending ADD
***** End of Schedule *****
```

The new scheduled request is added to a list that is displayed at the bottom of the panel. APA will add the request at this date and time.

Schedule additional observation sessions




```
File View Navigate Help
R03: Schedule New Measurement                               New dates generated
Command ==> _____ Scroll ==> CSR

● 1. Job Information   3. Multi Steps   5. Subsystems   ● 7. Schedule
● 2. Options           4. Active Jobs   6. Sysplex     8. Sched Options

Panel 7. Schedule                                         Input more data or ENTER to submit
Date/time of first in sequence                           Measurement repetitions
Date (yy mm dd) . 10 02 03                               Repeat . . 7 times
Time (hh mm) . . 12 00                                   After . . 1 days ___ minutes

Measurement Schedule (/ for line command list, UP/DOWN to scroll)
SeqN   Date/Time                               Status
0001   Wed Feb-03-10 12:00                     Pending ADD
***** End of Schedule *****
```

You can "repeat" schedules, so you do not have to enter multiple requests



69

IBM Application Performance Analyzer for z/OS tutorial

© 2010 IBM Corporation

You can continue to add more scheduled requests. And, you can enter multiple requests at the same time. It works like this. If you enter a date and time. And in the measurement repetitions area, you specify, for instance, a seven in the "repeat" field. Then, a one in the "after days" field. That means you want to add seven new requests. The first one starting on the date and time you entered, with each subsequent request delayed by one day each. Press Enter.

Multiple schedule requests are entered



```
File View Navigate Help
R03: Schedule New Measurement
Command ==> _____
Duplicates not added
Scroll ==> CSR

1. Job Information      3. Multi Steps      5. Subsystems      7. Schedule
2. Options              4. Active Jobs     6. Sysplex         8. Sched Options

Panel 7. Schedule
Date/time of first in sequence
Date (yy mm dd) . _ _ _
Time (hh mm) . . _ _
Repeat . . . _ times
After . . . _ days _ minutes

Measurement Schedule (/ for line command list, UP/DOWN to scroll)
SeqN  Date/Time      Status
0001  Wed Feb-03-10 12:00  Pending ADD
0002  Thu Feb-04-10 12:00  Pending ADD
0003  Fri Feb-05-10 12:00  Pending ADD
0004  Sat Feb-06-10 12:00  Pending ADD
0005  Sun Feb-07-10 12:00  Pending ADD
0006  Mon Feb-08-10 12:00  Pending ADD
0007  Tue Feb-09-10 12:00  Pending ADD
***** End of Schedule *****

Input more data or ENTER to submit
ENTER to submit the request
ENTER
```

Notice that the new scheduled requests have been added to the list. Also, you will notice that only the entries that were not already in the Measurement Schedule were added to the list.

Press enter again to get the message “Input more data or enter to submit”. Press Enter.

The new request has been submitted



File View Navigate Help

R02: IBM APA for z/OS Observation List (CAZA) Warning

Command ==> Scroll ==> CSR

ReqNum	Owned By	Description	Job Name	Date/Time	Samples	Status
<u>2855</u>	CHIDGEY		CHIDGEYS	Jan-15 14:00	10,000	REPEAT
<u>2851</u> +	CHIDGEY		TST%A%	Jan-15 11:46	10,000	MultiJob
<u>2839</u> +	CHIDGEY	SAM1V program i	CHIDGEYB	Jan-15 10:04	10,000	STEPS
<u>2793</u>	CHIDGEY		CHIDGEYX	Jan-14 9:44	9	Ended
<u>2792</u>	MACHIN2	v10-uc13-4K	DONDRVRN	Jan-11 16:04		Ended
<u>2791</u>	MACHIN2	v10-uc14	MACHIND	Jan-11 15:17		Ended
<u>2790</u>	MACHIN2	v10-uc20	CICSC41F	Jan-12 9:57	50	Ended
<u>2784</u> +	MACHIN2	v10-uc3	MQPUT	Jan-12 6:27	11,111	STEPS
<u>2782</u> +	MACHIN2	v10-uc23-v3	DONDRVRN	Jan-11 16:04	33,333	Thresh
<u>2781</u>	MACHIN2	v10-uc18	DBJOB8	Jan-11 20:30	271	Ended
<u>2779</u> +	MACHIN2	v10-uc23-v2	COBOLPLI	Jan-11 15:17	33,333	Thresh
<u>2777</u> +	MACHIN2	v10-uc23v1	COBOL	Jan-11 15:17		Thresh
<u>2776</u>	ECSLJO	ECLEAR IIK90A0	IIK99	Jan-7 13:07	10,000	Ended
<u>2775</u>	ECSLJO	ECLEAR IIK10A	IIK10	Jan-7 13:07	10,000	Ended
<u>2774</u>	ECSLJO	ECLEAR FFESAP	FFESAP00	Jan-7 13:07	10,000	Ended
<u>2766</u> +	MACHIN2	v9-uc3	MQPUT	Jan-4 6:25	11,111	STEPS
<u>2760</u> +	MACHIN2	v9-uc3	MQPUT	Jan-4 6:23	11,111	STEPS

71 | IBM Application Performance Analyzer for z/OS tutorial | © 2010 IBM Corporation

The new scheduled request is shown at the top of the observation list. It is typical to receive a warning message when you enter a new scheduled request. You can press PF1 (the help key) to display more information about the warning.

The new request has been submitted



```
File View Navigate Help
R02: IBM APA for z/OS Observation List (CAZA)
Command ==> | Scroll ==> CSR
```

ReqNum	Owned By	Description	Job Name	Date/Time	Samples	Status
2855	CHIDGEY		CHIDGEYS	Jan-15 14:00	10,000	REPEAT
2851 +	CHIDGEY		TST%A%	Jan-15 11:46	10,000	MultJb
2839 +	CHIDGEY	SAM1V program i	CHIDGEYB	Jan-15 10:04	10,000	STEPS
2793	CHIDGEY		CHIDGEYX	Jan-14 9:44	9	Ended
2792	MACHIN2	v10-uc13-4K	DONDRVRN	Jan-12 12:01	80,258	Ended
2791	MACHIN2	v10-uc14	MACHIND	Jan-12 11:43	99,999	Ended
2790	MACHIN2	v10-uc20	CICSC41F	Jan-12 9:57	50	Ended
2784 +	MACHIN2	v10-uc3	MQPUT	Jan-12 6:27	11,111	STEPS
2782 +	MACHIN2	v10-uc23-v3	DONDRVRN	Jan-11 16:04	33,333	Thresh
2781	MACHIN2	v10-uc18	DBJOB8	Jan-11 20:30	271	Ended
2779 +	MACHIN2	v10-uc23-v2	COBOLPLI	Jan-11 15:17	33,333	Thresh

A new measurement request has been provisionally added. It represents a scheduling request and therefore could not be authorized. The request will be authorized at the time the job starts.

2760 +	MACHIN2	v9-uc3	MQPUT	Jan-4 6:23	11,111	STEPS
------------------------	---------	--------	-------	------------	--------	-------

72 | IBM Application Performance Analyzer for z/OS tutorial | © 2010 IBM Corporation

In this case, the warning is just saying that the request itself is checked for authorization, that is permission to monitor the application, when it becomes active. Most typically, you can ignore these warnings, assuming of course that you are authorized to monitor the application.

Examples of entering observation requests



- Enter an observation request for a job that is already running
- Enter an observation request for a job that is not running yet
- Enter an observation request for multiple jobs
- Schedule future observation requests
- Enter an observation session to monitor CICS applications
- Enter a threshold observation request



In this next example, you will learn how to enter an observation request to monitor CICS applications.

Enter a NEW observation request




File View Navigate Help

R02: IBM APA for z/OS Observation List (CAZA) Row 00001 of 00150
Command ==> **NEW** Scroll ==> CSR

ReqNum	Owned By	Description	Job Name	Date/Time	Samples	Status	
2740	+	CHIDGEY	SAM1V program i	CHIDGEYB	Dec-15 14:51	10,000	STEPS
2711		CHIDGEY		CHIDGEYA	Dec-15 12:39	2,000	Ended
2708		CHIDGEY	Measure SAM1V A	CHIDGEYA	Dec-15 12:20	6	Ended
2684		MACHIN2	- test	-	Dec-9 7:53	155	Ended
2682		MACHIN2	V10	CICSC41F	Dec-8 11:11	11,111	Ended
2681		MACHIN2	v10ref7-uc7	CICSC32F	Dec-8 11:09	99,999	Ended
2680		MACHIN2	v9ref-uc17	CICSC32F	Dec-8 11:09	99,999	Ended
2679		MACHIN2	v9-uc3	MQPUT	Dec-8 11:09	774	Ended
2678		MACHIN2	v10ref2-uc18	DBJOB8	Dec-8 14:25	236	Ended
2677		MACHIN2	v10ref2-uc14	MACHIND	Dec-8 10:03	99,999	Ended
2671	+	MACHIN2	v10ref2-uc19v1	STEPS	Dec-8 9:06	11,111	STEPS
2542	+	MACHIN2	v10ref2-uc19v1	STEPS	Dec-8 9:02	11,111	STEPS
2541		MACHIND	v10ref2-uc15v2	DB2DATA	Dec-8 8:20	66,750	Ended
2540		MACHIND	v10ref2-uc15	DB2DATA	Dec-8 8:12	76,475	Ended
2539		MACHIN2	vq10ref2-uc26	DB2V9TEP	Dec-8 7:53	19,314	Er
2538		MACHIN2	v10ref2-uc30v4	-	Dec-8 6:47	149	Er
2537		MACHIN2	v10ref2-uc30v3	-	Dec-8 6:37	144	Er

74 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation



You start by using the NEW command. Enter.

The "Job Information" panel is displayed



File View Navigate Help

R03: Schedule New Measurement Row 00001 of 00013

Command ==>

1. Job Information 3. Multi Steps
2. Options 4. Active Jobs 6. Sysplex 8. Sched Options

Panel 1. Job Information

Job Name/Pattern . . . CIC* (Inactive) System Name . . . STLABF6

Step Specification

Step No. _____ Step _____
Program Name _____ step _____
Step Name _____ name _____
ProcStepName _____ than one step.

Description _____

Number of Samples . . . 10000 Measure to step end N
Duration (min:sec) . . . 5:00 Delay by (secs) _____
Notify TSO User . . . CHLDCE1 Retain file for (days) . . . 90
USS observations _____ Max _____

ENTER

75 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

For CICS applications, specify the name of the CICS region in the job name field. Remember that if you specify a wildcard with an asterisk in the job name, that is a shortcut to panel four, which displays a list of active jobs and regions. In this example, 10,000 samples are specified with a monitoring duration of five minutes. When you are monitoring CICS regions, especially if it is a busy region, consider collecting somewhat more samples than you will for a simple batch application. Since a wildcard was used in the job name, when you press enter...

The "Active Jobs" panel is displayed



File View Navigate Help

R03: Schedule New Measurement Row 00001 of 00005
Command ==> Scroll ==> CSR

1. Job Information 3. Multi Steps 5. Subsystems 7. Schedule
2. Options 4. Active Jobs 6. Sysplex 8. Sched Options

Panel 4. Active Jobs

Enter S to select an active job step to be measured. Prefix . . CIC*

	JobName	Type	JobId	StepName	ProcStep	ASIDX	System	CPU%	SIO
-	CICSC23F	STC	STC00368	CICSC23F	CICS	009F	STLABF6	3.23	0.00
-	CICSC31F	STC	STC00369	CICSC31F	CICS	00A0	STLABF6	0.00	0.00
S	CICSC32F	STC	STC00370	CICSC32F	CICS	00A1	STLABF6	1.08	0.00
-	CICSC41F	STC	STC00371	CICSC41F	CICS	00A2	STLABF6	0.00	0.00

Select the CICS region where the application runs

ENTER

76 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

Panel four, Active Jobs is displayed. Since a region was selected from panel four, APA knows that it should begin monitoring immediately.

Select the CICS region where the application is running. Of course, to get meaningful data, the transactions that you are interested in need to run while APA is collecting data. Press Enter.

Navigate to the "Options" panel



File View Navigate Help

R03: Schedule New Measurement Row 00001 of 00010
Command ==> 2 Scroll ==> CSR

1. Job Information 3. Multi Steps 5. Subsystems 7. Schedule
2. Options 4. Active Jobs 6. Sysplex 8. Sched Options

Panel 4. Active Jobs

Enter S to select an active job step to be measured. Prefix . . CIC* _____

JobName	Type	JobId	StepName	ProcStep	ASIDX	System	CPU%	SIO
- CICSC23F	STC	STC01391	CICSC23F	CICS				0.00
- CICSC31F	STC	STC02295	CICSC31F	CICS				0.00
- CICSC32F	STC	STC02336	CICSC32F	CICS				6.00
- CICSC41F	STC	STC02296	CICSC41F	CICS				0.00

Selected Jobs List
Enter D to remove an active job from the list.

JobName	System
- CICSC32F	STLABF6

ENTER

77 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

Notice that the CICS region you selected is now displayed in Selected Jobs List.

It is very important that you do not forget to specify the CICS data extractor when you are monitoring a CICS application. If you do not, APA will still gather a lot of information, but nothing that is CICS-specific such as transaction codes and EXEC CICS calls. To turn on the CICS data extractor, go to panel two.

Type two on the command line, and press Enter.

The "Options" panel is displayed



File View Navigate Help

R03: Schedule New Measurement Row 00001 of 00027
Command ==> 5 Scroll ==> CSR

1. Job Information 3. Multi Steps 5. Subsystems 7. Schedule
2. Options 4. Active Jobs 6. Sysplex 8. Sched Options

Panel 2. Measurement Options Input more data or ENTER to submit

Data Extractors. '/' to select extended measurement options:

/ CICS	CICS information	/ MQ	MQSeries call information
/ DB2	SQL call information	/ DB2+	SQL ser...
- CDB2	Collateral DB2 activity	/ DB2V	SQL V...
- IMS	DLI call information	- IMS+	DLI s...
- Java	Java information		

100 DB2+ Maximum number of trace entries in th
100 IMS+ Maximum number of trace entries in th

Specify up to 10 load libraries, or up to 440 bytes of HFS directories, to search for external symbol information. The load libraries apply only to sampled modules that are fetched from dynamically allocated load libraries. The directories apply only to sampled HFS programs that do not have a

ENTER

78 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

From panel two, you must turn on not only the CICS extractor, but also any others that your application will need.

In this example, the DB2 and MQSeries extractors are being selected as well using slashes.

You can also specify specific transactions you might want to monitor by navigating to the CICS Options panel. To do this, just type a five on the command line. Press Enter.

Ready to enter the new request



File View Navigate Help

R03: Schedule New Measurement
Command ==>

1. Job Information 3. Multi Steps 5. **Subsystems** 7. Schedule
2. Options 4. Active Jobs 6. Sysplex 8. Sched Options

Panel 5. Subsystem Measurement Criteria

Specify up to 16 CICS trancodes for which measurement data is to be recorded.

01 *	02	03	04	05	06	07	08
09	10	11	12	13	14	15	16

Include CICS system transactions in measurement (Y/N): N

Wildcard character '*' can be specified at the end of a partial name.
'*' by itself specifies all transactions or terminals.

Specify up to 8 CICS terminal ids for which measurement data is to be recorded.

01 *	02	03	04	05	06	07	08
------	----	----	----	----	----	----	----

ENTER

79 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

Select the transaction codes to be monitored
Use * for all transactions

Panel five, CICS Options, is displayed. Here you can specify up to 16 CICS transactions to monitor. If you want to measure all transactions, place an "*" in the first transaction field to monitor all transactions. Like so.

At this point, APA is ready to accept the request. When you are ready, press enter.

Request is added



File View Navigate Help

R02: IBM APA for z/OS Observation List (CAZA) New request added

Command ==> █ Scroll ==> CSR

ReqNum	Owned By	Description	Job Name	Date/Time	Samples	Status
<u>2756</u>	CHIDGEY		CICSC32F	Dec-16 12:56	10,000	Sched
<u>2740</u> +	CHIDGEY	SAM1V program i	CHIDGEYB	Dec-15 14:51	10,000	STEPS
<u>2711</u>	CHIDGEY		CHIDGEYA	Dec-15 12:39	2,000	Ended
<u>2708</u>	CHIDGEY	Measure SAM1V A	CHIDGEYA	Dec-15 12:20	6	Ended
<u>2684</u>	MACHIN2	- test	-	Dec-9 7:53	155	Ended
<u>2682</u>	MACHIN2	V10	CICSC41F	Dec-8 11:11	11,111	Ended
<u>2681</u>	MACHIN2	v10ref7-uc7	CICSC22F	Dec-8 11:00	00,000	Ended
<u>2680</u>	MACHIN2	v9ref-uc17	CI			
<u>2679</u>	MACHIN2	v9-uc3	MQ			
<u>2678</u>	MACHIN2	v10ref2-uc18	DB			
<u>2677</u>	MACHIN2	v10ref2-uc14	MA			
<u>2671</u> +	MACHIN2	v10ref2-uc19v1	STEPS	Dec-8 9:06	11,111	STEPS
<u>2542</u> +	MACHIN2	v10ref2-uc19v1	STEPS	Dec-8 9:02	11,111	STEPS
<u>2541</u>	MACHIND	v10ref2-uc15v2	DB2DATA	Dec-8 8:20	66,750	Ended
<u>2540</u>	MACHIND	v10ref2-uc15	DB2DATA	Dec-8 8:12	76,475	Er
<u>2539</u>	MACHIN2	vq10ref2-uc26	DB2V9TEP	Dec-8 7:53	19,314	Er
<u>2538</u>	MACHIN2	v10ref2-uc30v4	-	Dec-8 6:47	149	Er

The observation session starts
The observation session starts

Press ENTER to refresh the display
Press ENTER to refresh the display

ENTER

80 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

And the new request is added. Remember that you can refresh the display just by pressing enter again.

Observation session is active



File View Navigate Help

R02: IBM APA for z/OS Observation List (CAZA) Row 00001 of 00145
Command ==> Scroll ==> CSR

ReqNum	Owned By	Description	Job Name	Date/Time	Samples	Status
<u>2756</u>	CHIDGEY		CICSC32F	Dec-16 12:56	1,431	Active
<u>2740</u> +	CHIDGEY	SAM1V program i	CHIDGEYB	Dec-15 14:51	10,000	STEPS
<u>2711</u>	CHIDGEY		CHIDGEYA	Dec-15 12:39	2,000	Ended
<u>2708</u>	CHIDGEY	Measure SAM1V A	CHIDGEYA	Dec-15 12:20	6	Ended
<u>2684</u>	MACHIN2	- test	-	Dec-9 7:53	155	Ended
<u>2682</u>	MACHIN2	V10	CICSC41F	Dec-8 11:11	11,111	Ended
<u>2681</u>	MACHIN2	v10ref7-uc7	CICSC32F	Dec-8 11:09	99,999	Ended
<u>2680</u>	MACHIN2	v9ref-uc17	CICSC32F	Dec-8 11:09	99,999	Ended
<u>2679</u>	MACHIN2	v9-uc3	MQPUT	Dec-8 11:09	774	Ended
<u>2678</u>	MACHIN2	v10ref2-uc18	DBJOB8	Dec-8 14:25	236	Ended
<u>2677</u>	MACHIN2	v10ref2-uc14	MACHIND	Dec-8 10:01	99,999	Ended
<u>2671</u> +	MACHIN2	v10ref2-uc19v1	STEPS			STEPS
<u>2542</u> +	MACHIN2	v10ref2-uc19v1	STEPS			STEPS
<u>2541</u>	MACHIND	v10ref2-uc15v2	DB2DATA	Dec-8 8:12	76,475	Ended
<u>2540</u>	MACHIND	v10ref2-uc15	DB2DATA	Dec-8 8:12	76,475	Er
<u>2539</u>	MACHIN2	vq10ref2-uc26	DB2V9TEP	Dec-8 7:53	19,314	Er
<u>2538</u>	MACHIN2	v10ref2-uc30v4	-	Dec-8 6:47	149	Er

APA is monitoring activity in the CICS region

ENTER

81 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

Now, the session has gone active, and APA is collecting performance data from the CICS region.

Examples of entering observation requests



- Enter an observation request for a job that is already running
- Enter an observation request for a job that is not running yet
- Enter an observation session for multiple jobs
- Schedule future observation requests
- Enter an observation session to monitor CICS applications
- Enter a threshold observation request



In the next walk-through, you will learn how to enter a threshold observation request. The Threshold observation request process uses most of the panels described in the previous examples. But there are a few differences that must be noted.

Enter a NEW observation request



```
File View Navigate Help
R02: IBM APA for z/OS Observation List (CAZA) Connection established
Command ==> TNEW Scroll ==> CSR
```

ReqNum	Owned By	Description	Job Name	Date/Time	Samples	Status
<u>2756</u>	CHIDGEY		CICSC32F	Dec-16 13:01	10,000	Ended
<u>2740</u> +	CHIDGEY	SAM1V program i	CHIDGEYB	Dec-15 14:51	10,000	STEPS
<u>2711</u>	CHIDGEY		CHIDGEYA	Dec-15 12:39	2,000	Ended
<u>2708</u>	CHIDGEY	Measure SAM			6	Ended
<u>2684</u>	MACHIN2	- test			155	Ended
<u>2682</u>	MACHIN2	V10			11,111	Ended
<u>2681</u>	MACHIN2	v10ref7-uc			99,999	Ended
<u>2680</u>	MACHIN2	v9ref-uc17			99,999	Ended
<u>2679</u>	MACHIN2	v9-uc3	MQPUT	Dec-8 11:09	774	Ended
<u>2678</u>	MACHIN2	v10ref2-uc18	DBJOB8	Dec-8 14:25	236	Ended
<u>2677</u>	MACHIN2	v10ref2-uc14	MACHIND	Dec-8 10:03	99,999	Ended
<u>2671</u> +	MACHIN2	v10ref2-uc19v1	STEPS	Dec-8 9:06	11,111	STEPS
<u>2542</u> +	MACHIN2	v10ref2-uc19v1	STEPS	Dec-8 9:02	11,111	STEPS
<u>2541</u>	MACHIND	v10ref2-uc15v2	DB2DATA	Dec-8 8:20	66,750	Ended
<u>2540</u>	MACHIND	v10ref2-uc15	DB2DATA	Dec-8 8:12	76,475	Er
<u>2539</u>	MACHIN2	vq10ref2-uc26	DB2V9TEP	Dec-8 7:53	19,314	Er
<u>2538</u>	MACHIN2	v10ref2-uc30v4	-	Dec-8 6:47	149	Er

Use the TNEW command to enter a new threshold observation request

ENTER

83 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

In the previous examples, a new observation request began by typing the NEW command on the command line. To enter a threshold observation request, you begin by entering the TNEW command on the command line. After pressing Enter.....

The "Job Information" panel is displayed



Option 3 for the threshold criteria panel

```
File View Navigate Help
R03: Set Threshold Requirements Row 00001 of 00013
Command ==> 3 Scroll ==> CSR

1. Job Information 3. Criteria 5. Subsystems
2. Options 4. Active Jobs 6. Sysplex

Panel 1. Job Information

Job Name/Pattern . CHIDGEYM System Name . . . STLABF6
(Inactive)

Step Specification
Step No. . . . .
Program Name . . . . . Specify step number, program name,
Step Name . . . . . step name or step name + Proc step
ProcStepName . . . . . name.

Description . . . . Start monitoring after 20 CPU seconds
Number of Samples . 5000 Measure to step end . . . N
Duration (min:sec) . 5:00
Notify TSO User . CHIDGEY Retain file for (days) . 90
USS observations . . . . . Max
```

ENTER

84 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

Panel one, The Job information panel is displayed. Notice that the panel group is very similar to the standard Schedule New Measurement panel group in the previous examples. However, the differences are that the Multi-Step and Schedule information panels are not used for Threshold Observation requests and therefore are not available. Panel three, the Criteria panel, is specific to Threshold Observation requests. After entering the standard data to describe the measurement request, you must enter the Threshold Criteria.

In this example, the job name, the number of samples to be collected, and the duration is specified. To enter a threshold criteria, go to panel three: the criteria panel. Type the number three on the command line, and press Enter.

The "Criteria" panel is displayed



File View Navigate Help

R03: Set Threshold Requirements Row 00001 of 00008
Command ==> _____ Scroll ==> CSR

● 1. Job Information ● 3. **Criteria** 5. Subsystems
● 2. Options 4. Active Jobs 6. Sysplex

Panel 3. Threshold Criteria

Enter Threshold Criteria

CPU Time Exceeds (min:sec) 20 |
Elapsed Time Exceeds (min:sec) |
EXCP Count Exceeds |

If you enter more than one threshold criteria field, then all the criteria must be exceeded before monitoring begins.

Specify one or more threshold values.
If multiple values are entered, all values must be exceeded before monitoring begins.

ENTER

85 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

While on the criteria panel, you can specify a threshold that must be exceeded in order for the monitoring session to begin. You can specify one or more threshold values. All values must be exceeded before the monitoring session will start. In this example, to specify that the job should be monitored if it's CPU Time exceeds 20 seconds, "20" is typed into the "CPU Time Exceeds" field. Enter.

Ready to enter the threshold request



File View Navigate Help

R03: Set Threshold Requirements Row 00001 of 00008
Command ==> _____ Scroll ==> CSR

● 1. Job Information ● 3. **Criteria** 5. Subsystems
● 2. Options 4. Active Jobs 6. Sysplex

Panel 3. Threshold Criteria Input more data or ENTER to submit

Enter Threshold Criteria

CPU Time Exceeds (min:sec) 20
Elapsed Time Exceeds (min:sec) _____
EXCP Count Exceeds _____

If you enter more than one threshold criteria field, then all the criteria must be met for the measurement to be triggered.

ENTER

86 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

At this point, APA is ready to accept the request, and displays the “Input more data” message. Just press enter.

Request is added



File View Navigate Help

R02: IBM APA for z/OS Observation List (CAZA) New request added

Command ==> Scroll ==> CSR

ReqNum	Owned By	Description	Job Name	Date/Time	Samples	Status
2757	CHIDGEY	Start monitorin	CHIDGEYM	Dec-16 13:30	5,000	Thresh
2756	CHIDGEY		CICSC32F	Dec-16 13:01	10,000	Ended
2740 +	CHIDGEY	SAM1V program i	CHIDGEYB	Dec-15 14:51	10,000	STEPS
2711	CHIDGEY		CHIDGEYA	Dec-15 12:39	2,000	Ended
2708	CHIDGEY	Measure SAM1V A	CHIDGEYA	Dec-15 12:20	6	Ended
2684	MACHIN2	- test	-	Dec-9 7:53	155	Ended
2682	MACHIN2	V10	CICSC41F	Dec-8 11:11	11,111	Ended
2681	MACHIN2	v10ref7-uc7	CICSC32F	Dec-8 11:09	99,999	Ended
2680	MACHIN2	v9ref-uc17	CICSC32F	Dec-8 11:09	99,999	Ended
2679	MACHIN2	v9-uc3				Ended
2678	MACHIN2	v10ref2-u				Ended
2677	MACHIN2	v10ref2-u				Ended
2671 +	MACHIN2	v10ref2-u				STEPS
2542 +	MACHIN2	v10ref2-u				STEPS
2541	MACHIND	v10ref2-u				Ended
2540	MACHIND	v10ref2-u				Ended
2539	MACHIN2	vq10ref2-uc26	DB2V9TEP	Dec-8 7:53	19,314	Ended

The threshold request was added

Monitoring will begin when the job runs, and all threshold criteria are exceeded

87 IBM Application Performance Analyzer for z/OS tutorial © 2010 IBM Corporation

And the new request was added. Notice that the status for this request is “Thresh”, which means it is a Threshold Observation request. Once the threshold has been exceeded, monitoring will begin.

Now you have gone through some examples for how to enter a new observation request. You have learned how to enter a new request for a batch job that is already running, a batch job that will run later, multiple batch jobs and how to schedule future requests. You have also learned how to enter a request for a CICS application and how to enter a threshold observation request.

That is the end of this section, entering observation requests.

Feedback



Your feedback is valuable

You can help improve the quality of IBM Education Assistant content to better meet your needs by providing feedback.

- Did you find this module useful?
- Did it help you solve a problem or answer a question?
- Do you have suggestions for improvements?

Click to send email feedback:

mailto:iea@us.ibm.com?subject=Feedback_about_APAv10s03EnteringRequests.ppt

This module is also available in PDF format at: [../APAv10s03EnteringRequests.pdf](..../APAv10s03EnteringRequests.pdf)

You can help improve the quality of IBM Education Assistant content by providing feedback.



Trademarks, copyrights, and disclaimers

IBM, the IBM logo, ibm.com, CICS, DB2, IMS, MQSeries, z/OS, and zSeries are trademarks or registered trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of other IBM trademarks is available on the web at "[Copyright and trademark information](http://www.ibm.com/legal/copytrade.shtml)" at <http://www.ibm.com/legal/copytrade.shtml>

Java, STC, and all Java-based trademarks and logos are trademarks of Sun Microsystems, Inc. in the United States, other countries, or both.

THE INFORMATION CONTAINED IN THIS PRESENTATION IS PROVIDED FOR INFORMATIONAL PURPOSES ONLY. WHILE EFFORTS WERE MADE TO VERIFY THE COMPLETENESS AND ACCURACY OF THE INFORMATION CONTAINED IN THIS PRESENTATION, IT IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED. IN ADDITION, THIS INFORMATION IS BASED ON IBM'S CURRENT PRODUCT PLANS AND STRATEGY, WHICH ARE SUBJECT TO CHANGE BY IBM WITHOUT NOTICE. IBM SHALL NOT BE RESPONSIBLE FOR ANY DAMAGES ARISING OUT OF THE USE OF, OR OTHERWISE RELATED TO, THIS PRESENTATION OR ANY OTHER DOCUMENTATION. NOTHING CONTAINED IN THIS PRESENTATION IS INTENDED TO, NOR SHALL HAVE THE EFFECT OF, CREATING ANY WARRANTIES OR REPRESENTATIONS FROM IBM (OR ITS SUPPLIERS OR LICENSORS), OR ALTERING THE TERMS AND CONDITIONS OF ANY AGREEMENT OR LICENSE GOVERNING THE USE OF IBM PRODUCTS OR SOFTWARE.

© Copyright International Business Machines Corporation 2010. All rights reserved.