Discovering OMEGAMON
Volume 4
Tivoli Enterprise Portal
Introduction & Customiza-tion Lab Exercises

IBM

Contents

Lab #1 Tivoli Enterprise Portal (TEP) Introduction

Introduction

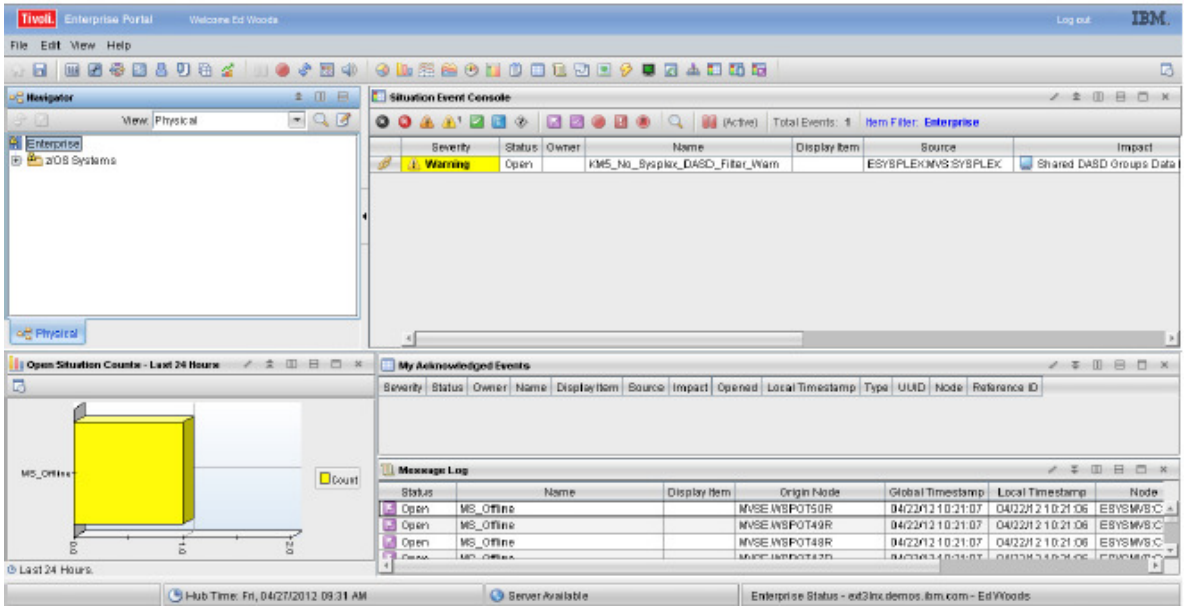
This lab exercise will demonstrate how to logon, navigate, and use some of the primary features of the OMEGAMON XE V5.x Tivoli Enterprise Portal (TEP) interface. After performing this lab exercise the user will have a better understanding of how to use the TEP. This exercise will cove the basics of the Tivoli Enterprise Portal, the navigation tree, how to navigate through the interface, how to enable history collection, and how to enable situation

1.1 Logon to the Tivoli Enterprise Portal

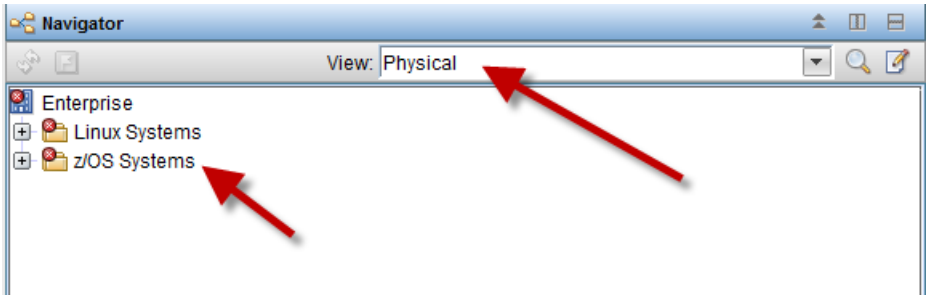
a) From your workstation, start Internet Explorer. From the Internet Explorer tool bar enter the URL address specified by your lab instructor.

b) Wait for the TEP logon panel. **Enter the USERID/PASSWORD** information supplied by the instructor.

1.2 Looking At the Enterprise View

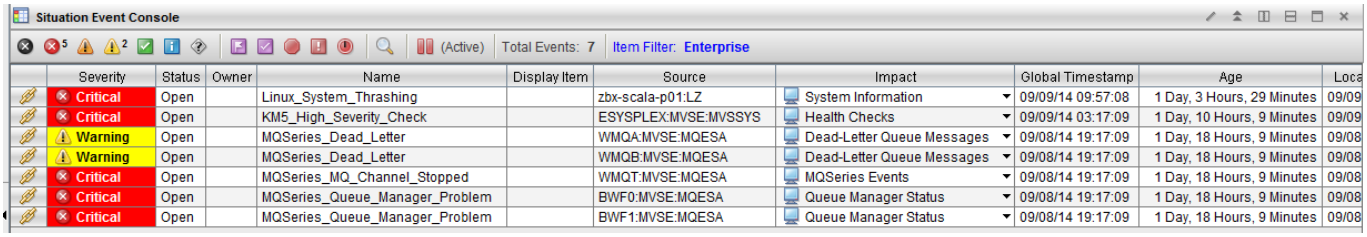


a) You are now looking at the product provided Enterprise workspace. In the Tivoli Portal screens are referred to as workspaces. There are several components that make up this workspace.



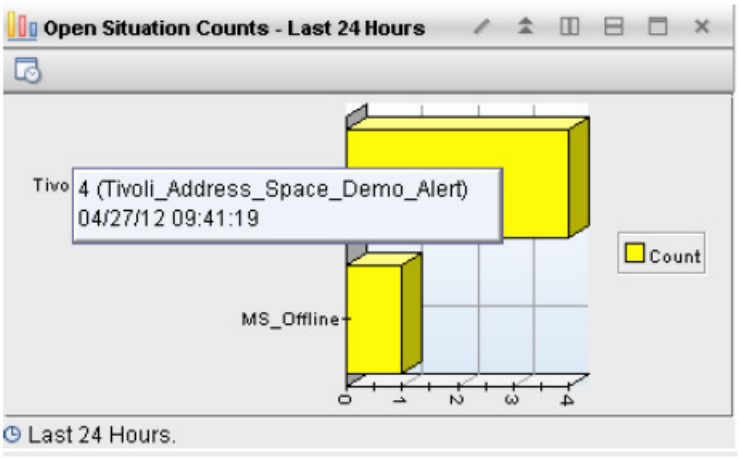
b) The above is the navigator portion of the TEP. The primary function of the navigator is to provide the user with a convenient method of navigating from screen to screen.

c) There are a couple things to note on this navigator view. First, you see that we have z/OS systems and Linux systems that have checked in to the Tivoli monitoring infrastructure. If other types of systems (such as Windows or Unix) were being monitored by the Tivoli infrastructure, they also would appear in the navigator tree. Second, note that you are looking at what is called the 'Physical' view. In the TEP you have the ability to create customized views, navigator trees and workspaces to fit your business and monitoring requirements.



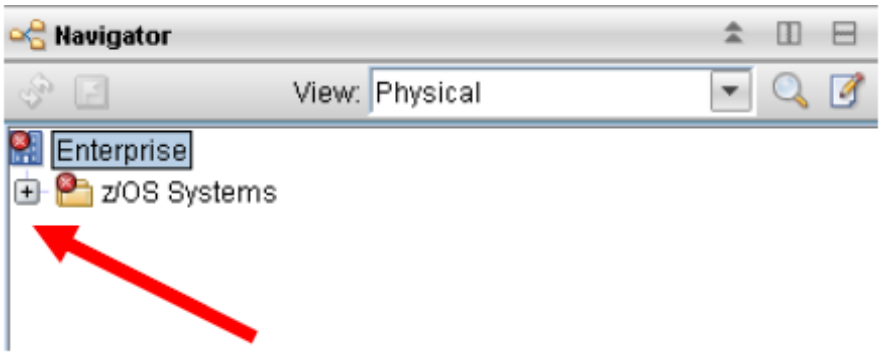
Severity	Status	Owner	Name	Display Item	Source	Impact	Global Timestamp	Age	Loca
Critical	Open		Linux_System_Thrashing		zbx-scala-p01:LZ	System Information	09/09/14 09:57:08	1 Day, 3 Hours, 29 Minutes	09/09
Critical	Open		KM5_High_Severity_Check		ESYSPLEX:MVSE:MVSSYS	Health Checks	09/09/14 03:17:09	1 Day, 10 Hours, 9 Minutes	09/09
Warning	Open		MQSeries_Dead_Letter		WMQA:MVSE:MQESA	Dead-Letter Queue Messages	09/08/14 19:17:09	1 Day, 18 Hours, 9 Minutes	09/08
Warning	Open		MQSeries_Dead_Letter		WMQB:MVSE:MQESA	Dead-Letter Queue Messages	09/08/14 19:17:09	1 Day, 18 Hours, 9 Minutes	09/08
Critical	Open		MQSeries_MQ_Channel_Stopped		WMQT:MVSE:MQESA	MQSeries Events	09/08/14 19:17:09	1 Day, 18 Hours, 9 Minutes	09/08
Critical	Open		MQSeries_Queue_Manager_Problem		BWF0:MVSE:MQESA	Queue Manager Status	09/08/14 19:17:09	1 Day, 18 Hours, 9 Minutes	09/08
Critical	Open		MQSeries_Queue_Manager_Problem		BWF1:MVSE:MQESA	Queue Manager Status	09/08/14 19:17:09	1 Day, 18 Hours, 9 Minutes	09/08

d) The above is the Situation Event Console. A situation is the Tivoli term for an alert that has been detected by the Tivoli monitoring infrastructure. You may define and customize situations depending upon the requirements of your monitoring environment. The Situation Event Console shows situations that are currently 'true' (i.e. a situation that has been detected by the monitor).

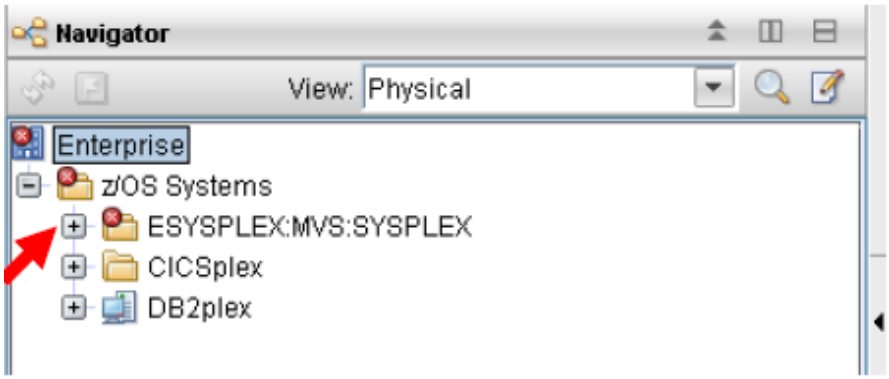


e) Open Situation Counts shows what situations have been true in the past 24 hours, and how often that has occurred for each situation.

1.3 Looking At The Navigator Tree



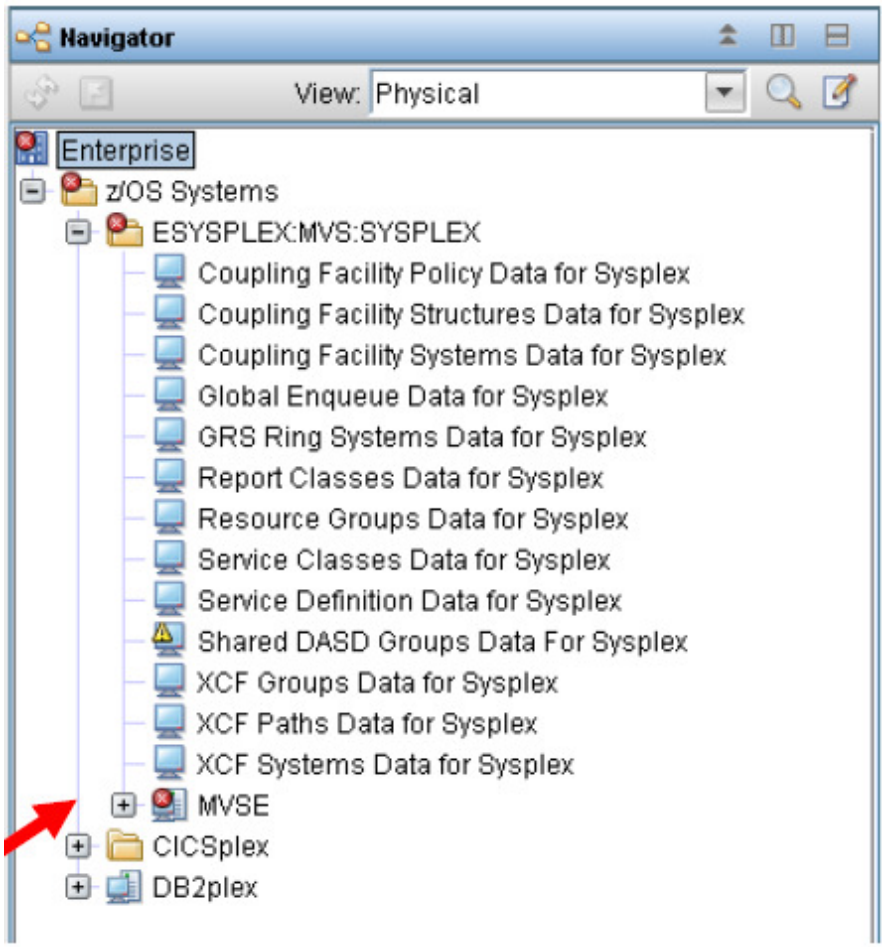
a) Now let's look in more detail at the Navigator portion of the workspace. **Click on the +** sign to the left of where of where it says z/OS Systems.



You now can see that monitoring for a z/OS sysplex (ESYSPLEX:MVS:SYSPLEX) has checked into the Tivoli monitoring infrastructure.

Note - ESYSPLEX:MVS:SYSPLEX is what is termed the managed system. In this example the managed system name is a combination of the Sysplex name (ESYSPLEX) and the agent type (MVS and SYS-PLEX). The combination of these items makes the managed system name unique in the Tivoli monitoring infrastructure. Each monitored entity in Tivoli (examples – Sysplex, z./OS LPAR, DB2 subsystem, CICS region, and Windows/UNIX/Linux server) will have a managed system name that uniquely identifies it to the Tivoli monitoring infrastructure.

b) Now let's continue to expand the navigation tree. **Click on the +** sign to the left of where it says ESYSPLEX.

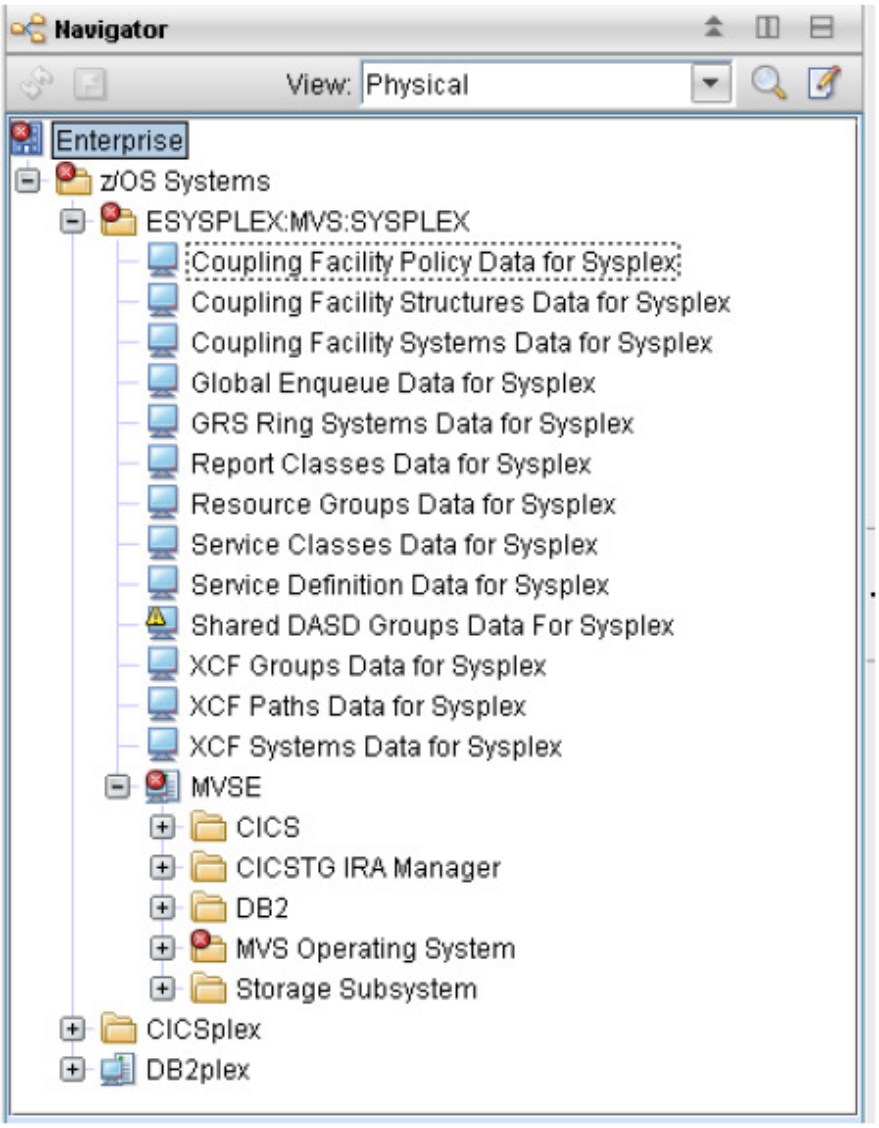


Under ESYSPLEX:MVS:SYSPLEX you see several lines that show how to display sysplex level resources, such as coupling facility structures, WLM service class information, and XCF information.

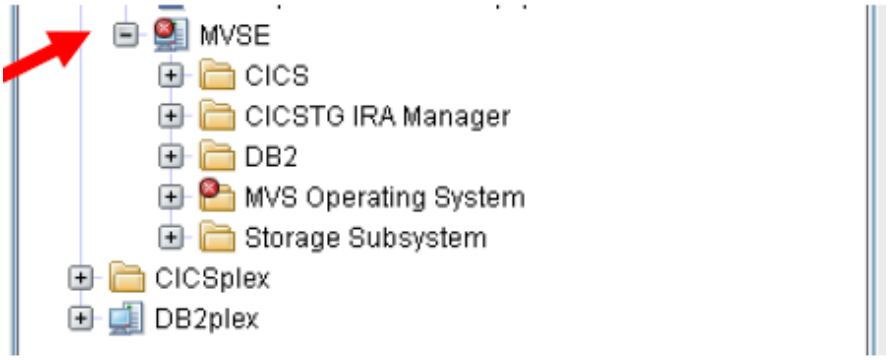
Underneath the sysplex level information you should also see an entry on the navigation tree for a z/OS LPARs (MVSE).

Note – to see all this information on the navigation tree you may need to scroll the navigation tree.

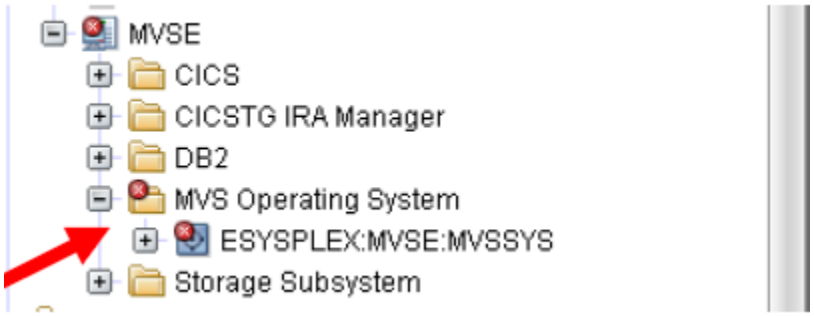
c) **Click on the +** sign to the left of the LPAR where it says MVSE.



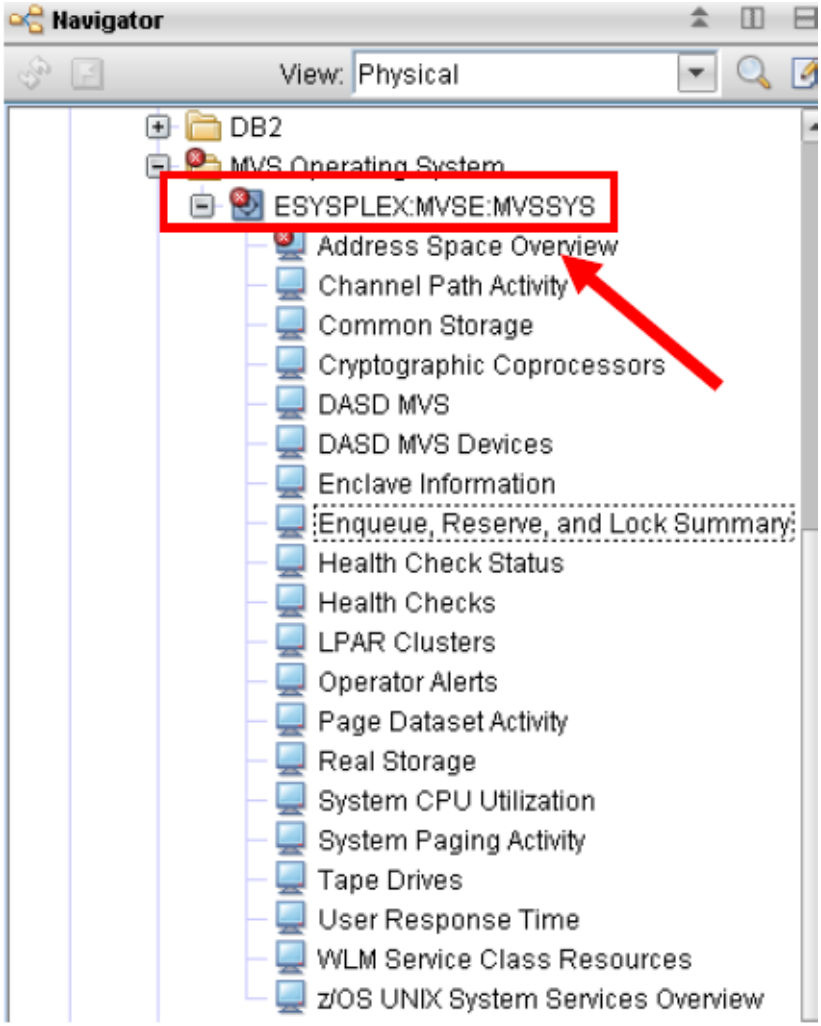
You now can see in the navigation tree entries for the various monitoring agents that are running on z/OS LPAR MVSE (CICS, z/OS, DB2, and Storage).



d) **Click on the +** sign to the left of where it says MVS Operating System.



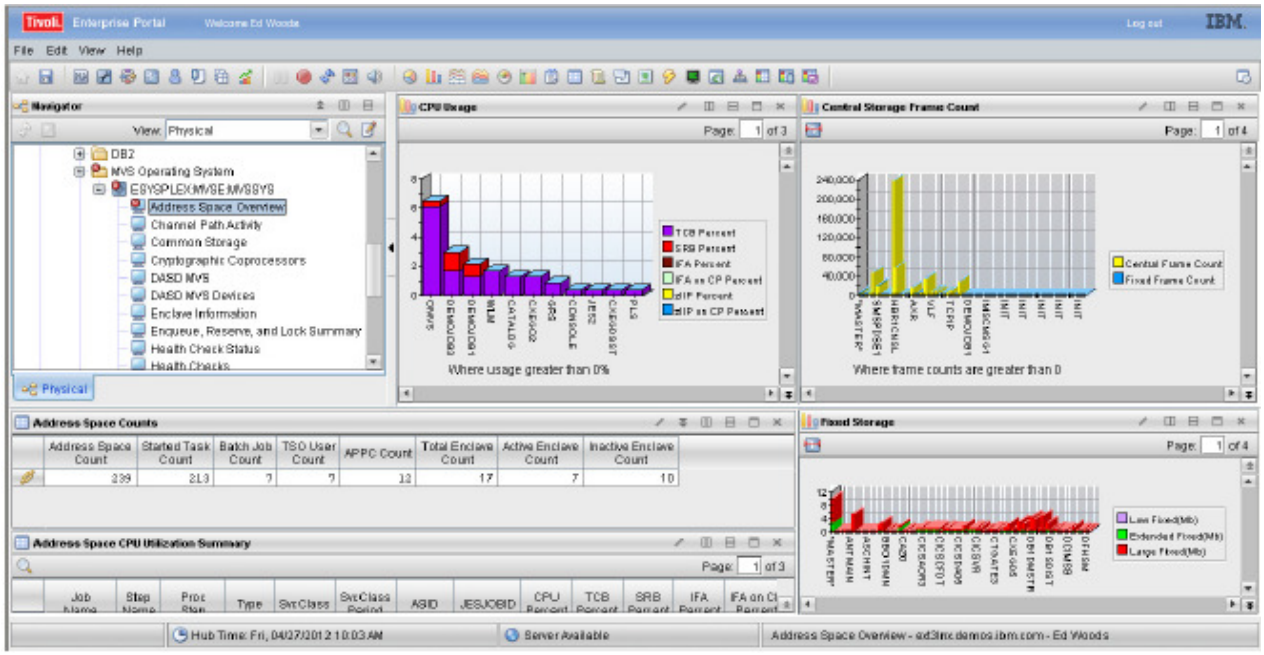
e) **Click on the +** sign to the left of the line that opens up underneath.



You now see entries in the navigation tree for the various screens (again called workspaces) that are provided by the OMEGAMON z/OS monitoring agent. By clicking on the various entries in the navigation tree you can navigate to different workspaces.

Note the three part name in the navigation tree that appears under MVS Operating System in the navigation tree, ESYSPLEX:MVSE:MVSSYS. This name is the managed system name for the z/OS LPAR.

f) Click on the line that says Address Space Overview.



You are now looking at the Address Space Overview workspace for OMEGAMON z/OS. This demonstrates how you may navigate from one workspace to another workspace using the navigator tree.

g) At this point feel free to explore other portions of the navigator tree. **Try clicking on other parts of the navigation tree and navigating to other workspaces with the TEP.**

1.4 Looking At The Toolbar

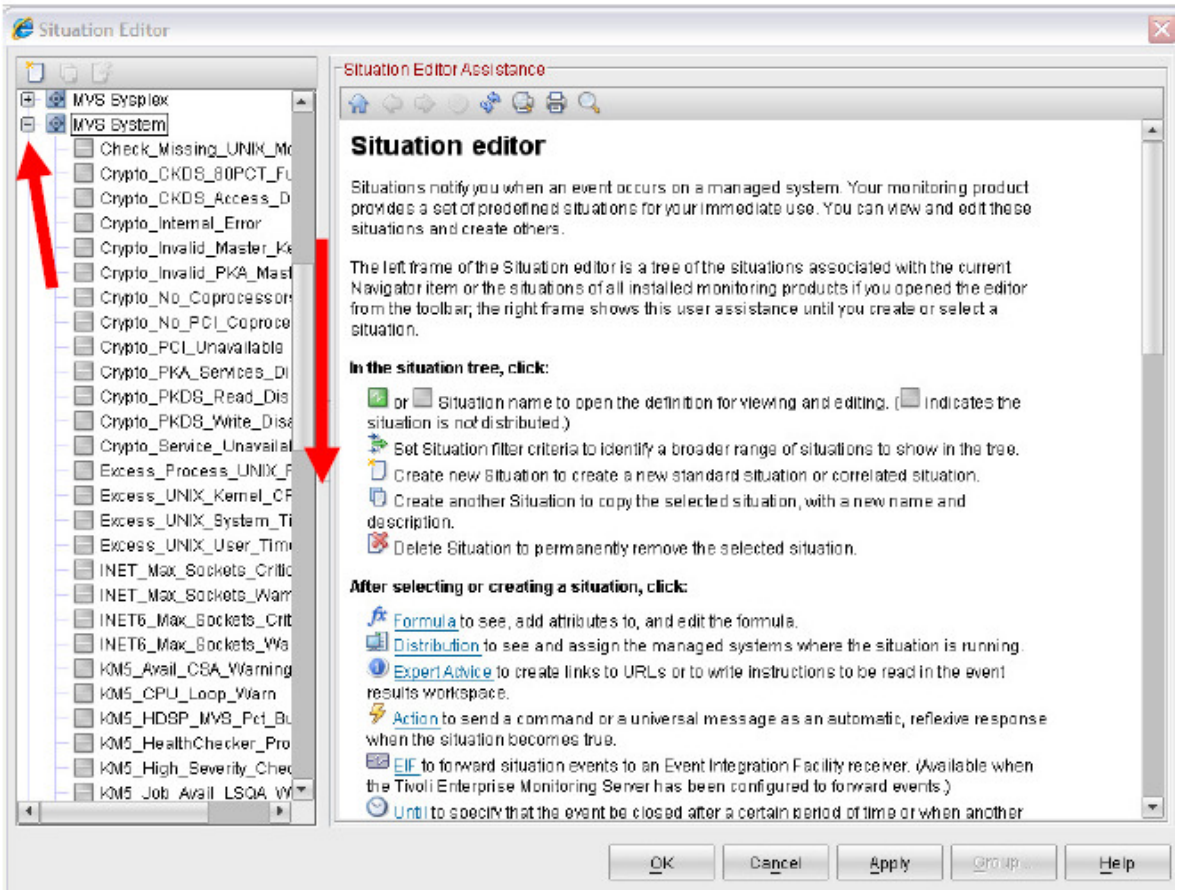
There is a toolbar at the top of the TEP that provides a number of useful functions. Let's take a look at what the toolbar provides.

Click on this icon 

a) The above icon refreshes the workspace. **Try clicking on the icon** a few times to refresh your display.

Click on this icon 

b) The above icon represents the situation icon. You may click on this icon to see the situations defined on this system.

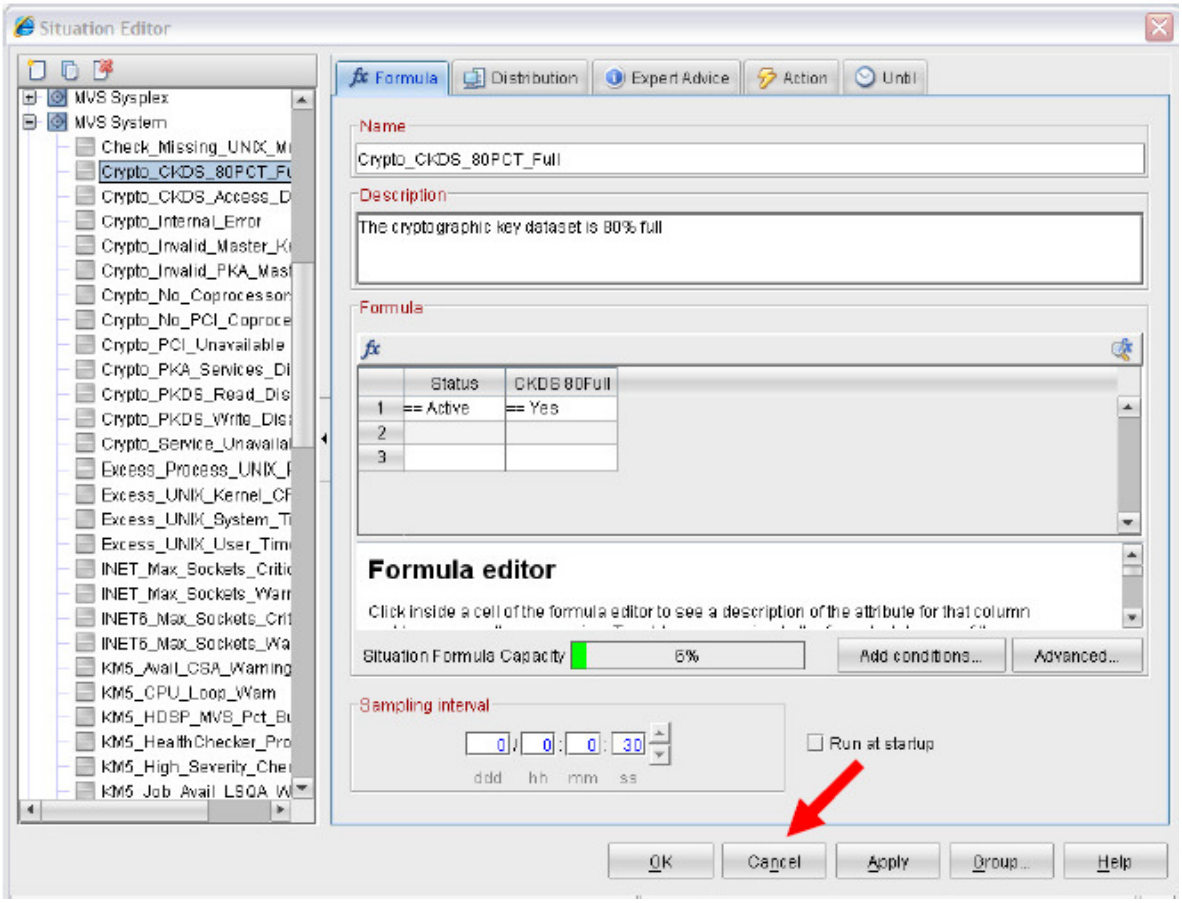


c) You are looking at the Situation Editor menu. **Scroll down** and look for MVS System.

d) **Click on the + sign** to the left of MVS System and you can see the situation alerts for z/OS on this system.

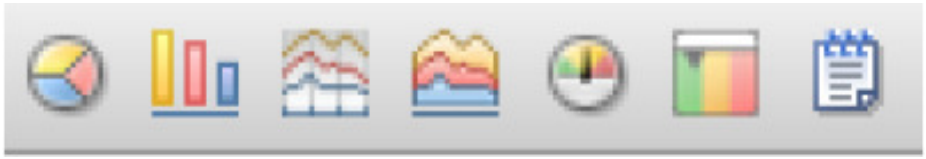
Each OMEGAMON monitor and Tivoli monitoring agent provides a set of what are called “product provided situations” as a starting point for situation creation.

e) **Click on one of the situations in the list** and you will be in the situation editor for that situation.



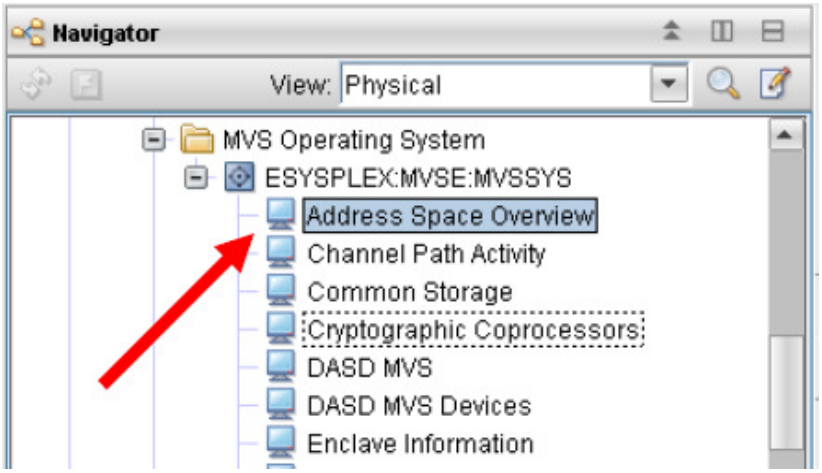
f) You are now looking at an example of the situation editor. We will look at this in more detail later in the exercise.

g) **Click Cancel** to exit the situation editor.

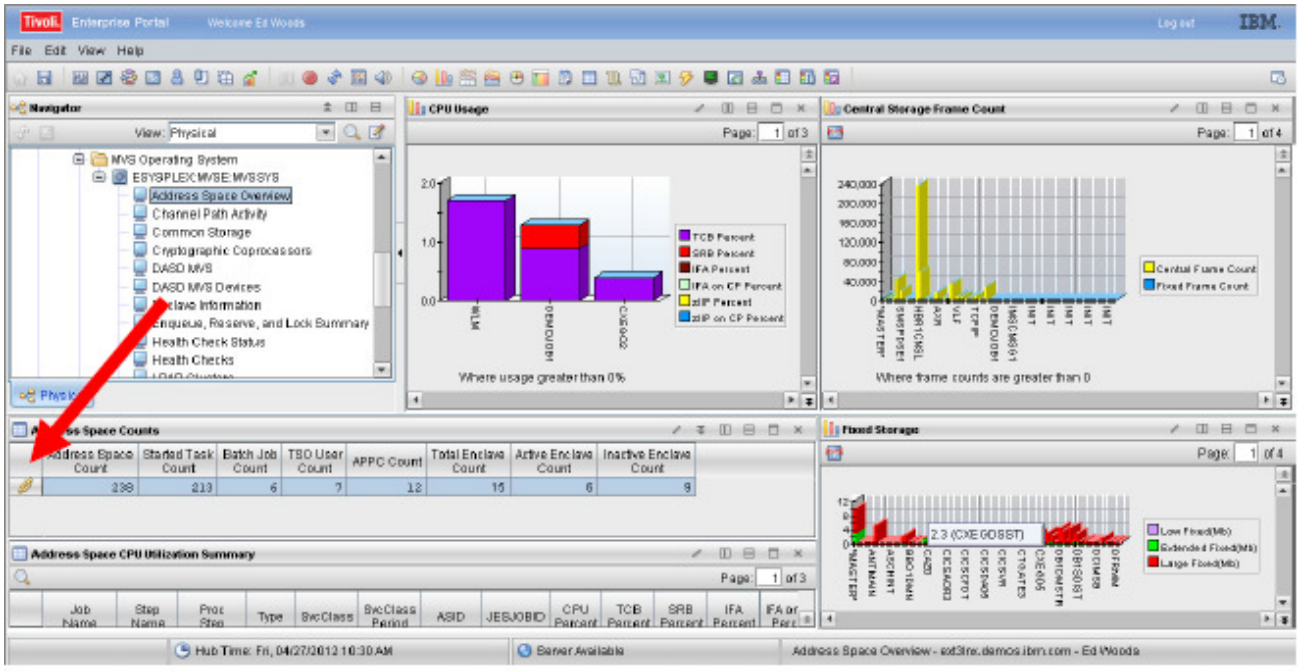


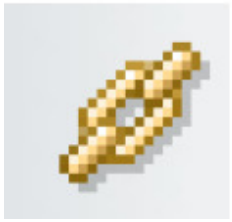
The above icons represent the some of the graphics options of the TEP. For example, you may click and drag these icons to create bar charts, pie charts, and plot charts. These options will be explored in a subsequent lab.

1.5 More on Navigation

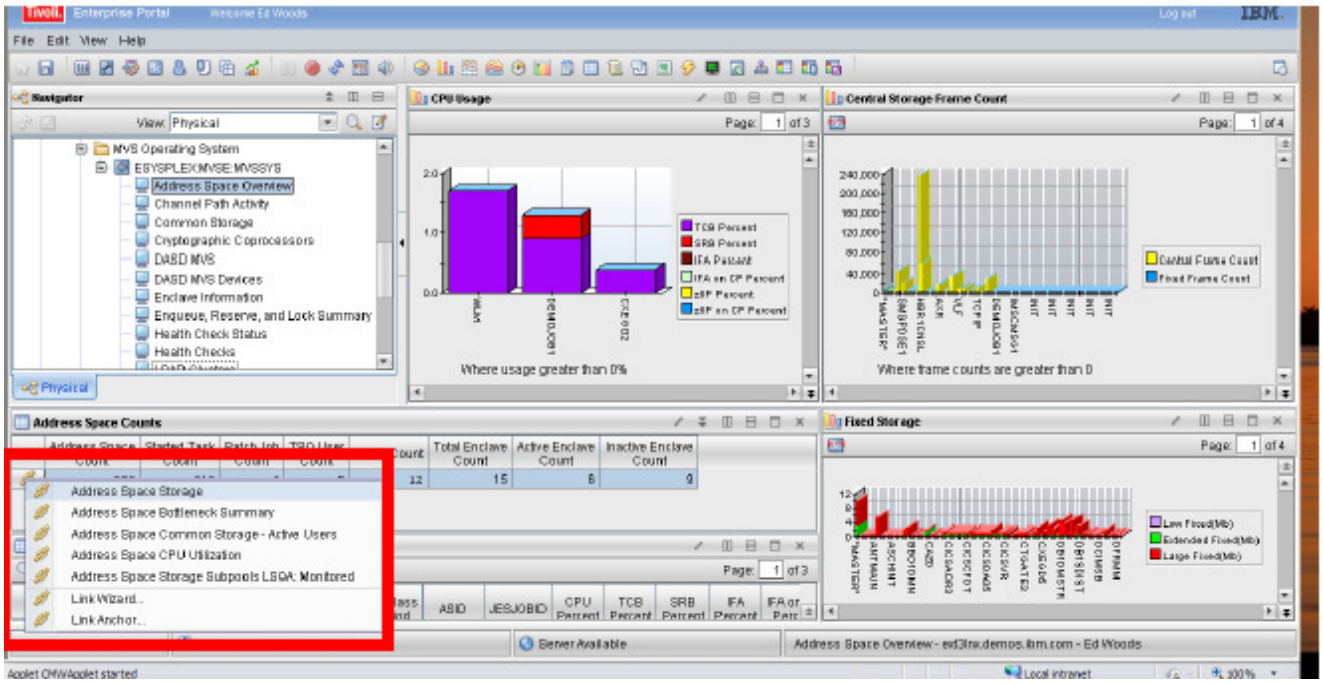


a) In the navigation tree, under MVS Operating System **click on the line that says Address Space Overview.**



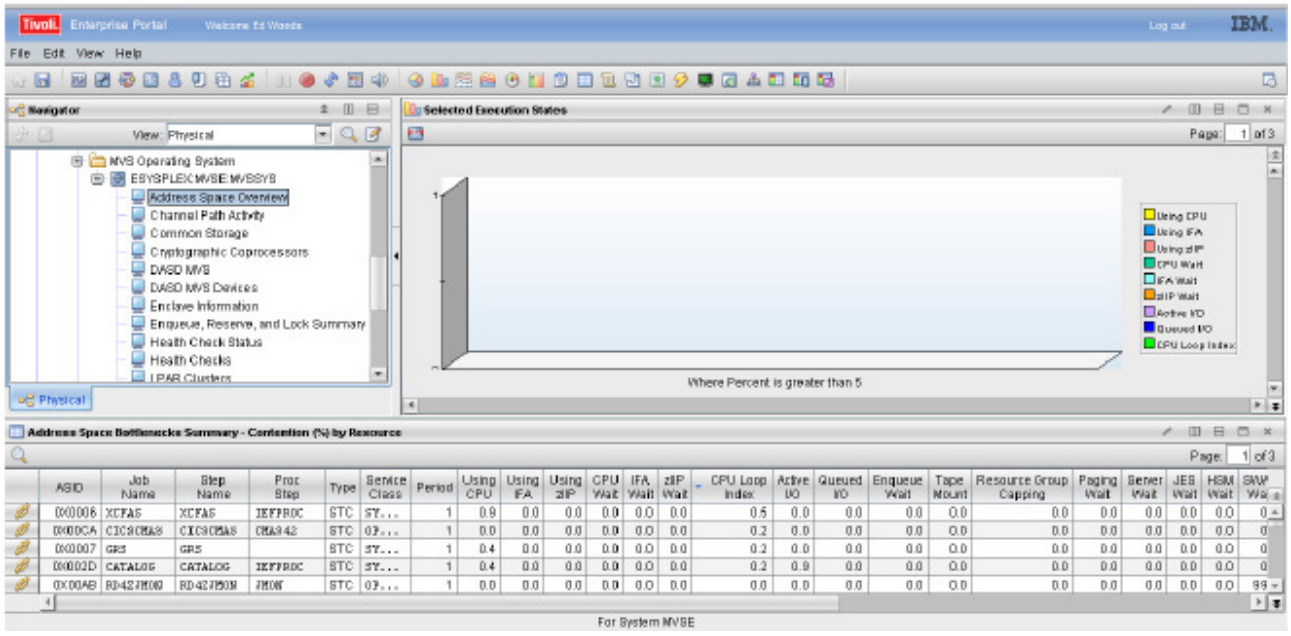


The above icon represents a link. A link enables navigation from one workspace to another. If you look at the Address Space Overview workspace you will see multiple lines with link symbols.



b) **Right click on one of the link symbols**, and you will see a popup with options to navigate to other workspaces.

c) **Click on one of the workspace links** from the above popup.



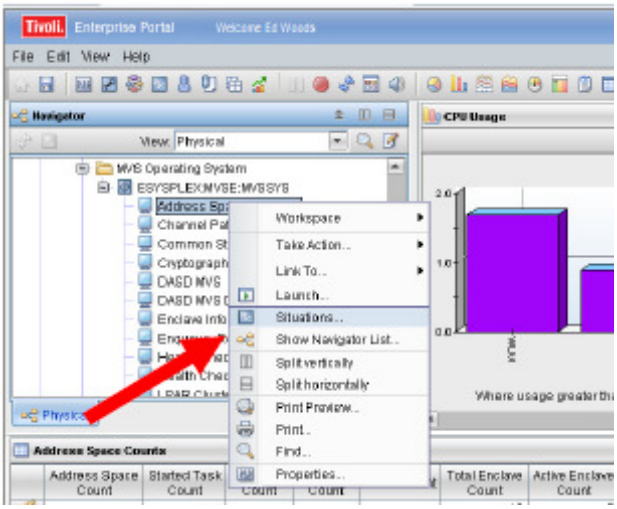
You are now looking at another address space workspace.

d) **Click on the browser back arrow** to return to the prior workspace.

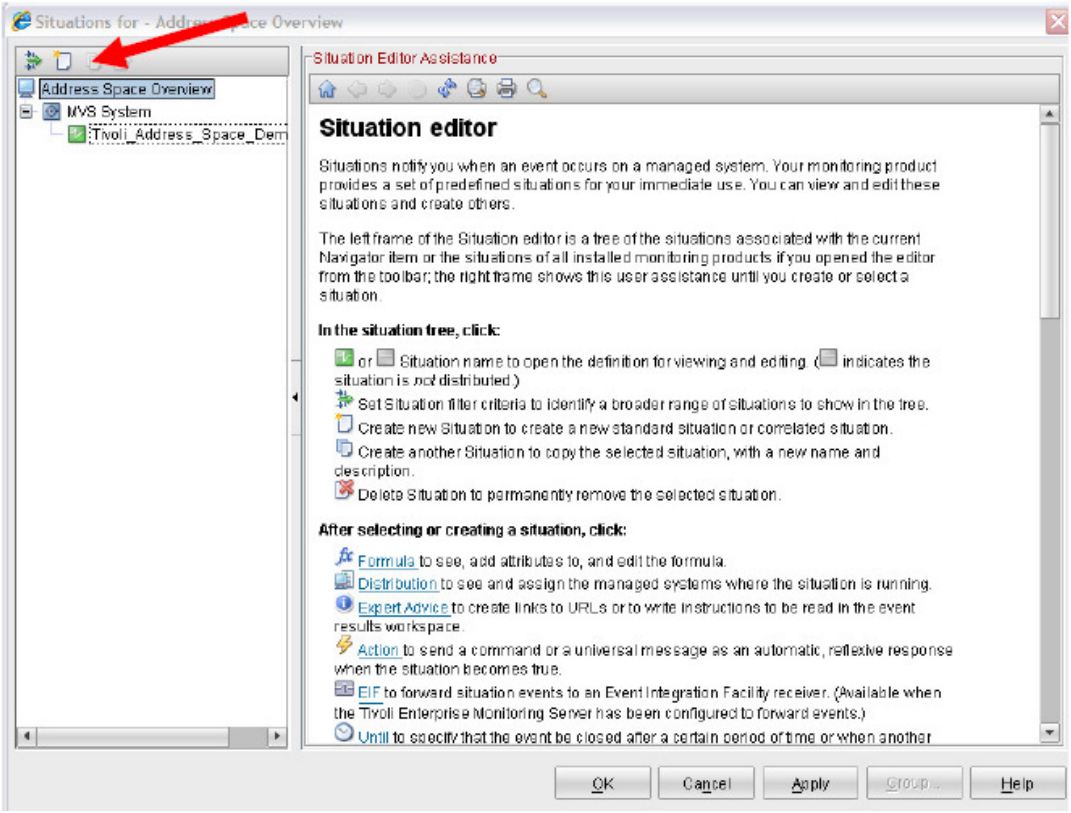
1.6 A Look at Situations

Situations are alerts that are monitored on an ongoing basis by the OMEGAMON or IBM Tivoli monitoring tools. It is easy to create a situation, and situation creation is very flexible. Almost any item of information that is captured by an OMEGAMON monitor may be included in a situation alert.

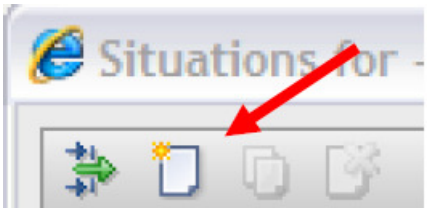
a) To create a situation**, right click** on Address Space Overview in the navigation tree.



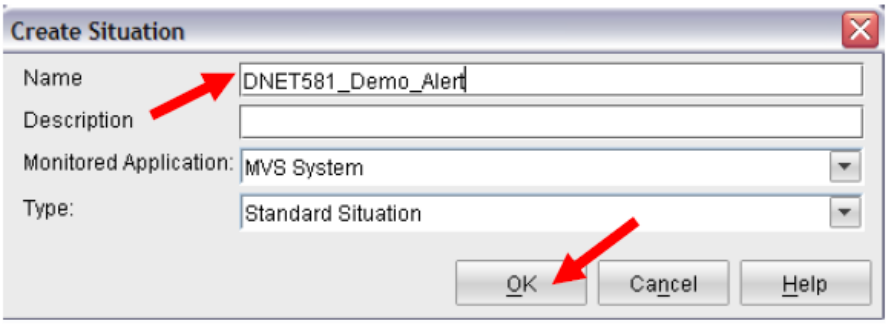
b) From the popup select Situations.



You are looking at the situation editor panel.

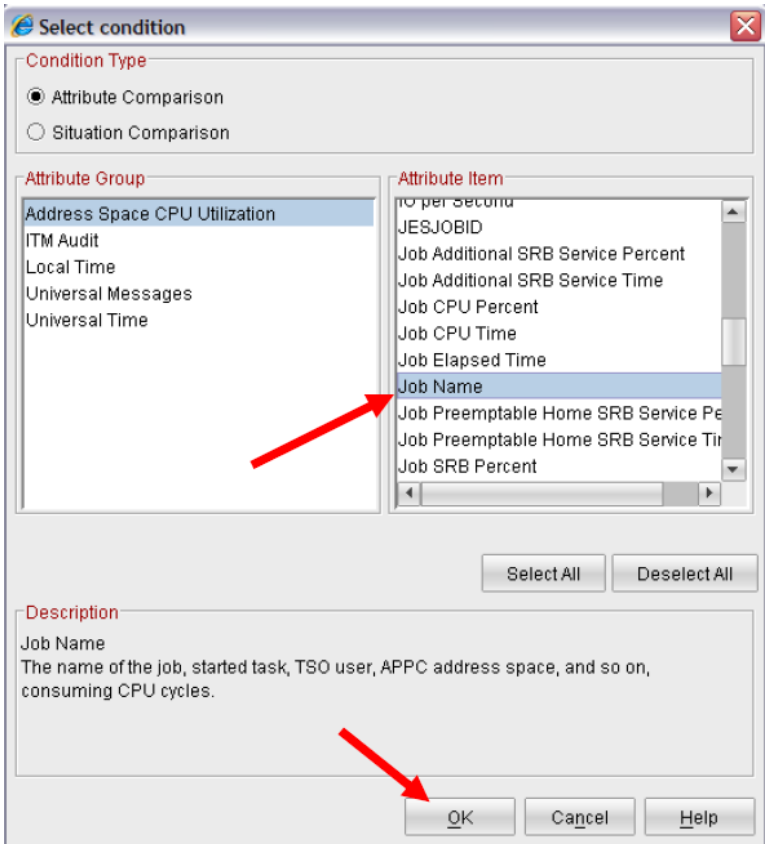


c) **Click** on the above icon to **Create New.** This will launch a popup to create a new situation alert.



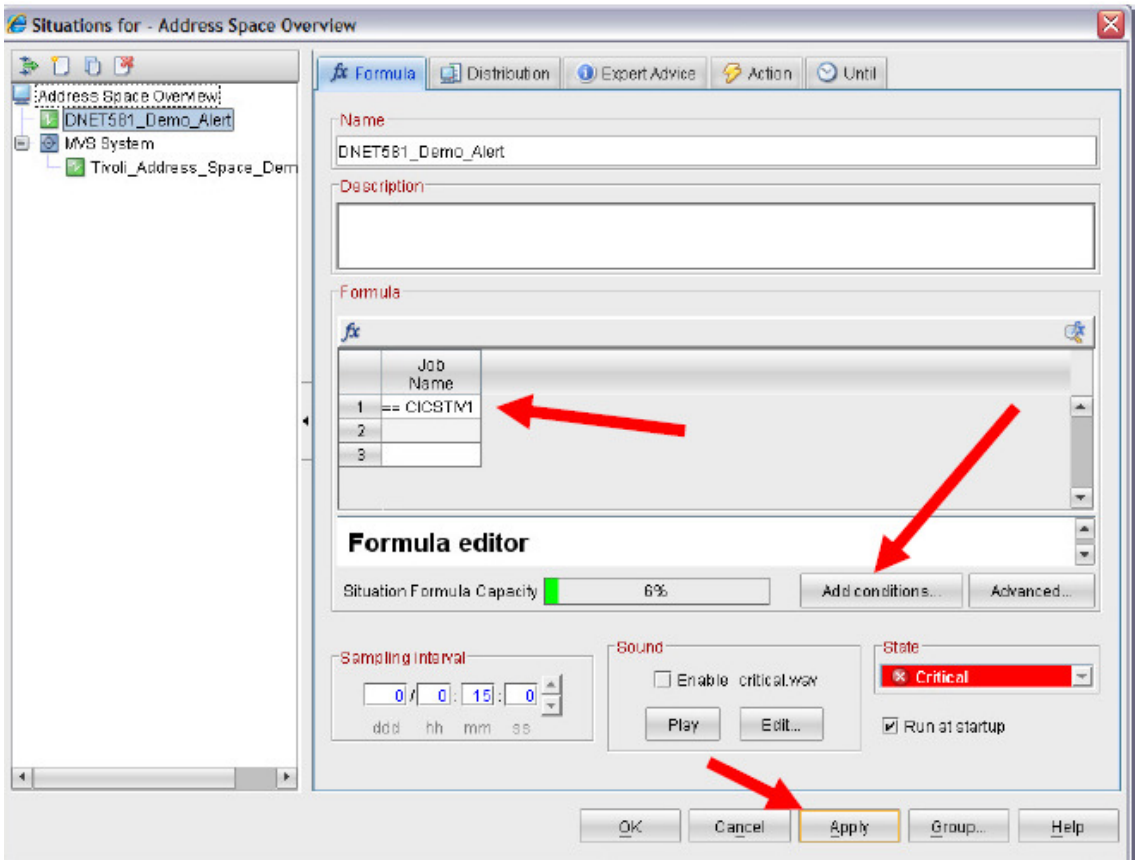
d) **Enter a name for the alert**. (For this lab use the format of *userid*_demo_alert). Don't forget the _ symbols.

e) Click OK.



f) You are now looking at the Select condition popup. **Scroll the Attribute Item window** on the right. **Click on Job Name**

g) **Click OK**.

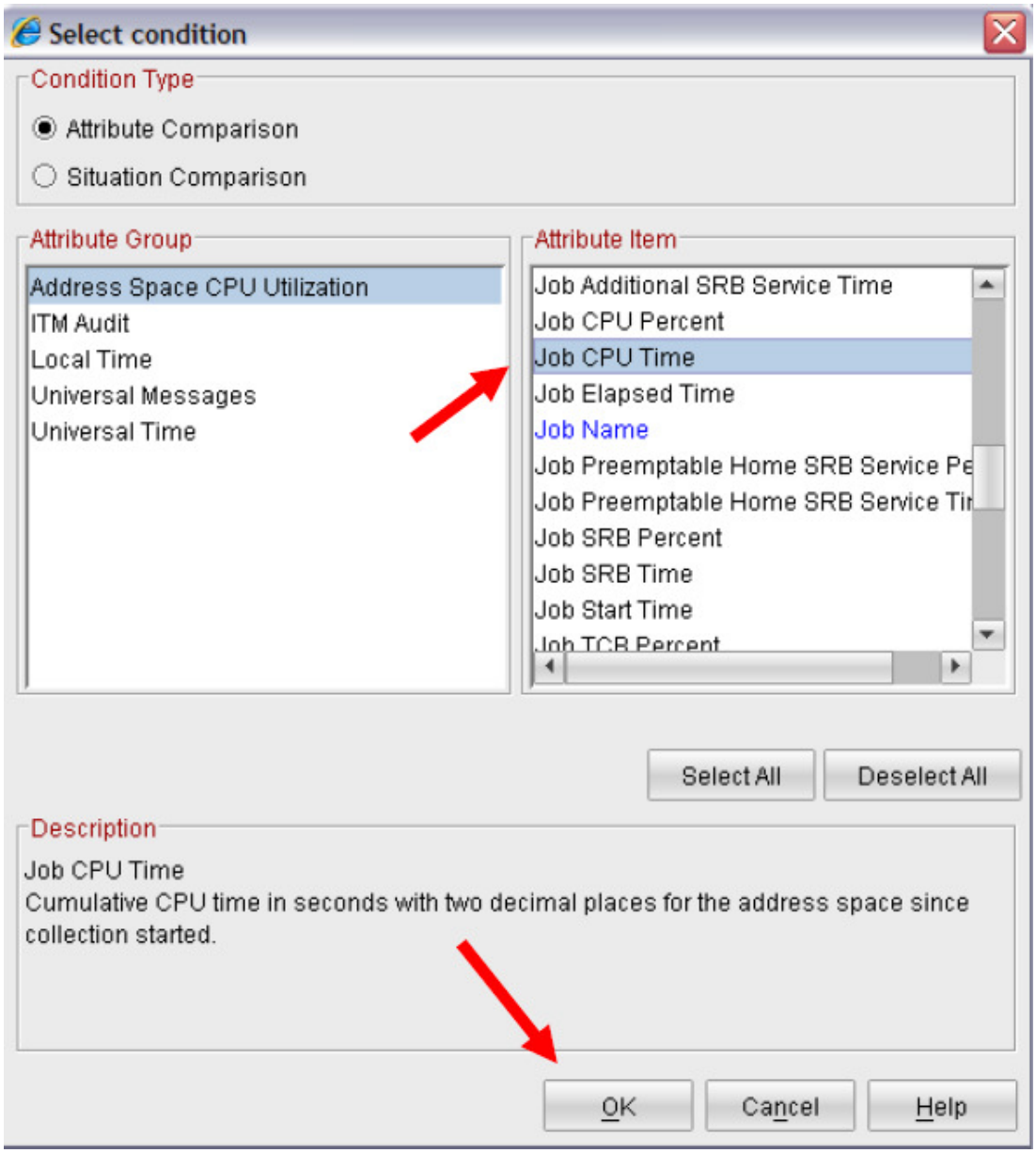


h) You are now looking at the situation editor. **Click** in the open area underneath Job Name

i) In the field **enter CICSTIV1**.

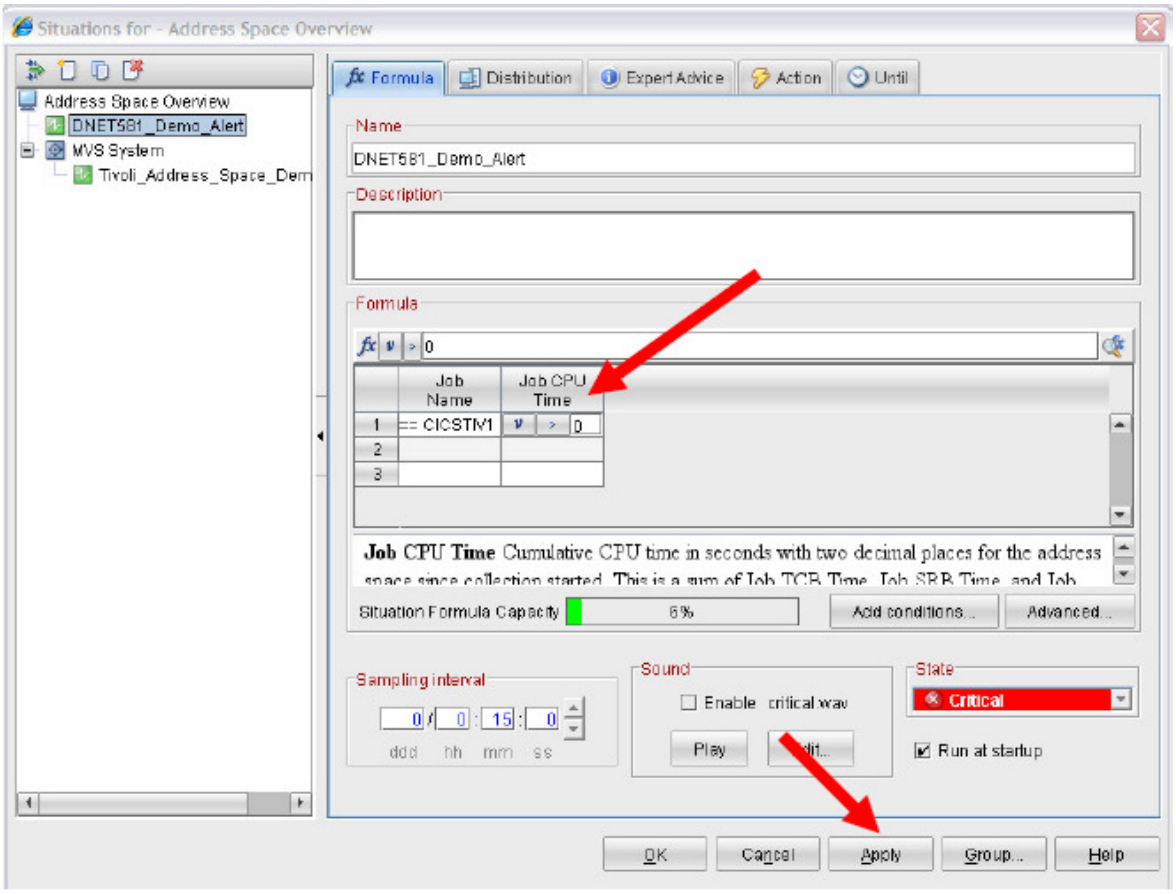
j) **Click Apply**.

k) **Click Add Conditions**.



l) From the Select Condition popup, **scroll the window** and **click Job CPU Time**.

m) Click OK.

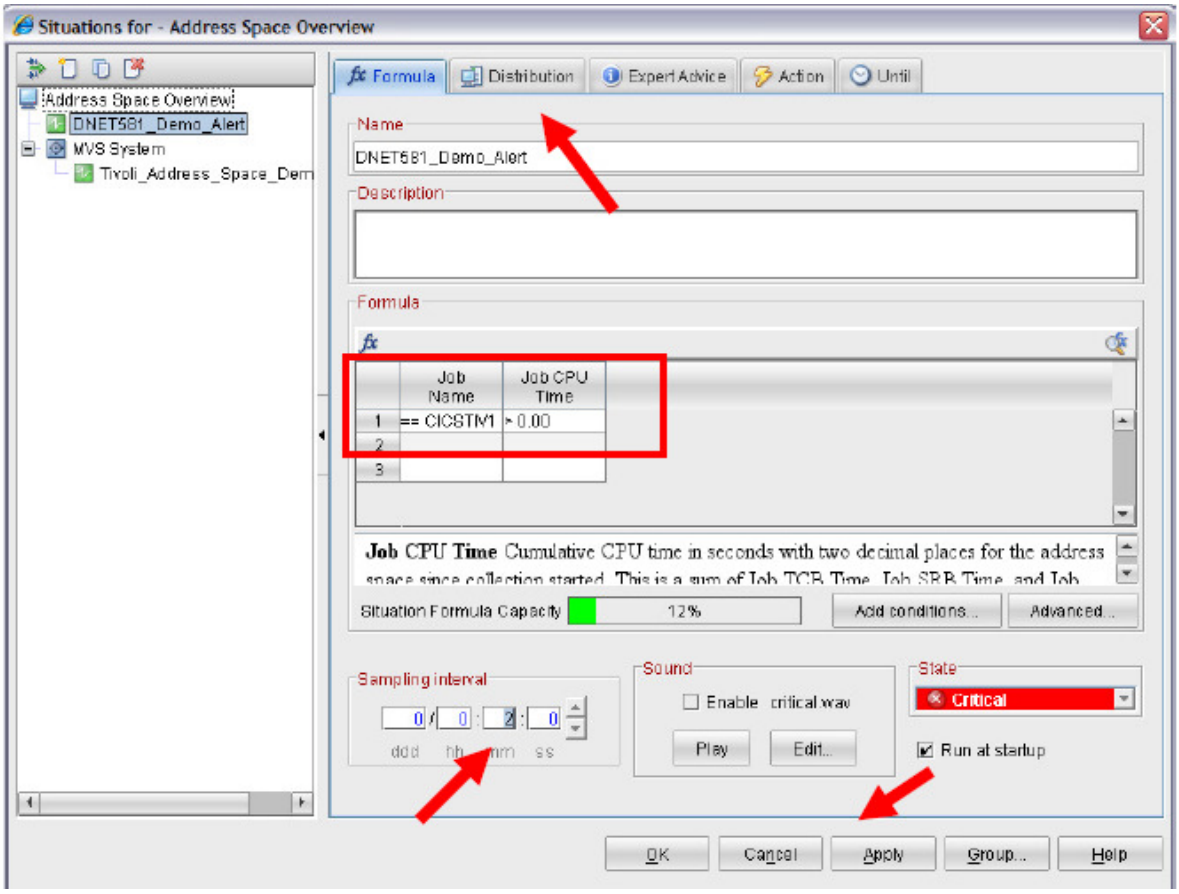


n) Now you see an additional column for Job CPU time in the editor. **Click on the ==** icon

o) **Select > Greater Than** from the popup.

p) **Click on the field to the right of the > and enter 0**.

You now have a situation that is looking for a given address space and checking to see if its CPU use is greater than 0.

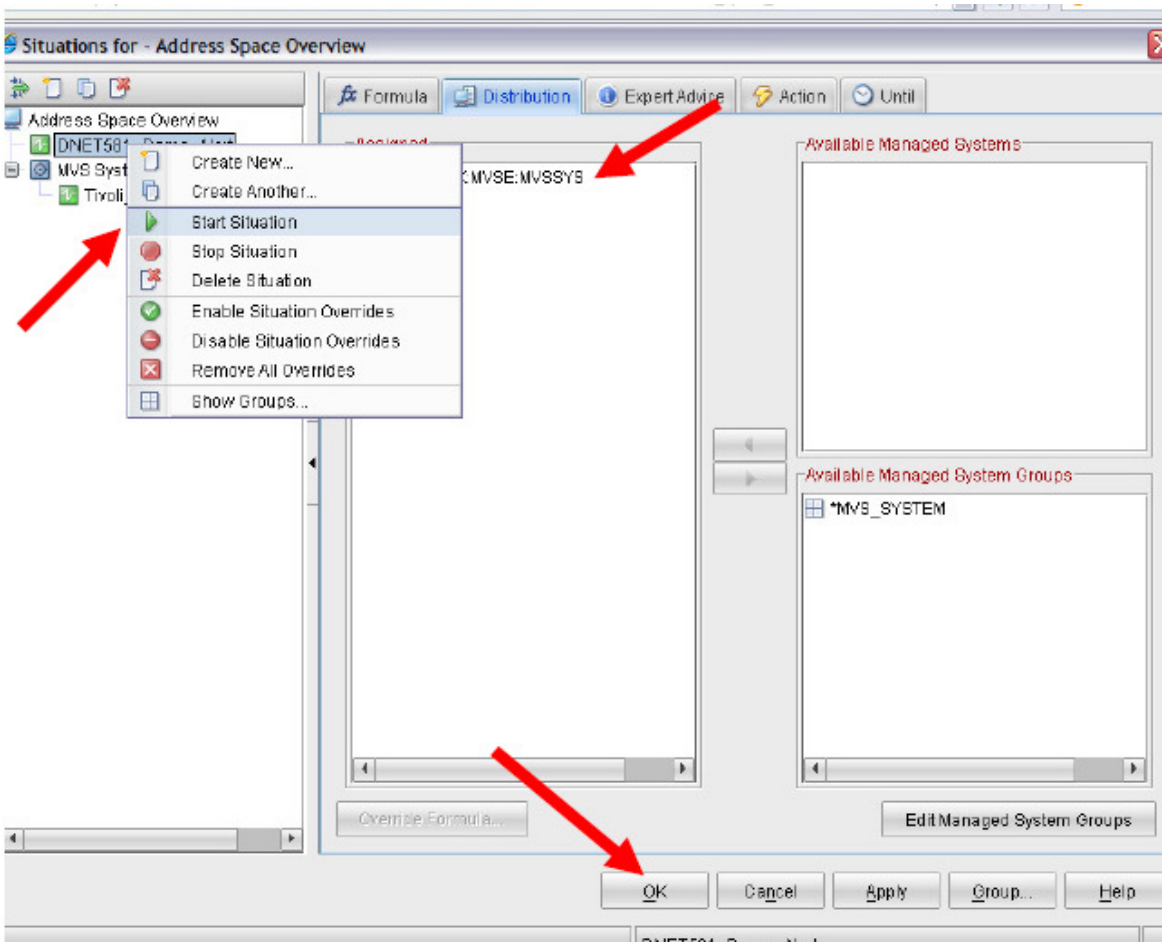


q) **Click on the mm (minutes) column** in the sampling interval

r) **Click the down arrow** to lower the interval. Set the time to 2 minutes.

s) **Click Apply**.

t) Click the Distribution Tab.



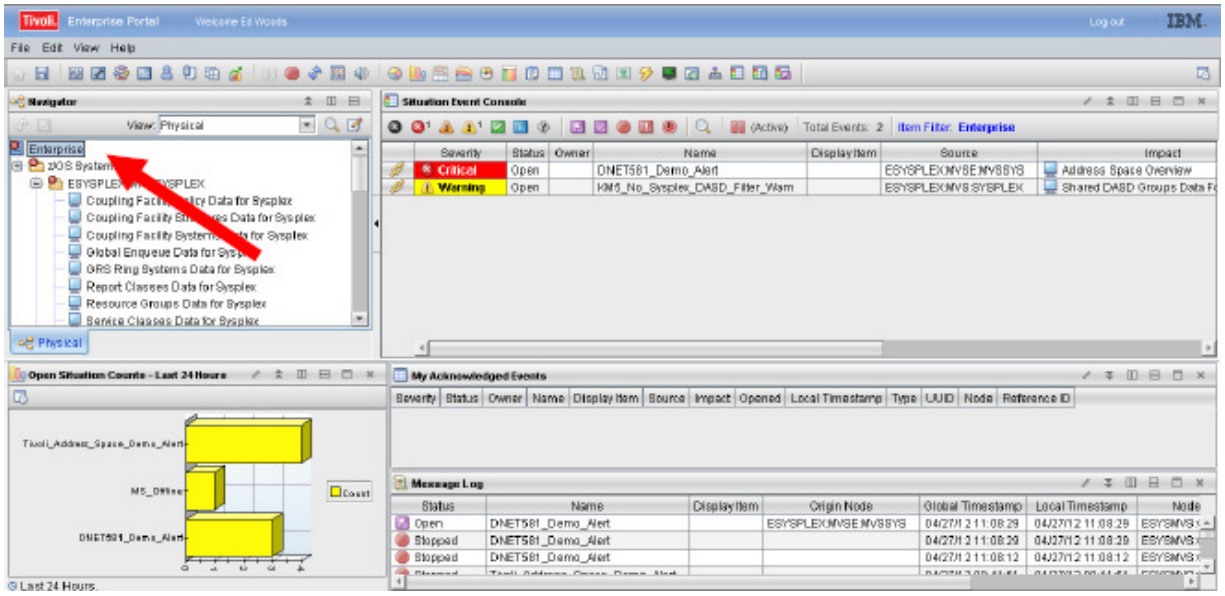
u) You are now looking at the distribution for the situation alert. This controls where the situation logic runs and what systems this situation will alert on. Note that you should see the managed system name for the z/OS LPAR MVSE under the 'Assigned' column.

v) **Right click** on the situation name

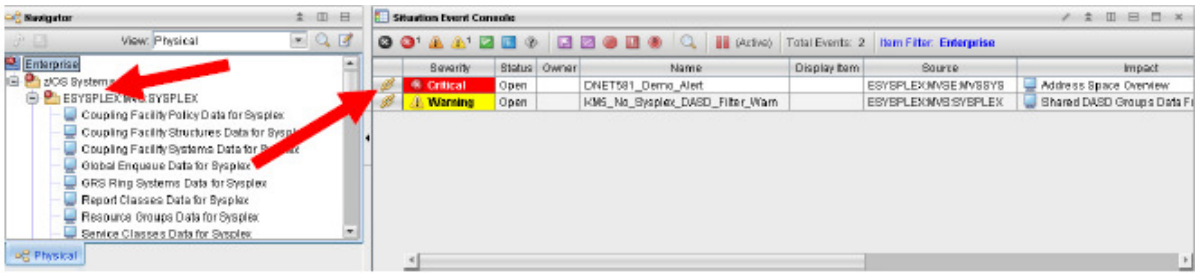
w) **Select Start Situation**. This will distribute the situation logic to the OMEGAMON agent task and enable the monitor to start checking for the alert condition.

x) Click OK.

y) Click **on the Enterprise** line in the navigation tree.

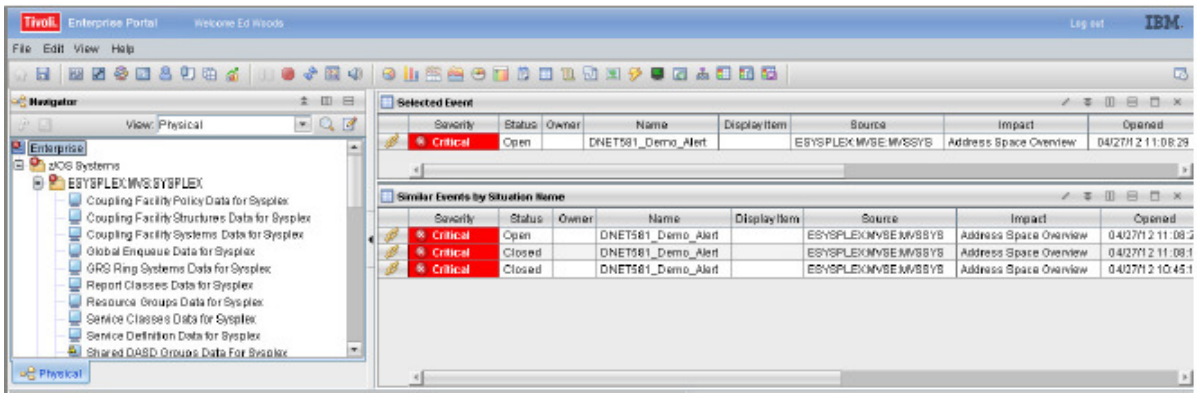


You are now looking at the Enterprise view we started at.



Wait two or three minutes and you should see the alert appear on the navigation tree on the left (look for red icons) and in the Situation Event Console on the right.

z) Click on the link symbol to the left of the alert name in the Situation Event Console and you will go to the detail view for the situation alert.



Congratulations. You have now completed the Tivoli Enterprise Portal introduction lab exercise. In this lab you have learned the basics of the portal, how to navigate the portal, the toolbar options, and how to create and view situation alerts.

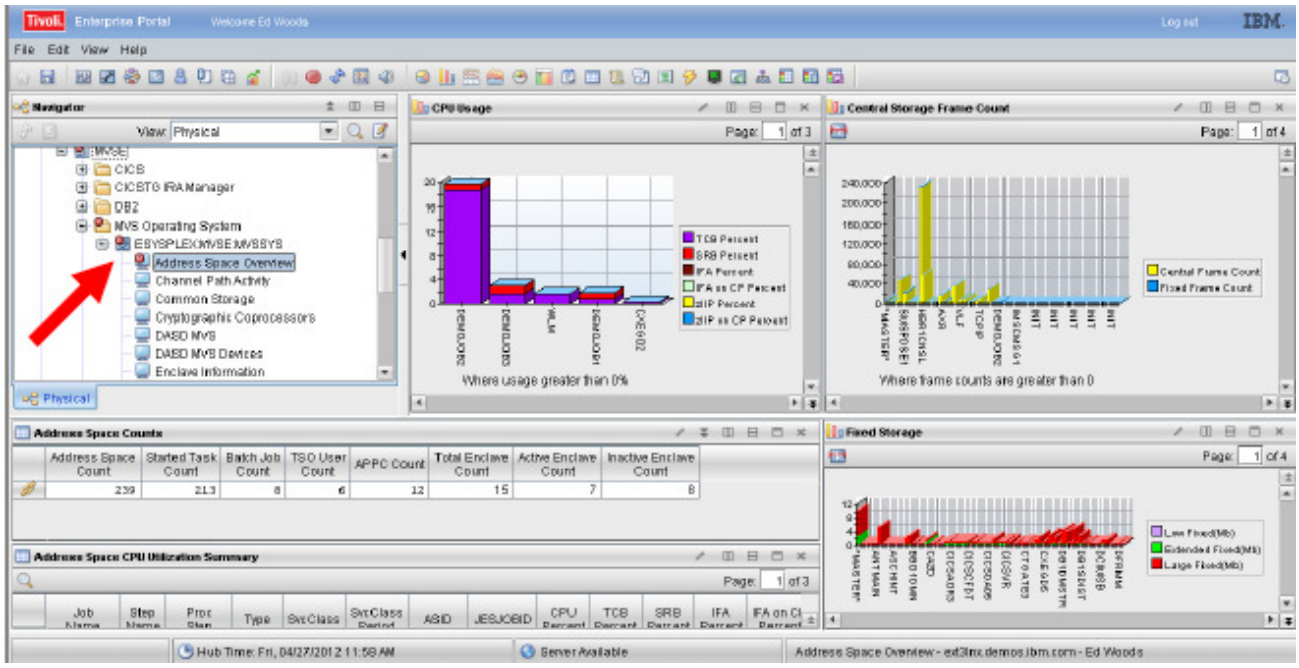
Lab #2 Tivoli Enterprise Portal (TEP) Customization

Introduction

The TEP introduction lab demonstrated how to logon, navigate, and use some of the primary features of the OMEGAMON V5.x Tivoli Enterprise Portal (TEP) interface. This lab exercise will demonstrate how you may customize workspaces in the TEP. After performing this lab exercise the user will have a better understanding of how to customize TEP workspaces to address technical challenges.

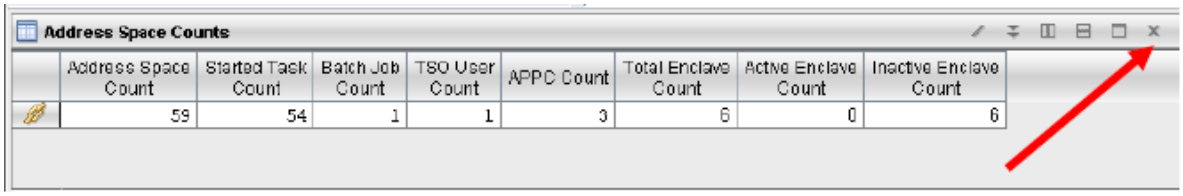
2.1 Start from the Address Space Overview Workspace

We are assuming you are already logged onto the Tivoli Enterprise Portal (TEP). From the TEP, click on the Address Space Overview workspace under MVS Systems.

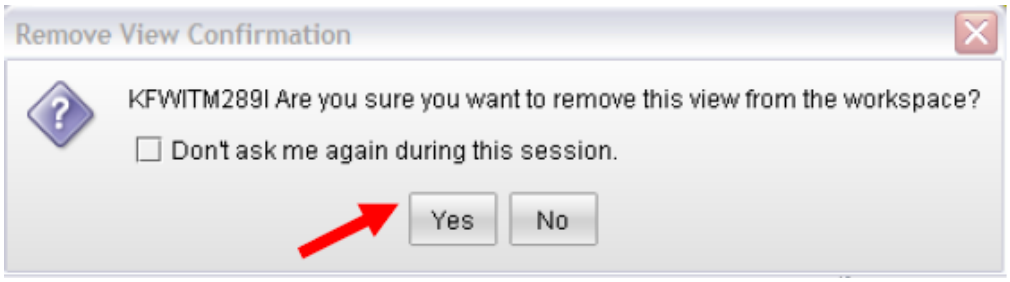


You are now looking at the Address Space Overview workspace. This workspace shows information on address spaces running on z/OS, including CPU and storage utilization. The goal of this exercise is to customize the workspace to track, monitor, and trend the CPU utilization of certain tasks running on z/OS. The goal is to demonstrate how you may customize screens to target important mission critical workloads.

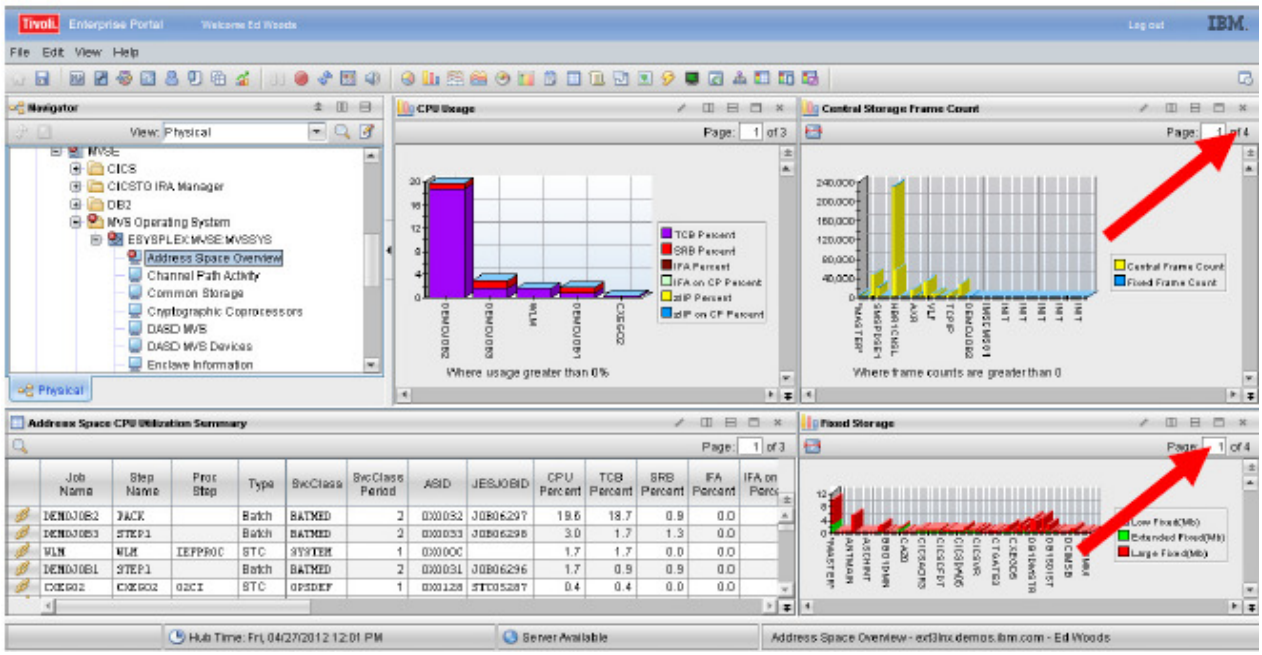
2.2 Begin The Customization



a) Start by removing portions of the workspace we will not use. **Click on the X** for Address Space Counts.

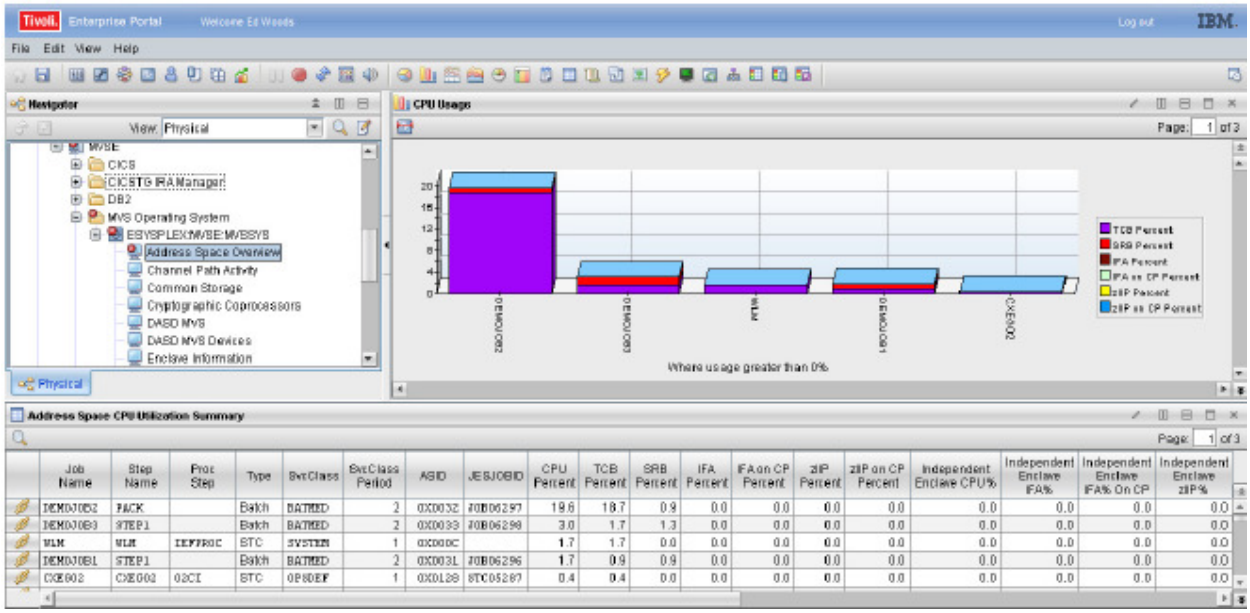


b) You will then be prompted - are you sure? **Click Yes**. The tile in workspace will be removed.



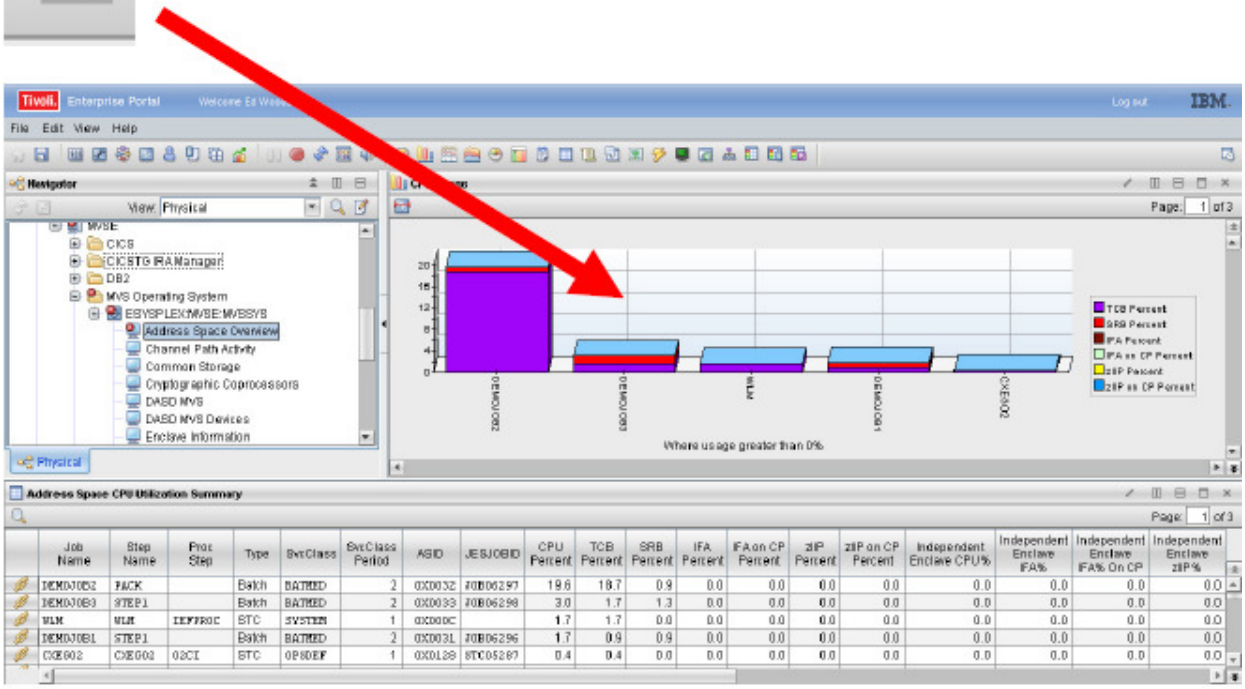
c) Now do the same process for Central Storage Frame Count, **click the X** and then **click YES.**

d) Next do the same thing for Fixed Storage. **Click the X** and then **click YES.**

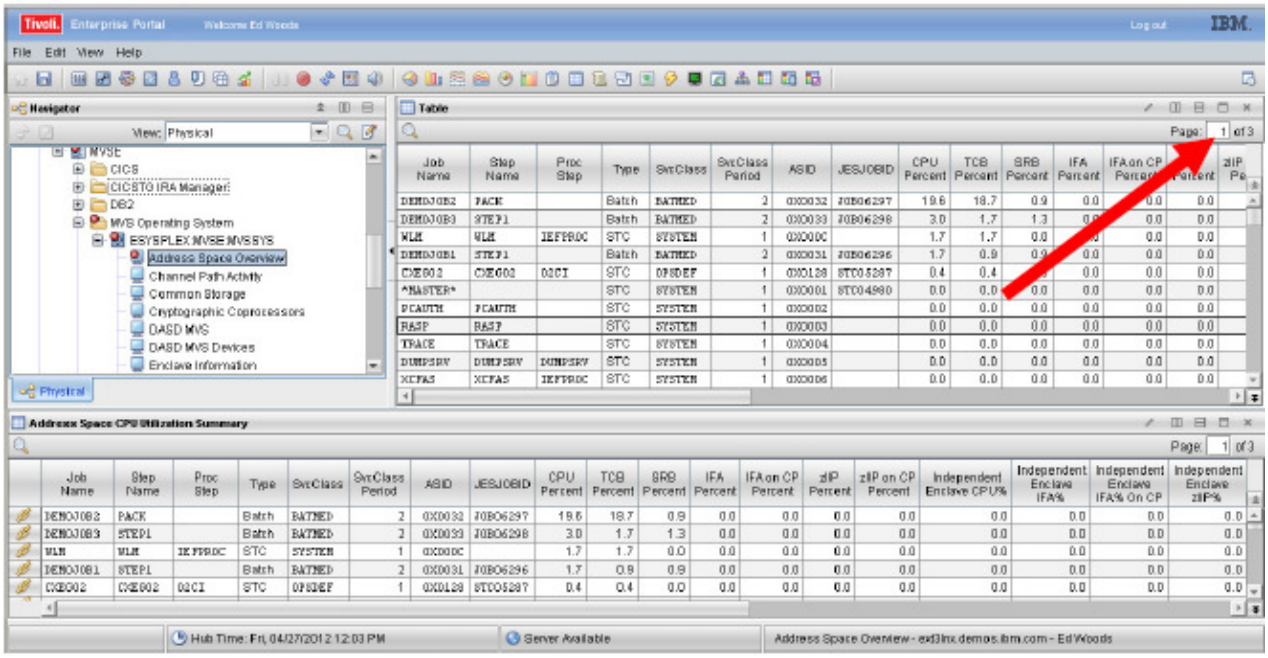


e) You now have a workspace with just the CPU usage information on it.

f) Now click once on the table icon on the toolbar.



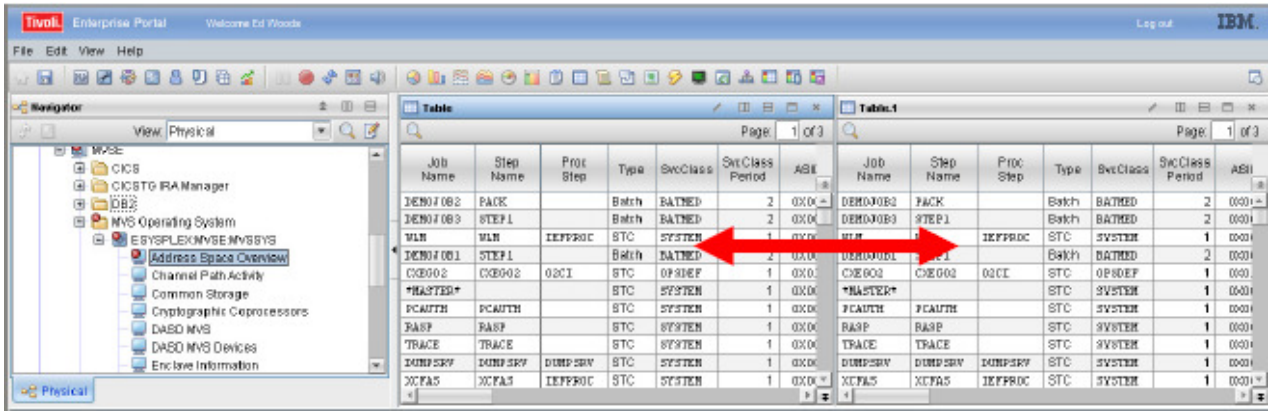
g) **Drag the icon** onto the graphic and release it. The graphic will change to a table view.



h) Notice how by clicking and dragging the icon you can easily convert graphic data to tabular data.

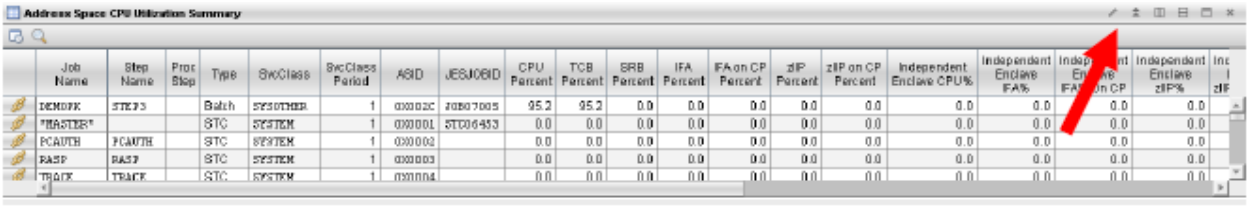
i) Now split the top portion of the workspace by **clicking on the vertical split** icon**.**

The top panel will split as you see below. The content of the data will be cloned.



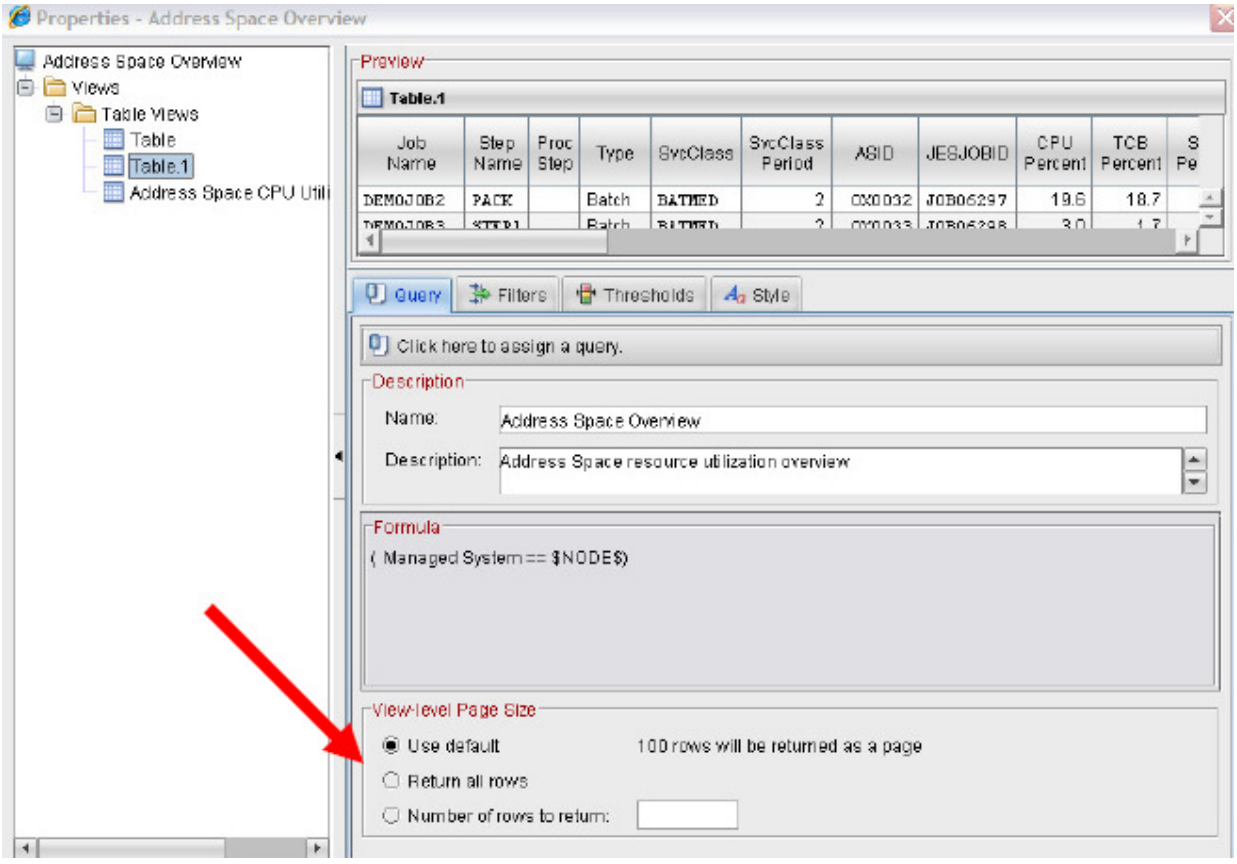
2.3 Filter The Display

Now that we have the base workspace, let's continue the customization.



Now let's go into the properties for the bottom pane of the workspace.

j) **Click on the / icon** in the upper right corner of the pane. This will open the properties popup menu. The properties menu is where you go to do much of the customization of the workspace.



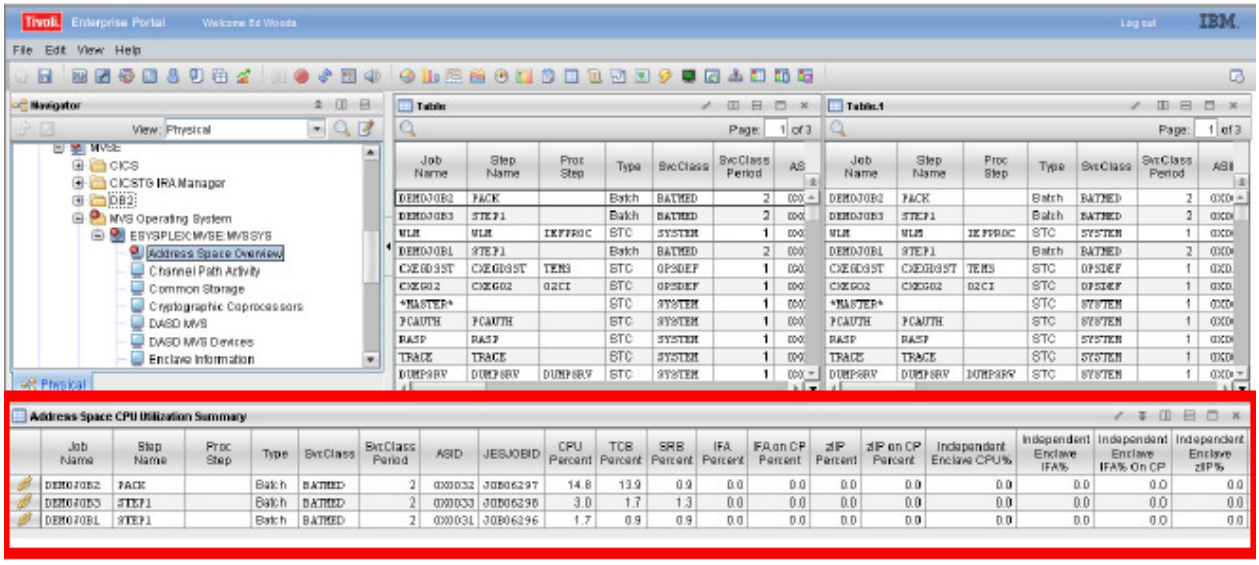
k) Click on the Return All Rows button.

l) Click on the Filters tab.

You are now looking at the Filter portion of the properties menu. From here you can click on the column headers to include or exclude columns. You can also apply filters to control what rows of information appear in the workspace.

m) Click in the cell underneath Job Name. Enter the string DEMO*. This will result in filtering the display for the desired address spaces (jobs starting with DEMO in the job name).

n) Click OK.

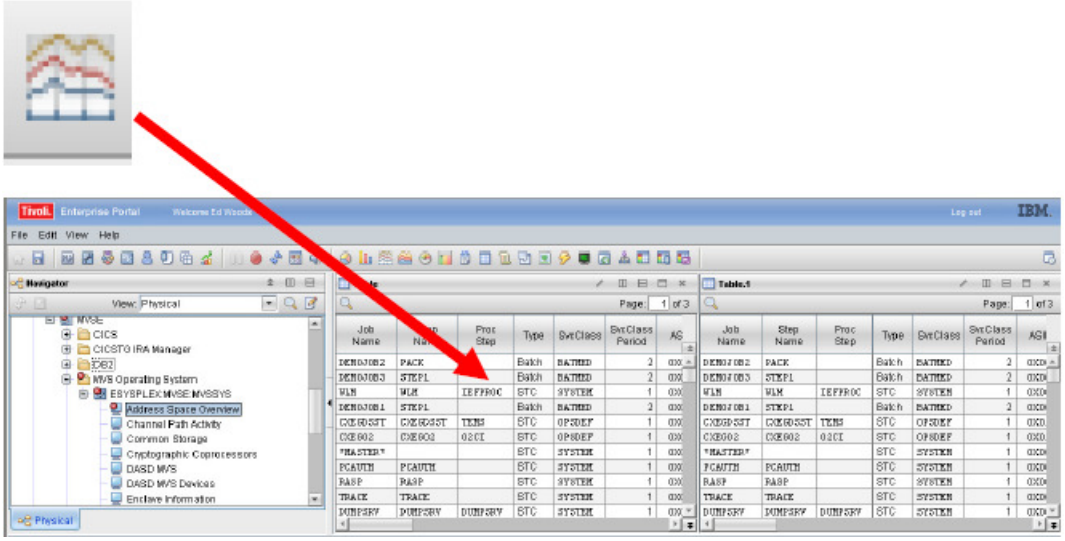


You are now looking at the workspace with the bottom portion filtered for jobs starting with DEMO in the job name.

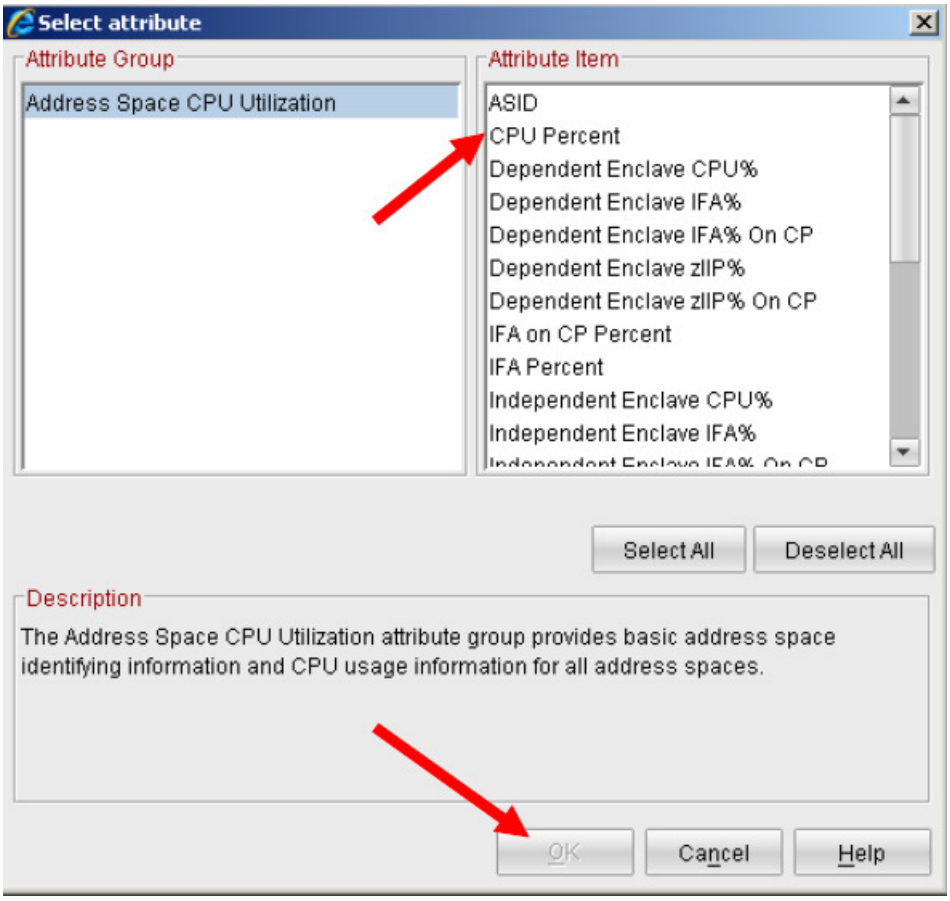
Let's continue the customization process.

2.4 Add Graphics to The Workspace

a) Click once on the Plot chart icon on the toolbar and drag it to the workspace. Then release the icon.

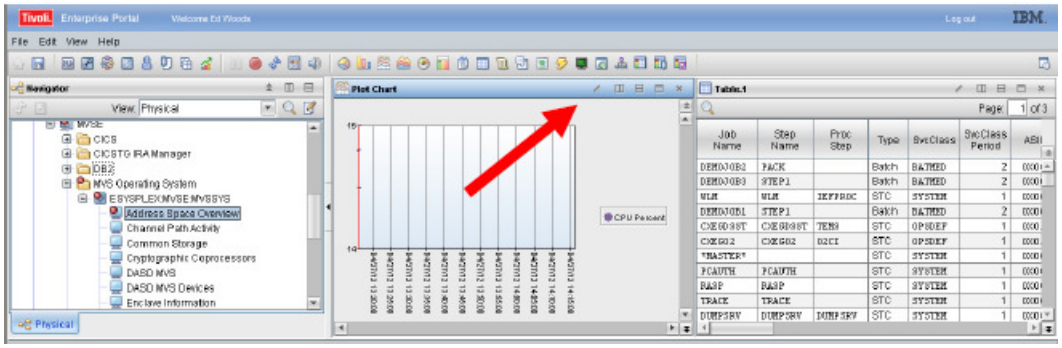


You will then get a popup to specify what to plot on the chart.



b) Click on CPU Percent.

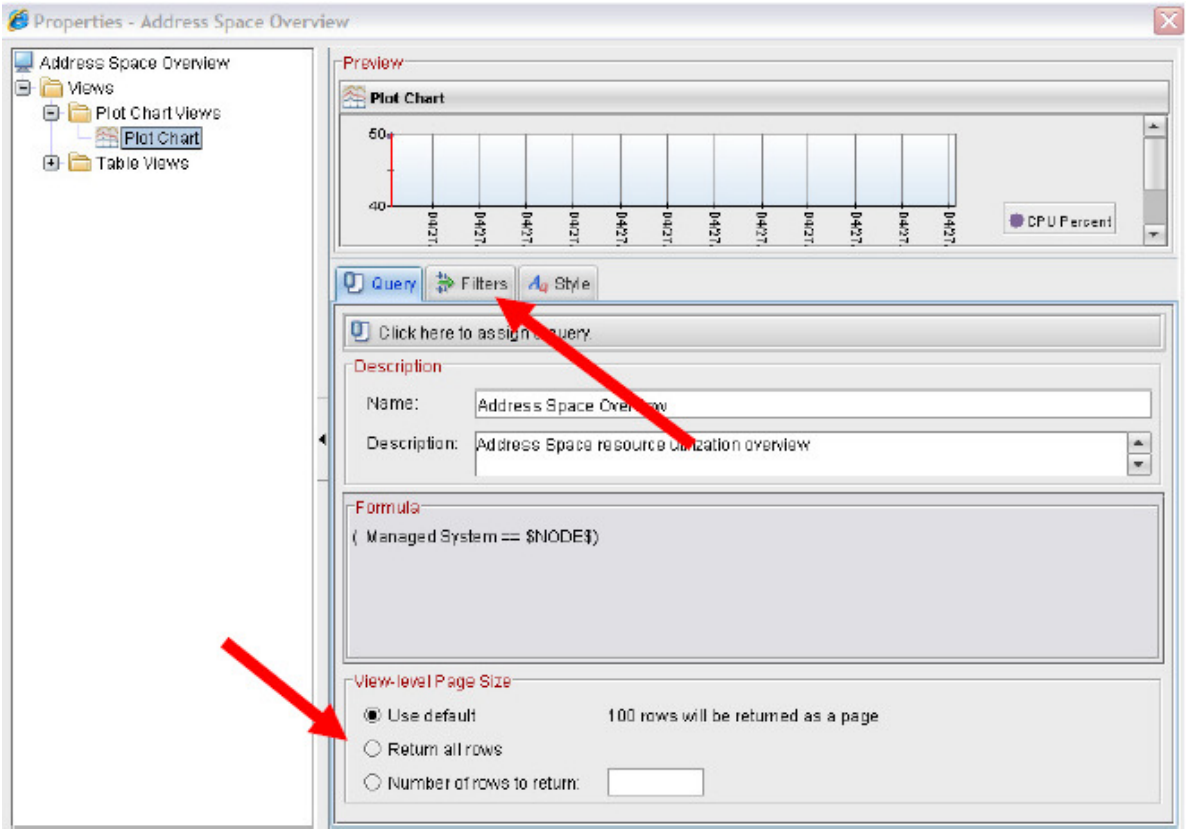
c) Click OK.



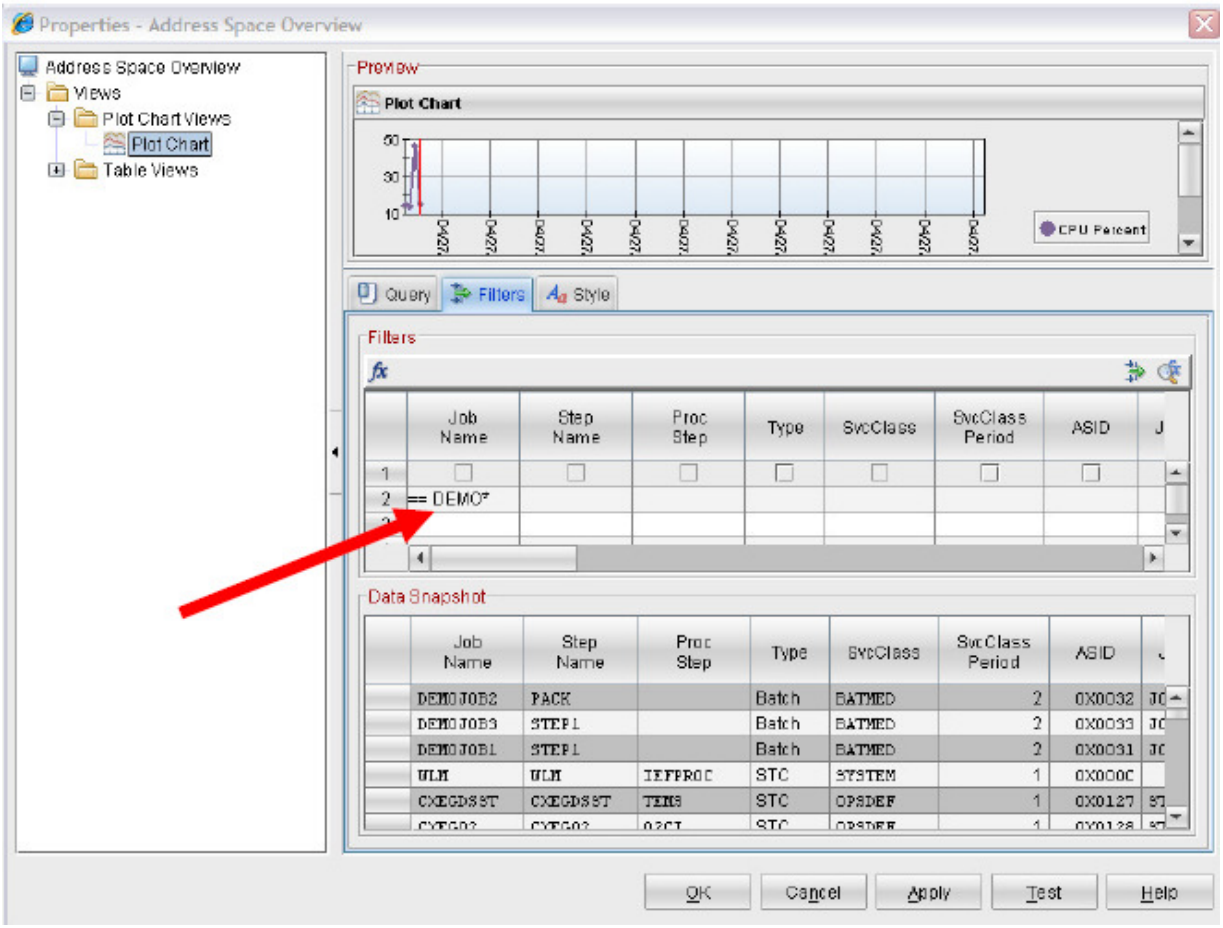
You are now looking at a Plot Chart in the workspace.

d) **Click on the** / icon in the upper left corner of the pane.

This will open the properties popup menu.



e) Click the Filters tab.

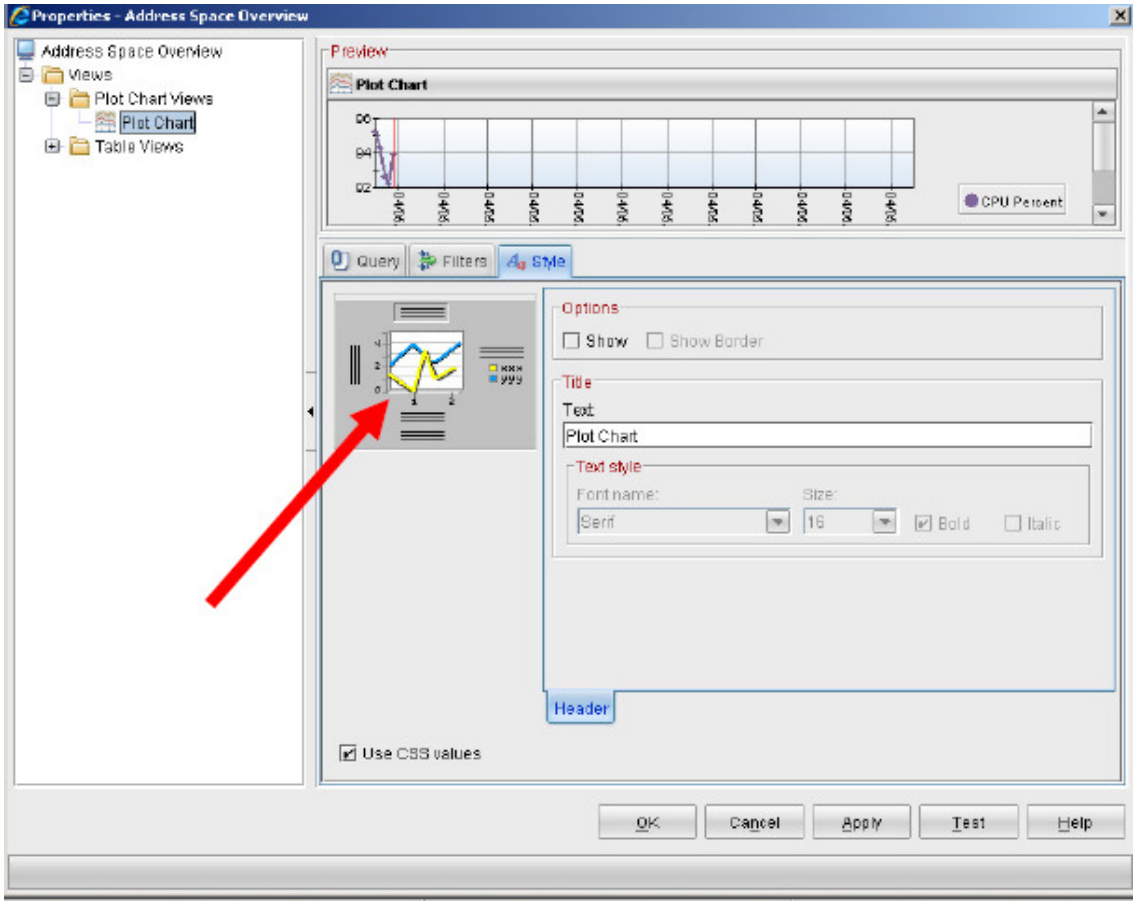


f) **Click in the cell** underneath Job Name.

g) **Enter DEMO*** in the field.

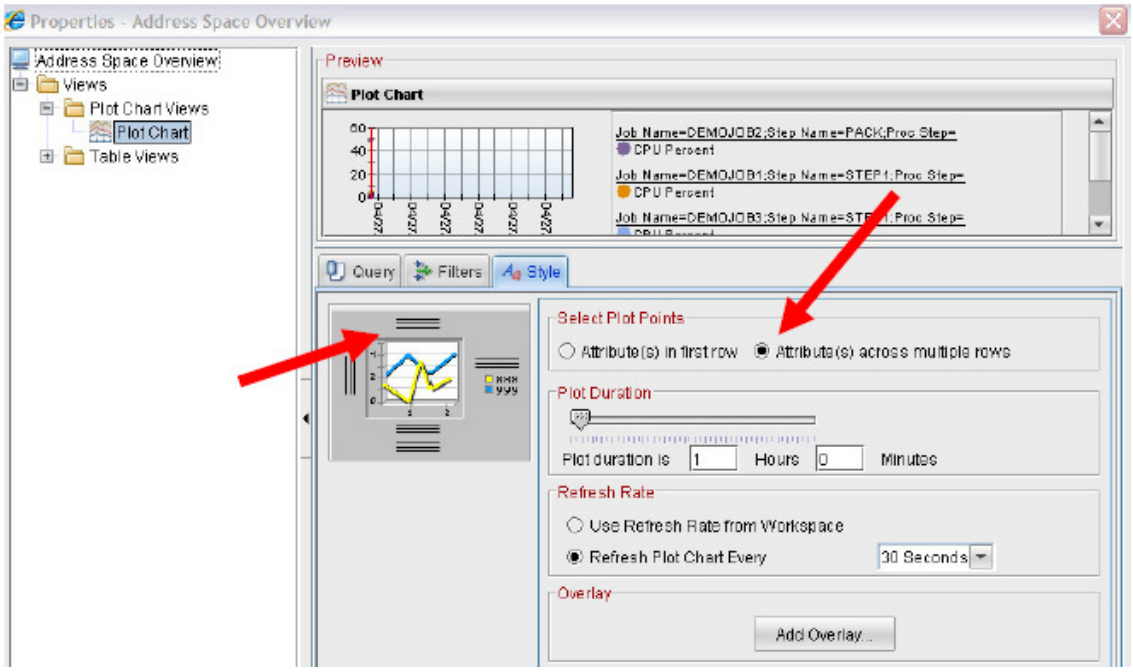
h) Click Apply.

i) Click the Style tab.



From the Style tab you can further customize the plot chart.

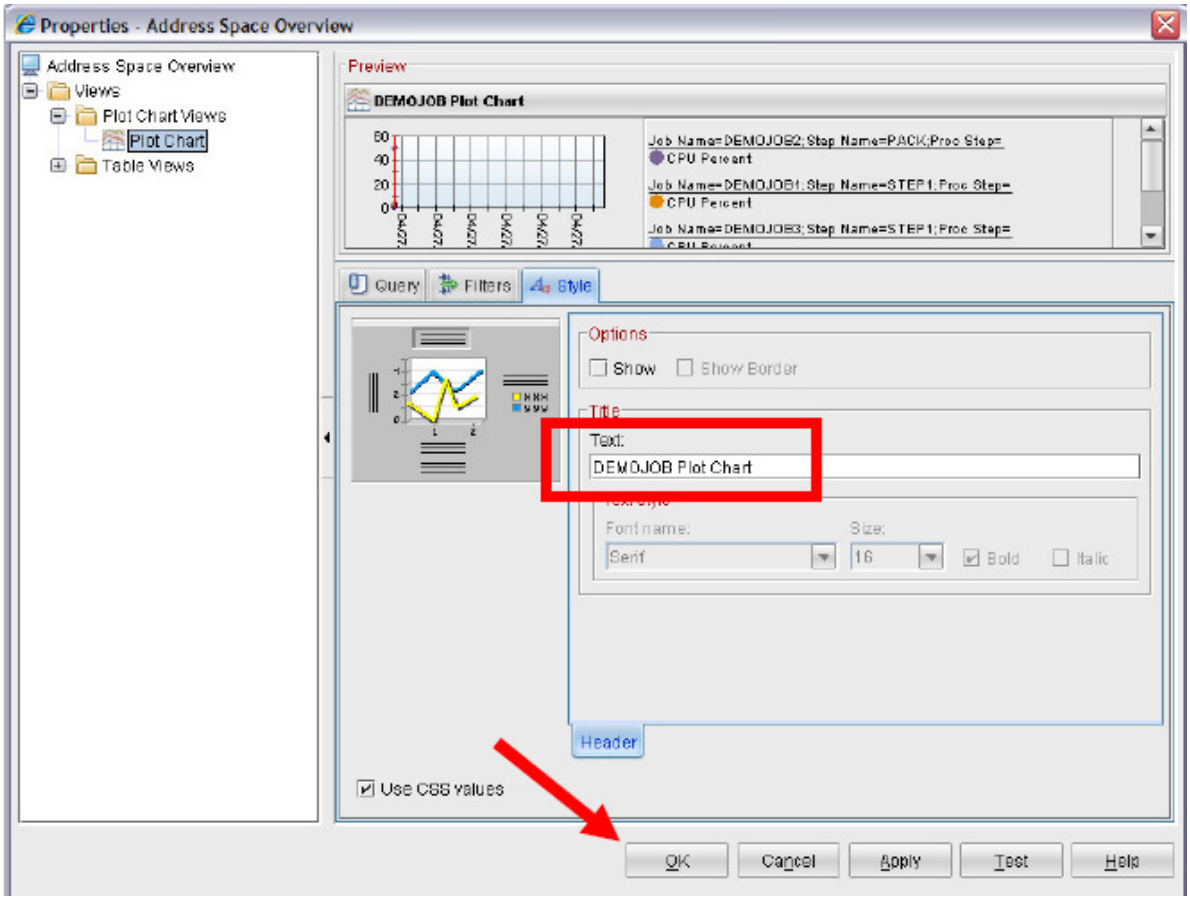
j) **Click on the chart icon** in the middle of the popup.



You are now looking at the properties menu that let's you specify such things as the duration of the plot chart, and how frequently the plot chart refreshes on the display.

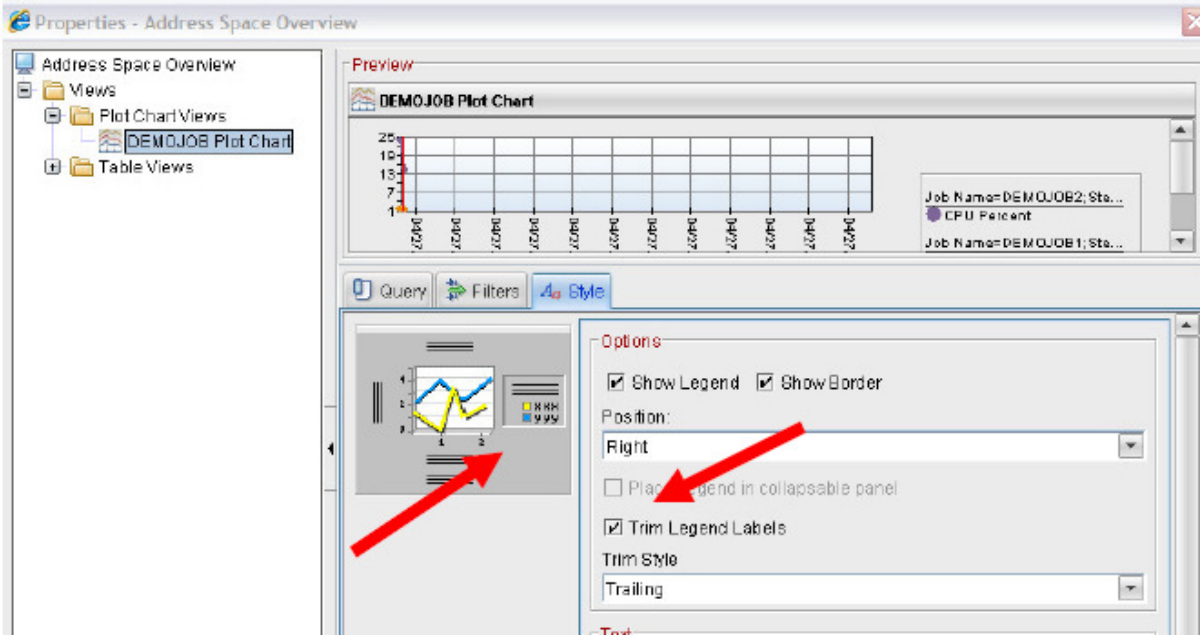
k) **Click on the Attributes** across multiple rows button.

l) **Now click on the lines** above the chart.



You can now specify the header text for this portion of the workspace.

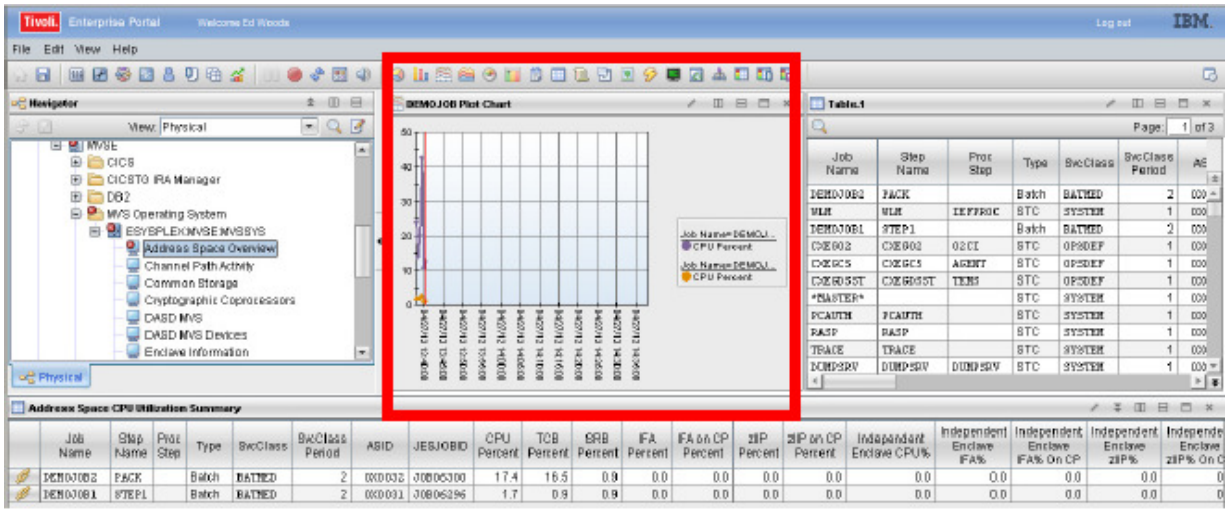
m) **Enter text** describing the chart.



n) **Click to the right** of the chart icon.

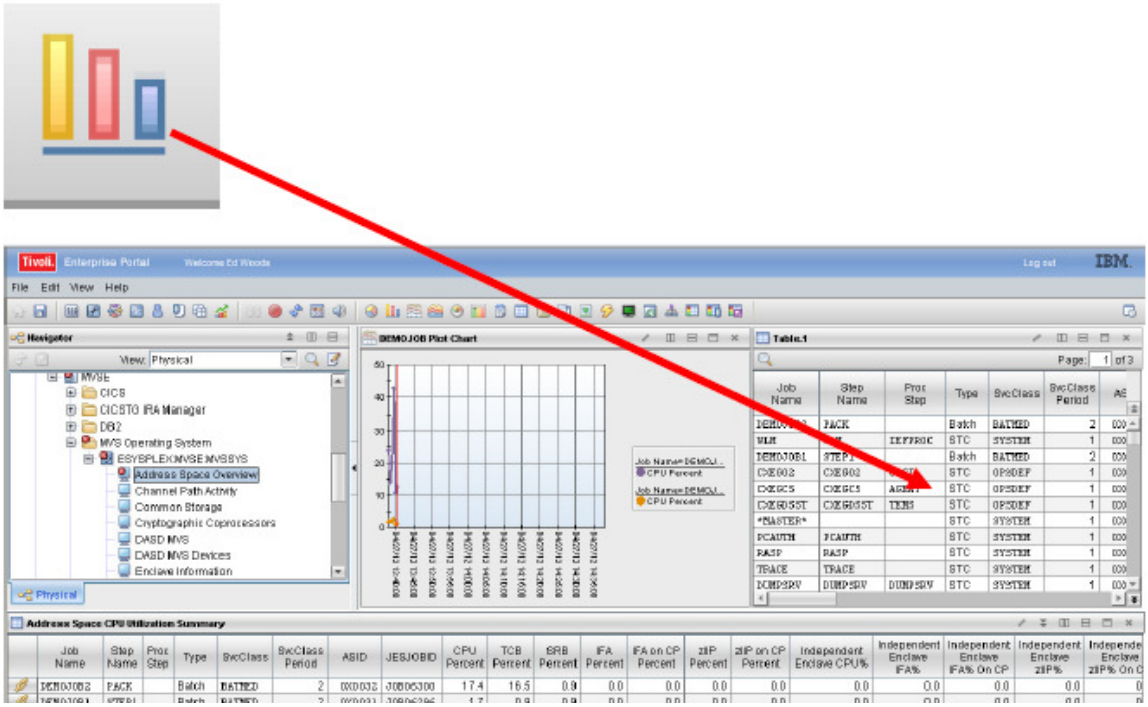
o) **Click on Trim Legend Labels**.

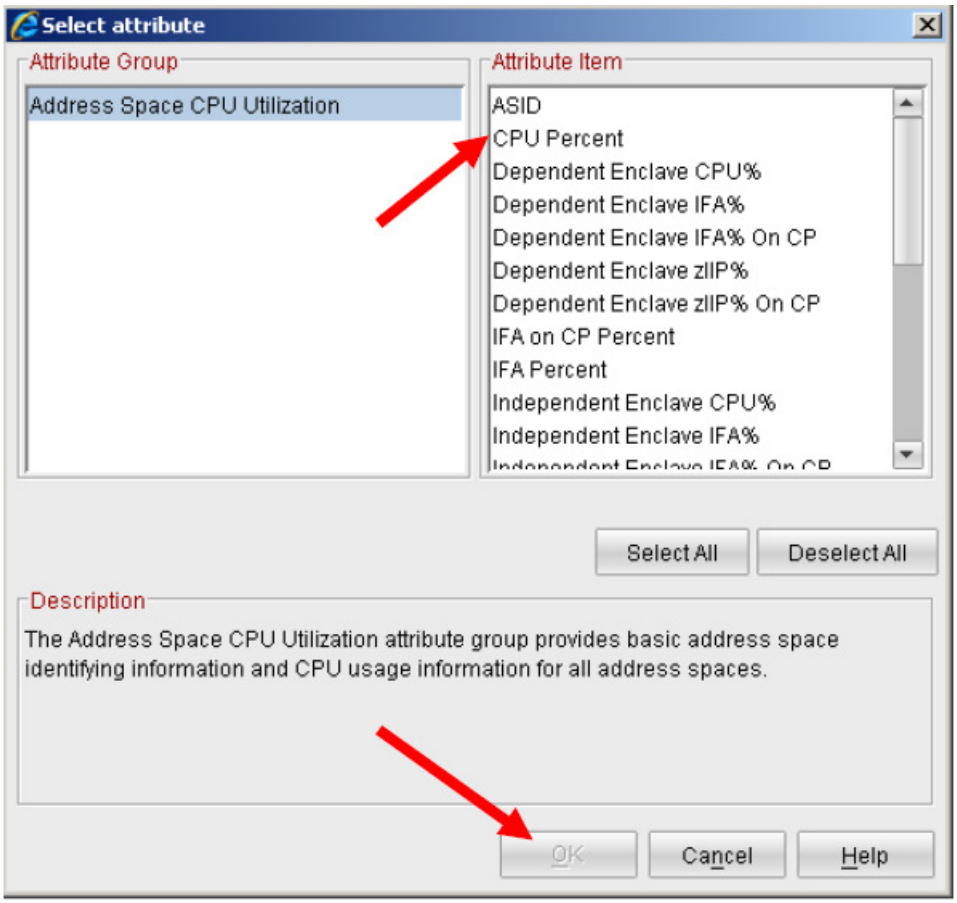
p) Click OK.



Now you can see the CPU plot chart data for the DEMO jobs.

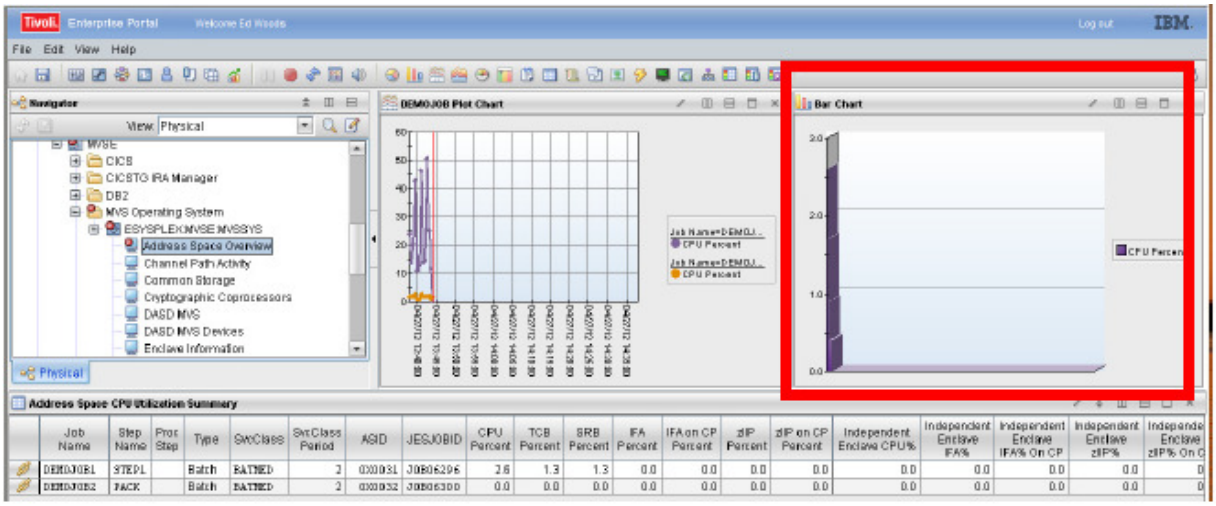
q) Click once on the Bar Chart icon on the toolbar and drag it to the workspace. Then release the icon.





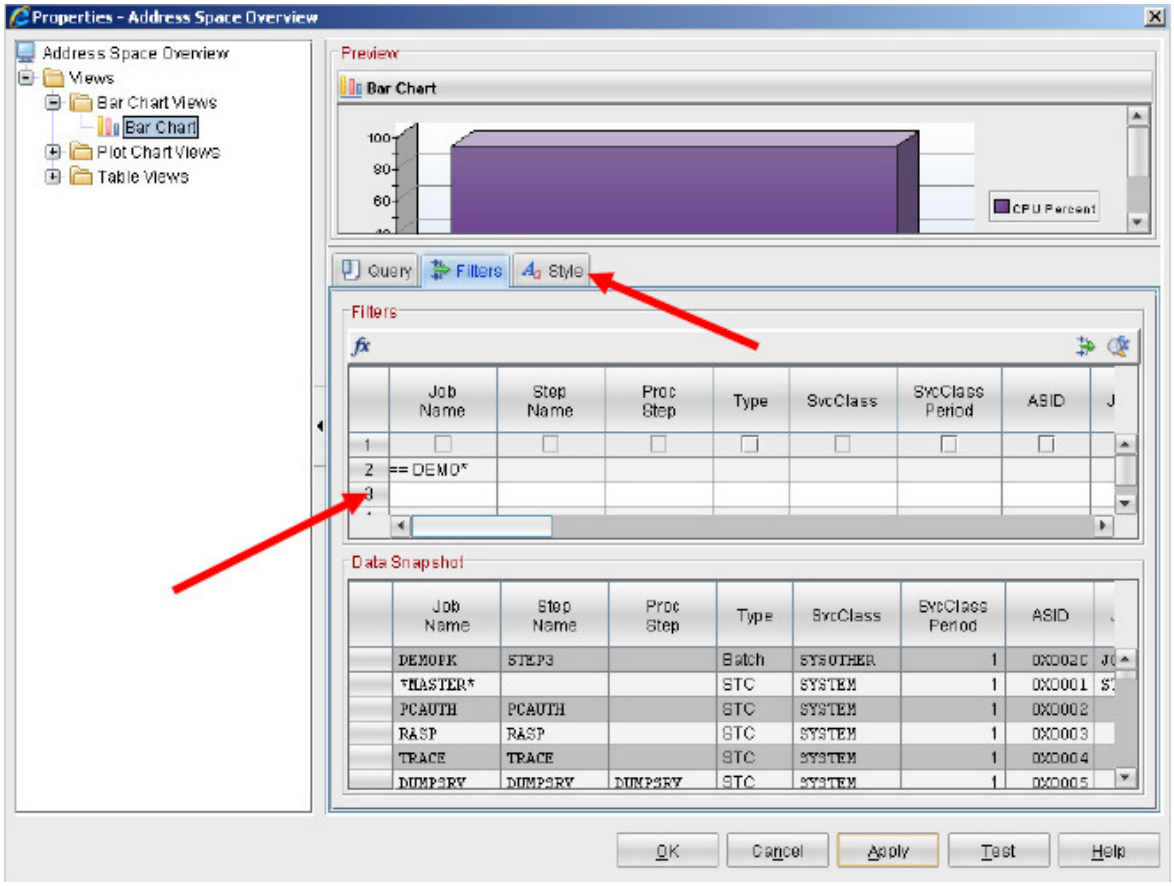
r) **Click on CPU Percent**.

s) Click OK.



You now have added a bar chart to the workspace.

t) **Click on the / icon** in the upper left corner of the pane. This will open the properties popup menu. **Click the Filters tab.**

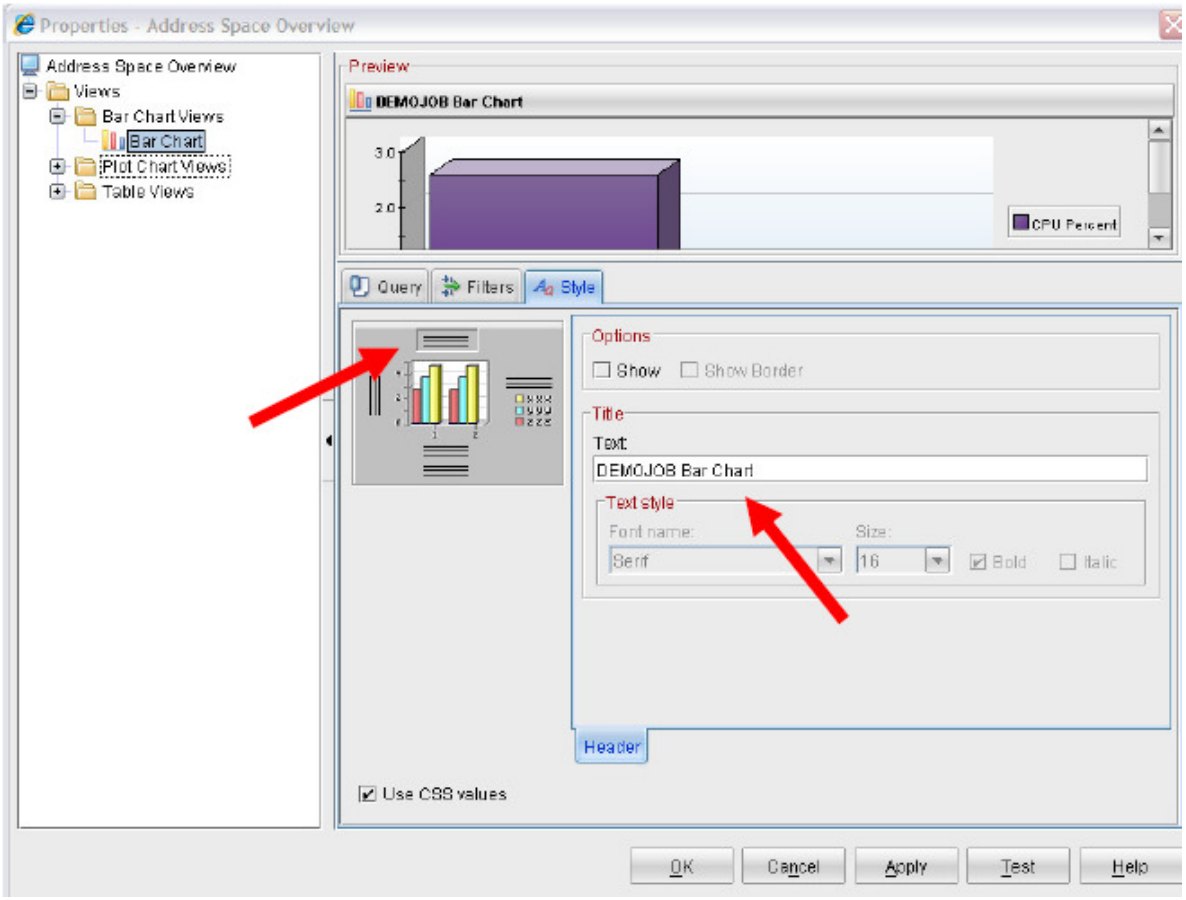


u) **Click in the cell** underneath Job Name.

v) **Enter DEMO*** in the field.

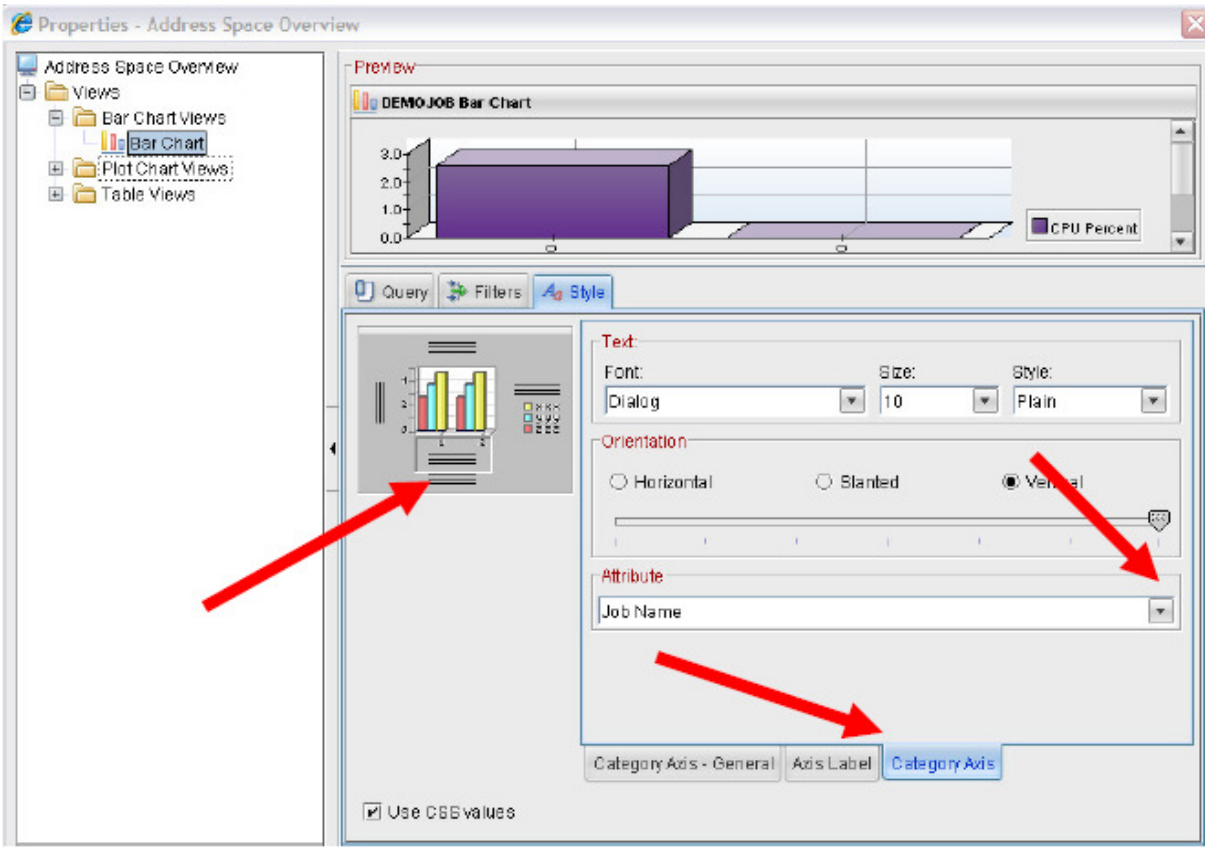
w) Click Apply.

x) Click the Style tab.



y) Now click on the lines above the chart.

z) Enter a title for the Bar chart.

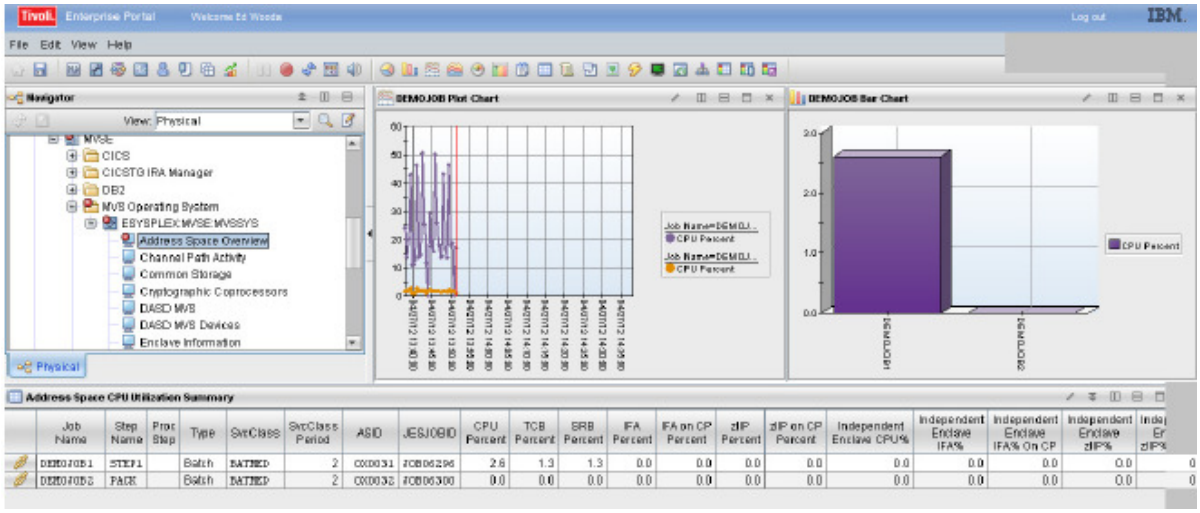


aa) **Click on the lines** below the chart icon

bb) Click on the Category Axis tab

cc) **Select job name** from the drop down

dd) **Click OK**.



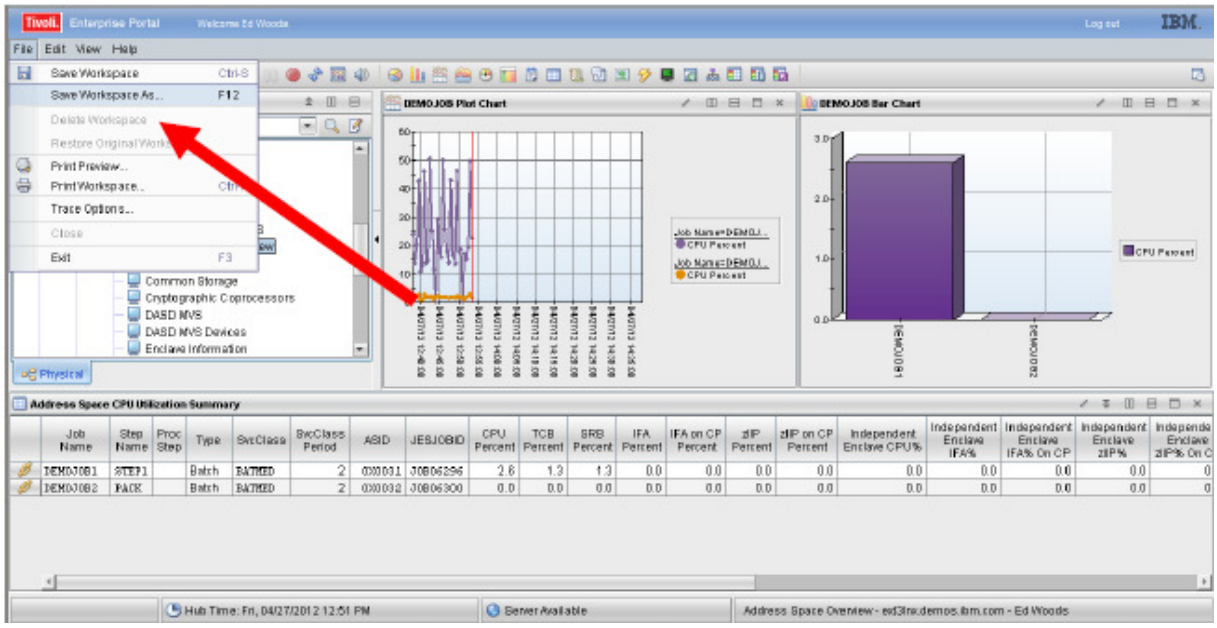
You have now made a Bar chart on the upper right pane of the workspace.

You now have a workspace showing CPU for specific jobs in tabular data format, you can plot the CPU usage of the jobs over time, and you have a bar chart sowing the CPU usage of the jobs.

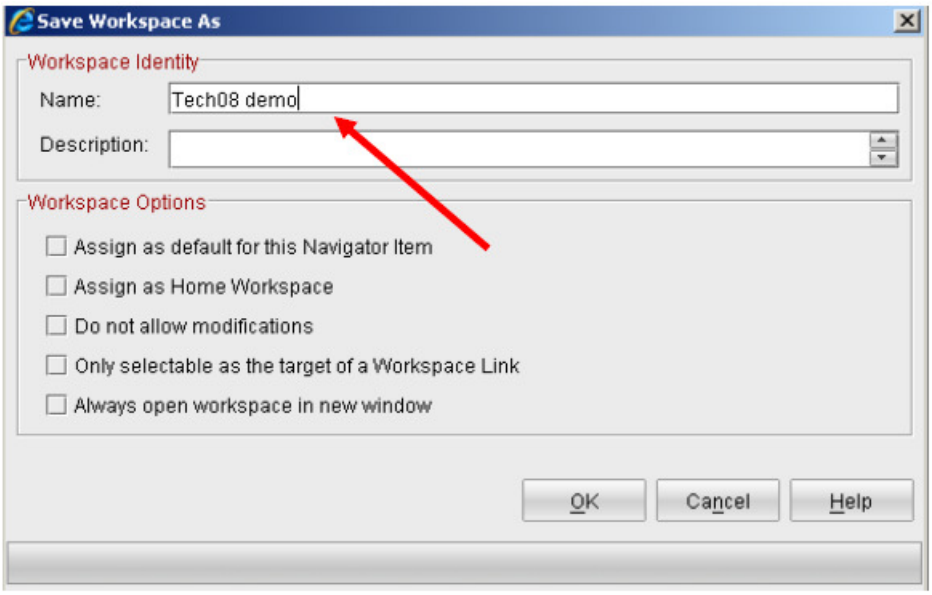
2.5 Saving Your Work

You can save your workspace and recall it for later use.

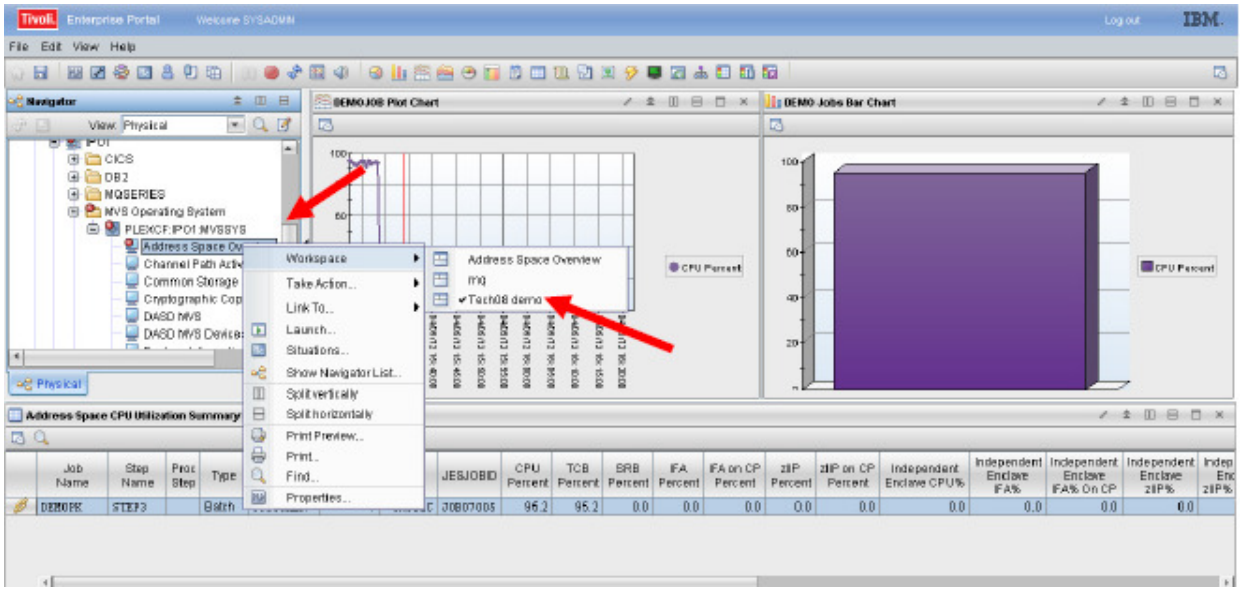
a) To save the workspace, **click on file**



b) Click on Save Workspace As….



c) In the Name field, **enter a name** for the workspace (use your userid as the first part of the screen name). **Click OK.**



Once you've saved the workspace, you can recall the workspace later by doing a **right click** on the Address Space Overview line in the navigation tree, **dragging the cursor** to the right, and **selecting the workspace** from the list.

Congratulations. You now know how to create a custom workspace using the Tivoli Enterprise Portal. The custom workspace you created in this lab exercise allows you to monitor more closely a specific set of address spaces on z/OS. This same technique can be applied to other tasks or workloads in the Tivoli Enterprise Portal (z/OS, CICS, DB2, IMS, MQ, and more).

Revisions

Date of Revision	Number	Completed by	Revision Log
09/10/2014	V6.0	Ed Woods	Principal lab author Fixed format and font issues Combined document into a single doc file
09/19/2014	V530	Lih Wang	Edits for Enterprise2014 conference lab session

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