

Zenoss Service Dynamics Service Impact Training Student Exercise Guide

Zenoss, Inc.

www.zenoss.com

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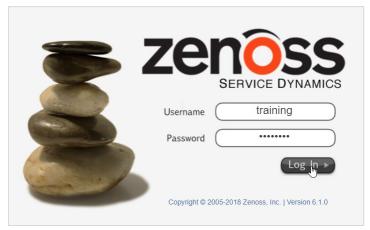
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Step-by-Step Guide to the Exercises

Exercise #0: Connect to Your Zenoss Instance

- 1. In a web browser, enter the URL for your assigned lab instance: https://zenoss5.region-trainX.zenoss.com where:
 - region is either blank (in which case you should omit the hyphen ("-")), or one of in, ir, pre, sa, or sing
 - X is the number of your assigned lab instance
 - a. If you are unsure of which region your lab instance is in, or which instance has been assigned to you, check with your instructor before proceeding.
 - b. Your browser may post a privacy or security warning. It is safe to continue.
- 2. Enter **training** as the *Username*.
- 3. Enter the *Password* provided by your instructor.



Exercise #1: Create a Basic Service

- 1. Click **SERVICES** in the top navigation row
- 2. From the 4 (add) menu at the lower left, select Add Dynamic Service



3. In the Add Dynamic Service dialog, enter Basic as the Name and click SUBMIT



- 4. Select the **Basic** service from the list on the left
- 5. Select Members from the view (Impact Events) menu



6. Click • above the empty Currently in Service list



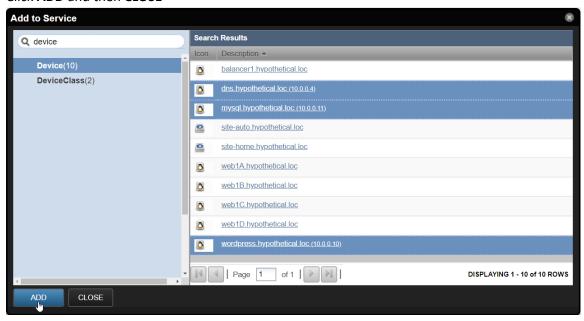
- 7. In the Add to Service dialog:
 - a. Enter device in the search box to list known devices
 - b. Select the three devices listed below from the right pane

When selecting a service member, click anywhere on its row except on the name (which is a link)

Click on the first device row, then hold down the Ctrl key and click on the remaining two device rows

- dns.hypothetical.loc
- mysql hypothetical.loc
- wordpress. hypothetical.loc

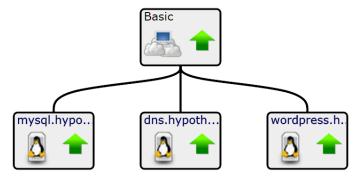
c. Click ADD and then CLOSE



8. Switch to the Impact View



9. Verify that your service graph looks like this (the order of the device nodes may vary):



Exercise #2a: How Events Impact Service States

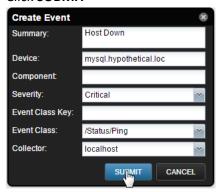
- 1. Click **EVENTS** in the top navigation row
- 2. Close all open events:
 - a. Click Select > All (or press Ctrl-A)



- b. Click the close event button: 🗸 🔾 🚉 🛨
- 3. Create a new ("synthetic") "Host Down" event:
 - a. Click the add event button to create a new event:
 - b. Fill in the Create Event dialog as shown:

Summary	Host Down
Device	mysql.hypothetical.loc
Component	[Leave Blank]
Severity	Critical
Event Class Key	[Leave Blank]
Event Class	/Status/Ping
Collector	localhost

c. Click SUBMIT

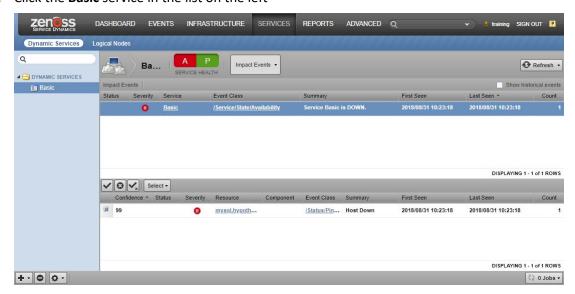


- d. Click the **Refresh** button to update the event console: **№** Refresh ▼
- 4. Verify that your event was processed and that a new Service event was created in response:



- 5. Explore the Impact Events view:
 - a. Click SERVICES in the top navigation row and note the change in the Availability Health pie chart

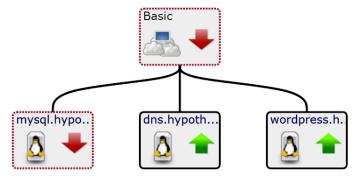
b. Click the Basic service in the list on the left



6. Select Impact View from the Impact Events menu



7. Note the state of the service's Impact View:



- 8. Return to the event console by clicking **EVENTS** in the top navigation bar
- 9. Close the "impacting" event: Select the **Host Down** event and then click the close event button:
- 10. Note that the service event is automatically closed (click 🚱 Refresh 🔻 if it remains on the console)

Exercise #2b: How Events Impact Service States

- 1. Click EVENTS in the top navigation row
- 2. Close all open events:
 - a. Click Select > All (or press Ctrl-A)
 - b. Click the Close Event button: 🗸 🔞 🔠 🛨
- 3. Create two new events with the values listed below:

a. Click the add event button to create a new event:



b. Fill in each Create Event dialog as shown:

Summary	HTTP worker process died
Device	wordpress.hypothetical.loc
Component	[Leave Blank]
Severity	Error
Event Class Key	[Leave Blank]
Event Class	/Status/HTTP
Collector	localhost

Summary	Host Down
Device	mysql.hypothetical.loc
Component	[Leave Blank]
Severity	Critical
Event Class Key	[Leave Blank]
Event Class	/Status/Ping
Collector	localhost

- c. Click SUBMIT
- 4. Click Refresh and verify that the new events have been received:



Exercise #2c: Impact Event Management

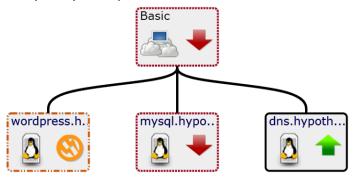
1. Click the Basic link in the Resource column on the service event row; this will take you to the Impact Events page for the Basic service



2. Select Impact View from the Members menu



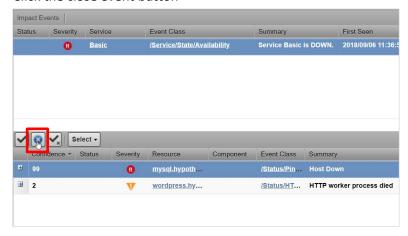
3. Verify that your Impact View looks like this:



4. Select Impact Events from the Impact View menu



- 5. Note that the topmost impact event is automatically selected.
- 6. Close the **Host Down** event:
 - a. Click on the event row (without clicking on a hyperlink) to select the event
 - b. Click the close event button



7. Verify that Basic service's availability state has changed to **Degraded**:



Exercise #2d: Clear Events and Service States

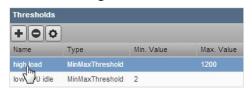
- 1. Click **EVENTS** in the top navigation row
- 2. Create a new ("synthetic") event to clear the existing HTTP worker process died event:
 - a. Click the Add Event button to create a new event: 🗸 🔾 🔝 📥 🔀 🔘 🕞
 - b. Fill in the Create Event dialog as shown:

Summary	HTTP worker process started		
Device	wordpress.hypothetical.loc		
Component	[Leave Blank]		
Severity	Clear		
Event Class Key	[Leave Blank]		
Event Class	/Status/HTTP		
Collector	localhost		

- c. Click SUBMIT
- 3. Verify that /Status/HTTP event and the corresponding service event have been cleared (click Refresh vi if necessary)

Exercise #2e: Simulate a Monitoring Template Threshold Event

- 1. Click INFRASTRUCTURE in the top navigation row
- 2. Click the dns.hypothetical.com link in the right pane
- 3. Click Device (/Server/Linux) under Monitoring Templates in the left pane
- 4. Double-click high load in the Thresholds pane



- 5. In the Edit Threshold dialog:
 - a. Scroll down and take note of the values for **Severity** and **Event Class** properties
 - b. Click CANCEL



- 6. Click EVENTS in the top navigation row
- 7. Close any open events:
 - a. Click Select > All or press Ctrl-A



- b. Click the close event button:
- 8. Create a synthetic event to simulate the **high load** threshold being exceeded:
 - a. Click the add event button to create a new event:
 - b. Fill in the Create Event dialog as shown:

Summary	threshold of high load exceeded
Device	dns.hypothetical.loc
Component	[Leave Blank]
Severity	Warning
Event Class Key	[Leave Blank]
Event Class	/Perf/CPU
Collector	localhost

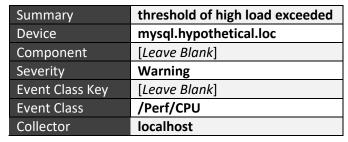
c. Click SUBMIT



- d. Refresh the event console by clicking @ Refresh -
- e. Note that since this is a **/Perf** event, a **/Service/State/Performance** event is generated:



9. Using the steps above, create a matching synthetic event for the mysql.hypothetical.com device:





10. Verify that the new /Perf/CPU event has been received and that the count for the service event is now 2 (click Refresh) if necessary)



Note: The First Seen and Last Seen columns have been omitted above to save space



Exercise #3: Prepare for Component Monitoring

- 1. Click **SERVICES** in the top navigation row
- 2. Delete the Basic service:
 - a. Select the Basic service from the list on the left
 - b. Click the Delete button (–) in the lower left to delete the service, then click **OK** in the *Delete Dynamic Service* confirmation dialog
- 3. From the Add (+) menu in the lower left, select Add Dynamic Service Organizer



4. In the *Add Dynamic Service Organizer* dialog, enter **Agent Blogs - Common** as the **Name** and click **SUBMIT**



5. Select Agent Blogs - Common from the list on the left



6. Create these four new services underneath the **Agent Blogs - Common** <u>organizer</u> by following the steps below for each service:

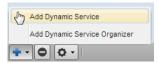
Agent Blogs - Common

DNS

MySQL

WordPress

a. From the Add menu (+) in the lower left, select Add Dynamic Service



 In the Add Dynamic Service dialog, enter the name of the next service from the list above and click SUBMIT



7. The DYNAMIC SERVICES tree should now look like this:





Exercise #4: Add DNS Service Members

- 1. Click on **SERVICES** in the top navigation row
- 2. Expand the Agent Blogs Common Service Organizer and select the DNS Dynamic Service
- 3. Select **Members** from the view menu (**Impact Events**)



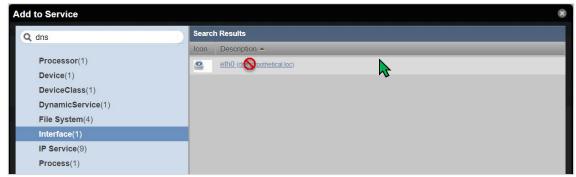
4. Click • above the empty Currently in Service pane



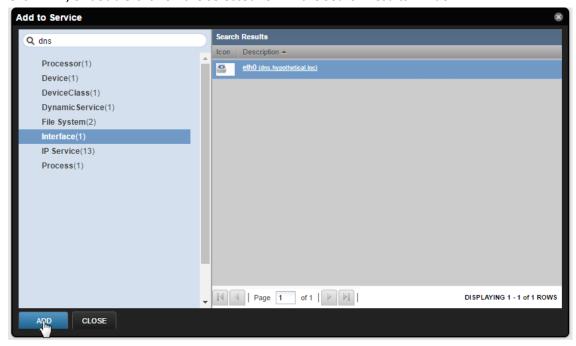
- 5. Enter dns in the Add to Service search box to locate the components for dns.hypothetical.loc
- 6. Add these service members to the service by following the steps below for each category and service member pair:

Category	Service Member
Interface	eth0 (dns.hypothetical.loc)
Process	/usr/sbin/named (dns.hypothetical.loc)

- a. Select the specified category from the list on the left
- Select the specified service member from the Search Results list
 Remember to click (or double-click) on the results row anywhere there is not a hyperlink



c. Click ADD, or double-click on the selected row in the Search Results window



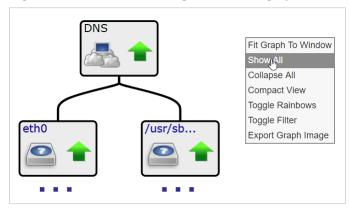
- 7. When all the listed service members have been added, click CLOSE
- 8. Verify that the **DNS** Members view now looks like this:



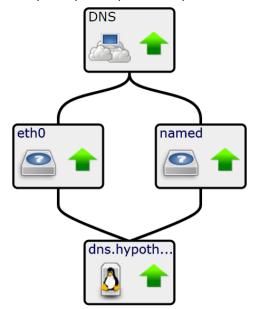
9. Select Impact View from the view menu (Members)



10. Right-click on the white background of the graph and select Show All



11. Verify that your expanded Impact View looks like this:



Exercise #5: Add MySQL Service Members

- 1. Click on **SERVICES** in the top navigation row
- 2. Expand the Agent Blogs Common Service Organizer and select the MySQL Dynamic Service
- 3. Select **Members** from the view menu (**Impact Events**)



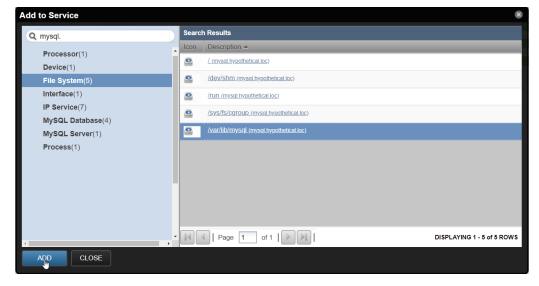
4. Click + above the empty Currently in Service pane



- 5. Enter mysql. in the Add to Service search box to locate the components for mysql.hypothetical.loc
- 6. Add the service members listed in the table to the service by following the steps below for each category and service member pair:

Category	Service Member
File System	/var/lib/mysql (mysql.hypothetical.loc)
MySQL Server	zenmonitor_3306 (mysql.hypothetical.loc)
Process	/usr/libexec/mysqld (mysql.hypothetical.loc)

- a. Select the specified category from the list on the left
- Select the specified service member from the Search Results list
 Remember to click (or double-click) on the results row anywhere there is not a hyperlink
- c. Click ADD, or double-click on the selected row in the Search Results window



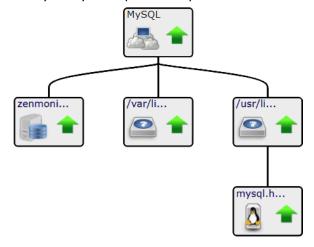
- 7. When all the listed service members have been added, click CLOSE
- 8. Verify that the MySQL Members view now looks like this:



9. Select Impact View from the view menu (Members)



- 10. Right-click on the white background of the graph and select Show All
- 11. Verify that your expanded Impact View looks like this:



Exercise #6: Add WordPress Service Members

- 1. Click on **SERVICES** in the top navigation row
- 2. Expand the Agent Blogs Common Service Organizer and select the Wordpress Dynamic Service
- 3. Select **Members** from the view menu (**Impact Events**)



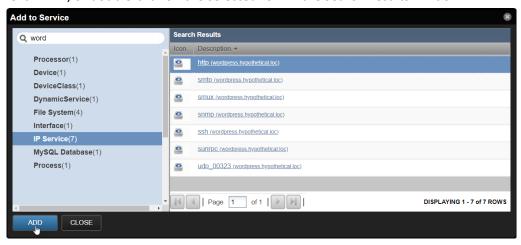
4. Click • above the empty Currently in Service pane



- 5. Enter word in the Add to Service search box to locate the components for wordpress.hypothetical.loc
- 6. Add these service members to the service by following the steps below for each category and service member pair:

Category	Service Member
IP Service	http (wordpress.hypothetical.loc)
Process	/usr/sbin/httpd (wordpress.hypothetical.loc)

- a. Select the specified category from the list on the left
- Select the specified service member from the Search Results list
 Remember to click (or double-click) on the results row anywhere there is not a hyperlink
- c. Click ADD, or double-click on the selected row in the Search Results window



7. When all the listed service members have been added, click CLOSE

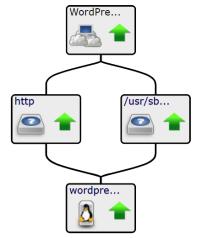
8. Verify that the **WordPress** *Members* view now looks like this:



9. Select Impact View from the view menu (Members)

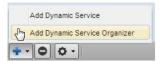


- 10. Right-click on the white background of the graph and select Show All
- 11. Verify that your expanded Impact View looks like this:



Exercise #7a: Create the Top-Level Services

- 1. Click **SERVICES** in the top navigation row
- 2. Make sure that the root organizer, **DYNAMIC SERVICES**, is selected
- 3. From the Add (+) menu in the lower left, select Add Dynamic Service Organizer

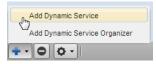


- 4. In the Add Dynamic Service dialog, enter Dashboards as the Name and click SUBMIT
- 5. Select the new **Dashboards** Dynamic Service from the list on the left
- 6. Create these two new services underneath the *Dashboards* organizer by following the steps below for each service:

Auto Blog

Home Blog

a. From the Add menu (+) in the lower left, select Add Dynamic Service



b. In the *Add Dynamic Service* dialog, enter the name of the next service from the list above and click **SUBMIT**



- 7. In the list on the left, expand the **Agent Blogs Common** service organizer and select the **Agent Blogs Common** service
- 8. Select Members from the view menu (Impact Events)



- 9. Click above the empty *Currently in Service* pane
 - a. Enter dynamic in the Add to Service search box
 - b. Double-click the **DNS (/Agent Blogs Common)** element in the *Search Results* list on the right (without clicking on a hyperlink)
 - c. Repeat steps a and b above to add the MySQL and WordPress dynamic services
- 10. Click CLOSE in the Add to Service dialog

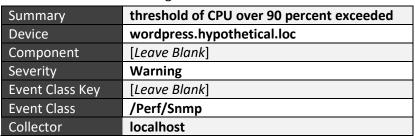
11. Verify that the Agent Blogs - Common Currently in Service view now looks like this:



- 12. Expand the Dashboards organizer, if necessary, and select the Auto Blog Service from the list on the left
 - a. Click above the empty *Currently in Service* pane
 - b. Enter **dynamic** in the *Add to Service* search box
 - c. Double-click the **Agent Blogs Common (/Agent Blogs Common)** element in the *Search Results* list on the right (without clicking on a hyperlink)
 - d. Click CLOSE in the Add to Service dialog
- 13. Repeat step 12 above to add the Agent Blogs Common Service to the Home Blog Service

Exercise #7b: Create the Top-Level Services

- 1. Click EVENTS in the top navigation row
- 2. Create an event that mimics an Apache CPU over 90 percent threshold:
 - a. Click the Add Event button to create a new event: Ohmore is a second of the Add Event button to create a new event:
 - b. Fill in the Create Event dialog as shown:



- c. Click SUBMIT
- 3. Click **SERVICES** in the top navigation row
- 4. In the list on the left, expand the **Dashboards** Service Organizer and select the **Home Blog** Service

Exercise #8a: Update the Auto Blog and Home Blog Services

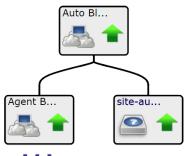
- 1. Click on **SERVICES** in the top navigation row
- 2. Expand the Dashboards Service Organizer and select the Auto Blog Service
- 3. Click above the Currently in Service pane
- 4. Enter auto in the Add to Service search box
- 5. Add the site-auto.hypothetical.loc device to the service
 - a. Select Device from the list on the left
 - b. Select site-auto.hypothetical.loc from the Search Results list
 - c. Click ADD, or double-click on the selected row in the Search Results pane
 - d. Click CLOSE
- 6. Verify that the Auto Blog Currently in Service view now looks like this:



7. Select Impact View from the view menu (Members)



8. Verify that your Impact View looks like this (note that the *Agent Blogs - Common* service has been collapsed in the screen shot below):



9. Select Members from the view menu (Impact View)



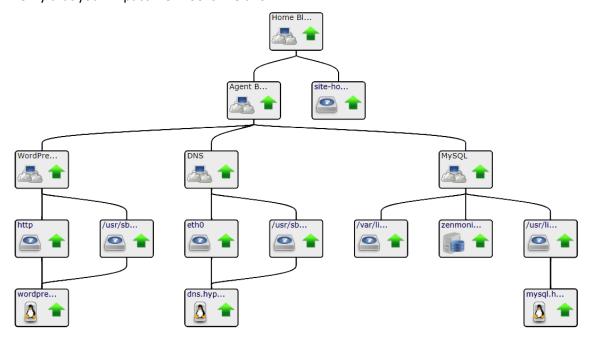
- 10. Under the Dashboards Service Organizer on left select the Home Blog Service
- 11. Click + above the Currently in Service pane
- 12. Enter home in the Add to Service search box
- 13. Add the site-home.hypothetical.loc device to the service
 - a. Select Device from the list on the left
 - b. Select site-home.hypothetical.loc from the Search Results list
 - c. Click ADD, or double-click on the selected row in the Search Results pane
 - d. Click CLOSE
- 14. Verify that the **Home Blog** *Members* view now looks like this:



15. Select Impact View from the view menu (Members)



16. Verify that your Impact View looks like this:



Exercise #8b: Generate a Test Event

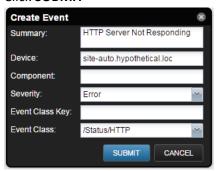
- 1. Click **EVENTS** in the top navigation row
- 2. Close all open events:
 - a. Click Select > All or press Ctrl-A



- b. Click the Close Event button:
- 3. Create a new ("synthetic") HTTP Server Not Responding event:
 - a. Click the Add Event button to create a new event:
 - b. Fill in the Create Event dialog as shown:

Summary	HTTP Server Not Responding		
Device	site-auto.hypothetical.loc		
Component	[Leave Blank]		
Severity	Error		
Event Class Key	[Leave Blank]		
Event Class	/Status/HTTP		
Collector	localhost		

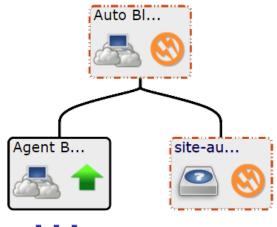
c. Click SUBMIT



- 4. Click **SERVICES** in the top navigation row
- 5. Expand the **Dashboards** Service Organizer and select the **Auto Blog** Service
- 6. Select Impact View from the view menu (Members)

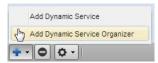


7. Verify that your Impact View looks like this (note that the *Agent Blogs - Common* service has been collapsed in the screen shot below):



Exercise #9a: Create the Web Cluster Services

- 1. Click **SERVICES** in the top navigation row
- 2. From the Add (+) menu in the lower left, select Add Dynamic Service Organizer

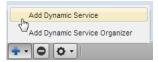


- 3. In the Add Dynamic Service dialog, enter Web Clusters as the Name and click SUBMIT
- 4. Select Web Clusters from the list on the left
- 5. Create these two new services underneath the **Web Clusters** organizer by following the steps below for each service:

Cluster 1

Cluster 1 Servers

a. From the Add menu (+) in the lower left, select Add Dynamic Service



b. In the *Add Dynamic Service* dialog, enter the name of the service from the list above and click **SUBMIT**



6. The Dynamic Service tree should now look like this:



- 7. Click on the **Cluster 1 Servers** service to select it
- 8. Select **Members** from the view menu (**Impact Events**)



9. Click + above the empty Currently in Service pane



- 10. In the Add to Service dialog:
 - a. Enter **web** in the search box to locate the web server devices
 - b. Select the **Device** category on the left (if necessary)
 - c. To select all four devices listed on the right, click on the first device name (web1A.hypothetical.loc), then hold down the Shift key and click on the last device name (web1D.hypothetical.loc)
 - d. Click ADD and then CLOSE
- 11. Click on the Cluster 1 service to select it
- 12. Click above the empty Currently in Service pane
 - a. Enter **cluster** in the search box to locate cluster services
 - b. Select the **DynamiceService** category on the left (if necessary)
 - c. Click on Cluster 1 Servers (/Web Clusters) in the Search Results
 - d. Click ADD
 - e. Enter bal in the search box to locate cluster services
 - f. Select the **Device** category on the left (if necessary)
 - g. Click on balancer1.hypothetical.loc in the Search Results
 - h. Click ADD and then CLOSE

Exercise #9b: Configure the Service Policy

- 1. Click on the Cluster 1 Servers service to select it
- 2. Select Impact View from the Members menu



- 3. Right-click the Cluster 1 Servers node and select Edit Impact Policies
- 4. In the *Impact Policies* dialog, click the <u>Global Policy</u> **Add** button

5. Create a Global Policy with the shown state triggers by following the steps below:

My state will be	If		%	Of type	Are
ATRISK	>=	25	\checkmark	Any	DOWN
DEGRADED	>=	50	V	Any	DOWN
DOWN	>=	100	V	Any	DOWN

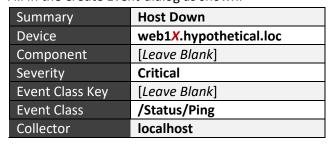
- a. Click 🛨 at the lower left
- b. Fill in the values as shown in the table above
- c. Click Save Changes
- 6. Click **8** in the upper right corner of the *Impact Policies* dialog to close it

Exercise #9c: Test the Service Policy

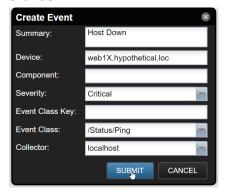
- 1. Click EVENTS in the top navigation row
- 2. Close all open events:
 - a. Click Select > All or press Ctrl-A



- b. Click the Close Event button:
- 3. Repeat the following steps for each of web1A.hypothetical.loc web1D.hypothetical.loc
 - a. Click EVENTS in the top navigation row (if necessary)
 - b. Click the add event button to create a new event:
 - c. Fill in the Create Event dialog as shown:



d. Click SUBMIT

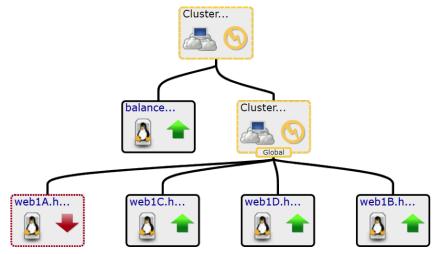


- e. Click on SERVICES in the top navigation row
- f. In the list on the left, expand the **Web Clusters** Service Organizer and select the **Cluster 1** service
- g. Select Impact View from the Impact Events menu

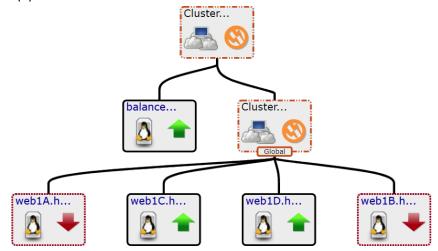


h. Verify that your Impact View looks like this:

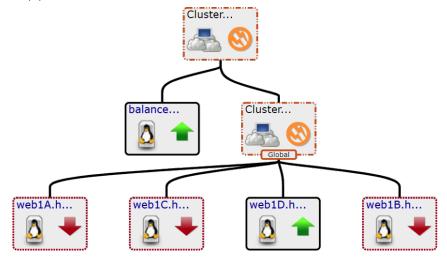
One (1) web server down:



Two (2) web servers down:



Three (3) web servers down:



Four (4) web servers down:

