



IBM Software Group

IBM® WebSphere® Extended Deployment V6

Creating Health Policies



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This presentation will cover configuring health policies in WebSphere Extended Deployment V6.

Agenda

- Configuring health policies
- Configuring the health controller



The presentation will walk through the process of creating a health policy, and also discuss configuration options for the health controller.

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Creating A Health Policy

- [-] Guided Activities
- [-] Servers
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- [-] Runtime Operations
- [-] Security
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Health Policies

Health Policies


A health policy defines runtime behaviors to monitor and take corrective actions when these behaviors are determined to be present.

[-] Preferences

Select	Name	Reaction mode	Description
None			
Total 0			



Show Me



Health Monitoring

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Health policies can be created and modified in the Administrative Console under the 'operational policies' menu item. Use the 'New' button to configure a new health policy. To view an animated demonstration of health policy configuration, pause this presentation, and click the 'show me' icon.

Creating A Health Policy: Step 1

The screenshot shows a software dialog box titled "Create a new health policy". At the top, it says "Create a new health policy. Define the general properties, including the health condition, and the Application Servers, Clusters, and Dynamic Clusters to be monitored." On the left, there is a vertical list of four steps: "Step 1: Define health policy general properties" (highlighted with a yellow arrow), "Step 2: Define health policy health condition properties", "Step 3: Specify members to be monitored", and "Step 4: Confirm health policy creation". The main area is titled "Define health policy general properties" and contains a text input field for "Name" with the value "Test_Condition", a larger text area for "Description", and a dropdown menu for "Health condition" currently showing "Age-based condition". A list of available conditions is displayed below the dropdown: "Age-based condition", "Excessive request timeout condition", "Excessive response time condition", "Memory condition: excessive memory usage", "Memory condition: memory leak", "Storm drain condition", and "Workload condition". At the bottom left of the dialog are "Next" and "Cancel" buttons. The footer of the slide includes a colorful bar, the text "Health Monitoring", a small number "4", and "© 2005 IBM Corporation".

When creating a new health policy, you first choose a name and the type of condition for which you want to monitor. In this example, a memory leak condition will be configured. The available condition types are discussed in the presentation titled 'Health Monitoring Overview'.

Creating A Health Policy: Step 2

The screenshot shows a dialog box titled "Create a new health policy" with a subtitle "Define health policy health condition properties". The main text reads: "Create a new health policy. Define the general properties, including the health condition, and the Application Servers, Clusters, and Dynamic Clusters to be monitored." On the left, a vertical sidebar lists four steps: Step 1 (Define health policy general properties), Step 2 (Define health policy health condition properties, which is highlighted with a yellow arrow), Step 3 (Specify members to be monitored), and Step 4 (Confirm health policy creation). The main area is divided into two sections: "Health condition properties" and "Health management monitor reaction". The "Health condition properties" section has a heading "Detection level for condition:" and three radio button options: "Faster detection, higher probability of false alarms", "Standard detection, standard probability of false alarms" (which is selected), and "Slower detection, lower probability of false alarms". The "Health management monitor reaction" section has a heading "Reaction mode" with a dropdown menu set to "Supervise". Below this is a section "Select actions to take on health condition breach:" with two checked checkboxes: "Take JVM heap dumps on IBM Java Development Kit (JDK) only" and "Restart server". At the bottom of the dialog are "Previous", "Next", and "Cancel" buttons. The footer of the slide includes a color bar, the text "Health Monitoring", the number "5", and "© 2005 IBM Corporation".

This step shows the options that are available when configuring a memory leak condition. To more accurately detect a true leak, the system must wait for a longer memory growth pattern to develop. The three available detection levels give you the choice of balancing accuracy against detection speed. As a reaction to this condition, you have the option to trigger a Java™ heap dump, restart the server, or both.

Creating A Health Policy: Step 3

Create a new health policy

Create a new health policy. Define the general properties, including the health condition, and the Application Servers, Clusters, and Dynamic Clusters to be monitored.

Specify members to be monitored

Step 1: Define health policy general properties

Step 2: Define health policy health condition properties

→ Step 3: Specify members to be monitored

Step 4: Confirm health policy creation

Memberships

Member type: Dynamic Clusters

Available for Membership

- StockTrade_DC
- AccountManagement_DC

Members of Test_Condition:

- FinancialAdvice_DC (Dynamic Clusters)

Buttons: Add >>, << Remove

Previous Next Cancel

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After defining the condition and the reaction, choose the members of your cell that should be monitored for this condition. The pop-up menu labeled 'Member type' populates the 'available for membership' list with all resources of the chosen type. You can then use the 'Add' and 'Remove' buttons to choose which members should be monitored.

Creating A Health Policy: Step 4

Create a new health policy

Create a new health policy. Define the general properties, including the health condition, and the Application Servers, Clusters, and Dynamic Clusters to be monitored.

Step 1: Define health policy general properties

Step 2: Define health policy health condition properties

Step 3: Specify members to be monitored

→ Step 4: Confirm health policy creation

Confirm health policy creation

The following is a summary of your selections. Click Finish to complete the health policy creation. If there are settings you want to change, click Previous to review the health policy settings.

The following actions will be performed:

- A new health policy, "Test_Condition", will be created with a reaction mode of "Automatic".
- The health policy will have an memory condition: memory leak health condition of "Standard detection, standard probability of false alarms" detection level.
- The health policy will have the following Dynamic Clusters as members: "FinancialAdvice_DC".

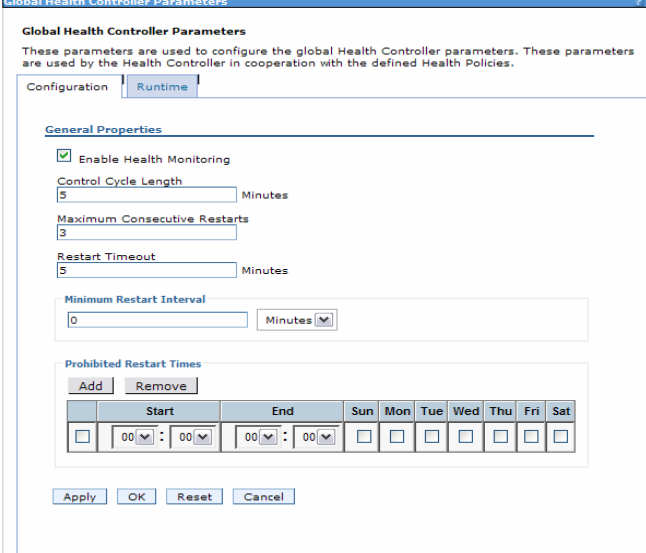
Previous Finish Cancel

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Step four displays the options you have chosen for this health policy. Click finish to create the policy. Remember that you must Save your changes before this policy will take effect.

Configuring the Health Controller

Operational Policies > Autonomic Managers > Health Controller



Global Health Controller Parameters

These parameters are used to configure the global Health Controller parameters. These parameters are used by the Health Controller in cooperation with the defined Health Policies.

Configuration | Runtime

General Properties

Enable Health Monitoring

Control Cycle Length: 5 Minutes

Maximum Consecutive Restarts: 3

Restart Timeout: 5 Minutes

Minimum Restart Interval: 0 Minutes

Prohibited Restart Times

Add Remove

	Start	End	Sun	Mon	Tue	Wed	Thu	Fri	Sat
<input type="checkbox"/>	00:00	00:00	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Apply OK Reset Cancel

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The health controller itself also has configurable properties, including how often it should run, and how many times in a row a server can be restarted. You can also define 'prohibited restart times', during which the health controller will not restart servers, even if they are in violation of a health policy. This can be useful for restricting restarts to non-peak times.

Summary

- A health policy define a group of servers, a health condition, and a reaction
 - ▶ The reaction will be triggered if a server reaches the defined condition
- Health policies are easily configured using a wizard in the Administrative Console



A health policy makes administering a group of servers easier by defining a health condition for which a group of servers should be monitored. A health policy can notify you or take an automatic corrective action when the condition is detected. Health policies can be easily created using a Wizard in the Administrative Console.

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