With Windows System Resource Manager for the Windows Server® 2008 operating system, you can manage server processor and memory usage with standard or custom resource policies. Managing your resources can help ensure that all of the services provided by a single server are available on an equal basis or that your resources will always be available to high-priority applications, services, or users.

A resource allocation policy defines how resources are managed by Windows System Resource Manager. Only one resource allocation policy at a time can be managing a computer.

A resource allocation policy is made of one or more resource allocations. Resource allocations apply to applications and processes that match a process matching criterion.

Built-in resource management policies

You can enable built-in resource management policies by selecting the type of policy to use. No further configuration is required.

Policy	Description
Equal per process	When the **Equal_Per_Process** resource allocation policy is managing the system, each running process is given equal treatment. For example, if a server that is running ten processes reaches 70% processor utilization, Windows System Resource Manager will limit each process to using 10% of the processor resources while they are in contention. Note that resources not used by low utilization processes will be allocated to other processes.
Equal per user	When the **Equal_Per_User** resource allocation policy is managing the system, processes are grouped according to the user account that is running them and each of these process groups is given equal treatment. For example, if four users are running processes on the server, each user will be allocated 25% of the system resources to complete those processes. A user running a single application is allocated the same resources as a user running several applications. This policy is especially useful for application servers.
Equal per session	When the **Equal_Per_Session** resource allocation policy is managing the system, resources are allocated on an equal basis for each session connected to the system. This policy is for use with terminal servers.
Equal per IIS application pool	When the **Equal_Per_IISAppPool** resource allocation policy is managing the system, each running IIS application pool is given equal treatment, and applications that are not in an IIS application pool can only use resources that are not being consumed by IIS application pools.

To install the Windows System Resource Manager feature

1. Click **Start**, point to **Administrative Tools**, and then click **Server Manager**. Microsoft Management Console will start.
2. In the console pane, scroll down to **Features Summary**.

3. Click **Add Feature**. The Add Features Wizard will start.
4. In the list of features, select the check box for Windows System Resource Manager, and then click **Next**.
5. Follow the steps in the Wizard to finish installing Windows System Resource Manager.

Start the Windows System Resource Manager service

Resource management depends on the Windows System Resource Manager service. If you just installed the Windows System Resource Manager feature, this service will not be running.

To start the Windows System Resource Manager service

1. Click **Start**, point to **Administrative Tools**, and then click **Services**. Microsoft Management Console will start.
2. In the console pane, scroll down in the list of services to **Windows System Resource Manager**.

3. • You may need to expand the **Name** column to find the service.

- Right-click **Windows System Resource Manager**, and then click **Start**.

Creating a resource allocation policy

A resource allocation policy must contain at least one resource allocation. Types of resource allocations include **CPU targets**, **memory limits**, and **processor affinity**.

- Open Windows System Resource Manager.(This computer)

- In the navigation tree, right-click **Resource Allocation Policies**, and then click **New Resource Allocation Policy**.

- In **Policy name**, type a descriptive name for the new resource allocation policy, and then click **Add**.

Note

A resource allocation policy name cannot start with a hyphen (-) and cannot contain spaces or the following characters: , \ / * ; ? : " | - < or >.

- Use the procedures that follow to create a CPU target resource allocation, a memory resource allocation, or processor affinity in the **Add or Edit Resource Allocation** dialog box.

- When you are finished adding resource allocations, click **OK**

Creating a CPU target resource allocation

1. In the **Add or Edit Resource Allocation** dialog box, click the **General** tab, click **Process matching criteria**, and then select a process matching criterion for which matched processes will be managed by the resource allocation.(IISAppool)
2. In the **Percentage of processor allocated for this resource** text box, type (or select a value from the drop-down list) the percentage of available CPU bandwidth to be allocated, and then click **OK**.(99)

Note

If the percentage value is set to 0, CPU bandwidth is not allocated. This means that matched processes will not be able to consume any CPU bandwidth if the bandwidth allocated to other resource allocations in the resource allocation policy adds up to 100%.

Memory resource allocations limit the amount of memory consumed by a single process, and they can trigger user-defined actions when limits are exceeded.

To create a memory resource allocation

1. In the **Add or Edit Resource Allocation** dialog box, click the **General** tab, click **Process matching criteria**, and then select a process matching criterion for which matched processes will be managed by the resource allocation.
2. On the **Memory** tab, select one or both:
    - **Use maximum committed memory for each process**
    - **Use maximum working set limit for each process**
3. If you selected **Use maximum committed memory for each process**:
    - In **Maximum committed memory limit per process**, type a value in megabytes.
    - In **If memory is surpassed**, select an action to take when the limit is reached.
4. If you selected **Use maximum working set limit for each process**, in **Maximum working set limit per process**, type a value in megabytes.
5. Click **OK**.

Processor affinity limits matched processes to the processors with which they have affinity.

To define processor affinity

1. In the **Add or Edit Resource Allocation** dialog box, click the **General** tab, click **Process matching criteria**, and then select a process matching criterion for which matched processes will be managed by the resource allocation.
2. On the **Advanced** tab, select **Use specified processors**.
3. Enter the processor number, processor number list, or range of processor numbers, and then click **OK**. (Processor numbers range from 0 to (n-1), where n is equal to the number of processors in the server.)
    - To specify a single processor, type the processor number.
    - To specify a processor number list, separate the processor numbers with a comma. For example, type: 0, 3, 7.
    - To specify a processor number range, separate the first and last processor number with a hyphen. For example, type: 2-4.