

Topic: SNMP Setup with Control Center 4.0
Component(s) Affected: Control Center 4.0, Blade Manager 4.0 and 4.1
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OVERVIEW / ENVIRONMENT

In the ClearCube Blade environment, SNMP can be used to interact with your Network Management System (NMS) to provide an advanced monitoring solution that will integrate with your current monitoring software.

DETAILED DESCRIPTION

To take advantage of the SNMP functionality, you need to have Blade Manager installed on all the Blades you wish to monitor. It is installed on Blades by default. You also need a Control Center console system installed and functioning on your network to enable the monitoring functionality. No Management Information Base (MIB) is required, but monitoring is limited to the Alerts included with Blade Manager. Additional functionality may be possible in future releases of the product. Please speak with your salesperson for more information on our Product Enhancement Request Form if additional functionality is required.

The SNMP reporting and alerting functions are Blade Manager Alerts set up on the local Blade in Blade Manager that are pushed out to the NMS using SNMP. Configuration of these Alerts is done locally on each Blade. Control Center can be used to create Alerts on multiple Blades individually from a single console.

RESOLUTION

To configure Control Center and Blade Manager for SNMP communications, do the following:

1. On the Blade that is to send the SNMP trap, edit the `snmp.config` file, found inside the `BM4Client` folder. The default path is:

```
C:\Program Files\ClearCube Management Suite\DCI\BM4Client
```

The following is an example `snmp.config` file:

```
Port: 162
NMS: computer1
Community: public
Enterprise: .1.3.6.1.4.1.2789
Sender: computer2
Generic: 6
Specific: 1247
OID: .1.3.6.1.4.1.2789.1247.1
Type: String
```

In this example, `computer1` is the hostname of the management server (the trap destination), and `computer2` is the hostname of the Blade Manager client machine (the sender). The management server is your NMS. Only one trap destination can be specified.

In most cases, only the NMS and Sender fields need to be configured. Enter the trap destination in the NMS field and the local hostname in the Sender field. Customers who need detailed configurations specific to their environments can change the SNMP port, Generic and Specific trap information, and the trap data type.

| Field | Description |
|---------------|---|
| Port | Trap destination TCP port (default is 162) |
| NMS | Hostname or IP address of the Network Management Server (trap destination) |
| Community | Community string to be sent with trap. NMS can be configured to ignore traps without this string. |
| Enterprise | Vendor identification number for the management subsystem |
| Sender | Hostname or IP address of the local machine sending the trap |
| Generic | A number in the range 0–6 used when specific traps are not implemented. |
| Specific | Indicates the specific trap sent. This number is arbitrary. Specific traps must be defined by the enterprise. When a generic trap is used, this value is ignored. |
| OID | Operation identifier. |
| Type | Trap format type. |

- In Blade Manager, use the **Create New Alert** window to define a new Alert based on the conditions desired for the SNMP trap, and check the **SNMP Notification** checkbox.
- Save the Alert by clicking the **Add** button. See *Figure 1*.

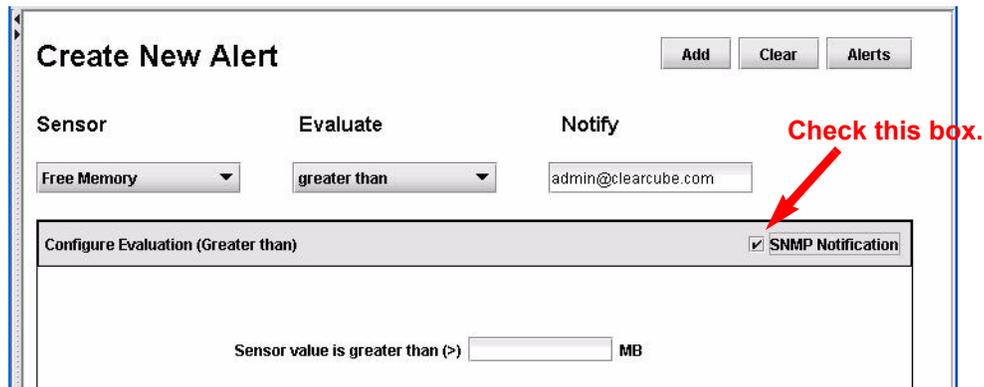


Figure 1

When the Alert conditions are met, Blade Manager sends an email to the email address in the **Notify** field. If **SNMP Notification** is selected, Blade Manager also sends an SNMP trap to the configured SNMP destination.

Note: The email destination and the SNMP trap destination do not need to be the same system.

TO TEST

To set up an SNMP trap on your Control Center console, do the following:

- Modify the NMS option in the `snmp.config` file on your local Control Center console machine to point to itself. This is done so that it will receive the SNMP return. Blade Manager must be loaded on this machine (the Control Center Console) for this to work.
- Create an Alert in the local Blade Manager Client that will trigger frequently, such as a Free Physical Memory notification that is lower than the actual free memory on the drive. Be sure to check the SNMP option on the Alert.

3. On the same machine run the following command in a CMD window from the following directory:
c:\Program Files\Clear Cube Management Suite\DC\IBM4Console

```
>perl Rstrap.pl
```

When an Alert is triggered and an SNMP trap sent, the local machine set to receive the trap information receives the information from the trap in the CMD window.

The following is an example of the possible output:

```
192.168.0.7 - port: 1207  
Community: public  
Enterprise: 1.3.6.1.4.1.2789  
Agent addr: 192.168.0.7  
Generic ID: 6  
Specific ID: 1247  
Uptime: 0:00:00  
Message is: =Free=Physical=Memory 4691=MB was greater than the specified threshold  
10=MB
```

This is the trap information your NMS will be receiving from the Blade. If you see this, your system is working properly. The rate at which these traps come in will vary, based on the time set up on your Control Center configuration.

For information on how to set up your NMS to receive this information, please consult your NMS documentation.

For more information, please contact ClearCube technical support.

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