

## How to Use SNMP Monitoring

<https://campus.barracuda.com/doc/3866701/>

This article applies to the Barracuda Email Security Gateway 400 and higher, version 5.1 and above.

In addition to the system performance statistics on the **BASIC > Dashboard** page, you can use the Barracuda Email Security Gateway SNMP agent with your SNMP monitor to query the system for performance and email filtering statistics. You can also use SNMP monitoring to receive alerts (traps) by email that report system load and other vitals of the Barracuda Email Security Gateway.

### Step 1. Configure SNMP on the Barracuda Email Security Gateway

1. Log into the web interface of the Barracuda Email Security Gateway as the administrator.
2. Navigate to the **BASIC > Administration** page and, in the **SNMP Manager** section, set **Enable SNMP Agent** to **Yes**.
3. Click the **Help** button on the page for instructions on choosing the **SNMP Version** (see **SNMP Versions** below for details). Barracuda Networks strongly recommends using SNMP v3 because it is more secure since it encrypts SNMP traffic and limits access to only password-authenticated users.
4. Set the **Allowed SNMP IP/Range**. Only the IP addresses/networks you enter here will be allowed SNMP access to the Barracuda Email Security Gateway.
5. Configure **SNMP Traps** and **SNMP Threshold** sections. Click the **Help** button for instructions.

Note that the Barracuda Email Security Gateway communicates SNMP information using a community string of **cudaSNMP** by default. This string can be changed for version 5.x and higher in the **SNMP Manager** section of the **BASIC > Administration** page.

### Step 2. Configure SNMP/Email Notifications

In the **Email Notifications** of the page, you can optionally set the Barracuda Email Security Gateway to send notifications to the **System Alerts Email Address** via SNMP for these conditions:

- The inbound message queue size exceeds normal thresholds
- The outbound message queue size exceeds normal thresholds
- The average latency exceeds normal thresholds
- Problems with RAID disk storage

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To receive email notifications about system health via SNMP:

1. **Send SNMP/Email Notifications to Yes.**
2. Enter a value for the **System Alerts Email Address.**

## Step 3. Get the MIB files for your SNMP monitor

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Click to download the [Barracuda Email Security Gateway SNMP MIB](#) and the [Barracuda Reference MIB](#). You can use reference objects included in these MIBs for monitoring either from custom scripts or from your SNMP monitor. The MIB files can be viewed in your web browser by simply replacing **YOURBARRACUDA** in the following links with the IP address of your Barracuda Email Security Gateway:

`http://YOURBARRACUDA:8000/Barracuda-SPAM-MIB.txt`

`http://YOURBARRACUDA:8000/Barracuda-REF-MIB.txt`

## SNMP Versions

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The Barracuda Email Security Gateway supports both SNMP versions v2c and v3. SNMP v2c queries and responses are NOT encrypted, so it is not as secure as SNMP v3. With SNMP v3, traffic is encrypted and you can set up access control for specified users with passwords. **Barracuda Networks strongly recommends using version v3.** You can configure which SNMP version you want to use as well as authentication and encryption methods for v3 in the **SNMP Manager** section of the **BASIC > Administration** page of the Barracuda Email Security Gateway web interface. Examples of snmpget commands for both versions are shown below.

## Syntax for SNMP queries

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If you are using an SNMP monitor tool, all you need to do is import the MIBs as mentioned above into the SNMP monitor. You can refer to the MIBs for the Object IDs (OIDs) that correspond to the type of status you want to monitor. Please refer to the objects and traps listed in the next section.

If you are querying the Barracuda Email Security Gateway from code, use the following syntax (where **System IP or hostname or localhost** is the IP address of the Barracuda Email Security Gateway). Note that, if using the snmpwalk command, if you don't include an OID you will get a listing of all of the OIDs in the MIB.

### Examples: Getting Mail and Performance Statistics

The standard SNMP MIB reports the email traffic and performance statistics for the Barracuda Email Security Gateway on an hourly, daily and monthly basis. These examples demonstrate the syntax for using snmpget to obtain some of these measurements.

**Example 1:** Using SNMP v2, get the size of the inbound queue (number of current messages in the inbound queue waiting for virus and spam scanning), where the OID for Inbound Queue is 1.3.6.1.4.1.20632.2.2 (see Objects and Traps below).

```
$ snmpget -On -v2c -c public 192.168.132.74 1.3.6.1.4.1.20632.2.2
```

SNMP Response:

```
.1.3.6.1.4.1.20632.2.2 = INTEGER: 0
```

**Example 2:** Using SNMP v3, calculate the size of the outbound queue (number of messages in the outbound queue waiting for the outbound server (delivery) where the OID for Inbound Queue is 1.3.6.1.4.1.20632.2.3:

```
$ snmpget -On -v3 -a MD5 -x DES -A password -X password -l authPriv -u  
admin 192.168.132.74 1.3.6.1.4.1.20632.2.3
```

SNMP Response:

```
.1.3.6.1.4.1.20632.2.3 = INTEGER: 0
```

## Objects and Traps

As you will see in the Barracuda Email Security Gateway MIB, the system provides the following objects. Please see the online help in the Barracuda Email Security Gateway web interface for details on these settings.

OID	Object	Description
1.3.6.1.4.1.20632.2.2	inQueueSize	Number of messages waiting to be processed by the Barracuda Email Security Gateway.

1.3.6.1.4.1.20632.2.3	outQueueSize	Number of messages waiting to be sent to the mail server. Note that alerts and notifications are queued separately from outbound email.
1.3.6.1.4.1.20632.2.4	deferredQueueSize	Number of messages deferred because they could not be processed, and will be requeued for processing.
1.3.6.1.4.1.20632.2.5	avgEmailLatency	Difference between the time a message was received by the Barracuda Email Security Gateway and the time it is sent to the mail server.
1.3.6.1.4.1.20632.2.8	notifyQueueSize	Count of messages in the notification queue.
1.3.6.1.4.1.20632.2.9	encryptionEnabled	A flag that is set if encryption is enabled for at least one domain.
1.3.6.1.4.1.20632.2.11	lastMessageDelivery	Time and date the last message was delivered by the Barracuda Email Security Gateway.
1.3.6.1.4.1.20632.2.12	uniqueRecipients	Number of unique recipients of mail processed by the Barracuda Email Security Gateway.
1.3.6.1.4.1.20632.2.13	systemLoad	Estimate of CPU and disk load on the system.
1.3.6.1.4.1.20632.2.14	sysFanSpeed	System fan speed.
1.3.6.1.4.1.20632.2.15	cpuFanSpeed	CPU fan speed.
1.3.6.1.4.1.20632.2.16	cpuTemperature	CPU temperature.
1.3.6.1.4.1.20632.2.17	firmwareStorage	Amount of disk storage used for various system components.
1.3.6.1.4.1.20632.2.18	maillogStorage	Amount of disk storage used for message and log storage.
1.3.6.1.4.1.20632.2.19	raidStatus	The status of the RAID disk array: Fully Operational, Degraded, Rebuilding.
1.3.6.1.4.1.20632.2.20	totalInboundBlocked	Total number of inbound messages blocked since last system reset.
1.3.6.1.4.1.20632.2.21	dailyInboundBlocked	Total number of inbound messages blocked in the past 24 hours.
1.3.6.1.4.1.20632.2.22	hourlyInboundBlocked	Total number of inbound messages blocked in the past hour.
1.3.6.1.4.1.20632.2.23	totalInboundVirusBlocked	Total number of inbound messages blocked due to viruses since last system reset.
1.3.6.1.4.1.20632.2.24	dailyInboundVirusBlocked	Total number of inbound messages blocked due to viruses in the past 24 hours.

1.3.6.1.4.1.20632.2.25	hourlyInboundVirusBlocked	Total number of inbound messages blocked due to viruses in the past hour.
1.3.6.1.4.1.20632.2.26	totalInboundRateControlled	Total number of inbound messages deferred due to Rate Control since last system reset.
1.3.6.1.4.1.20632.2.27	dailyInboundRateControlled	Total number of inbound messages deferred due to Rate Control in the past 24 hours.
1.3.6.1.4.1.20632.2.28	hourlyInboundRateControlled	Total number of inbound messages deferred due to Rate Control in the past hour.
1.3.6.1.4.1.20632.2.29	totalInboundQuarantined	Total number of inbound messages quarantined since last system reset.
1.3.6.1.4.1.20632.2.30	dailyInboundQuarantined	Total number of inbound messages quarantined in the past 24 hours.
1.3.6.1.4.1.20632.2.31	hourlyInboundQuarantined	Total number of inbound messages quarantined in the past hour.
1.3.6.1.4.1.20632.2.32	totalInboundTagged	Total number of inbound messages tagged since last system reset.
1.3.6.1.4.1.20632.2.33	dailyInboundTagged	Total number of inbound messages tagged in the past 24 hours.
1.3.6.1.4.1.20632.2.34	hourlyInboundTagged	Total number of inbound messages tagged in the past hour.
1.3.6.1.4.1.20632.2.35	totalAllowed	Total number of inbound messages allowed since last system reset.
1.3.6.1.4.1.20632.2.36	dailyAllowed	Total number of inbound messages allowed in the past 24 hours.
1.3.6.1.4.1.20632.2.37	hourlyAllowed	Total number of inbound messages allowed in the past hour.
1.3.6.1.4.1.20632.2.38	totalOutboundPolicyBlocked	Total number of outbound messages blocked due to policy since last system reset.
1.3.6.1.4.1.20632.2.39	dailyOutboundPolicyBlocked	Total number of outbound messages blocked due to policy in the past 24 hours.
1.3.6.1.4.1.20632.2.40	hourlyOutboundPolicyBlocked	Total number of outbound messages blocked due to policy in the past hour.
1.3.6.1.4.1.20632.2.41	totalOutboundSpamBlocked	Total number of outbound messages blocked due to spam since last system reset.
1.3.6.1.4.1.20632.2.42	dailyOutboundSpamBlocked	Total number of outbound messages blocked due to spam in the past 24 hours.
1.3.6.1.4.1.20632.2.43	hourlyOutboundSpamBlocked	Total number of outbound messages blocked due to spam in the past hour.
1.3.6.1.4.1.20632.2.44	totalOutboundVirusBlocked	Total number of outbound messages blocked due to viruses since last system reset.
1.3.6.1.4.1.20632.2.45	dailyOutboundVirusBlocked	Total number of outbound messages blocked due to viruses in the past 24 hours.

1.3.6.1.4.1.20632.2.46	hourlyOutboundVirusBlocked	Total number of outbound messages blocked due to viruses in the past hour.
1.3.6.1.4.1.20632.2.47	totalOutboundRateControlled	Total number of outbound messages deferred due to Rate Control since last system reset.
1.3.6.1.4.1.20632.2.48	dailyOutboundRateControlled	Total number of outbound messages deferred due to Rate Control in the past 24 hours.
1.3.6.1.4.1.20632.2.49	hourlyOutboundRateControlled	Total number of outbound messages deferred due to Rate Control in the past hour.
1.3.6.1.4.1.20632.2.50	totalOutboundQuarantined	Total number of outbound messages quarantined since last system reset.
1.3.6.1.4.1.20632.2.51	dailyOutboundQuarantined	Total number of outbound messages quarantined in the past 24 hours.
1.3.6.1.4.1.20632.2.52	hourlyOutboundQuarantined	Total number of outbound messages quarantined in the past hour.
1.3.6.1.4.1.20632.2.53	totalEncrypted	Number of messages sent to the Barracuda Message Center for encryption and delivery since last system reset.
1.3.6.1.4.1.20632.2.54	dailyEncrypted	Number of messages sent to the Barracuda Message Center for encryption and delivery in the past 24 hours.
1.3.6.1.4.1.20632.2.55	hourlyEncrypted	Number of messages sent to the Barracuda Message Center for encryption and delivery in the past hour.
1.3.6.1.4.1.20632.2.56	totalRedirected	Number of messages redirected to another mail server since last system reset.
1.3.6.1.4.1.20632.2.57	dailyRedirected	Number of messages redirected to another mail server in the past 24 hours.
1.3.6.1.4.1.20632.2.58	hourlyRedirected	Number of messages redirected to another mail server in the past hour.
1.3.6.1.4.1.20632.2.59	totalSent	Number of outbound messages delivered to the intended recipient, without modification, since last system reset.
1.3.6.1.4.1.20632.2.50	totalOutboundQuarantined	Number of outbound messages quarantined since last system reset.
1.3.6.1.4.1.20632.2.60	dailySent	Number of outbound messages delivered to the intended recipient, without modification, in the past 24 hours.
1.3.6.1.4.1.20632.2.61	hourlySent	Number of outbound messages delivered to the intended recipient, without modification, in the past hour.

1.3.6.1.4.1.20632.2.62	domainCount	Number of domains configured on the system.
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**The system provides the following traps:**

OID	Object
1.3.6.1.4.1.20632.2.1.2	cpuFanDead
1.3.6.1.4.1.20632.2.1.3	sysFanDead
1.3.6.1.4.1.20632.2.1.4	cpuTempHigh
1.3.6.1.4.1.20632.2.1.5	firmwareStorageHigh
1.3.6.1.4.1.20632.2.1.6	mailStorageHigh
1.3.6.1.4.1.20632.2.1.7	raidDegrading
1.3.6.1.4.1.20632.2.1.8	inQueueHigh - "Severity: Alert. In-queue size is high"
1.3.6.1.4.1.20632.2.1.9	outQueueHigh - "Severity: Alert. Out-queue size is high"
1.3.6.1.4.1.20632.2.1.10	notifyQueueHigh
1.3.6.1.4.1.20632.2.1.11	latencyHigh
1.3.6.1.4.1.20632.2.1.12	noMailForTooLong

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