



## **Server Agent v2.0 User Guide**

**September 05, 2008**

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## I. What is ServerAgent?

ServerAgent is AlertSite's server monitoring agent. It can reside on a Windows or UNIX server and collect system health statistics reporting them back to the AlertSite monitoring service on a 5 or 15 minute interval. Thresholds may be set for both warning and error conditions supporting instant notification through all AlertSite notification mechanisms.

To learn more, visit: [http://www.alertsite.com/systems\\_monitoring.shtml](http://www.alertsite.com/systems_monitoring.shtml)

## II. What are the current features?

ServerAgent will collect, report and alert on system health and connectivity:

- CPU load average (5 min. average)
- Disk utilization for all logical drives
- Memory use
- Monitor for the presence of processes
- Discovery of SNMP enabled Devices
- Network Interface Monitoring (Errors, Operational Status, % Utilization)
- User defined monitoring

Warning and error thresholds can be defined for any value ServerAgent is monitoring.

Notifications are sent when monitored metrics breach an error threshold or the server fails to report to alertsite.com.

Quick Tip:

To activate notifications for a monitored metric, the 'Notify' and 'Enabled' check-boxes for that metric must be enabled on 'Edit server information' screen accessed by logging in to your account and navigating to 'Monitor Items'->'Edit ServerAgents' and clicking on the name of the ServerAgent you wish to configure. *Note that it will be necessary to open the View that holds your ServerAgent. If you have not yet created a view, new ServerAgents are placed in the 'AlertSite Default View' following their first publication of collected metrics.*

Current device status is reported in the AlertSite monitoring console and historical details are available in the Report Center. As well, daily, weekly and monthly email summaries are provided.

All configuration is managed centrally through the AlertSite Monitoring Console.

Quick Tip:

To configure a single ServerAgent, or a group of ServerAgents assigned to a View, log in to your account and navigating to 'Monitor Items'->'Edit ServerAgents'. From there, select the particular agent or View by clicking on the link in the Name column.

The following is a list of key enhancements for ServerAgent v2.0

- Centralized Management  
All features and configuration parameters are now centrally managed via the enhanced Console Manager web portal eliminating the need to edit configuration files directly
- Server Agent Views



- Agent instances may be grouped into one or more logical views to facilitate management. Configuration changes may be made against a single Server Agent or an entire group.
- **Parallel Metrics Collection**  
All collection categories are gathered in parallel on a per device basis ensuring timely and immediate identification of warning and error conditions. As each category from each resource is autonomously collected, compounding latency due to slow response times or lengthy user scripts is avoided
  - **Self Diagnosis**  
The Server Agent log files may be scheduled for email delivery for analysis and evaluation in the event of system error.
  - **Data Broadcasting**  
Collected data may be broadcast to a list of AlertSite listeners to ensure high availability of collected data
  - **n-Tier Distributed Collection**  
Server Agent instances may be configured to proxy between secondary, tertiary, or more Server Agents. This feature enables organizations maximum flexibility in how Server Agent is deployed in their environment even when segments of their network do not have access to the Internet
  - **Secure Communications**  
All data sent over the Internet is encrypted and encoded to ensure total data protection
  - **Light Weight Processes**  
The Server Agent processes require very little system resources
  - **Browser Support**  
The Server Agent software accepts browser connections on default port 2525 to enable customers to view cached data pending publication

### III. What are the benefits?

Track system resource utilization.

Capture data for capacity planning.

Fully integrated into AlertSite's notification system.

- Instant notification via email, pager, SMS and telephone.
- Flexible alerting and escalation policies.

When combined with AlertSite's website and web transaction monitoring, ServerAgent can help you quickly identify and resolve system problems.

### IV. What platforms are supported?

Windows (2000 and above)

Unix

Linux, BSD, Cygwin (tested and verified)  
Solaris and others (may require an up to date version of GCC/G++)

If your platform is not listed here, contact AlertSite for information and options for having it added.



## V. What are the possible status codes from ServerAgent?

- 4050 – server not responding (see troubleshooting section below)
- 4040 – error threshold exceeded
- 4030 – warning threshold exceeded

## VI. Where can I download ServerAgent?

Visit the following link to learn more about the features of the latest version of ServerAgent:  
[http://www.alertsite.com/download\\_sa.shtml](http://www.alertsite.com/download_sa.shtml)

The windows version is currently available for download to anyone.

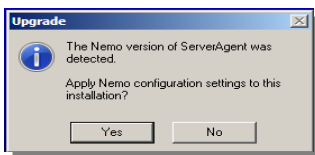
The Unix version is currently provided as bash script installation package. It is available from the Control Panel Download page for all registered customers. For information on a ServerAgent trial, please contact [customercare@alertsite.com](mailto:customercare@alertsite.com).

## VII. How does it work?

1. Pre-register the device assigning it a name and AlertSite generates a 32 character ID for it.
2. Copy or store the assigned ID, install the client-side software providing the ID when requested, and start talking to us (sending the ID and collected metrics).
3. On our server, we map the ID to the device and record your data.

## VIII. How is ServerAgent installed?

Note: When upgrading from ServerAgent 1.x (aka: Nemo), the ServerAgent v2.0 installer will detect any previous installation and present you with the option to apply the Nemo settings to your new installation as seen in the diagram below.



Additionally, ensure that the Nemo UNIX/Linux daemon or Win32 service appropriate for your deployment environment is not set to run automatically as it is not advised that both collection environments run concurrently on the same system.

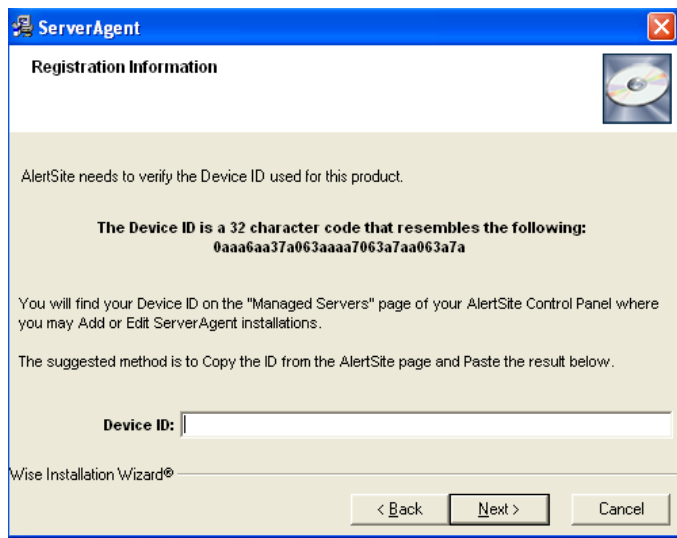
[Installation instructions for MS Windows](#)

Installation directory: C:\Program Files\ServerAgent

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1. You need to "Add a new server" from the AlertSite 'Monitored Items'->'Edit ServerAgents' web page. This will generate the 32 character Device ID you will need during the installation. Save this ID in a convenient place, you will need to enter it to complete installation.



2. Download the ServerAgent Installation program - ServerAgentInstaller.exe
3. Run the downloaded installer. This will place the ServerAgent package in C:\Program Files\AlertSite\ServerAgent
4. During installation, you will be prompted for the Device ID generated in step 1. Enter that value and select "Next".

Note: When prompted to 'Restart' your system, you may choose cancel if running Win XP (SP2) or lower; however, the system restart is required for Windows Vista / 2003 or 2008 Server.

You're done! Shortly you should see information related to your new server displayed on the AlertSite web-site!

#### Installation instructions for UNIX / Linux / Cygwin

Installation directory: /usr/local/alertsite

1. You need to "Add a new server" from the AlertSite 'Monitored Items'->'Edit ServerAgents' web page. This will generate the 32 character id you will need at the completion of installation.
2. Download the ServerAgent Installation package - server-agent-installer.sh
3. Execute the following command

```
$ ./server-agent-installer.sh
```

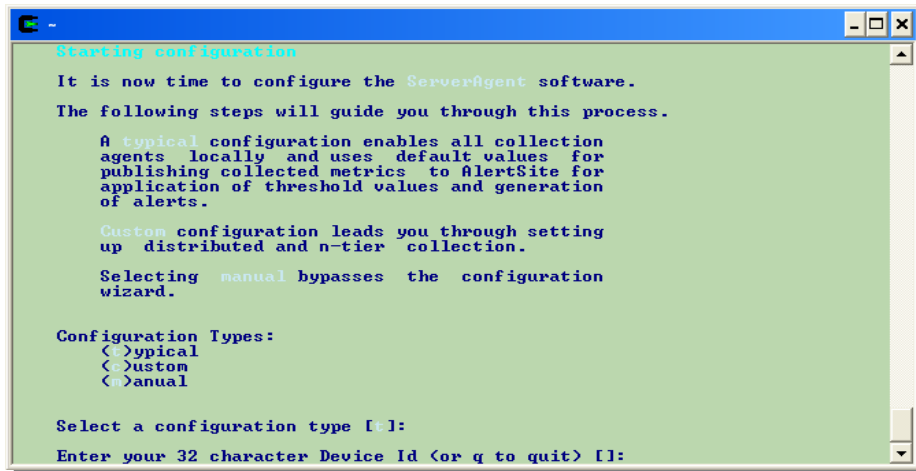
(Note: It may be necessary to give execute permission following download.)



4. This is done by using the chmod command as seen below

```
$ chmod +x server-agent-installer.sh
```

5. During installation, you will be prompted for the Device ID generated in step 1. Enter the 32 character id generated in step 1 and press return.



6. The installation program will verify your installation by communicating to an AlertSite server.

7. You are now ready to start the daemons for the ServerAgent. A script suitable for starting and stopping the ServerAgent is provided in the installation directory under the init.d directory. This should be placed in the appropriate rc directory for your system's run level.

You're done! Shortly you should see information related to your new server displayed on the AlertSite web-site!

## IX. ServerAgent Configuration

The ServerAgent is configured via the AlertSite 'Monitoring Console'->'View ServerAgents'. Just click on the name of the ServerAgent you wish to configure to access the 'Edit server information' screen.

*Remember, under the 'Monitoring Console'->'View ServerAgents' it will be necessary to open the appropriate View for your ServerAgent . If you have not yet created a view, look in the 'AlertSite Default View'.*

Note in the following figure, the presence of both common and category specific portions of the Edit Sever Agent portal.



Control Panel | Monitoring Console | **Monitored Items** | Notifiers | Diagnostics | Reports | Account

Up | Back | Help | Logoff

---

Edit server information Delete Submit

**Record Updated.** ◀◀ ▶▶

Site Name  Site Plan

Monitoring is  Notify on Error?

IP Address

TCP Traceroute on network error  Use Ping to verify network errors

Commgr Listener  Proxy/HTTP Listener  Logging Level

Proxy Server

Reporting Interval  Device ID [1a4ba796d0e6853d3569541ebd8a829b](#)

---

**Agent Configuration**

To add new monitored items and/or set warning and threshold values, click on the tab associated with the appropriate collection category.

Cpu | Disk | **Process** | User Scripts | Connection | Distributed Collection

Enable Process Monitor

Delete	Enabled	Notify	Name	Compare	Warning Value	Threshold Value	Last Value	Last Status	Last Reported
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	bogus	<>	<input type="text" value="0"/>	<input type="text" value="0"/>	N/A	0	2008-07-08 20:08:05
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	ftpd	<	<input type="text" value="1"/>	<input type="text" value="1"/>	N/A	0	2008-07-08 20:07:10
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	httpd	<	<input type="text" value="1"/>	<input type="text" value="1"/>	N/A	0	2008-07-08 20:07:46
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	sshd	>=	<input type="text" value="20"/>	<input type="text" value="20"/>	N/A	0	2008-07-08 20:07:46
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<=	<input type="text"/>	<input type="text"/>			

The following section provides an overview of the common portion of the ServerAgent configuration screen.

Site Name  Site Plan

Monitoring is  Notify on Error?

IP Address

TCP Traceroute on network error  Use Ping to verify network errors

Commgr Listener  Proxy/HTTP Listener  Logging Level

Proxy Server

Reporting Interval  Device ID [1a4ba796d0e6853d3569541ebd8a829b](#)

Configuration Parameter	Description
Site Name	Description of the monitored site. This can be a short URL but preferably should be a brief description of the site or server you are monitoring, for example, "AlertSite Home Page."





<b>Site Plan</b>	Allows selection of the appropriate monitoring plan from those available in your AlertSite account.
<b>Monitoring is</b>	Enables or disables monitoring for this site only. Please note that it takes a few minutes for these updates to distribute to all monitoring locations.
<b>Notify on Error?</b>	Turn alerting on or off for this site. Please note that it takes a few minutes for these updates to distribute to all monitoring locations.
<b>IP Address</b>	The IP address that your site resolved to when it was configured. If the site you are trying to monitor does not have a DNS name then this field must be completed. Further, please provide this value if the ServerAgent will perform proxy services for other ServerAgents.
<b>TCP Traceroute on network error</b>	Select "Yes" and AlertSite will conduct a TCP traceroute and send a notice to all E-mail alert recipients when we issue an alert for a network connectivity issue. A traceroute prints the route packets take to reach a host and is used by administrators and engineers in fault diagnosis.
<b>Use Ping to verify network errors</b>	"Ping" is a low-level test to determine if your server is "reachable". Select "Yes" if your site is "Pingable." Select "No" if your site blocks "Ping."
<b>Commgr Listener</b>	Port where the Communication Manager (CommMgr) listens for Agent registration and collected metric publication
<b>Proxy/HTTP Listener</b>	Port where the CommMgr will listen for Proxy requests from other Server Agent instances during distributed collection. Also accepts connections from supported browsers to enable the user to view the contents of the collected metrics cache between publication intervals.
<b>Logging Level</b>	Assigns the level of verbosity with which the Server Agent will log messages.
<b>Proxy Server</b>	By default, Server Agent publishes directly to an AlertSite server; however, if this ServerAgent does not have visibility to the Internet, it may be necessary for the ServerAgent to employ another ServerAgent as a proxy. The proxy ServerAgent is assigned here. Ensure that the IP Address of the ServerAgent selected as a Proxy Server is specified.
<b>Reporting Interval</b>	Determines the frequency of monitoring.
<b>Device ID</b>	The Device ID is generated by AlertSite to uniquely identify the monitored device. This value is required during installation.



Less typical is the requirement to modify the 'listener ports' employed by the ServerAgent. The following table describes the configuration options and default values for the ports used by the ServerAgent.

Configuration Parameter	Port	Description
Commgr Listener	8000	Monitored by the collection manager process to accept collected metrics from the agents for publication to AlertSite
Proxy/HTTP Listener	2525	Used when the ServerAgent is configured as a proxy in a distributed or n-Tier deployment. Also accepts HTTP GET requests for users wanting to monitor the collected data pending publication.

The remaining portion of the ServerAgent Edit portal provides a means of configuring specific settings for each collection agent.



The following sections detail configuring specific settings for the various collection agents.

The 'Enable' button found below the category tabs provides a means of selecting the metrics monitored by ServerAgent.



The next portion of the interface lists the current settings for the given category:

Delete	Enabled	Notify	Name	Compare	Warning Value	Threshold Value
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	bogus	<>	0	0
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	ftpd	<	1	1
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	httpd	<	1	1
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	sshd	>=	20	20

Note in this example the processes bogus, ftpd, httpd, and sshd are being monitored.

To enable thresholds for a given process, click on the checkbox in the Enabled column. Further, if you wish for notifications to be sent when either the warning value or threshold value is in violation for the Compare



operator, click on the checkbox in the Notify column. Now simply edit the Compare operator and warning/Threshold values respectively.

Note: When entering a process to monitor, you must consider whether your deployment environment is MS Windows or Linux/UNIX. To determine the appropriate value to enter in the Name field for Process monitoring, use the following methods:

#### MS Windows

1. View the 'Task Manager' by pressing Ctrl-Alt-Del and selecting 'Task Manager'
2. On the Process tab of the 'Task Manager', find the name of the application under the 'Image Name' column. This is the explicit value to enter in the Name field of the Process monitor configuration tab.


#### Linux/UNIX

Under Sun's Solaris use the following command to determine the appropriate process name to enter in the Name field of the Process monitor configuration tab:

```
$ ps -e -o fname
```

Under other flavors of Linux/UNIX, the following command will reveal the value to be entered in the Name field of the Process monitor configuration tab:

```
$ ps ax -o comm
```

Finally, the Edit screen provides an area that allows you to add values for the agent you are configuring. 









Delete	Enabled	Notify	Name	Compare	Warning Value	Threshold Value
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<= 	<input type="text"/>	<input type="text"/>

In this example, if you wanted to add processes to monitor, add the explicit process name to the Name field, enable the threshold enforcement and notification settings as desired, and apply the appropriate Compare operator and warning/Threshold values. Finally, press 'Submit' to insert your changes in the list.

Each collection agent tab provides the means for adjusting the specific settings for the corresponding agent category as described in the following paragraphs.

### Cpu

The metrics collected by the Cpu agent are determined by the operating system where the ServerAgent is running. Therefore, the only settings that the user may impact are the warning and Threshold Values.

Cpu								
Enable Cpu Monitor <input checked="" type="checkbox"/>								
Enabled	Notify	Name	Compare	Warning Value	Threshold Value	Last Value	Last Status	Last Reported
<input type="checkbox"/>	<input type="checkbox"/>	LAST_REPORT	>= 	<input type="text" value="0"/>	<input type="text" value="0"/>	1220639580	0	2008-09-05 18:33:07
<input type="checkbox"/>	<input type="checkbox"/>	LOAD_AVERAGE	> 	<input type="text" value="90"/>	<input type="text" value="95"/>	0	0	2008-09-05 18:33:07
<input type="checkbox"/>	<input type="checkbox"/>	MEMORY_LOAD	>= 	<input type="text" value="0"/>	<input type="text" value="0"/>	77	0	2008-09-05 18:33:07
<input type="checkbox"/>	<input type="checkbox"/>	NOTIFY_ON_REBOOT	> 	<input type="text" value="0"/>	<input type="text" value="0"/>	0	0	2008-09-05 18:33:07
<input type="checkbox"/>	<input type="checkbox"/>	PAGING_MEMORY_USAGE	>= 	<input type="text" value="0"/>	<input type="text" value="0"/>	20	0	2008-09-05 18:33:07
<input type="checkbox"/>	<input type="checkbox"/>	PHYSICAL_MEMORY_USAGE	>= 	<input type="text" value="0"/>	<input type="text" value="0"/>	77	0	2008-09-05 18:33:07
<input type="checkbox"/>	<input type="checkbox"/>	PROCS	< 	<input type="text" value="0"/>	<input type="text" value="0"/>	53	0	2008-09-05 18:33:07
<input type="checkbox"/>	<input type="checkbox"/>	VIRTUAL_MEMORY_USAGE	>= 	<input type="text" value="0"/>	<input type="text" value="0"/>	22	0	2008-09-05 18:33:07



## Disk

As with the Cpu monitor, the metrics collected by the Disk agent are determined by your system. Therefore, the only settings that the user may impact are those for warning and Threshold Values.

Enabled	Notify	Name	Compare	Warning Value	Threshold Value	Last Value	Last Status	Last Reported
<input type="checkbox"/>	<input type="checkbox"/>	DRIVE_C_USAGE	>	90	95	89	0	2008-09-05 18:33:07
<input type="checkbox"/>	<input type="checkbox"/>	LAST_REPORT	>=	0	0	1220639580	0	2008-09-05 18:33:07

## Connection

Delete	Enabled	Notify	Name	Compare	Warning Value	Threshold Value	Last Value	Last Status	Last Reported
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	alertsite.com:443	<	0	0			

The Connection monitor enables a user to monitor specific services running on a designated host. The syntax for adding a new connection to monitor is *host:port*. Values returned by the Network Monitor are 0 or 1 for 'failed to connect' and 'connect success', respectively.

## Process

Delete	Enabled	Notify	Name	Compare	Warning Value	Threshold Value	Last Value	Last Status	Last Reported
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	agentmgr.exe	<>	1	1	1	0	2008-09-05 18:33:07
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	firefox.exe	<>	1	1	N/A	0	2008-09-05 18:37:00
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<	0	0			

The Process Monitor provides the capability to track the total number of a given process running on the system. To add to the Process list, simply enter the exact process name in the Name field of the 'Agent Configuration' section of the Process tab.

## User Scripts

The ServerAgent software considers the presence of user scripts staged by the user to perform monitoring functions beyond the categories offered by ServerAgent. Details of the User Script functionality and supported



configuration options may be found under the section 'Configuring ServerAgent to monitor user defined scripts' found later in this document.

### **Distributed Collection**

The ServerAgent software may be instructed to proxy for other ServerAgent instances that do not have visibility to the public Internet. The Distributed Collection tab provides a means of specifying which ServerAgents will be subordinate to this instance.



Simply select from the available Server Agents, and press the right facing arrow to add them to the list of Proxied Servers.

## **X. Configuring ServerAgent to monitor user defined scripts**

AlertSite's ServerAgent can monitor processes, CPU, and basic disk utilization natively. Many customers, however, want to integrate resource or environment specific monitoring with ServerAgent.

This is done by adding user defined monitoring scripts to ServerAgent.

Almost any executable script, cmd file or program that outputs a single integral value to standard out can be integrated into ServerAgent.

### **How it works**

ServerAgent will scan for any user scripts both at startup and during run-time. For any scripts found, ServerAgent will attempt to run them on each monitoring pass (typically every minute).

It will read the first line of output generated by the script, expecting an integral value, and use that value to test for error/warning conditions configured in your AlertSite account.

Any other text produced by the script will be saved as additional information for your own use. For example, if you have a script that searched for error conditions in your system log files, you could add the actual error messages as output to the script after the numeric value used to indicate the error/warning condition.

### **Installing scripts**



#### On Windows

- place the script in c:\Program Files\ServerAgent\user (if the folder doesn't exist, create it)
- Note, it is not necessary to stop and restart the ServerAgent service

#### On Unix

- place the script in /usr/local/alertsite/bin/user
- Note, it is not necessary to kill and restart the ServerAgent process. Any changes to the bin/user directory will immediately be detected and acted upon

#### Sample scripts

Sample Windows .cmd file that checks for the presence of a file.

```
----- testfile.cmd -----
@ECHO OFF
IF EXIST c:\tmp.txt (
    echo 1
    echo File Found
) ELSE (
    echo 0
    echo File Not Found
)
-----
```

NOTE: If using a .bat or .cmd file and echo is used to generate output for ServerAgent, be sure to provide '@' character prior to echo keyword.

Sample Unix shell script that checks for the presence of a file.

```
----- chkfile.sh -----
#!/bin/sh
# returns "1" if a file exists

if [ -f /tmp/somefile.txt ]
then
    echo "1"
    echo "File Found"
fi
-----
```

#### Limiting User Scripts

Under normal conditions, the ServerAgent on your machine will run your user scripts approximately once per minute. Data is sent to AlertSite based on your ServerAgent plan, usually at 5 or 15 minute intervals. If, however, an error threshold is raised on your machine, the error condition is transmitted immediately to AlertSite so you can be notified. After an error has been reported, no more data is sent to AlertSite until the next 5 or 15 minute interval.



There could be reasons why you want to limit how often a particular script runs on your machine, including:

1. It is very CPU intensive and you would like to use it less often.
2. It monitors data that does not change very often, such as making sure a daily transaction occurred.
3. You want to make sure every transaction is captured by the AlertSite system for reporting purposes. In this case, you would want to run the script only on your particular 5 or 15 minute interval to make sure all the data is transmitted to AlertSite.

In all the above cases, you can add a 'limit' to the ServerAgent configuration by adding and Interval Limit to the name of the User script as seen in the following figure.

Delete	Enabled	Notify	Name	Compare	Warning Value	Threshold Value
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	db_check.pl:4	<>	0	0
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	http_stat.sh:1	>	1	3

For example, consider that you have a 15 minute ServerAgent collection interval and want to limit "http\_stat.sh" to run only on the actual 15 minute interval. You also have a "db\_check.pl" that you want to run once per hour (that is, every 4<sup>th</sup> interval). All other scripts will be run on the standard schedule.

To do this, edit the rows corresponding to the appropriate script. For instance, enter a 1 for the limit of http\_stat.sh, as seen highlighted above, and a 4 in the same column for db\_check.pl:4.

Note, if the ServerAgent has already begun to publish data for the customer script, it will be necessary to delete and re-add the script to the configuration table in order to add the ':<limit>' column.

## XI. How does ServerAgent communicate with AlertSite?

The client software opens an outgoing socket to our server on port 4892.

Both the client side check-in packet and the server side response are encrypted and encoded ascii packets.

Here's a sample from one of our servers, decoded and unencrypted...

```

;; Incoming from client
<REPORT><Function>MONITOR</Function><ServerID>8f2264198cb88f896c88fe15182ebbd4</ServerID><ClientVersion>
2.0</ClientVersion><Hostname>serveragent</Hostname><DISK_INFO><DRIVE_root_BLOCKS>8</DRIVE_root_BLOCKS><D
RIVE_dev_shm_BLOCKS>0</DRIVE_dev_shm_BLOCKS></DISK_INFO><PROCESS><httpd>0</httpd><bash>2</bash><sshd>7</
sshd><ftpd>0</ftpd></PROCESS><CPU_USAGE><LOAD_1_MIN>0</LOAD_1_MIN><LOAD_5_MIN>0</LOAD_5_MIN><LOAD_15_MIN
>0</LOAD_15_MIN><PROCS>61</PROCS><UPTIME>2220055</UPTIME><RAM>57</RAM><SWAP>0</SWAP><NOTIFY_ON_REBOOT>0<
/NOTIFY_ON_REBOOT></CPU_USAGE></Report>

;; Outgoing from server
<Response><TIME>1211373241</TIME><SEED>4</SEED><STATUS>0</STATUS><LogLevel>info</LogLevel><ServerList>b1
ue.alertsite.com:4882,green.alertsite.com:4882</ServerList><Thresholds>THRESHOLDS=0</Thresholds><VERSION
>2.0</VERSION><INTERVAL>5</INTERVAL></Response>

```

This is a "typical" handshake between the ServerAgent and the AlertSite server.



## XII. How to confirm that ServerAgent is working?

After the final step of the installation process for Windows, where the Device ID is entered and the next button is pressed, a SUCCESSFUL message will be returned if the agent was able to communicate back to the AlertSite service. **Within a few minutes status icons should appear in the status console for that monitored server.**

As well, the communication manager will accept browser connect to its default listener port (2525). Simply point your browser to where the ServerAgent is running and you are able to view the data pending publication as demonstrated in the following figure.

AlertSite  
Server Agent v2.0

Data collected as of: Wed, 21 May 2008 16:10:17

REPORT	
Function	MONITOR
ServerID	8f2264198cb88f896c88fe15182ebb4d
ClientVersion	2.0
Hostname	serveragent
User Agent (USER)	
test4.sh	0
test.sh	0
test9.sh	0
test6.sh	0
test5.sh	0
test2.sh	0
test3.sh	0
test7.sh	0
test1.sh	0
test8.sh	0
Disk_info Agent (DISK_INFO)	
DRIVE_root_BLOCKS	9
DRIVE_dev_shm_BLOCKS	0
Cpu_usage Agent (CPU_USAGE)	
LOAD_1_MIN	0
LOAD_5_MIN	0
LOAD_15_MIN	0
PROCS	63
UPTIME	2160535





Log files

ServerAgent currently keeps a 7 day rolling history of log files.

Naming convention server-agent.YYYYMMDD.

Location:

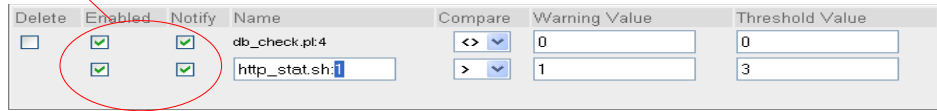
- Windows: c:\Program Files\ServerAgent\logs
- Unix: /usr/local/alertsite/bin/logs/

A **successfully** functioning ServerAgent will have entries in the logfile that show its present configuration:

```
** sample **
02/24/2008@11:57:07 (info ) commgr -- ready
02/24/2008@11:57:07 (info ) agentmgr -- starting cpu metrics collector
02/24/2008@11:57:08 (info ) agentmgr -- starting disk metrics collector
02/24/2008@11:57:08 (info ) agentmgr -- starting task metrics collector
02/24/2008@11:57:08 (info ) agentmgr -- starting network metrics collector
02/24/2008@11:57:08 (info ) agentmgr -- starting user metrics collector
```

### XIII. Enabling Alerts

The Notify and Enabled checkboxes for the monitored items must be checked in order to receive alerts for any monitored item. These are found when editing any of the monitored servers and selecting the appropriate tab for the collection category.



### XIV. ServerAgent screenshots

Open this view to see ServerAgents not placed in any other view

New v2.0 ServerAgents appear under the ServerAgent portion of the screen until they publish data, then they are moved into the Default View above.

Name	Connect	Cpu	Disk	Process	User	Last Status	Last Check In	Reporting Interval	Monitor	Errors Last 24 Hrs (cnt/hhmm)
Alertsite Default View	▲	▲	▲	▲		0	2008-09-05 15:06:04			163/08:47
JRB-Win2008		▲	▲			0	2008-09-05 15:04:01	5	Enabled	all clear
Seans WinXP	▲	▲	▲	▲		0	2008-09-05 15:06:04	5	Enabled	163/08:47

Server Name	Connect	Cpu	Disk	Process	User	Last Status	Last Check In	Reporting Interval	Monitor	Errors Last 24 Hrs (cnt/hhmm)
Joe-Burt(2.0)-Linux						4050	2008-06-11 16:13:23	5	Disabled	all clear
Joe-Burt(www.alertsite.com)		▲	▲		▲	0	2008-04-11 16:35:08	5	Disabled	all clear



The following are samples of 'drill-downs' obtained by clicking on a category's status icon for a given ServerAgent (note, drill-downs are not available for summary icons displayed for View 'roll-ups'):

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Server Name	A-mail
Category	Disk
Reporting Location	Seattle, Washington
Last Check-In	2008-05-18 01:35:14

Item	Current Value	Monitored Value	Status
DRIVE_root_BLOCKS	62	90/95	0

AlertSite [Back to AlertSite](#)

Server Name	A-mail
Category	Cpu
Reporting Location	Seattle, Washington
Last Check-In	2008-05-18 01:35:14

Item	Current Value	Monitored Value	Status
BUFFERRAM	22704128		0
HIGH	0		0
LOAD_15_MIN	23		0
LOAD_1_MIN	2		0
LOAD_5_MIN	15	150/500	0
NOTIFY_ON_REBOOT	0	0/0	0
PROCS	80		0
RAM	90		0
SHAREDGRAM	0		0
SWAP	4		0
TIME	303849		0

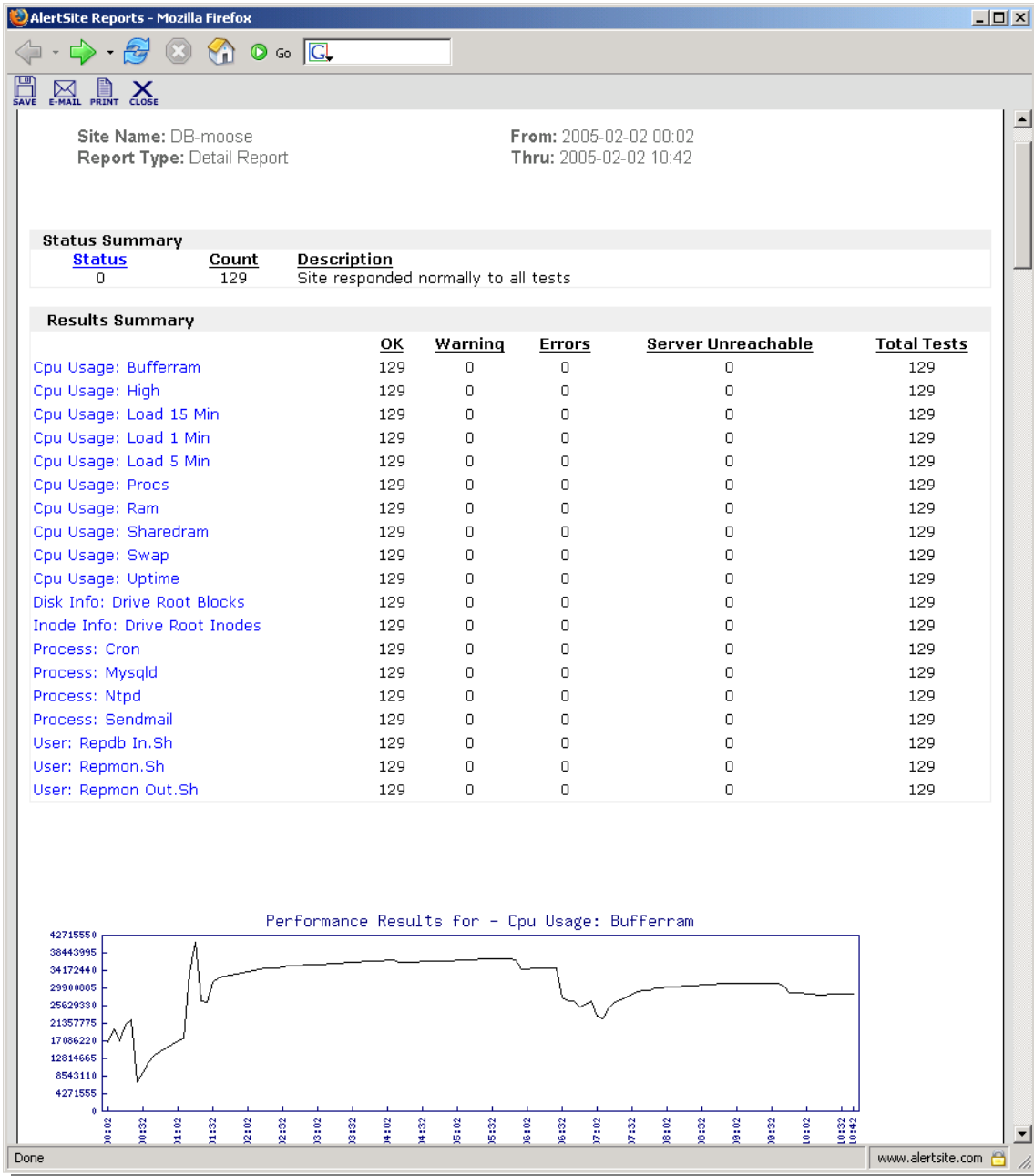
AlertSite [Back to AlertSite](#)

Server Name	A-mail
Category	Process
Reporting Location	Seattle, Washington
Last Check-In	2008-05-18 01:35:14

Item	Current Value	Monitored Value	Status
cron	1	1/1	0
named	5	1/1	0
ntpd	1	1/1	0
sendmail	19	1/1	0
spamd	7	1/1	0



**Sample ServerAgent Report:**





## XV. Troubleshooting

### Ensure the service or daemon is running.

Under Linux/UNIX, a simple ps (process status) command will reveal if the daemons are running as seen in the following example:

```
$ ps -ea | grep mgr  
or  
$ps ax | grep mgr
```

And ensure that the processes commgr and agentmgr appear in the output.

Under windows, to verify the services are running, go to 'Control Panel'-'>'Administrative Tools' and double-click on 'Services'. It may be necessary to expand the Name column to view the full text of the service names. In the list, find "AlertSite ServerAgent Manager v2.0" and "AlertSite ServerAgent Monitor v2.0" and ensure their status is shown as "Started".

### Verify connectivity to the assigned monitoring server.

If ServerAgent cannot connect to its assigned monitoring server and is displaying error messages in the log files that look like this:

```
01/31/2008@09:11:06 (error ) commgr -- failed to connect to green.alertsite.com:4892 (connection  
refused): will retry 2 more times  
01/31/2008@09:11:14 (info ) agentmgr -- waiting for collector (localhost:8000)  
01/31/2008@09:11:14 (error ) commgr -- failed to connect to green.alertsite.com:4892 (connection  
refused): will retry 1 more times
```

The first thing to check is whether the server running ServerAgent has outbound connectivity to the appropriate AlertSite monitoring location. To verify that there is appropriate connectivity:

```
c:\> telnet green.alertsite.com 4892
```

A connection should be established and upon hitting enter the "Connection closed by foreign host" should be displayed.

### Debugging:

ServerAgent can be configured to add debugging information to your log files for network problems. Review the earlier section in this document regarding configuring a ServerAgent instance.

<b>Logging Level</b>	Assigns the level of verbosity with which the Server Agent will log messages.
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Any time ServerAgent cannot talk to AlertSite, it will perform a "ping" and a "traceroute" for the particular monitoring server and include that information in the log file. Please note that this requires the following commands to be included in the program path of the ServerAgent:

- Unix – "ping" and "traceroute"
- Windows – "ping" and "tracert"



## XVI. ServerAgent Metrics

The ServerAgent program tracks different default values depending on the operating system where it is running.

ServerAgent also tracks user specific metrics when you opt to measure certain processes (PROCESS) and/or user scripts (USER).

### Unix

(Not all metrics are available on all Unix operating systems)

<i>Metric Name (Unix)</i>	<i>Description</i>
CONNECT: <i>host:port</i>	1 if successful, 0 if failed
CPU_USAGE: BUFFERRAM	Memory used by buffers
CPU_USAGE: LOAD_1_MIN	Active tasks averaged over prior 1 minute X 100
CPU_USAGE: LOAD_5_MIN	Active tasks averaged over prior 5 minutes X 100
CPU_USAGE: LOAD_15_MIN	Active tasks averaged over prior 15 minutes X 100
CPU_USAGE: NOTIFY_ON_REBOOT	Date and time when rebooting, otherwise 0
CPU_USAGE: PROCS	# of running processes
CPU_USAGE: RAM	% used main memory size
CPU_USAGE: SHAREDGRAM	Amount of shared memory
CPU_USAGE: SWAP	% used swap space
CPU_USAGE: UPTIME	Seconds since last reboot
CPU_USAGE: SWAP	% used swap space
DISK_INFO: DRIVE_ <i>name</i> _BLOCKS	% used disk blocks for drive <i>name</i>
PROCESS: <i>taskname</i>	Number of times process <i>taskname</i> is running now
USER: <i>userprogram</i>	Results of your <i>userprogram</i>

### Windows

<i>Metric Name (Windows)</i>	<i>Description</i>
CONNECT: <i>host:port</i>	1 if successful, 0 if failed
CPU_USAGE: LOAD_AVERAGE	% cpu usage
CPU_USAGE: NOTIFY_ON_REBOOT	Date and time when rebooting, otherwise 0
CPU_USAGE: MEMORY_LOAD	Special value, provided by operating system, between 0 and 100 that gives a general idea of current memory utilization, in which 0 indicates no memory use and 100 indicates full memory use
CPU_USAGE: PHYSICAL_MEMORY_USAGE	% used of total physical memory

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<i>Metric Name (Windows)</i>	<i>Description</i>
CPU_USAGE: PAGING_MEMORY_USAGE	% used of the paging file on disk
CPU_USAGE: PROCS	# of running processes
CPU_USAGE: VIRTUAL_MEMORY_USAGE	% used of the virtual address memory
DISK_INFO: DRIVE_letter_USAGE	% used for fixed disk <i>letter</i>
PROCESS: <i>taskname</i>	Number of times process <i>taskname</i> is running now
USER: <i>userprogram</i>	Results of your <i>userprogram</i>