

# ZenPack Details Guide

---

## ZenPack Details Guide

Copyright © 2009 Zenoss, Inc., 275 West St. Suite 204, Annapolis, MD 21401, U.S.A. All rights reserved.

This work is licensed under a Creative Commons Attribution Share Alike 3.0 License. To view a copy of this license, visit <http://creativecommons.org/licenses/by-sa/3.0/>; or send a letter to Creative Commons, 171 2nd Street, Suite 300, San Francisco, California, 94105, USA.

The Zenoss logo is a registered trademark of Zenoss, Inc. Zenoss and Open Enterprise Management are trademarks of Zenoss, Inc. in the U.S. and other countries.

Flash is a registered trademark of Adobe Systems Incorporated.

Java is a registered trademark of Sun Microsystems, Inc.

Linux is a registered trademark of Linus Torvalds.

Oracle and the Oracle logo are registered trademarks of the Oracle Corporation.

SNMP Informant is a trademark of Garth K. Williams (Informant Systems, Inc.).

Sybase is a registered trademark of Sybase, Inc.

Tomcat is a trademark of the Apache Software Foundation.

Windows is a registered trademark of Microsoft Corporation in the United States and other countries.

All other companies and products mentioned are trademarks and property of their respective owners.

---

---

1. Core .....	1
2. ActiveDirectory .....	17
3. AixMonitor .....	24
4. ApacheMonitor .....	29
5. BigIpMonitor .....	31
6. BrocadeMonitor .....	41
7. CheckPointMonitor .....	44
8. CiscoMonitor .....	47
9. CiscoUCS .....	63
10. DigMonitor .....	73
11. DnsMonitor .....	74
12. EnterpriseLinux .....	75
13. EsxTop .....	79
14. FtpMonitor .....	81
15. HpuxMonitor .....	82
16. HttpMonitor .....	86
17. IISMonitor .....	87
18. IRCMonitor .....	90
19. JBossMonitor .....	91
20. JabberMonitor .....	97
21. LDAPMonitor .....	98
22. MExchange .....	99
23. MSSQLServer .....	102
24. MySqlMonitor .....	104
25. NetAppMonitor .....	107
26. NetScreenMonitor .....	114
27. NtpMonitor .....	118
28. RANCIDIntegrator .....	119
29. RPCMonitor .....	120
30. SolarisMonitor .....	121
31. SugarCRMMonitor .....	125
32. TomcatMonitor .....	127
33. VMwareESXMonitor .....	132
34. WebLogicMonitor .....	134
35. WebsphereMonitor .....	143
36. XenMonitor .....	144
37. ZenAWS .....	145
38. ZenHoltWinters .....	148
39. ZenJMX .....	149
40. ZenSQLTx .....	152
41. ZenVMware .....	153
42. ZenWebTx .....	162
43. ZenWinPerf .....	163
44. vCloud .....	167

---

# Chapter 1. Core

**Table 1.1. Core Details**

<b>Version</b>	Zenoss
<b>Author</b>	None
<b>Dependencies</b>	None

## 1. Monitoring Template Information

### 1.1. Device Performance Template

Basic template that only collects sysUpTime.

- Devices

#### 1.1.1. Data Points

**Table 1.2. Device DataPoints**

<b>Data Source</b>	<b>Data Point</b>	<b>Description</b>
sysUpTime	sysUpTime	This uses the sysUpTimeInstance object. This object is the length of time the system has been running.

### 1.2. ethernetCsmacd Performance Template

Standard ethernet interface template with 75% utilization threshold

- Devices

#### 1.2.1. Data Points

**Table 1.3. ethernetCsmacd DataPoints**

<b>Data Source</b>	<b>Data Point</b>	<b>Description</b>
ifInErrors	ifInErrors	For packet-oriented interfaces, the number of inbound packets that contained errors preventing them from being deliverable to a higher-layer protocol. For character-oriented or fixed-length interfaces, the number of inbound transmission units that contained errors preventing them from being deliverable to a higher-layer protocol.
ifInOctets	ifInOctets	The total number of octets received on the interface, including framing characters.
ifInUcastPackets	ifInUcastPackets	The number of packets, delivered by this sub-layer to a higher (sub-)layer, which were not addressed to a multicast or broadcast address at this sub-layer.
ifOperStatus	ifOperStatus	
ifOutErrors	ifOutErrors	For packet-oriented interfaces, the number of outbound packets that could not be transmitted because of errors. For character-oriented or fixed-length interfaces, the number of outbound transmission units that could not be transmitted because of errors.

Data Source	Data Point	Description
ifOutOctets	ifOutOctets	The total number of octets transmitted out of the interface, including framing characters.
ifOutUcastPackets	ifOutUcastPackets	The total number of packets that higher-level protocols requested be transmitted, and which were not addressed to a multicast or broadcast address at this sub-layer, including those that were discarded or not sent.

## 1.2.2. Graphs

**Table 1.4. Errors**

Name	Type	Description
ifInErrors	DataPointGraphPoint	
ifOutErrors	DataPointGraphPoint	

**Table 1.5. Packets**

Name	Type	Description
ifInUcastPackets	DataPointGraphPoint	
ifOutUcastPackets	DataPointGraphPoint	

**Table 1.6. Throughput**

Name	Type	Description
Utilization 75 perc	ThresholdGraphPoint	
ifInOctets	DataPointGraphPoint	
ifOutOctets	DataPointGraphPoint	

## 1.2.3. Thresholds

**Table 1.7. ethernetCsmacd**

Name	Type	Description
high utilization	MinMaxThreshold	

## 1.3. ethernetCsmacd\_64 Performance Template

Template for 64-bit interface counters. Must use SNMP v2c for it to work.

- Devices

### 1.3.1. Data Points

**Table 1.8. ethernetCsmacd\_64 DataPoints**

Data Source	Data Point	Description
ifHCInOctets	ifHCInOctets	The total number of octets received on the interface, including framing characters. This object is a 64-bit version of ifInOctets.
ifHCInUcastPkts	ifHCInUcastPkts	The number of packets, delivered by this sub-layer to a higher (sub-)layer, which were not addressed to a multicast or broadcast address at this sub-layer. This object is a 64-bit version of ifInUcastPkts.

Data Source	Data Point	Description
ifHCOctets	ifHCOctets	The total number of octets transmitted out of the interface, including framing characters. This object is a 64-bit version of ifHCOctets.
ifHCOUcastPkts	ifHCOUcastPkts	The total number of packets that higher-level protocols requested be transmitted, and which were not addressed to a multicast or broadcast address at this sub-layer, including those that were discarded or not sent. This object is a 64-bit version of ifHCOUcastPkts.
ifInErrors	ifInErrors	For packet-oriented interfaces, the number of inbound packets that contained errors preventing them from being deliverable to a higher-layer protocol. For character-oriented or fixed-length interfaces, the number of inbound transmission units that contained errors preventing them from being deliverable to a higher-layer protocol.
ifOperStatus	ifOperStatus	
ifOutErrors	ifOutErrors	For packet-oriented interfaces, the number of outbound packets that could not be transmitted because of errors. For character-oriented or fixed-length interfaces, the number of outbound transmission units that could not be transmitted because of errors.

### 1.3.2. Graphs

**Table 1.9. Errors**

Name	Type	Description
ifInErrors	DataPointGraphPoint	
ifOutErrors	DataPointGraphPoint	

**Table 1.10. Packets**

Name	Type	Description
ifHCInUcastPkts	DataPointGraphPoint	
ifHCOUcastPkts	DataPointGraphPoint	

**Table 1.11. Throughput**

Name	Type	Description
ifHCInOctets	DataPointGraphPoint	
ifHCOctets	DataPointGraphPoint	

### 1.3.3. Thresholds

**Table 1.12. ethernetCsmacd\_64**

Name	Type	Description
high utilization	MinMaxThreshold	

## 1.4. IpService Performance Template

Place holder for future use.

- Devices

## 1.5. OSProcess Performance Template

Monitors for OSProcess object

- Devices

### 1.5.1. Data Points

**Table 1.13. OSProcess DataPoints**

Data Source	Data Point	Description
count	count	Number of process matching process name.
cpu	cpu	CPU consumed by processes.
mem	mem	Memory consumed by processes.

### 1.5.2. Graphs

**Table 1.14. CPU Utilization**

Name	Type	Description
cpu	DataPointGraphPoint	

**Table 1.15. Memory**

Name	Type	Description
mem	DataPointGraphPoint	

**Table 1.16. Process Count**

Name	Type	Description
count	DataPointGraphPoint	

## 1.6. WinService Performance Template

Place holder for future use.

- Devices

## 1.7. Device Performance Template

Cisco template that collects cpu and free memory. Has CPU threshold at 90%

- Devices/Network/Router/Cisco

### 1.7.1. Data Points

**Table 1.17. Device DataPoints**

Data Source	Data Point	Description
cpu5min	cpu5min	This data source uses the avgBusy5 object. This object is the 5 minute exponentially-decayed moving average of the CPU busy percentage.
mem5minFree	mem5minFree	This data source uses the ciscoMemoryPoolFree object. This object indicates the number of bytes from

Data Source	Data Point	Description
		the memory pool that are currently unused on the managed device.
sysUpTime	sysUpTime	This uses the sysUpTimeInstance object. This object is the length of time the system has been running.

## 1.7.2. Graphs

**Table 1.18. CPU Utilization**

Name	Type	Description
CPU	ThresholdGraphPoint	
cpu5min	DataPointGraphPoint	

**Table 1.19. Free Memory**

Name	Type	Description
mem5minFree	DataPointGraphPoint	

## 1.7.3. Thresholds

**Table 1.20. Device**

Name	Type	Description
CPU	MinMaxThreshold	

## 1.8. Device Performance Template

Blank Template.

- `Devices/Ping`

## 1.9. Device Performance Template

APC Device Profile that tracks battery capacity, load and runtime

- `Devices/Power/UPS/APC`

### 1.9.1. Data Points

**Table 1.21. Device DataPoints**

Data Source	Data Point	Description
batteryCapacity	batteryCapacity	
batteryOutputLoad	batteryOutputLoad	
batteryRunTimeRemaining	batteryRunTimeRemaining	
sysUpTime	sysUpTime	This uses the sysUpTimeInstance object. This object is the length of time the system has been running.

### 1.9.2. Graphs

**Table 1.22. Battery**

Name	Type	Description
batteryCapacity	DataPointGraphPoint	



**Table 1.23. Load**

Name	Type	Description
batteryOutputLoad	DataPointGraphPoint	

**Table 1.24. Runtime**

Name	Type	Description
batteryRunTimeRemaining	DataPointGraphPoint	

## 1.10. Device Performance Template

Net-SNMP template for late vintage unix device. Has CPU threshold.

- `Devices/Server`

### 1.10.1. Data Points

**Table 1.25. Device DataPoints**

Data Source	Data Point	Description
laLoadInt5	laLoadInt5	Template for system load five minute average
memAvailReal	memAvailReal	The amount of physical memory available.
memAvailSwap	memAvailSwap	The amount of swap memory available.
memBuffer	memBuffer	The amount of buffer memory.
memCached	memCached	The amount of cached memory.
ssCpuRawIdle	ssCpuRawIdle	Template for CPU performance
ssCpuRawSystem	ssCpuRawSystem	Template for CPU performance
ssCpuRawUser	ssCpuRawUser	Template for CPU performance
ssCpuRawWait	ssCpuRawWait	Template for CPU performance
sysUpTime	sysUpTime	This uses the sysUpTimeInstance object. This object is the length of time the system has been running.

### 1.10.2. Graphs

**Table 1.26. CPU Idle**

Name	Type	Description
CPU Utilization	ThresholdGraphPoint	
ssCpuRawIdle	DataPointGraphPoint	

**Table 1.27. CPU Utilization**

Name	Type	Description
ssCpuRawSystem	DataPointGraphPoint	
ssCpuRawUser	DataPointGraphPoint	
ssCpuRawWait	DataPointGraphPoint	

**Table 1.28. Free Memory**

Name	Type	Description
memAvailReal	DataPointGraphPoint	

**Table 1.29. Free Swap**

Name	Type	Description
memAvailSwap	DataPointGraphPoint	

**Table 1.30. Load Average**

Name	Type	Description
laLoadInt5	DataPointGraphPoint	

**Table 1.31. Load Average 5 min**

Name	Type	Description
laLoadInt5	DataPointGraphPoint	

### 1.10.3. Thresholds

**Table 1.32. Device**

Name	Type	Description
CPU Utilization	MinMaxThreshold	

## 1.11. FileSystem Performance Template

Filesystem template that uses HOST-RESOURCES mib. Has a 90% threshold.

- `Devices/Server`

### 1.11.1. Data Points

**Table 1.33. FileSystem DataPoints**

Data Source	Data Point	Description
usedBlocks	usedBlocks	Amount of blocks used on the database.

### 1.11.2. Graphs

**Table 1.34. Utilization**

Name	Type	Description
high disk usage	ThresholdGraphPoint	
usedBlocks	DataPointGraphPoint	

### 1.11.3. Thresholds

**Table 1.35. FileSystem**

Name	Type	Description
high disk usage	MinMaxThreshold	

## 1.12. Device Performance Template

ZenPlugin template for late vintage unix device. Has CPU threshold.

- Devices/Server/Cmd

### 1.12.1. Data Points

**Table 1.36. Device DataPoints**

Data Source	Data Point	Description
cpu	laLoadInt1	Template for system load one minute average
cpu	laLoadInt15	Template for system load fifteen minute average
cpu	laLoadInt5	Template for system load five minute average
cpu	ssCpuRawIdle	Template for CPU performance
cpu	ssCpuRawInterrupt	Template for CPU performance
cpu	ssCpuRawKernel	Template for CPU performance
cpu	ssCpuRawNice	Template for CPU performance
cpu	ssCpuRawSystem	Template for CPU performance
cpu	ssCpuRawUser	Template for CPU performance
cpu	ssCpuRawWait	Template for CPU performance
cpu	ssRawContexts	
cpu	ssRawInterrupts	
mem	hrMemorySize	The total size of physical memory.
mem	hrSwapSize	The total size of swap memory.
mem	memAvailReal	The amount of physical memory available.
mem	memAvailSwap	The amount of swap memory available.
mem	memBuffer	The amount of buffer memory.
mem	memCached	The amount of cached memory.
mem	pageSize	
uptime	sysUpTime	This uses the sysUpTimeInstance object. This object is the length of time the system has been running.

### 1.12.2. Graphs

**Table 1.37. CPU Idle**

Name	Type	Description
CPU Utilization	ThresholdGraphPoint	
ssCpuRawIdle	DataPointGraphPoint	

**Table 1.38. CPU Utilization**

Name	Type	Description
ssCpuRawSystem	DataPointGraphPoint	
ssCpuRawUser	DataPointGraphPoint	
ssCpuRawWait	DataPointGraphPoint	

**Table 1.39. Free Memory**

Name	Type	Description
memAvailReal	DataPointGraphPoint	

Name	Type	Description
memBuffer	DataPointGraphPoint	
memCached	DataPointGraphPoint	

**Table 1.40. Free Swap**

Name	Type	Description
memAvailSwap	DataPointGraphPoint	

**Table 1.41. Load Average**

Name	Type	Description
laLoadInt5	DataPointGraphPoint	

### 1.12.3. Thresholds

**Table 1.42. Device**

Name	Type	Description
CPU Utilization	MinMaxThreshold	

## 1.13. ethernetCsmacd Performance Template

Ethernet interface template for ZenPlugins with 75% utilization threshold

- `Devices/Server/Cmd`

### 1.13.1. Data Points

**Table 1.43. ethernetCsmacd DataPoints**

Data Source	Data Point	Description
intf	ifInErrors	For packet-oriented interfaces, the number of inbound packets that contained errors preventing them from being deliverable to a higher-layer protocol. For character-oriented or fixed-length interfaces, the number of inbound transmission units that contained errors preventing them from being deliverable to a higher-layer protocol.
intf	ifInMcastPackets	
intf	ifInOctets	The total number of octets received on the interface, including framing characters.
intf	ifInUcastPackets	The number of packets, delivered by this sub-layer to a higher (sub-)layer, which were not addressed to a multicast or broadcast address at this sub-layer.
intf	ifOutErrors	For packet-oriented interfaces, the number of outbound packets that could not be transmitted because of errors. For character-oriented or fixed-length interfaces, the number of outbound transmission units that could not be transmitted because of errors.
intf	ifOutOctets	The total number of octets transmitted out of the interface, including framing characters.

Data Source	Data Point	Description
intf	ifOutUcastPackets	The total number of packets that higher-level protocols requested be transmitted, and which were not addressed to a multicast or broadcast address at this sub-layer, including those that were discarded or not sent.

### 1.13.2. Graphs

**Table 1.44. Errors**

Name	Type	Description
ifInErrors	DataPointGraphPoint	
ifOutErrors	DataPointGraphPoint	

**Table 1.45. Packets**

Name	Type	Description
ifInUcastPackets	DataPointGraphPoint	
ifOutUcastPackets	DataPointGraphPoint	

**Table 1.46. Throughput**

Name	Type	Description
ifInOctets	DataPointGraphPoint	
ifOutOctets	DataPointGraphPoint	

### 1.13.3. Thresholds

**Table 1.47. ethernetCsmacd**

Name	Type	Description
Utilization 75 perc	MinMaxThreshold	

## 1.14. FileSystem Performance Template

Filesystem template that uses ZenPlugins

- `Devices/Server/Cmd`

### 1.14.1. Data Points

**Table 1.48. FileSystem DataPoints**

Data Source	Data Point	Description
disk	availBlocks	The value of how many blocks are free on the disk as calculated from the total blocks minus the Used.
disk	availInodes	Inodes available.
disk	totalBlocks	Total number of blocks.
disk	totalInodes	Total Inodes on disk
disk	usedBlocks	Amount of blocks used.
disk	usedInodes	Inodes used.

### 1.14.2. Graphs

**Table 1.49. Block Utilization**

Name	Type	Description
Free Space 90 Percent	ThresholdGraphPoint	
usedBlocks	DataPointGraphPoint	

**Table 1.50. Inode Utilization**

Name	Type	Description
totalInodes	DataPointGraphPoint	
usedInodes	DataPointGraphPoint	

### 1.14.3. Thresholds

**Table 1.51. FileSystem**

Name	Type	Description
Free Space 90 Percent	MinMaxThreshold	

## 1.15. Device Performance Template

Net-SNMP template for Mac OS X devices.

- `Devices/Server/Darwin`

### 1.15.1. Data Points

**Table 1.52. Device DataPoints**

Data Source	Data Point	Description
laLoadInt1	laLoadInt1	Template for system load one minute average
laLoadInt15	laLoadInt15	Template for system load fifteen minute average
laLoadInt5	laLoadInt5	Template for system load five minute average
memAvailReal	memAvailReal	The amount of physical memory available.
memAvailSwap	memAvailSwap	The amount of swap memory available.
ssCpuIdle	ssCpuIdle	Template for CPU performance
ssCpuRawWait	ssCpuRawWait	Template for CPU performance
ssCpuSystem	ssCpuSystem	Template for CPU performance
ssCpuUser	ssCpuUser	Template for CPU performance
ssIORawReceived	ssIORawReceived	The value for total number of sectors read.
ssIORawSent	ssIORawSent	The value for total number of sectors written.
sysUpTime	sysUpTime	This uses the sysUpTimeInstance object. This object is the length of time the system has been running.

### 1.15.2. Graphs

**Table 1.53. CPU Utilization**

Name	Type	Description
ssCpuIdle	DataPointGraphPoint	

Name	Type	Description
ssCpuRawWait	DataPointGraphPoint	
ssCpuSystem	DataPointGraphPoint	
ssCpuUser	DataPointGraphPoint	

**Table 1.54. IO**

Name	Type	Description
ssIORawReceived	DataPointGraphPoint	
ssIORawSent	DataPointGraphPoint	

**Table 1.55. Load Average**

Name	Type	Description
high load	ThresholdGraphPoint	
laLoadInt1	DataPointGraphPoint	
laLoadInt15	DataPointGraphPoint	
laLoadInt5	DataPointGraphPoint	

**Table 1.56. Memory Utilization**

Name	Type	Description
memAvailReal	DataPointGraphPoint	
memAvailSwap	DataPointGraphPoint	

### 1.15.3. Thresholds

**Table 1.57. Device**

Name	Type	Description
high load	MinMaxThreshold	
low CPU idle	MinMaxThreshold	

## 1.16. Device Performance Template

Net-SNMP template for Linux devices.

- `Devices/Server/Linux`

### 1.16.1. Data Points

**Table 1.58. Device DataPoints**

Data Source	Data Point	Description
laLoadInt1	laLoadInt1	Template for system load one minute average
laLoadInt15	laLoadInt15	Template for system load fifteen minute average
laLoadInt5	laLoadInt5	Template for system load five minute average
memAvailReal	memAvailReal	The amount of physical memory available.
memAvailSwap	memAvailSwap	The amount of swap memory available.
memBuffer	memBuffer	The amount of buffer memory.

Data Source	Data Point	Description
memCached	memCached	The amount of cached memory.
ssCpuIdle	ssCpuIdle	Template for CPU performance
ssCpuRawWait	ssCpuRawWait	Template for CPU performance
ssCpuSystem	ssCpuSystem	Template for CPU performance
ssCpuUser	ssCpuUser	Template for CPU performance
ssIORawReceived	ssIORawReceived	The value for total number of sectors read.
ssIORawSent	ssIORawSent	The value for total number of sectors written.
sysUpTime	sysUpTime	This uses the sysUpTimeInstance object. This object is the length of time the system has been running.

### 1.16.2. Graphs

**Table 1.59. CPU Utilization**

Name	Type	Description
ssCpuIdle	DataPointGraphPoint	
ssCpuRawWait	DataPointGraphPoint	
ssCpuSystem	DataPointGraphPoint	
ssCpuUser	DataPointGraphPoint	

**Table 1.60. IO**

Name	Type	Description
ssIORawReceived	DataPointGraphPoint	
ssIORawSent	DataPointGraphPoint	

**Table 1.61. Load Average**

Name	Type	Description
high load	ThresholdGraphPoint	
laLoadInt1	DataPointGraphPoint	
laLoadInt15	DataPointGraphPoint	
laLoadInt5	DataPointGraphPoint	

**Table 1.62. Memory Utilization**

Name	Type	Description
memAvailReal	DataPointGraphPoint	
memAvailSwap	DataPointGraphPoint	
memBuffer	DataPointGraphPoint	
memCached	DataPointGraphPoint	

### 1.16.3. Thresholds

**Table 1.63. Device**

Name	Type	Description
high load	MinMaxThreshold	



Name	Type	Description
low CPU idle	MinMaxThreshold	

## 1.17. Device Performance Template

Blank device template. No collection on port scanned devices.

- `Devices/Server/Scan`

## 1.18. Device Performance Template

Net-SNMP template for Solaris devices.

- `Devices/Server/Solaris`

### 1.18.1. Data Points

**Table 1.64. Device DataPoints**

Data Source	Data Point	Description
laLoadInt1	laLoadInt1	Template for system load one minute average
laLoadInt15	laLoadInt15	Template for system load fifteen minute average
laLoadInt5	laLoadInt5	Template for system load five minute average
memAvailReal	memAvailReal	The amount of physical memory available.
memAvailSwap	memAvailSwap	The amount of swap memory available.
ssCpuIdle	ssCpuIdle	Template for CPU performance
ssCpuRawWait	ssCpuRawWait	Template for CPU performance
ssCpuSystem	ssCpuSystem	Template for CPU performance
ssCpuUser	ssCpuUser	Template for CPU performance
ssIORawReceived	ssIORawReceived	The value for total number of sectors read.
ssIORawSent	ssIORawSent	The value for total number of sectors written.
sysUpTime	sysUpTime	This uses the sysUpTimeInstance object. This object is the length of time the system has been running.

### 1.18.2. Graphs

**Table 1.65. CPU Utilization**

Name	Type	Description
ssCpuIdle	DataPointGraphPoint	
ssCpuRawWait	DataPointGraphPoint	
ssCpuSystem	DataPointGraphPoint	
ssCpuUser	DataPointGraphPoint	

**Table 1.66. IO**

Name	Type	Description
ssIORawReceived	DataPointGraphPoint	
ssIORawSent	DataPointGraphPoint	

**Table 1.67. Load Average**

Name	Type	Description
high load	ThresholdGraphPoint	
laLoadInt1	DataPointGraphPoint	
laLoadInt15	DataPointGraphPoint	
laLoadInt5	DataPointGraphPoint	

**Table 1.68. Memory Utilization**

Name	Type	Description
memAvailReal	DataPointGraphPoint	
memAvailSwap	DataPointGraphPoint	

### 1.18.3. Thresholds

**Table 1.69. Device**

Name	Type	Description
high load	MinMaxThreshold	
low CPU idle	MinMaxThreshold	

## 1.19. Device Performance Template

- `Devices/Server/SSH`

## 1.20. Device Performance Template

Windows template that requires Informant MIB

- `Devices/Server/Windows`

### 1.20.1. Data Points

**Table 1.70. Device DataPoints**

Data Source	Data Point	Description
cpuPercentProcessorTime	cpuPercentProcessorTime	A measure of how much time the processor actually spends working on productive threads and how often it was busy servicing requests.
memoryAvailableKBytes	memoryAvailableKBytes	The Available Memory counter indicates the amount of memory that is left after nonpaged pool allocations, paged pool allocations, process' working sets, and the file system cache have all taken their piece.
memoryPagesPerSec	memoryPagesPerSec	The Pages/sec counter is a combination of Pages Input/sec and Pages Output/sec counters. Recall that Page Faults/sec is a combination of hard page faults and soft page faults. This counter, however, is a general indicator of how often the system is using the hard drive to store or retrieve memory associated data.

Data Source	Data Point	Description
sysUpTime	sysUpTime	This uses the sysUpTimeInstance object. This object is the length of time the system has been running.

## 1.20.2. Graphs

**Table 1.71. CPU**

Name	Type	Description
CPU Utilization over 90	ThresholdGraphPoint	
cpuPercentProcessorTime	DataPointGraphPoint	

**Table 1.72. Free Memory**

Name	Type	Description
memoryAvailableKBytes	DataPointGraphPoint	

**Table 1.73. Paging**

Name	Type	Description
memoryPagesPerSec	DataPointGraphPoint	

## 1.20.3. Thresholds

**Table 1.74. Device**

Name	Type	Description
CPU Utilization over 90	MinMaxThreshold	

## 1.21. HardDisk Performance Template

HardDisk I/O template that requires Informat MIB

- `Devices/Server/Windows`

### 1.21.1. Data Points

**Table 1.75. HardDisk DataPoints**

Data Source	Data Point	Description
IDiskDiskReadBytesPerSec	IDiskDiskReadBytesPerSec	
IDiskDiskWriteBytesPerSec	IDiskDiskWriteBytesPerSec	

### 1.21.2. Graphs

**Table 1.76. IO Bytes**

Name	Type	Description
IDiskDiskReadBytesPerSec	DataPointGraphPoint	
IDiskDiskWriteBytesPerSec	DataPointGraphPoint	

---

# Chapter 2. ActiveDirectory

**Table 2.1. ActiveDirectory Details**

<b>Version</b>	2.0.1
<b>Author</b>	Zenoss

## 1. Monitoring Template Information

### 1.1. Active Directory Performance Template

Performance monitoring for Microsoft Active Directory.

- `Devices/Server/Windows/WMI/Active Directory/2008`

#### 1.1.1. Data Points

**Table 2.2. Active Directory DataPoints**

<b>Data Source</b>	<b>Data Point</b>	<b>Description</b>
dsClientBindsSec	dsClientBindsSec	
dsDirectoryReadsSec	dsDirectoryReadsSec	
dsDirectorySearchesSec	dsDirectorySearchesSec	
dsDirectoryWritesSec	dsDirectoryWritesSec	
dsMonitorListSize	dsMonitorListSize	
dsNameCacheHitRate	dsNameCacheHitRate	
dsNotifyQueueSize	dsNotifyQueueSize	
dsSearchSuboperationsSec	dsSearchSuboperationsSec	
dsServerBindsSec	dsServerBindsSec	
dsServerNameTranslationsSec	dsServerNameTranslationsSec	
dsThreadsInUse	dsThreadsInUse	
ldapActiveThreads	ldapActiveThreads	
ldapBindTime	ldapBindTime	
ldapClientSessions	ldapClientSessions	
ldapClosedConnectionsSec	ldapClosedConnectionsSec	
ldapNewConnectionsSec	ldapNewConnectionsSec	
ldapNewSSLConnectionsSec	ldapNewSSLConnectionsSec	
ldapSearchesSec	ldapSearchesSec	
ldapSuccessfulBinds	ldapSuccessfulBinds	
ldapUdpOperationsSec	ldapUdpOperationsSec	
ldapWritesSec	ldapWritesSec	

#### 1.1.2. Graphs

**Table 2.3. DS Client Binds Per Second**

<b>Name</b>	<b>Type</b>	<b>Description</b>
dsClientBindsSec	DataPointGraphPoint	

**Table 2.4. DS Directory Reads Per Second**

Name	Type	Description
dsDirectoryReadsSec	DataPointGraphPoint	

**Table 2.5. DS Directory Searches Per Second**

Name	Type	Description
dsDirectorySearchesSec	DataPointGraphPoint	

**Table 2.6. DS Directory Writes Per Second**

Name	Type	Description
dsDirectoryWritesSec	DataPointGraphPoint	

**Table 2.7. DS Name Cache Hit Rate**

Name	Type	Description
dsNameCacheHitRate	DataPointGraphPoint	

**Table 2.8. DS Notify Queue Size**

Name	Type	Description
dsNotifyQueueSize	DataPointGraphPoint	

**Table 2.9. DS Search Sub-Operations Per Second**

Name	Type	Description
dsSearchSuboperationsSec	DataPointGraphPoint	

**Table 2.10. DS Server Binds Per Second**

Name	Type	Description
dsServerBindsSec	DataPointGraphPoint	

**Table 2.11. DS Server Name Translations Per Second**

Name	Type	Description
dsServerNameTranslationsSec	DataPointGraphPoint	

**Table 2.12. DS Threads In Use**

Name	Type	Description
dsThreadsInUse	DataPointGraphPoint	

**Table 2.13. LDAP Active Threads**

Name	Type	Description
ldapActiveThreads	DataPointGraphPoint	

**Table 2.14. LDAP Bind Time**

Name	Type	Description
ldapBindTime	DataPointGraphPoint	

**Table 2.15. LDAP Client Sessions**

Name	Type	Description
ldapClientSessions	DataPointGraphPoint	

**Table 2.16. LDAP Closed Connections Per Second**

Name	Type	Description
ldapClosedConnectionsSec	DataPointGraphPoint	

**Table 2.17. LDAP New Connections Per Second**

Name	Type	Description
ldapNewConnectionsSec	DataPointGraphPoint	

**Table 2.18. LDAP New SSL Connections Per Second**

Name	Type	Description
ldapNewSSLConnectionsSec	DataPointGraphPoint	

**Table 2.19. LDAP Searches Per Second**

Name	Type	Description
ldapSearchesSec	DataPointGraphPoint	

**Table 2.20. LDAP Successful Binds Per Second**

Name	Type	Description
ldapSuccessfulBinds	DataPointGraphPoint	

**Table 2.21. LDAP UDP Operations Per Second**

Name	Type	Description
ldapUdpOperationsSec	DataPointGraphPoint	

**Table 2.22. LDAP Writes Per Second**

Name	Type	Description
ldapWritesSec	DataPointGraphPoint	

### 1.1.3. Thresholds

**Table 2.23. Active Directory**

Name	Type	Description
ldapBindTimeCrit	MinMaxThreshold	
ldapBindTimeErr	MinMaxThreshold	
ldapBindTimeWarn	MinMaxThreshold	

## 1.2. Active Directory Performance Template

Performance monitoring for Microsoft Active Directory.

- `Devices/Server/Windows/WMI/Active Directory`

### 1.2.1. Data Points

**Table 2.24. Active Directory DataPoints**

Data Source	Data Point	Description
dsClientBindsSec	dsClientBindsSec	
dsDirectoryReadsSec	dsDirectoryReadsSec	
dsDirectorySearchesSec	dsDirectorySearchesSec	
dsDirectoryWritesSec	dsDirectoryWritesSec	
dsMonitorListSize	dsMonitorListSize	
dsNameCacheHitRate	dsNameCacheHitRate	
dsNotifyQueueSize	dsNotifyQueueSize	
dsSearchSuboperationsSec	dsSearchSuboperationsSec	
dsServerBindsSec	dsServerBindsSec	
dsServerNameTranslationsSec	dsServerNameTranslationsSec	
dsThreadsInUse	dsThreadsInUse	
kdcAsRequests	kdcAsRequests	
kdcTgsRequests	kdcTgsRequests	
kerberosAuthentications	kerberosAuthentications	
ldapActiveThreads	ldapActiveThreads	
ldapBindTime	ldapBindTime	
ldapClientSessions	ldapClientSessions	
ldapClosedConnectionsSec	ldapClosedConnectionsSec	
ldapNewConnectionsSec	ldapNewConnectionsSec	
ldapNewSSLConnectionsSec	ldapNewSSLConnectionsSec	
ldapSearchesSec	ldapSearchesSec	
ldapSuccessfulBinds	ldapSuccessfulBinds	
ldapUdpOperationsSec	ldapUdpOperationsSec	
ldapWritesSec	ldapWritesSec	
ntlmAuthentications	ntlmAuthentications	

### 1.2.2. Graphs

**Table 2.25. DS Client Binds Per Second**

Name	Type	Description
dsClientBindsSec	DataPointGraphPoint	

**Table 2.26. DS Directory Reads Per Second**

Name	Type	Description
dsDirectoryReadsSec	DataPointGraphPoint	

**Table 2.27. DS Directory Searches Per Second**

Name	Type	Description
dsDirectorySearchesSec	DataPointGraphPoint	

**Table 2.28. DS Directory Writes Per Second**

Name	Type	Description
dsDirectoryWritesSec	DataPointGraphPoint	

**Table 2.29. DS Name Cache Hit Rate**

Name	Type	Description
dsNameCacheHitRate	DataPointGraphPoint	

**Table 2.30. DS Notify Queue Size**

Name	Type	Description
dsNotifyQueueSize	DataPointGraphPoint	

**Table 2.31. DS Search Sub-Operations Per Second**

Name	Type	Description
dsSearchSuboperationsSec	DataPointGraphPoint	

**Table 2.32. DS Server Binds Per Second**

Name	Type	Description
dsServerBindsSec	DataPointGraphPoint	

**Table 2.33. DS Server Name Translations Per Second**

Name	Type	Description
dsServerNameTranslationsSec	DataPointGraphPoint	

**Table 2.34. DS Threads In Use**

Name	Type	Description
dsThreadsInUse	DataPointGraphPoint	

**Table 2.35. KDC AS Requests**

Name	Type	Description
kdcAsRequests	DataPointGraphPoint	

**Table 2.36. KDC TGS Requests**

Name	Type	Description
kdcTgsRequests	DataPointGraphPoint	

**Table 2.37. Kerberos Authentications Per Second**

Name	Type	Description
kerberosAuthentications	DataPointGraphPoint	

**Table 2.38. LDAP Active Threads**

Name	Type	Description
ldapActiveThreads	DataPointGraphPoint	



**Table 2.39. LDAP Bind Time**

Name	Type	Description
ldapBindTime	DataPointGraphPoint	

**Table 2.40. LDAP Client Sessions**

Name	Type	Description
ldapClientSessions	DataPointGraphPoint	

**Table 2.41. LDAP Closed Connections Per Second**

Name	Type	Description
ldapClosedConnectionsSec	DataPointGraphPoint	

**Table 2.42. LDAP New Connections Per Second**

Name	Type	Description
ldapNewConnectionsSec	DataPointGraphPoint	

**Table 2.43. LDAP New SSL Connections Per Second**

Name	Type	Description
ldapNewSSLConnectionsSec	DataPointGraphPoint	

**Table 2.44. LDAP Searches Per Second**

Name	Type	Description
ldapSearchesSec	DataPointGraphPoint	

**Table 2.45. LDAP Successful Binds Per Second**

Name	Type	Description
ldapSuccessfulBinds	DataPointGraphPoint	

**Table 2.46. LDAP UDP Operations Per Second**

Name	Type	Description
ldapUdpOperationsSec	DataPointGraphPoint	

**Table 2.47. LDAP Writes Per Second**

Name	Type	Description
ldapWritesSec	DataPointGraphPoint	

**Table 2.48. NTLM Authentications Per Second**

Name	Type	Description
ntlmAuthentications	DataPointGraphPoint	

### 1.2.3. Thresholds

**Table 2.49. Active Directory**

Name	Type	Description
ldapBindTimeCrit	MinMaxThreshold	

<b>Name</b>	<b>Type</b>	<b>Description</b>
ldapBindTimeErr	MinMaxThreshold	
ldapBindTimeWarn	MinMaxThreshold	

---

# Chapter 3. AixMonitor

**Table 3.1. AixMonitor Details**

<b>Version</b>	1.1.5
<b>Author</b>	Zenoss

## 1. Monitoring Template Information

### 1.1. Device Performance Template

Template for gathering performance data via SSH commands.

- `Devices/Server/SSH/AIX`

#### 1.1.1. Data Points

**Table 3.2. Device DataPoints**

<b>Data Source</b>	<b>Data Point</b>	<b>Description</b>
cpu	ssCpuIdle	This is taking the value of the id column of the table called by mpstat. Average percentage of time that CPUs were idle and the system did not have an outstanding disk I/O request.
cpu	ssCpuSystem	This is taking the value of the sy column of the table called by mpstat. Average percentage of CPU time executing in the system mode.
cpu	ssCpuUser	This is taking the value of the us column of the table called by mpstat. Average percentage of CPU time executing in the user mode.
cpu	ssCpuWait	This is taking the value of the wa column of the table called by mpstat. CPU idle time during which the system had outstanding disk/NFS I/O request(s).
cpu	ssRawContexts	This is taking the value of the ctxt column of the table called by mpstat. The ctxt stands for the sum of all contexts (stats which can be obtained by the mpstat -i command).
cpu	ssRawInterrupts	This is taking the value of the int column of the table called by mpstat. The int stands for the sum of all interrupts (stats which can be obtained by the mpstat -i command). The mpstat -i command will show a breakdown of what caused the interrupts
io	read	The is a counter of the value of the Kb_read value on the table produced by the iostat command.
io	written	The is a counter of the value of the Kb_wrtn value on the table produced by the iostat command.
mem	hrMemorySize	
mem	memAvailReal	This is taking the value of the fre column of the table called by vmstat. This indicates the size of the free list of memory.

Data Source	Data Point	Description
swap	percentUsed	Percent of Used swap from the table called by the lsps -s command.
uptime	laLoadInt1	This is the value of the system load averages for the past 1 minute obtained from the uptime command
uptime	laLoadInt15	This is the value of the system load averages for the past 15 minutes obtained by the uptime command
uptime	laLoadInt5	This is the value of the system load averages for the past 5 minutes obtained from the uptime command
uptime	sysUpTime	This is the value for how the long the system has been running, obtained from the uptime command

### 1.1.2. Graphs

**Table 3.3. CPU Utilization**

Name	Type	Description
ssCpuIdle	DataPointGraphPoint	
ssCpuSystem	DataPointGraphPoint	
ssCpuUser	DataPointGraphPoint	
ssCpuWait	DataPointGraphPoint	

**Table 3.4. IO**

Name	Type	Description
read	DataPointGraphPoint	
written	DataPointGraphPoint	

**Table 3.5. Load Average**

Name	Type	Description
high load	ThresholdGraphPoint	
laLoadInt1	DataPointGraphPoint	
laLoadInt15	DataPointGraphPoint	
laLoadInt5	DataPointGraphPoint	

**Table 3.6. Memory Utilization**

Name	Type	Description
percentMemoryUsed	DataPointGraphPoint	
percentSwapUsed	DataPointGraphPoint	

### 1.1.3. Thresholds

**Table 3.7. Device**

Name	Type	Description
CPU Utilization	MinMaxThreshold	When the value for cpu_ssCpuIdle gets below the default value of 2 an event is sent.

Name	Type	Description
high load	MinMaxThreshold	When the value for uptime_laLoadInt5 exceed the default value of 1200 an event is sent.

## 1.2. ethernetCsmacd Performance Template

Ethernet interface template for ZenPlugins with 75% utilization threshold

- Devices/Server/SSH/AIX

### 1.2.1. Data Points

**Table 3.8. ethernetCsmacd DataPoints**

Data Source	Data Point	Description
intf	ifInErrors	The received errors on the specified network interface.
intf	ifInPackets	The number of packets received on the specified network interface.
intf	ifOutErrors	The transmit errors on the specified network interface.
intf	ifOutPackets	The number of packets sent to the specified network interface.

### 1.2.2. Graphs

**Table 3.9. Errors**

Name	Type	Description
ifInErrors	DataPointGraphPoint	
ifOutErrors	DataPointGraphPoint	

**Table 3.10. Packets**

Name	Type	Description
ifInPackets	DataPointGraphPoint	
ifOutPackets	DataPointGraphPoint	

## 1.3. FileSystem Performance Template

Filesystem template

- Devices/Server/SSH/AIX

### 1.3.1. Data Points

**Table 3.11. FileSystem DataPoints**

Data Source	Data Point	Description
disk	availBlocks	This is the value of how many blocks are free on the disk as calculated from the total blocks minus the Used.

Data Source	Data Point	Description
disk	availableInodes	This is the value of how many Inodes are free on the disk as calculated from the total minus the Iused.
disk	percentInodesUsed	The percent of used Inodes on the filesystem
disk	usedBlocks	The amount of Used Blocks
disk	usedInodes	The number of used Inodes.

### 1.3.2. Graphs

**Table 3.12. Inode Utilization**

Name	Type	Description
percentInodesUsed	DataPointGraphPoint	

**Table 3.13. Utilization**

Name	Type	Description
high disk usage	ThresholdGraphPoint	
usedBlocks	DataPointGraphPoint	

### 1.3.3. Thresholds

**Table 3.14. FileSystem**

Name	Type	Description
high disk usage	MinMaxThreshold	When the value for disk_usedBlocks gets above the default percentage value of 90% an event is sent.

## 1.4. OSProcess Performance Template

- Devices/Server/SSH/AIX

### 1.4.1. Data Points

**Table 3.15. OSProcess DataPoints**

Data Source	Data Point	Description
ps	count	The value displays how long that process has been running.
ps	cpu	The value displays how much cpu that process is using.
ps	mem	The value displays how much memory that process is using.

### 1.4.2. Graphs

**Table 3.16. CPU Utilization**

Name	Type	Description
cpu	DataPointGraphPoint	

**Table 3.17. Memory**

<b>Name</b>	<b>Type</b>	<b>Description</b>
mem	DataPointGraphPoint	

**Table 3.18. Process Count**

<b>Name</b>	<b>Type</b>	<b>Description</b>
count	DataPointGraphPoint	

---

# Chapter 4. ApacheMonitor

**Table 4.1. ApacheMonitor Details**

<b>Version</b>	2.1.3
<b>Author</b>	Zenoss

## 1. Monitoring Template Information

### 1.1. Apache Performance Template

Apache metrics via mod\_status

- Devices/Server

#### 1.1.1. Data Points

**Table 4.2. Apache DataPoints**

<b>Data Source</b>	<b>Data Point</b>	<b>Description</b>
apache	bytesPerReq	The average number of bytes per request
apache	cpuLoad	The current percentage CPU used by each worker and in total by Apache
apache	slotDNSLookup	The number of DNSLookup's the server is currently performing
apache	slotKeepAlive	The number of KeepAlive connections being maintained by the server
apache	slotLogging	The number of connections being logged by the server
apache	slotOpen	The number of free connections on the server
apache	slotReadingRequest	The number of requests being read by the server
apache	slotSendingReply	The number of requests to which the server is currently responding
apache	slotWaiting	The amount of idle connections the server is maintaining.
apache	totalAccesses	The total number of accesses
apache	totalKBytes	The total number of bytes served

#### 1.1.2. Graphs

**Table 4.3. Apache - CPU Utilization**

<b>Name</b>	<b>Type</b>	<b>Description</b>
CPU over 90 percent	ThresholdGraphPoint	
cpuLoad	DataPointGraphPoint	

**Table 4.4. Apache - Requests**

<b>Name</b>	<b>Type</b>	<b>Description</b>
totalAccesses	DataPointGraphPoint	



**Table 4.5. Apache - Slot Usage**

Name	Type	Description
slotDNSLookup	DataPointGraphPoint	
slotKeepAlive	DataPointGraphPoint	
slotLogging	DataPointGraphPoint	
slotOpen	DataPointGraphPoint	
slotReadingRequest	DataPointGraphPoint	
slotSendingReply	DataPointGraphPoint	
slotWaiting	DataPointGraphPoint	

**Table 4.6. Apache - Throughput**

Name	Type	Description
totalKBytes	DataPointGraphPoint	

### 1.1.3. Thresholds

**Table 4.7. Apache**

Name	Type	Description
CPU over 90 percent	MinMaxThreshold	Alert if CPU is over 90 percent

## 2. Event Class Information

**Table 4.8. ApacheMonitor Event ClassInformation**

Path	Name	Type	Code?	Description
/App/Apache	Apache	Event Class	no	

---

# Chapter 5. BigIpMonitor

**Table 5.1. BigIpMonitor Details**

<b>Version</b>	2.3.1
<b>Author</b>	Zenoss

## 1. Monitoring Template Information

### 1.1. BigIpDevice Performance Template

F5 BIG-IP device level metrics

- `Devices/Network/BIG-IP`

#### 1.1.1. Data Points

**Table 5.2. BigIpDevice DataPoints**

<b>Data Source</b>	<b>Data Point</b>	<b>Description</b>
clientBytesIn	clientBytesIn	The number of bytes received by the system from client-side.
clientBytesOut	clientBytesOut	The number of bytes sent to client-side from the system.
clientCurConns	clientCurConns	The current connections from client-side to the system.
clientMaxConns	clientMaxConns	The maximum connections from client-side to the system.
clientPacketsIn	clientPacketsIn	The number of packets received by the system from client-side.
clientPacketsOut	clientPacketsOut	
connLimitExceeded	connLimitExceeded	
connPoolCurSize	connPoolCurSize	The number of currently idle connections in the pool.
connPoolMaxSize	connPoolMaxSize	The number of idle connections in the pool.
connectionMemoryErrors	connectionMemoryErrors	
cookiesDetected	cookiesDetected	
cookiesGenerated	cookiesGenerated	
droppedPacketRate	droppedPacketRate	
hostMemoryUsed	hostMemoryUsed	Memory used on host system
httpRequestRate	httpRequestRate	
hwClientBytesIn	hwClientBytesIn	The number of hardware accelerated bytes received
hwClientBytesOut	hwClientBytesOut	The number of hardware accelerated bytes sent to client-side from the system.
hwClientCurConns	hwClientCurConns	The current hardware accelerated connections from client-side to the system.
hwClientMaxConns	hwClientMaxConns	The maximum hardware accelerated connections from client-side to the system.

<b>Data Source</b>	<b>Data Point</b>	<b>Description</b>
hwClientPacketsIn	hwClientPacketsIn	The number of hardware accelerated packets received by the system from client-side.
hwClientPacketsOut	hwClientPacketsOut	The number of hardware accelerated packets sent to client-side from the system.
hwPartialCurConns	hwPartialCurConns	The current number of the partially hardware accelerated connections on the system.
hwServerBytesIn	hwServerBytesIn	The number of hardware accelerated bytes received by the system from server-side
hwServerBytesOut	hwServerBytesOut	The number of hardware accelerated bytes sent to server-side from the system.
hwServerCurConns	hwServerCurConns	The current hardware accelerated connections from server-side to the system.
hwServerMaxConns	hwServerMaxConns	The maximum hardware accelerated connections from server-side to the system.
hwServerPacketsIn	hwServerPacketsIn	The number of hardware accelerated packets received by the system from server-side.
hwServerPacketsOut	hwServerPacketsOut	The number of hardware accelerated packets sent to server-side from the system.
idleCycles	idleCycles	Traffic management CPU usage. The cycles spent polling with no traffic.
inErrorRate	inErrorRate	
licenseDeny	licenseDeny	
memoryUsed	memoryUsed	The total memory in use on the system.
noHandlerDeny	noHandlerDeny	
outErrorRate	outErrorRate	
serverBytesIn	serverBytesIn	
serverBytesOut	serverBytesOut	The number of bytes sent to server-side from the system.
serverCurConns	serverCurConns	The current connections from server-side to the system.
serverMaxConns	serverMaxConns	The maximum connections from server-side to the system.
serverPacketsIn	serverPacketsIn	The number of packets received by the system from server-side.
serverPacketsOut	serverPacketsOut	The number of packets sent to server-side from the system.
sleepCycles	sleepCycles	Traffic management CPU usage. The cycles yielded (uniprocessor only).
totalCycles	totalCycles	Traffic management CPU usage. The total cycles spent in traffic management.
virtServerNonSynDeny	virtServerNonSynDeny	

## 1.1.2. Graphs

**Table 5.3. Accelerated Connections**

Name	Type	Description
hwClientCurConns	DataPointGraphPoint	
hwClientMaxConns	DataPointGraphPoint	
hwPartialCurConns	DataPointGraphPoint	
hwServerCurConns	DataPointGraphPoint	
hwServerMaxConns	DataPointGraphPoint	

**Table 5.4. Accelerated Packet Rates**

Name	Type	Description
hwClientPacketsIn	DataPointGraphPoint	
hwClientPacketsOut	DataPointGraphPoint	
hwServerPacketsIn	DataPointGraphPoint	
hwServerPacketsOut	DataPointGraphPoint	

**Table 5.5. Accelerated Throughput**

Name	Type	Description
hwClientBytesIn	DataPointGraphPoint	
hwClientBytesOut	DataPointGraphPoint	
hwServerBytesIn	DataPointGraphPoint	
hwServerBytesOut	DataPointGraphPoint	

**Table 5.6. CPU Utilization**

Name	Type	Description
idleCycles	DataPointGraphPoint	
sleepCycles	DataPointGraphPoint	
totalCycles	DataPointGraphPoint	

**Table 5.7. Connection Failure Rates**

Name	Type	Description
connLimitExceeded	DataPointGraphPoint	
connectionMemoryErrors	DataPointGraphPoint	

**Table 5.8. Connection Pool**

Name	Type	Description
connPoolCurSize	DataPointGraphPoint	
connPoolMaxSize	DataPointGraphPoint	

**Table 5.9. Connections**

Name	Type	Description
clientCurConns	DataPointGraphPoint	
clientMaxConns	DataPointGraphPoint	

Name	Type	Description
serverCurConns	DataPointGraphPoint	
serverMaxConns	DataPointGraphPoint	

**Table 5.10. HTTP Rates**

Name	Type	Description
cookiesDetected	DataPointGraphPoint	
cookiesGenerated	DataPointGraphPoint	
httpRequestRate	DataPointGraphPoint	

**Table 5.11. Memory Utilization**

Name	Type	Description
hostMemoryUsed	DataPointGraphPoint	
memoryUsed	DataPointGraphPoint	

**Table 5.12. Packet Failure Rates**

Name	Type	Description
droppedPacketRate	DataPointGraphPoint	
inErrorRate	DataPointGraphPoint	
licenseDeny	DataPointGraphPoint	
noHandlerDeny	DataPointGraphPoint	
outErrorRate	DataPointGraphPoint	
virtServerNonSynDeny	DataPointGraphPoint	

**Table 5.13. Packet Rates**

Name	Type	Description
clientPacketsIn	DataPointGraphPoint	
clientPacketsOut	DataPointGraphPoint	
serverPacketsIn	DataPointGraphPoint	
serverPacketsOut	DataPointGraphPoint	

**Table 5.14. Throughput**

Name	Type	Description
clientBytesIn	DataPointGraphPoint	
clientBytesOut	DataPointGraphPoint	
serverBytesIn	DataPointGraphPoint	
serverBytesOut	DataPointGraphPoint	

### 1.1.3. Thresholds

**Table 5.15. BigIpDevice**

Name	Type	Description
free host memory	MinMaxThreshold	When the value for hostmemoryUsed_hostmemoryUsed gets above the default percentage value of 90% an event is sent.

Name	Type	Description
free memory	MinMaxThreshold	When the value for memoryUsed_memoryUsed gets above the default percentage value of 90% an event is sent.

## 1.2. CPU Performance Template

CPU temperature and fan speed

- Devices/Network/BIG-IP

### 1.2.1. Data Points

**Table 5.16. CPU DataPoints**

Data Source	Data Point	Description
rpm	rpm	The fan speed (in RPM) of the indexed CPU on the system.
temperature	celsius	The temperature of the indexed CPU on the system.

### 1.2.2. Thresholds

**Table 5.17. CPU**

Name	Type	Description
fan underspeed	MinMaxThreshold	This threshold monitors the value for the rpm_rpm DataPointi. When the value for rpm_rpm gets above the default percentage value of 3000 an event is sent.
overheat	MinMaxThreshold	This threshold monitors the value for the rpm_rpm DataPoint. When the value for rpm_rpm gets above the default percentage value of 3000 an event is sent.

## 1.3. Fan Performance Template

Fan speed

- Devices/Network/BIG-IP

### 1.3.1. Data Points

**Table 5.18. Fan DataPoints**

Data Source	Data Point	Description
rpm	rpm	The fan speed (in RPM) of the indexed CPU on the system.

### 1.3.2. Graphs

**Table 5.19. Fan Speed**

Name	Type	Description
fan underspeed	ThresholdGraphPoint	

Name	Type	Description
rpm	DataPointGraphPoint	

### 1.3.3. Thresholds

**Table 5.20. Fan**

Name	Type	Description
fan underspeed	MinMaxThreshold	This threshold monitors the value for the rpm_rpm DataPoint. When the value for rpm_rpm gets above the default percentage value of 3000 an event is sent.

## 1.4. LBPool Performance Template

- Devices/Network/BIG-IP

## 1.5. LBPoolMember Performance Template

- Devices/Network/BIG-IP

### 1.5.1. Data Points

**Table 5.21. LBPoolMember DataPoints**

Data Source	Data Point	Description
memberStatus	memberStatus	

## 1.6. LBPort Performance Template

- Devices/Network/BIG-IP

### 1.6.1. Data Points

**Table 5.22. LBPort DataPoints**

Data Source	Data Point	Description
bytesIn	bytesIn	
bytesOut	bytesOut	

### 1.6.2. Graphs

**Table 5.23. Throughput**

Name	Type	Description
bytesIn	DataPointGraphPoint	
bytesOut	DataPointGraphPoint	

## 1.7. LTMVirtualServer Performance Template

Metrics for each virtual server on a BIG-IP load balancer

- Devices/Network/BIG-IP

### 1.7.1. Data Points

**Table 5.24. LTMVirtualServer DataPoints**

Data Source	Data Point	Description
clientBytesIn	clientBytesIn	The number of bytes received from client side.
clientBytesOut	clientBytesOut	The number of bytes sent to client side.
clientCurConns	clientCurConns	The current connections from client side.
clientMaxConns	clientMaxConns	The maximum connections from client side.
clientPktsIn	clientPktsIn	The number of packets received from client side.
clientPktsOut	clientPktsOut	This takes the value of the clientPktsOut Data-Source.
clientTotConns	clientTotConns	The total connections from client side.
ephemeralBytesIn	ephemeralBytesIn	
ephemeralBytesOut	ephemeralBytesOut	
ephemeralCurConns	ephemeralCurConns	
ephemeralMaxConns	ephemeralMaxConns	
ephemeralPktsIn	ephemeralPktsIn	
ephemeralPktsOut	ephemeralPktsOut	
ephemeralTotConns	ephemeralTotConns	
hwAcceleratedBytesIn	hwAcceleratedBytesIn	
hwAcceleratedBytesOut	hwAcceleratedBytesOut	
hwAcceleratedCurConns	hwAcceleratedCurConns	
hwAcceleratedMaxConns	hwAcceleratedMaxConns	
hwAcceleratedPktsIn	hwAcceleratedPktsIn	
hwAcceleratedPktsOut	hwAcceleratedPktsOut	
hwAcceleratedTotConns	hwAcceleratedTotConns	
hwPartAcceleratedCurConns	hwPartAcceleratedCurConns	
maxConnDuration	maxConnDuration	Maximum Connection Duration (ms)
meanConnDuration	meanConnDuration	Average Connection Duration (ms)
minConnDuration	minConnDuration	Minimum Connection Duration (ms)
requestRate	requestRate	

### 1.7.2. Graphs

**Table 5.25. Connection Duration**

Name	Type	Description
maxConnDuration	DataPointGraphPoint	
meanConnDuration	DataPointGraphPoint	
minConnDuration	DataPointGraphPoint	

**Table 5.26. Connections**

Name	Type	Description
clientCurConns	DataPointGraphPoint	



Name	Type	Description
clientMaxConns	DataPointGraphPoint	
clientTotConns	DataPointGraphPoint	
ephemeralCurConns	DataPointGraphPoint	
ephemeralMaxConns	DataPointGraphPoint	
ephemeralTotConns	DataPointGraphPoint	
hwAcceleratedCurConns	DataPointGraphPoint	
hwAcceleratedMaxConns	DataPointGraphPoint	
hwAcceleratedTotConns	DataPointGraphPoint	
hwPartAcceleratedCurConns	DataPointGraphPoint	

**Table 5.27. Packets**

Name	Type	Description
clientPktsIn	DataPointGraphPoint	
clientPktsOut	DataPointGraphPoint	
ephemeralPktsIn	DataPointGraphPoint	
ephemeralPktsOut	DataPointGraphPoint	
hwAcceleratedPktsIn	DataPointGraphPoint	
hwAcceleratedPktsOut	DataPointGraphPoint	

**Table 5.28. Request Rate**

Name	Type	Description
requestRate	DataPointGraphPoint	

**Table 5.29. Throughput**

Name	Type	Description
clientBytesIn	DataPointGraphPoint	
clientBytesOut	DataPointGraphPoint	
ephemeralBytesIn	DataPointGraphPoint	
ephemeralBytesOut	DataPointGraphPoint	
hwAcceleratedBytesIn	DataPointGraphPoint	
hwAcceleratedBytesOut	DataPointGraphPoint	

## 1.8. TemperatureSensor Performance Template

Chassis temperatures

- `Devices/Network/BIG-IP`

### 1.8.1. Data Points

**Table 5.30. TemperatureSensor DataPoints**

Data Source	Data Point	Description
temperature	celsius	The chassis temperature (in Celsius) of the indexed sensor on the system.

## 1.8.2. Graphs

**Table 5.31. Temperature**

Name	Type	Description
celsius	DataPointGraphPoint	
overheat	ThresholdGraphPoint	

## 1.8.3. Thresholds

**Table 5.32. TemperatureSensor**

Name	Type	Description
overheat	MinMaxThreshold	This threshold monitors the value for the temperature_celsius DataPoint. When the value for temperature_celsius gets above the default percentage value of 38 an event is sent.

## 2. Event Class Information

**Table 5.33. BigIpMonitor Event ClassInformation**

Path	Name	Type	Code?	Description
/BIG-IP	BIG-IP	Event Class	no	
/BIG-IP/ instances/gtmd	gtmd	Mapping		
/BIG-IP/ instances/mcpd	mcpd	Mapping		
/BIG-IP/ in- stances/monitor_instance_down	monitor_instance_down	Mapping		
/BIG-IP/ in- stances/monitor_instance_up	monitor_instance_up	Mapping		
/BIG-IP/ in- stances/pool_member_down	pool_member_down	Mapping		
/BIG-IP/ in- stances/pool_member_up	pool_member_up	Mapping		
/BIG-IP/ in- stances/state_change_down	state_change_down	Mapping		
/BIG-IP/ in- stances/state_change_up	state_change_up	Mapping		
/BIG-IP/ in- stances/sync_group_joined	sync_group_joined	Mapping		
/BIG-IP/ in- stances/sync_group_left	sync_group_left	Mapping		

BigIpMonitor

---

<b>Path</b>	<b>Name</b>	<b>Type</b>	<b>Code?</b>	<b>Description</b>
/BIG-IP/ instances/tmm	tmm	Mapping		

---

# Chapter 6. BrocadeMonitor

**Table 6.1. BrocadeMonitor Details**

<b>Version</b>	2.0.5
<b>Author</b>	Zenoss
<b>Dependencies</b>	ZenPacks.zenoss.StorageBase >=1.0

## 1. Monitoring Template Information

### 1.1. FcPort Performance Template

Brocade fibre channel port values

- `Devices/Storage/Brocade`

#### 1.1.1. Data Points

**Table 6.2. FcPort DataPoints**

<b>Data Source</b>	<b>Data Point</b>	<b>Description</b>
adminStatus	adminStatus	The desired state of the FxPort.
c1Discards	c1Discards	The number of Class 1 frames discarded by this Fx-Port.
c1InFrames	c1InFrames	The number of Class 1 frames (other than Class 1 connect-request) received by this FxPort from its attached NxPort.
c1InOctets	c1InOctets	The number of Class 1 frame octets, including the frame delimiters, received by this FxPort from its attached NxPort.
c1OutFrames	c1OutFrames	The number of Class 1 frames (other than Class 1 connect-request) delivered through this FxPort to its attached NxPort.
c1OutOctets	c1OutOctets	The number of Class 1 frame octets, including the frame delimiters, delivered through this FxPort its attached NxPort.
c2Discards	c2Discards	The number of Class 2 frames discarded by this Fx-Port.
c2InFrames	c2InFrames	The number of Class 2 frames received by this Fx-Port from its attached NxPort.
c2InOctets	c2InOctets	The number of Class 2 frame octets, including the frame delimiters, received by this FxPort from its attached NxPort.
c2OutFrames	c2OutFrames	The number of Class 2 frames delivered through this FxPort to its attached NxPort.
c2OutOctets	c2OutOctets	The number of Class 2 frame octets, including the frame delimiters, delivered through this FxPort to its attached NxPort.
c3Discards	c3Discards	The number of Class 3 frames discarded by this Fx-Port.

Data Source	Data Point	Description
c3InFrames	c3InFrames	The number of Class 3 frames received by this FxPort from its attached NxPort.
c3InOctets	c3InOctets	The number of Class 3 frame octets, including the frame delimiters, received by this FxPort from its attached NxPort.
c3OutFrames	c3OutFrames	The number of Class 3 frames delivered through this FxPort to its attached NxPort.
c3OutOctets	c3OutOctets	The number of Class 3 frame octets, including the frame delimiters, delivered through this FxPort to its attached NxPort.
linkFailures	linkFailures	The number of link failures detected by this FxPort.
operStatus	operStatus	The current operational status of the FxPort.
sigLosses	sigLosses	The number of loss of signal detected by the FxPort.
syncLosses	syncLosses	The number of loss of synchronization detected by the FxPort.

### 1.1.2. Graphs

**Table 6.3. Data Throughput**

Name	Type	Description
c1InOctets	DataPointGraphPoint	
c1OutOctets	DataPointGraphPoint	
c2InOctets	DataPointGraphPoint	
c2OutOctets	DataPointGraphPoint	
c3InOctets	DataPointGraphPoint	
c3OutOctets	DataPointGraphPoint	

**Table 6.4. Discards**

Name	Type	Description
c1Discards	DataPointGraphPoint	
c2Discards	DataPointGraphPoint	
c3Discards	DataPointGraphPoint	

**Table 6.5. Errors**

Name	Type	Description
linkFailures	DataPointGraphPoint	
sigLosses	DataPointGraphPoint	
syncLosses	DataPointGraphPoint	

**Table 6.6. Frame Throughput**

Name	Type	Description
c1InFrames	DataPointGraphPoint	
c1OutFrames	DataPointGraphPoint	
c2InFrames	DataPointGraphPoint	

<b>Name</b>	<b>Type</b>	<b>Description</b>
c2OutFrames	DataPointGraphPoint	
c3InFrames	DataPointGraphPoint	
c3OutFrames	DataPointGraphPoint	

---

# Chapter 7. CheckPointMonitor

**Table 7.1. CheckPointMonitor Details**

<b>Version</b>	1.0.4
<b>Author</b>	Zenoss

## 1. Monitoring Template Information

### 1.1. CheckPointDevice Performance Template

Device metrics for Check Point firewalls.

- `Devices/Network/Check Point`

#### 1.1.1. Data Points

**Table 7.2. CheckPointDevice DataPoints**

<b>Data Source</b>	<b>Data Point</b>	<b>Description</b>
diskPercent	diskPercent	Percent of free space.
dtpsConnectedUsers	dtpsConnectedUsers	Connected users.
fwAccepted	fwAccepted	The number of accepted packets.
fwDropped	fwDropped	The number of dropped packets.
fwLogged	fwLogged	The number of logged packets.
fwNumConn	fwNumConn	Number of connections.
fwPeakNumConn	fwPeakNumConn	Peak number of connections.
fwRejected	fwRejected	The number of rejected packets.
memActiveReal	memActiveReal	Active real memory (32 bit)
memActiveVirtual	memActiveVirtual	Active virtual memory (32 bit)
procSysTime	procSysTime	Processor system time.
procUsage	procUsage	Processor usage.
procUsrTime	procUsrTime	Processor user time.

#### 1.1.2. Graphs

**Table 7.3. CPU Utilization**

<b>Name</b>	<b>Type</b>	<b>Description</b>
CPU utilization	ThresholdGraphPoint	
procSysTime	DataPointGraphPoint	
procUsrTime	DataPointGraphPoint	

**Table 7.4. Disk Utilization**

<b>Name</b>	<b>Type</b>	<b>Description</b>
disk utilization	ThresholdGraphPoint	
diskPercent	DataPointGraphPoint	

**Table 7.5. Firewall - Packet Handling**

Name	Type	Description
fwAccepted	DataPointGraphPoint	
fwDropped	DataPointGraphPoint	
fwLogged	DataPointGraphPoint	
fwRejected	DataPointGraphPoint	

**Table 7.6. Firewall - Simultaneous Connections**

Name	Type	Description
fwNumConn	DataPointGraphPoint	
fwPeakNumConn	DataPointGraphPoint	

**Table 7.7. Memory Utilization**

Name	Type	Description
memActiveReal	DataPointGraphPoint	
memActiveVirtual	DataPointGraphPoint	
memory utilization	ThresholdGraphPoint	
swap utilization	ThresholdGraphPoint	

**Table 7.8. Policy Server - Users**

Name	Type	Description
dtpsConnectedUsers	DataPointGraphPoint	
licensed users	ThresholdGraphPoint	

### 1.1.3. Thresholds

**Table 7.9. CheckPointDevice**

Name	Type	Description
CPU utilization	MinMaxThreshold	This threshold monitors the value for the procUsage_procUsage DataPoint and when the value for gets above the default percentage value of 95 an event is sent.
disk utilization	MinMaxThreshold	This threshold monitors the value for the diskPercent_diskPercent DataPoint and when the value is above the default percentage value of 95 an event is sent.
licensed users	MinMaxThreshold	This threshold monitors the value for the dtpsConnectedUsers_dtpsConnectedUsers DataPoint and when the value gets above the default percentage value an event is sent.
memory utilization	MinMaxThreshold	This threshold monitors the value for the memActiveReal_memActiveReal DataPoint and when the value gets above the default percentage value of 90 an event is sent.
swap utilization	MinMaxThreshold	This threshold monitors the value for the memActiveVirtual_memActiveVirtual DataPoint



Name	Type	Description
		and when the value gets above the default percentage value of 50 an event is sent.

## 1.2. FileSystem Performance Template

File system template

- Devices/Network/Check Point

### 1.2.1. Data Points

**Table 7.10. FileSystem DataPoints**

Data Source	Data Point	Description
usedBlocks	usedBlocks	

### 1.2.2. Graphs

**Table 7.11. Utilization**

Name	Type	Description
low disk	ThresholdGraphPoint	
usedBlocks	DataPointGraphPoint	

### 1.2.3. Thresholds

**Table 7.12. FileSystem**

Name	Type	Description
low disk	MinMaxThreshold	

## 2. Event Class Information

**Table 7.13. CheckPointMonitor Event ClassInformation**

Path	Name	Type	Code?	Description
/Status/HA	HA	Event Class	no	
/Status/VPN	VPN	Event Class	no	

---

# Chapter 8. CiscoMonitor

**Table 8.1. CiscoMonitor Details**

<b>Version</b>	3.0.3
<b>Author</b>	Zenoss
<b>Dependencies</b>	ZenPacks.zenoss.EnterpriseReports

## 1. Monitoring Template Information

### 1.1. ISDN Performance Template

B-Channel Utilization for an Interface.

- Devices

#### 1.1.1. Data Points

**Table 8.2. ISDN DataPoints**

<b>Data Source</b>	<b>Data Point</b>	<b>Description</b>
isdn_interface	activeCount	The amount of blocks used on the disk.

#### 1.1.2. Graphs

**Table 8.3. Bearer Channel Utilization**

<b>Name</b>	<b>Type</b>	<b>Description</b>
interface_activeCount	DataPointGraphPoint	
nearing saturation	ThresholdGraphPoint	

#### 1.1.3. Thresholds

**Table 8.4. ISDN**

<b>Name</b>	<b>Type</b>	<b>Description</b>
nearing saturation	MinMaxThreshold	An event is sent when the disk usage exceeds the default value of 90 percent.

### 1.2. ISDN Device Performance Template

B-Channel Utilization for a Device

- Devices

#### 1.2.1. Data Points

**Table 8.5. ISDN Device DataPoints**

<b>Data Source</b>	<b>Data Point</b>	<b>Description</b>
isdn	activeCount	

Data Source	Data Point	Description
isdn	totalCount	

## 1.2.2. Graphs

**Table 8.6. ISDN - Bearer Channels**

Name	Type	Description
activeCount	DataPointGraphPoint	
totalCount	DataPointGraphPoint	

## 1.3. CiscoDS1 Performance Template

Active DS0 monitoring for individual DS1s.

- `Devices/Network/Cisco`

### 1.3.1. Data Points

**Table 8.7. CiscoDS1 DataPoints**

Data Source	Data Point	Description
activeDS0s	activeDS0s	
highActiveDS0s	highActiveDS0s	

### 1.3.2. Graphs

**Table 8.8. Active DS0s**

Name	Type	Description
Current	DataPointGraphPoint	
High	DataPointGraphPoint	

## 1.4. Device Performance Template

Cisco template that collects cpu and free memory. Has CPU threshold at 90%

- `Devices/Network/Cisco`

### 1.4.1. Data Points

**Table 8.9. Device DataPoints**

Data Source	Data Point	Description
cpu5min	cpu5min	This data source uses the avgBusy5 object. This object is the 5 minute exponentially-decayed moving average of the CPU busy percentage.
mem5minFree	mem5minFree	This data source uses the ciscoMemoryPoolFree object. This object indicates the number of bytes from the memory pool that are currently unused on the managed device.



Data Source	Data Point	Description
ifInErrors	ifInErrors	For packet-oriented interfaces, the number of inbound packets that contained errors preventing them from being deliverable to a higher-layer protocol. For character-oriented or fixed-length interfaces, the number of inbound transmission units that contained errors preventing them from being deliverable to a higher-layer protocol. This object is a 64-bit version of ifInErrors.
ifOutErrors	ifOutErrors	For packet-oriented interfaces, the number of outbound packets that could not be transmitted because of errors. For character-oriented or fixed-length interfaces, the number of outbound transmission units that could not be transmitted because of errors. This object is a 64-bit version of ifOutErrors.

## 1.5.2. Graphs

**Table 8.14. Errors**

Name	Type	Description
ifInErrors	DataPointGraphPoint	
ifOutErrors	DataPointGraphPoint	

**Table 8.15. Packets**

Name	Type	Description
ifHCInUcastPkts	DataPointGraphPoint	
ifHCOUcastPkts	DataPointGraphPoint	

**Table 8.16. Throughput**

Name	Type	Description
ifHCInOctets	DataPointGraphPoint	
ifHCOOctets	DataPointGraphPoint	

## 1.5.3. Thresholds

**Table 8.17. ethernetCsmacd**

Name	Type	Description
errors	MinMaxThreshold	This threshold uses the ifInErrors_ifInErrors and ifOutErrors_ifOutErrors DataPoints to determine the errors. When there is an error threshold an event is sent.
high utilization	MinMaxThreshold	This threshold uses the ifHCInOctets_ifHCInOctets and ifHCOOctets_ifHCOOctets DataPoints to determine the utilization percentage.

## 1.6. ppp Performance Template

Cisco Serial interface metrics

- `Devices/Network/Cisco`

### 1.6.1. Data Points

**Table 8.18. ppp DataPoints**

Data Source	Data Point	Description
ifInErrors	ifInErrors	The number of inbound packets that contained errors preventing them from being deliverable to a higher-layer protocol.
ifInOctets	ifInOctets	The total number of octets received on the interface, including framing characters.
ifInUcastPackets	ifInUcastPackets	The number of subnetwork-unicast packets delivered to a higher-layer protocol.
ifOperStatus	ifOperStatus	The current operational state of the interface.
ifOutErrors	ifOutErrors	The number of outbound packets that could not be transmitted because of errors.
ifOutOctets	ifOutOctets	The total number of octets transmitted out of the interface, including framing characters.
ifOutUcastPackets	ifOutUcastPackets	The total number of packets that higher-level protocols requested be transmitted to a subnetwork-unicast address, including those that were discarded or not sent.

### 1.6.2. Graphs

**Table 8.19. Errors**

Name	Type	Description
ifInErrors	DataPointGraphPoint	
ifOutErrors	DataPointGraphPoint	

**Table 8.20. Packets**

Name	Type	Description
ifInUcastPackets	DataPointGraphPoint	
ifOutUcastPackets	DataPointGraphPoint	

**Table 8.21. Throughput**

Name	Type	Description
Utilization 75 perc	ThresholdGraphPoint	
ifInOctets	DataPointGraphPoint	
ifOutOctets	DataPointGraphPoint	

### 1.6.3. Thresholds

**Table 8.22. ppp**

Name	Type	Description
high utilization	MinMaxThreshold	This threshold uses the ifHCInOctets_ifHCInOctets and ifHCOctets_ifHCOctets DataPoints to determine the utilization percentage.

## 1.7. propPointToPointSerial Performance Template

Cisco Serial interface metrics

- Devices/Network/Cisco

### 1.7.1. Data Points

**Table 8.23. propPointToPointSerial DataPoints**

Data Source	Data Point	Description
ifInErrors	ifInErrors	For packet-oriented interfaces, the number of inbound packets that contained errors preventing them from being deliverable to a higher-layer protocol. For character-oriented or fixed-length interfaces, the number of inbound transmission units that contained errors preventing them from being deliverable to a higher-layer protocol. This object is a 64-bit version of ifInErrors.
ifInOctets	ifInOctets	The total number of octets received on the interface, including framing characters.
ifInUcastPackets	ifInUcastPackets	The number of subnetwork-unicast packets delivered to a higher-layer protocol.
ifOperStatus	ifOperStatus	The current operational state of the interface.
ifOutErrors	ifOutErrors	The number of outbound packets that could not be transmitted because of errors.
ifOutOctets	ifOutOctets	The total number of octets transmitted out of the interface, including framing characters.
ifOutUcastPackets	ifOutUcastPackets	The total number of packets that higher-level protocols requested be transmitted to a subnetwork-unicast address, including those that were discarded or not sent.

### 1.7.2. Graphs

**Table 8.24. Errors**

Name	Type	Description
ifInErrors	DataPointGraphPoint	
ifOutErrors	DataPointGraphPoint	

**Table 8.25. Packets**

Name	Type	Description
ifInUcastPackets	DataPointGraphPoint	
ifOutUcastPackets	DataPointGraphPoint	

**Table 8.26. Throughput**

Name	Type	Description
Utilization 75 perc	ThresholdGraphPoint	
ifInOctets	DataPointGraphPoint	
ifOutOctets	DataPointGraphPoint	

### 1.7.3. Thresholds

**Table 8.27. propPointToPointSerial**

Name	Type	Description
high utilization	MinMaxThreshold	This threshold uses the ifHCInOctets_ifHCInOctets and ifHCOctets_ifHCOctets DataPoints to determine the utilization percentage.

## 1.8. propVirtual Performance Template

64-bit interface counters without errors. Requires SNMPv2c.

- Devices/Network/Cisco

### 1.8.1. Data Points

**Table 8.28. propVirtual DataPoints**

Data Source	Data Point	Description
ifHCInOctets	ifHCInOctets	The total number of octets received on the interface, including framing characters. This object is a 64-bit version of ifInOctets.
ifHCInUcastPkts	ifHCInUcastPkts	The number of packets, delivered by this sub-layer to a higher (sub-)layer, which were not addressed to a multicast or broadcast address at this sub-layer. This object is a 64-bit version of ifInUcastPkts
ifHCOctets	ifHCOctets	The total number of octets transmitted out of the interface, including framing characters. This object is a 64-bit version of ifHCOctets.
ifHCOctetsUcastPkts	ifHCOctetsUcastPkts	The number of subnetwork-unicast packets delivered to a higher-layer protocol.

### 1.8.2. Graphs

**Table 8.29. Packets**

Name	Type	Description
ifHCInUcastPkts	DataPointGraphPoint	
ifHCOctetsUcastPkts	DataPointGraphPoint	

**Table 8.30. Throughput**

Name	Type	Description
ifHCInOctets	DataPointGraphPoint	
ifHCOctets	DataPointGraphPoint	

### 1.8.3. Thresholds

**Table 8.31. propVirtual**

Name	Type	Description
high utilization	MinMaxThreshold	This threshold uses the ifHCInOctets_ifHCInOctets and ifHCOctets_ifHCOctets DataPoints to determine the utilization percentage.



## 1.9. RTTProbeGeneric Performance Template

Metrics from CISCO-RTTMON-MIB, specifically for probes using rttMonLatestRttOperTable

- Devices/Network/Cisco

### 1.9.1. Data Points

**Table 8.32. RTTProbeGeneric DataPoints**

Data Source	Data Point	Description
operSense	operSense	A sense code for the completion status of the latest RTT operation.
rttMonLatestRttOperTable	rttMonLatestRttOperTable	The completion time of the latest RTT operation successfully completed.

### 1.9.2. Graphs

**Table 8.33. Round Trip**

Name	Type	Description
rttMonLatestRttOperTable	DataPointGraphPoint	

## 1.10. RTTProbeICMPJitter Performance Template

This template provides stats, for ICMP Jitter rrtType probes.

- Devices/Network/Cisco

### 1.10.1. Data Points

**Table 8.34. RTTProbeICMPJitter DataPoints**

Data Source	Data Point	Description
rttMonLatestIcmpJitterAvgJitter	rttMonLatestIcmpJitterAvgJitter	The average of positive and negative jitter values in Source-to-Destination and Destination-to-Source direction.
rttMonLatestIcmpJitterNumOW	rttMonLatestIcmpJitterNumOW	The number of successful one way trip time measurements.
rttMonLatestIcmpJitterNumRTT	rttMonLatestIcmpJitterNumRTT	The number of RTT's that were successfully measured.
rttMonLatestIcmpJitterPktLoss	rttMonLatestIcmpJitterPktLoss	The number of packets lost.

### 1.10.2. Graphs

**Table 8.35. Jitter**

Name	Type	Description
rttMonLatestIcmpJitterAvgJitter	DataPointGraphPoint	

**Table 8.36. Packet Loss**

Name	Type	Description
rttMonLatestIcmpJitterPktLoss	DataPointGraphPoint	

**Table 8.37. Success Stats**

Name	Type	Description
rttMonLatestIcmpJitterNumOW	DataPointGraphPoint	
rttMonLatestIcmpJitterNumRTT	DataPointGraphPoint	

## 1.11. RTTProbeJitter Performance Template

Jitter metrics from CISCO-RTTMON-MIB

- Devices/Network/Cisco

### 1.11.1. Data Points

**Table 8.38. RTTProbeJitter DataPoints**

Data Source	Data Point	Description
echoNumPackets	echoNumPackets	This uses the rttMonEchoAdminNumPackets object. This value represents the number of packets that need to be transmitted. This value is currently used for Jitter probe. This object is applicable to jitter probe only.
jitterAverage	avgIn	Averaged input jitter
jitterAverage	avgJitter	The jitter ratio of avgIn / avgOut
jitterAverage	avgOut	Averaged output jitter
jitterNumRTT	jitterNumRTT	This uses the rttMonLatestJitterOperNumOfRTT object. The number of RTT's that were successfully measured.
jitterPktLossDS	jitterPktLossDS	This uses the rttMonLatestJitterOperPacketLossDS object. It is the number of packets lost when sent from destination to source.
jitterPktLossSD	jitterPktLossSD	This uses the rttMonLatestJitterOperPacketLossSD object. The number of packets lost when sent from source to destination.
jitterRTTSum	jitterRTTSum	This uses the rttMonLatestJitterOperRTTSum object. The sum of Jitter RTT's that are successfully measured (low order 32 bits).
normalizedPacketLoss	avgLoss	Normalized loss of input and output packets
normalizedPacketLoss	pctLossIn	Averaged input packet loss
normalizedPacketLoss	pctLossOut	Averaged output packet loss
operSense	operSense	This uses the rttMonLatestRttOperSense object. A sense code for the completion status of the latest RTT operation.
rttMonLatestJitterOperMOS	rttMonLatestJitterOperMOS	The MOS value for the latest jitter operation in hundreds.
rttMonLatestJitterOperMaxOfNegativesDS	rttMonLatestJitterOperMaxOfNegativesDS	The maximum of all negative jitter values from packets sent from destination to source.
rttMonLatestJitterOperMaxOfNegativesSD	rttMonLatestJitterOperMaxOfNegativesSD	The maximum of absolute values of all negative jitter values from packets sent from source to destination.
rttMonLatestJitterOperMaxOfPositivesDS	rttMonLatestJitterOperMaxOfPositivesDS	The maximum of all positive jitter values from packets sent from destination to source.

Data Source	Data Point	Description
rttMonLatestJitterOperMaxOfPositivesSD	rttMonLatestJitterOperMaxOfPositivesSD	The maximum of all positive jitter values from packets sent from source to destination.
rttMonLatestJitterOperMinOfNegativesDS	rttMonLatestJitterOperMinOfNegativesDS	The minimum of all negative jitter values from packets sent from destination to source.
rttMonLatestJitterOperMinOfNegativesSD	rttMonLatestJitterOperMinOfNegativesSD	The minimum of absolute values of all negative jitter values from packets sent from source to destination.
rttMonLatestJitterOperMinOfPositivesDS	rttMonLatestJitterOperMinOfPositivesDS	The minimum of all positive jitter values from packets sent from destination to source.
rttMonLatestJitterOperMinOfPositivesSD	rttMonLatestJitterOperMinOfPositivesSD	The minimum of all positive jitter values from packets sent from source to destination.

### 1.11.2. Graphs

**Table 8.39. Average Jitter**

Name	Type	Description
rttMonLatestJitterOperMaxOfNegativesDS	DataPointGraphPoint	
rttMonLatestJitterOperMaxOfNegativesSD	DataPointGraphPoint	
rttMonLatestJitterOperMaxOfPositivesDS	DataPointGraphPoint	
rttMonLatestJitterOperMaxOfPositivesSD	DataPointGraphPoint	
rttMonLatestJitterOperMinOfNegativesDS	DataPointGraphPoint	
rttMonLatestJitterOperMinOfNegativesSD	DataPointGraphPoint	
rttMonLatestJitterOperMinOfPositivesDS	DataPointGraphPoint	
rttMonLatestJitterOperMinOfPositivesSD	DataPointGraphPoint	

**Table 8.40. MOS Score**

Name	Type	Description
rttMonLatestJitterOperMOS	DataPointGraphPoint	

**Table 8.41. Normalized Jitter**

Name	Type	Description
Averaged Input Jitter	DataPointGraphPoint	
Averaged Input divided by Output Jitter	DataPointGraphPoint	
Averaged Output Jitter	DataPointGraphPoint	

**Table 8.42. Normalized Packet Loss**

Name	Type	Description
Average Packet Loss of Input divided by Output	DataPointGraphPoint	
Input Packet Loss Percent	DataPointGraphPoint	
Output Packet Loss Percent	DataPointGraphPoint	

**Table 8.43. Packet Loss**

Name	Type	Description
echoNumPackets	DataPointGraphPoint	
jitterPktLossDS	DataPointGraphPoint	
jitterPktLossSD	DataPointGraphPoint	

**Table 8.44. Round-Trip Time**

Name	Type	Description
jitterNumRTT	DataPointGraphPoint	
jitterRTTSum	DataPointGraphPoint	

### 1.11.3. Thresholds

**Table 8.45. RTTProbeJitter**

Name	Type	Description
MaxJitter	MinMaxThreshold	
NormalizedJitter	MinMaxThreshold	
NormalizedPacketLoss	MinMaxThreshold	

## 1.12. SLBVirtualServer Performance Template

Virtual server metrics from CISCO-SLB-MIB

- [Devices/Network/Cisco](#)

### 1.12.1. Data Points

**Table 8.46. SLBVirtualServer DataPoints**

Data Source	Data Point	Description
connections	connections	This reports the total amount of connections to the server.
currentConnections	currentConnections	This reports the amount of current connections to the server.

### 1.12.2. Graphs

**Table 8.47. Connections**

Name	Type	Description
currentConnections	DataPointGraphPoint	

**Table 8.48. Connections per Second**

Name	Type	Description
connections	DataPointGraphPoint	

## 1.13. Device Performance Template

Basic template that only collects sysUpTime.

- Devices/Network/Cisco/ACE

### 1.13.1. Data Points

**Table 8.49. Device DataPoints**

Data Source	Data Point	Description
sysUpTime	sysUpTime	The length of time the system has been running.

## 1.14. Device Performance Template

Cisco template that collects cpu and free memory. Has CPU threshold at 90%

- Devices/Network/Cisco/ASA

### 1.14.1. Data Points

**Table 8.50. Device DataPoints**

Data Source	Data Point	Description
cpu5min	cpu5min	This object is the 5 minute exponentially-decayed moving average of the CPU busy percentage.
mem5minFree	mem5minFree	The number of bytes from the memory pool that are currently unused on the managed device.
sysUpTime	sysUpTime	The length of time the system has been running.

### 1.14.2. Graphs

**Table 8.51. CPU Utilization**

Name	Type	Description
CPU	ThresholdGraphPoint	
cpu5min	DataPointGraphPoint	

**Table 8.52. Free Memory**

Name	Type	Description
mem5minFree	DataPointGraphPoint	

### 1.14.3. Thresholds

**Table 8.53. Device**

Name	Type	Description
CPU	MinMaxThreshold	

## 1.15. CiscoCodec Performance Template

Codec level metrics for Cisco Telepresence.

- `Devices/Network/Cisco/Codec`

### 1.15.1. Data Points

**Table 8.54. CiscoCodec DataPoints**

Data Source	Data Point	Description
overallCallTime	overallCallTime	This object specifies elapsed time of calls since Telepresence system was first in service
overallCalls	overallCalls	This object specifies total number of calls since Telepresence system was first in service.
sysUpTime	sysUpTime	The length of time the system has been running.

### 1.15.2. Graphs

**Table 8.55. In Use**

Name	Type	Description
overallCallTime	DataPointGraphPoint	

## 1.16. CiscoTPPeripheral Performance Template

Per-peripheral monitoring for Cisco Telepresence codecs.

- `Devices/Network/Cisco/Codec`

### 1.16.1. Data Points

**Table 8.56. CiscoTPPeripheral DataPoints**

Data Source	Data Point	Description
peripheralStatus	peripheralStatus	This object specifies a peripheral status.

### 1.16.2. Graphs

**Table 8.57. Availability**

Name	Type	Description
peripheralStatus	DataPointGraphPoint	

### 1.16.3. Thresholds

**Table 8.58. CiscoTPPeripheral**

Name	Type	Description
peripheralError	MinMaxThreshold	

## 1.17. Device Performance Template

Collect CPU and memory usage over IDIOM

- Devices/Network/Cisco/IDS

### 1.17.1. Data Points

**Table 8.59. Device DataPoints**

Data Source	Data Point	Description
device	cpuUsage	
device	memoryUsage	

### 1.17.2. Graphs

**Table 8.60. CPU Utilization**

Name	Type	Description
CPU Usage	DataPointGraphPoint	
High CPU Utilization	ThresholdGraphPoint	

**Table 8.61. Memory Utilization**

Name	Type	Description
High Memory Utilization	ThresholdGraphPoint	
Memory Usage	DataPointGraphPoint	

### 1.17.3. Thresholds

**Table 8.62. Device**

Name	Type	Description
CPU	MinMaxThreshold	
Memory	MinMaxThreshold	

## 1.18. ethernetCsmacd Performance Template

Standard ethernet interface template with 75% utilization threshold

- Devices/Network/Cisco/IDS

### 1.18.1. Data Points

**Table 8.63. ethernetCsmacd DataPoints**

Data Source	Data Point	Description
ifTraffic	rxCount	The number of active calls on this interface
ifTraffic	txCount	

### 1.18.2. Graphs

**Table 8.64. Throughput**

Name	Type	Description
rxCount	DataPointGraphPoint	

Name	Type	Description
txCount	DataPointGraphPoint	

## 1.19. FileSystem Performance Template

- Devices/Network/Cisco/IDS

### 1.19.1. Data Points

**Table 8.65. FileSystem DataPoints**

Data Source	Data Point	Description
check_idiom_filesystems	usedBlocks	The number of active calls on this interface

### 1.19.2. Graphs

**Table 8.66. Utilization**

Name	Type	Description
Filesystem Usage	DataPointGraphPoint	
High Filesystem Utilization	ThresholdGraphPoint	

### 1.19.3. Thresholds

**Table 8.67. FileSystem**

Name	Type	Description
high disk usage	MinMaxThreshold	This threshold uses the activecount DataPoint. An event is sent when the default value of 4 is exceeded.

## 1.20. Device Performance Template

Cisco Nexus template that collects CPU and memory. 90% CPU and memory thresholds.

- Devices/Network/Cisco/Nexus

### 1.20.1. Data Points

**Table 8.68. Device DataPoints**

Data Source	Data Point	Description
cpmCPUTotal5minRev	cpmCPUTotal5minRev	
cseSysMemoryUtilization	cseSysMemoryUtilization	Percentage of CPU used.
sysUpTime	sysUpTime	

### 1.20.2. Graphs

**Table 8.69. CPU Utilization**

Name	Type	Description
CPU	ThresholdGraphPoint	



Name	Type	Description
cpmCPUTotal5minRev	DataPointGraphPoint	

**Table 8.70. Memory Utilization**

Name	Type	Description
cseSysMemoryUtilization	DataPointGraphPoint	
memory	ThresholdGraphPoint	

**1.20.3. Thresholds****Table 8.71. Device**

Name	Type	Description
CPU	MinMaxThreshold	When the value gets above the default percentage value of 90% an event is sent.
memory	MinMaxThreshold	When the value gets above the default value of 90% an event is sent.

**2. Event Class Information****Table 8.72. CiscoMonitor Event ClassInformation**

Path	Name	Type	Code?	Description
/Status/CiscoTPPeripheral	CiscoTPPeripheral	Event Class	yes	

---

# Chapter 9. CiscoUCS

**Table 9.1. CiscoUCS Details**

<b>Version</b>	1.6.0
<b>Author</b>	Zenoss
<b>Dependencies</b>	ZenPacks.zenoss.DynamicView

## 1. Monitoring Template Information

### 1.1. Device Performance Template

Basic template that only collects sysUpTime from a Cisco UCS device.

- `Devices/CiscoUCS`

#### 1.1.1. Data Points

**Table 9.2. Device DataPoints**

Data Source	Data Point	Description
sysUpTime	sysUpTime	

### 1.2. UCSCChassis Performance Template

Collects performance statistics on equipment chassis in a Cisco UCS device.

- `Devices/CiscoUCS`

#### 1.2.1. Data Points

**Table 9.3. UCSCChassis DataPoints**

Data Source	Data Point	Description
equipmentChassisStats	inputPower	
equipmentChassisStats	outputPower	

#### 1.2.2. Graphs

**Table 9.4. Power**

Name	Type	Description
Input	DataPointGraphPoint	
Output	DataPointGraphPoint	

### 1.3. UCSEthPort Performance Template

Collects performance statistics on network element Ethernet ports in a Cisco UCS device.

- `Devices/CiscoUCS`

### 1.3.1. Data Points

**Table 9.5. UCSEthPort DataPoints**

Data Source	Data Point	Description
etherErrStats	align	
etherErrStats	deferredTx	
etherErrStats	fcs	
etherErrStats	intMacRx	
etherErrStats	intMacTx	
etherErrStats	outDiscard	
etherErrStats	rcv	
etherErrStats	underSize	
etherErrStats	xmit	
etherLossStats	SQETest	
etherLossStats	carrierSense	
etherLossStats	excessCollision	
etherLossStats	giants	
etherLossStats	lateCollision	
etherLossStats	multiCollision	
etherLossStats	singleCollision	
etherLossStats	symbol	
etherPauseStats	recvPause	
etherPauseStats	resets	
etherPauseStats	xmitPause	
etherRxStats	broadcastPacketsRx	
etherRxStats	jumboPacketsRx	
etherRxStats	multicastPacketsRx	
etherRxStats	totalBytesRx	
etherRxStats	totalPacketsRx	
etherRxStats	unicastPacketsRx	
etherTxStats	broadcastPacketsTx	
etherTxStats	jumboPacketsTx	
etherTxStats	multicastPacketsTx	
etherTxStats	totalBytesTx	
etherTxStats	totalPacketsTx	
etherTxStats	unicastPacketsTx	

### 1.3.2. Graphs

**Table 9.6. Errors**

Name	Type	Description
Align	DataPointGraphPoint	
Deferred Tx	DataPointGraphPoint	

Name	Type	Description
FCS	DataPointGraphPoint	
Int Mac Rx	DataPointGraphPoint	
Int Mac Tx	DataPointGraphPoint	
Out Discard	DataPointGraphPoint	
Receive	DataPointGraphPoint	
Transmit	DataPointGraphPoint	
Under Size	DataPointGraphPoint	

**Table 9.7. Loss Stats**

Name	Type	Description
Carrier Sense	DataPointGraphPoint	
Excess Collision	DataPointGraphPoint	
Giants	DataPointGraphPoint	
Late Collision	DataPointGraphPoint	
Multi Collision	DataPointGraphPoint	
Single Collision	DataPointGraphPoint	

**Table 9.8. Pause Stats**

Name	Type	Description
Receive	DataPointGraphPoint	
Resets	DataPointGraphPoint	
Transmit	DataPointGraphPoint	

**Table 9.9. Received Packets**

Name	Type	Description
Broadcast	DataPointGraphPoint	
Jumbo	DataPointGraphPoint	
Multicast	DataPointGraphPoint	
Total	DataPointGraphPoint	
Unicast	DataPointGraphPoint	

**Table 9.10. Sent Packets**

Name	Type	Description
Broadcast	DataPointGraphPoint	
Jumbo	DataPointGraphPoint	
Multicast	DataPointGraphPoint	
Total	DataPointGraphPoint	
Unicast	DataPointGraphPoint	

**Table 9.11. Throughput**

Name	Type	Description
Received	DataPointGraphPoint	

Name	Type	Description
Sent	DataPointGraphPoint	

## 1.4. UCSFabricInterconnect Performance Template

Collects performance statistics on fabric interconnects in a Cisco UCS device.

- `Devices/CiscoUCS`

### 1.4.1. Data Points

**Table 9.12. UCSFabricInterconnect DataPoints**

Data Source	Data Point	Description
swEnvStats	fanCtrlrInlet1	
swEnvStats	fanCtrlrInlet2	
swEnvStats	fanCtrlrInlet3	
swEnvStats	fanCtrlrInlet4	
swEnvStats	mainBoardOutlet1	
swEnvStats	mainBoardOutlet2	
swEnvStats	psuCtrlrInlet1	
swEnvStats	psuCtrlrInlet2	
swSystemStats	load	
swSystemStats	memAvailable	
swSystemStats	memCached	

### 1.4.2. Graphs

**Table 9.13. CPU Utilization**

Name	Type	Description
Used	DataPointGraphPoint	

**Table 9.14. Memory Utilization**

Name	Type	Description
Available	DataPointGraphPoint	
Cached	DataPointGraphPoint	

**Table 9.15. Temperatures**

Name	Type	Description
Fan Inlet 1	DataPointGraphPoint	
Fan Inlet 2	DataPointGraphPoint	
Fan Inlet 3	DataPointGraphPoint	
Fan Inlet 4	DataPointGraphPoint	
Main Outlet 1	DataPointGraphPoint	
Main Outlet 2	DataPointGraphPoint	
PSU Inlet 1	DataPointGraphPoint	
PSU Inlet 2	DataPointGraphPoint	

## 1.5. UCSFanModule Performance Template

Collects performance statistics on fan modules in an Cisco UCS device.

- `Devices/CiscoUCS`

### 1.5.1. Data Points

**Table 9.16. UCSFanModule DataPoints**

Data Source	Data Point	Description
equipmentFanModuleStats	ambientTemp	
equipmentFanStats	fan1Speed	
equipmentFanStats	fan2Speed	

### 1.5.2. Graphs

**Table 9.17. Fan Speeds**

Name	Type	Description
Fan 1	DataPointGraphPoint	
Fan 2	DataPointGraphPoint	

**Table 9.18. Temperature**

Name	Type	Description
Ambient	DataPointGraphPoint	

## 1.6. UCSFcPort Performance Template

Collects performance statistics on fibre channel ports in a Cisco UCS device.

- `Devices/CiscoUCS`

### 1.6.1. Data Points

**Table 9.19. UCSFcPort DataPoints**

Data Source	Data Point	Description
fcErrStats	crcRx	
fcErrStats	discardRx	
fcErrStats	discardTx	
fcErrStats	linkFailures	
fcErrStats	rx	
fcErrStats	signalLosses	
fcErrStats	syncLosses	
fcErrStats	tooLongRx	
fcErrStats	tooShortRx	
fcErrStats	tx	
fcStats	bytesRx	
fcStats	bytesTx	

Data Source	Data Point	Description
fcStats	packetsRx	
fcStats	packetsTx	

## 1.6.2. Graphs

**Table 9.20. Errors**

Name	Type	Description
CRC Rx	DataPointGraphPoint	
Discard Rx	DataPointGraphPoint	
Discard Tx	DataPointGraphPoint	
Link Failures	DataPointGraphPoint	
Receive	DataPointGraphPoint	
Signal Losses	DataPointGraphPoint	
Sync Losses	DataPointGraphPoint	
Too Long Rx	DataPointGraphPoint	
Too Short Rx	DataPointGraphPoint	
Transmit	DataPointGraphPoint	

**Table 9.21. Throughput**

Name	Type	Description
Received	DataPointGraphPoint	
Sent	DataPointGraphPoint	

## 1.7. UCSHostEthIf Performance Template

Collects performance statistics on Host-side Ethernet Interfaces in a Cisco UCS unit.

- `Devices/CiscoUCS`

### 1.7.1. Data Points

**Table 9.22. UCSHostEthIf DataPoints**

Data Source	Data Point	Description
adaptorEthPortStats	goodPacketsRx	
adaptorEthPortStats	goodPacketsTx	
adaptorEthPortStats	pausePacketsRx	
adaptorEthPortStats	pausePacketsTx	
adaptorEthPortStats	perPriorityPausePacketsRx	
adaptorEthPortStats	perPriorityPausePacketsTx	
adaptorEthPortStats	pppPacketsRx	
adaptorEthPortStats	pppPacketsTx	
adaptorEthPortStats	totalPacketsRx	
adaptorEthPortStats	totalPacketsTx	
adaptorEthPortStats	vlanPacketsRx	

Data Source	Data Point	Description
adaptorEthPortStats	vlanPacketsTx	

## 1.7.2. Graphs

**Table 9.23. Received Packets**

Name	Type	Description
Good	DataPointGraphPoint	
PPP	DataPointGraphPoint	
Pause	DataPointGraphPoint	
Priority Pause	DataPointGraphPoint	
Total	DataPointGraphPoint	
VLAN	DataPointGraphPoint	

**Table 9.24. Sent Packets**

Name	Type	Description
Good	DataPointGraphPoint	
PPP	DataPointGraphPoint	
Pause	DataPointGraphPoint	
Priority Pause	DataPointGraphPoint	
Total	DataPointGraphPoint	
VLAN	DataPointGraphPoint	

## 1.8. UCSPowerSupplyUnit Performance Template

Collects performance statistics on power supply units in a Cisco UCS unit.

- `Devices/CiscoUCS`

### 1.8.1. Data Points

**Table 9.25. UCSPowerSupplyUnit DataPoints**

Data Source	Data Point	Description
equipmentPsuStats	ambientTemp	
equipmentPsuStats	input210v	
equipmentPsuStats	output12v	
equipmentPsuStats	output3v3	
equipmentPsuStats	outputCurrent	
equipmentPsuStats	outputPower	

### 1.8.2. Graphs

**Table 9.26. Current**

Name	Type	Description
Output	DataPointGraphPoint	



**Table 9.27. Power**

Name	Type	Description
Output	DataPointGraphPoint	

**Table 9.28. Temperatures**

Name	Type	Description
Ambient	DataPointGraphPoint	

**Table 9.29. Voltages**

Name	Type	Description
12V Output	DataPointGraphPoint	
210V Input	DataPointGraphPoint	
3V3 Output	DataPointGraphPoint	

## 1.9. UCSProcessorUnit Performance Template

Collects performance statistics on processor units in a Cisco UCS device.

- Devices/CiscoUCS

### 1.9.1. Data Points

**Table 9.30. UCSProcessorUnit DataPoints**

Data Source	Data Point	Description
processorEnvStats	inputCurrent	
processorEnvStats	temperature	

### 1.9.2. Graphs

**Table 9.31. Current**

Name	Type	Description
Input	DataPointGraphPoint	

**Table 9.32. Temperature**

Name	Type	Description
Processor	DataPointGraphPoint	

## 1.10. UCSServer Performance Template

Collects performance statistics on computer blades in an Cisco UCS device.

- Devices/CiscoUCS

### 1.10.1. Data Points

**Table 9.33. UCSServer DataPoints**

Data Source	Data Point	Description
computeMbPowerStats	consumedPower	

Data Source	Data Point	Description
computeMbPowerStats	inputCurrent	
computeMbPowerStats	inputVoltage	
computeMbTempStats	fmTempSenIo	
computeMbTempStats	fmTempSenRear	

## 1.10.2. Graphs

**Table 9.34. Current**

Name	Type	Description
Input	DataPointGraphPoint	

**Table 9.35. Power**

Name	Type	Description
Consumed	DataPointGraphPoint	

**Table 9.36. Temperatures**

Name	Type	Description
IO	DataPointGraphPoint	
Rear	DataPointGraphPoint	

**Table 9.37. Voltage**

Name	Type	Description
Input	DataPointGraphPoint	

## 2. Event Class Information

**Table 9.38. CiscoUCS Event Class Information**

Path	Name	Type	Code?	Description
/Change/Set/UCS	UCS	Event Class	yes	
/CiscoUCS	CiscoUCS	Event Class	yes	
/CiscoUCS/instances/LO-CAL0-3-SYSTEM_MSG	LO-CAL0-3-SYSTEM_MSG	Mapping		
/Status/Blade	Blade	Event Class	no	
/Status/Blade/instances/ComputeBladeCmosReset_BEGIN	ComputeBladeCmosReset_BEGIN	Mapping		
/Status/Blade/instances/ComputeBladeCmosReset_END	ComputeBladeCmosReset_END	Mapping		
/Status/Blade/instances/ComputeBladeDecommission_BEGIN	ComputeBladeDecommission_BEGIN	Mapping		

Path	Name	Type	Code?	Description
/Status/Blade/in- stances/ComputeBlade	ComputeBladeDecommission_END	Mapping	no	
/Status/Blade/in- stances/ComputeBlade	ComputeBladeDecommission_END	Mapping	no	
/Status/Blade/in- stances/ComputeBlade	ComputeBladeHardReset_BEGIN	Mapping	no	
/Status/Blade/in- stances/ComputeBlade	ComputeBladeHardReset_END	Mapping	no	
/Status/Blade/in- stances/ComputeBlade	ComputeBladeHardShutdown_BEGIN	Mapping	no	
/Status/Blade/in- stances/ComputeBlade	ComputeBladeHardShutdown_END	Mapping	no	
/Status/Blade/in- stances/ComputeBlade	ComputeBladePowercycle_BEGIN	Mapping	no	
/Status/Blade/in- stances/ComputeBlade	ComputeBladePowercycle_END	Mapping	no	
/Status/Blade/in- stances/ComputeBlade	ComputeBladeSoftShutdown_BEGIN	Mapping	no	
/Status/Blade/in- stances/ComputeBlade	ComputeBladeSoftShutdown_END	Mapping	no	
/Status/Blade/in- stances/ComputeBlade	ComputeBladeTurnup_END	Mapping	no	
/Status/Chassis	Chassis	Event Class	no	
/Status/Chassis/in- stances/Equipment	EquipmentChassisRemoveChassis_BEGIN	Mapping	no	
/Status/Chassis/in- stances/Equipment	EquipmentChassisRemoveChassis_BEGIN	Mapping	no	

---

# Chapter 10. DigMonitor

**Table 10.1. DigMonitor Details**

<b>Version</b>	1.0.3
<b>Author</b>	Zenoss

## 1. Monitoring Template Information

### 1.1. DigMonitor Performance Template

DNS query time template with 30 second threshold

- `Devices/Server`

#### 1.1.1. Data Points

**Table 10.2. DigMonitor DataPoints**

<b>Data Source</b>	<b>Data Point</b>	<b>Description</b>
dig	time	The amount of time it takes to respond to a command

#### 1.1.2. Graphs

**Table 10.3. DNS Response Time**

<b>Name</b>	<b>Type</b>	<b>Description</b>
time	DataPointGraphPoint	

#### 1.1.3. Thresholds

**Table 10.4. DigMonitor**

<b>Name</b>	<b>Type</b>	<b>Description</b>
BrokenDNS	MinMaxThreshold	Alert sent if there is no response to the command
SlowDNS	MinMaxThreshold	Alert sent if there is a slow response to the command

---

# Chapter 11. DnsMonitor

**Table 11.1. DnsMonitor Details**

<b>Version</b>	2.0.3
<b>Author</b>	Zenoss

## 1. Monitoring Template Information

### 1.1. DnsMonitor Performance Template

Perform a DNS forward lookup of the device name and check to see that it resolves to the device's manageIp

- Devices

#### 1.1.1. Data Points

**Table 11.2. DnsMonitor DataPoints**

<b>Data Source</b>	<b>Data Point</b>	<b>Description</b>
DnsMonitor	time	

#### 1.1.2. Graphs

**Table 11.3. DnsLookupTime**

<b>Name</b>	<b>Type</b>	<b>Description</b>
time	DataPointGraphPoint	

## 2. Event Class Information

**Table 11.4. DnsMonitor Event ClassInformation**

<b>Path</b>	<b>Name</b>	<b>Type</b>	<b>Code?</b>	<b>Description</b>
/Status/DNS	DNS	Event Class	no	

---

# Chapter 12. EnterpriseLinux

**Table 12.1. EnterpriseLinux Details**

<b>Version</b>	1.2.1
<b>Author</b>	Zenoss
<b>Dependencies</b>	ZenPacks.zenoss.LinuxMonitor

## 1. Monitoring Template Information

### 1.1. Device Performance Template

Template for gathering performance data via SSH commands.

- `Devices/Server/SSH/Linux`

#### 1.1.1. Data Points

**Table 12.2. Device DataPoints**

<b>Data Source</b>	<b>Data Point</b>	<b>Description</b>
cpu	ssCpuIdle	Average percentage of time that CPUs were idle and the system did not have an outstanding disk I/O request.
cpu	ssCpuInterrupt	The average percentage of time spent executing niced processes in user mode.
cpu	ssCpuKernel	The average percentage of CPU time spent executing processing kernel-level code.
cpu	ssCpuNice	The average percentage of time spent executing niced processes in user mode.
cpu	ssCpuSystem	The average percentage of time spent executing niced processes in user mode.
cpu	ssCpuUser	Average percentage of CPU time executing in the user mode.
cpu	ssCpuWait	CPU idle time during which the system had outstanding disk/NFS I/O request(s).
cpu	ssRawContexts	Total number of context switches across all CPUs
cpu	ssRawInterrupts	The sum of all interrupts. The <code>/bin/cat /proc/stat</code> command will also show values to the right that breakdown the causes of the interrupts
io	ssIORawReceived	This is the value for total number of sectors read.
io	ssIORawSent	This is the value for total number of sectors written
uptime	laLoadInt1	This is the value of the system load averages for the past 1 minute obtained from the uptime command
uptime	laLoadInt15	This is the value of the system load averages for the past 15 minutes obtained from the uptime command
uptime	laLoadInt5	This is the value of the system load averages for the past 5 minutes obtained from the uptime command
uptime	sysUpTime	

## 1.1.2. Graphs

**Table 12.3. CPU Utilization**

Name	Type	Description
ssCpuIdle	DataPointGraphPoint	
ssCpuSystem	DataPointGraphPoint	
ssCpuUser	DataPointGraphPoint	
ssCpuWait	DataPointGraphPoint	

**Table 12.4. IO**

Name	Type	Description
ssIORawReceived	DataPointGraphPoint	
ssIORawSent	DataPointGraphPoint	

**Table 12.5. Load Average**

Name	Type	Description
high load	ThresholdGraphPoint	
laLoadInt1	DataPointGraphPoint	
laLoadInt15	DataPointGraphPoint	
laLoadInt5	DataPointGraphPoint	

## 1.2. ethernetCsmacd Performance Template

Ethernet interface template with 75% utilization threshold

- `Devices/Server/SSH/Linux`

### 1.2.1. Data Points

**Table 12.6. ethernetCsmacd DataPoints**

Data Source	Data Point	Description
intf	ifInErrors	The received errors on the specified network interface.
intf	ifInOctets	The total number of octets received on the interface
intf	ifInPackets	The value in the Ipkts column reflects the number of packets received on the specified network interface.
intf	ifOutErrors	The transmit errors on the specified network interface.
intf	ifOutOctets	The total number of octets transmitted out of the interface
intf	ifOutPackets	The number of packets sent to the specified network interface.

### 1.2.2. Graphs

**Table 12.7. Errors**

Name	Type	Description
ifInErrors	DataPointGraphPoint	

Name	Type	Description
ifOutErrors	DataPointGraphPoint	

**Table 12.8. Throughput**

Name	Type	Description
ifInOctets	DataPointGraphPoint	
ifOutOctets	DataPointGraphPoint	

### 1.2.3. Thresholds

**Table 12.9. ethernetCsmacd**

Name	Type	Description
Utilization 75 perc	MinMaxThreshold	

## 1.3. FileSystem Performance Template

Filesystem template

- `Devices/Server/SSH/Linux`

### 1.3.1. Data Points

**Table 12.10. FileSystem DataPoints**

Data Source	Data Point	Description
disk	availBlocks	This is the value of how many blocks are free on the disk as calculated from the total blocks minus the Used.
disk	usedBlocks	The number of blocks used.
idisk	availableInodes	This is the value of how many Inodes are free on the disk as calculated from the total minus the Iused.
idisk	percentInodesUsed	This is taking the value of the %Iused column in the table generated by the <code>/bin/df -vk</code> command.
idisk	totalInodes	
idisk	usedInodes	

### 1.3.2. Graphs

**Table 12.11. Block Utilization**

Name	Type	Description
Free Space 90 Percent	ThresholdGraphPoint	
usedBlocks	DataPointGraphPoint	

**Table 12.12. Inode Utilization**

Name	Type	Description
percentInodesUsed	DataPointGraphPoint	
totalInodes	DataPointGraphPoint	



Name	Type	Description
usedInodes	DataPointGraphPoint	

### 1.3.3. Thresholds

**Table 12.13. FileSystem**

Name	Type	Description
Free Space 90 Percent	MinMaxThreshold	

## 1.4. OSProcess Performance Template

- Devices/Server/SSH/Linux

### 1.4.1. Data Points

**Table 12.14. OSProcess DataPoints**

Data Source	Data Point	Description
ps	count	Number of process matching process name.
ps	cpu	CPU consumed by processes.
ps	mem	Memory consumed by processes.

### 1.4.2. Graphs

**Table 12.15. memory**

Name	Type	Description
mem	DataPointGraphPoint	

**Table 12.16. process performance**

Name	Type	Description
count	DataPointGraphPoint	
cpu	DataPointGraphPoint	

---

# Chapter 13. EsxTop

**Table 13.1. EsxTop Details**

<b>Version</b>	1.0.3
<b>Author</b>	Zenoss
<b>Dependencies</b>	ZenPacks.zenoss.ZenossVirtualHostMonitor

## 1. Monitoring Template Information

### 1.1. EsxTopHost Performance Template

Performance stats from ESX/ESXi via the resxtop command

- `Devices/Server/Virtual Machine Host/EsxTop`

#### 1.1.1. Data Points

**Table 13.2. EsxTopHost DataPoints**

Data Source	Data Point	Description
Group Cpu	Members	
Group Cpu	Processor Migrations_sec	
Memory	Free MBytes	
Memory	Memory Overcommit (5 Minute Avg)	
Memory	Swap Free MBytes	
Physical Cpu	Processor Time	
Physical Cpu	Util Time	
Physical Cpu Load	Cpu Load (5 Minute Avg)	

#### 1.1.2. Graphs

**Table 13.3. CPU Load (esxtop)**

Name	Type	Description
CPU Load (5 Minute Avg)	DataPointGraphPoint	

**Table 13.4. Free Memory (esxtop)**

Name	Type	Description
Free MBytes	DataPointGraphPoint	

### 1.2. VirtualMachine Performance Template

esxtop stats for VMware VMs

- `Devices/Server/Virtual Machine Host/EsxTop`

### 1.2.1. Data Points

**Table 13.5. VirtualMachine DataPoints**

Data Source	Data Point	Description
Group Cpu	CPU Latency	
Group Cpu	CoStop	
Group Cpu	Max Limited	
Group Cpu	Ready	
Group Cpu	Swap Wait	
Group Cpu	Timers_sec	
Group Cpu	Used	
Group Memory	Memctl MBytes	
Group Memory	Numa _ Local	
Group Memory	Swap Read MBytes_sec	
Group Memory	Swap Written MBytes_sec	

### 1.2.2. Graphs

**Table 13.6. CPU Usage (esxtop)**

Name	Type	Description
Used	DataPointGraphPoint	

**Table 13.7. Contention Factors (esxtop)**

Name	Type	Description
CoStop	DataPointGraphPoint	
Max Limited	DataPointGraphPoint	
Ready	DataPointGraphPoint	

**Table 13.8. Timers per second (esxtop)**

Name	Type	Description
Timers_sec	DataPointGraphPoint	

---

# Chapter 14. FtpMonitor

**Table 14.1. FtpMonitor Details**

<b>Version</b>	1.0.3
<b>Author</b>	Zenoss

## 1. Monitoring Template Information

### 1.1. FtpMonitor Performance Template

- Devices

#### 1.1.1. Data Points

**Table 14.2. FtpMonitor DataPoints**

<b>Data Source</b>	<b>Data Point</b>	<b>Description</b>
FtpMonitor	time	The amount of time it takes to respond to a string command

#### 1.1.2. Graphs

**Table 14.3. time**

<b>Name</b>	<b>Type</b>	<b>Description</b>
time	DataPointGraphPoint	

## 2. Event Class Information

**Table 14.4. FtpMonitor Event ClassInformation**

<b>Path</b>	<b>Name</b>	<b>Type</b>	<b>Code?</b>	<b>Description</b>
/Status/Ftp	Ftp	Event Class	no	

---

# Chapter 15. HpuxMonitor

**Table 15.1. HpuxMonitor Details**

<b>Version</b>	1.1.3
<b>Author</b>	Zenoss

## 1. Monitoring Template Information

### 1.1. Device Performance Template

Template for gathering performance data via SSH commands.

- `Devices/Server/SSH/HP-UX`

#### 1.1.1. Data Points

**Table 15.2. Device DataPoints**

<b>Data Source</b>	<b>Data Point</b>	<b>Description</b>
cpu	ssCpuIdle	Template for CPU performance using vmstat.
cpu	ssCpuInterrupt	Template for CPU performance using vmstat.
cpu	ssCpuSystem	Template for CPU performance using vmstat.
cpu	ssCpuUser	Template for CPU performance using vmstat.
io	reads_and_writes	Template for IO performance using iostat. HP-UX provides only combined read/write performance unless additional tools are purchased.
memory_and_swap	percentMemUsed	Template for memory usage using swapinfo.
memory_and_swap	percentSwapUsed	Template for swap usage using swapinfo.
uptime	laLoadInt1	Template for system load one minute average using uptime.
uptime	laLoadInt15	Template for system load fifteen minute after using uptime.
uptime	laLoadInt5	Template for system load five minute average using uptime.
uptime	sysUpTime	System uptime from uptime command.

#### 1.1.2. Graphs

**Table 15.3. CPU Utilization**

<b>Name</b>	<b>Type</b>	<b>Description</b>
ssCpuIdle	DataPointGraphPoint	
ssCpuSystem	DataPointGraphPoint	
ssCpuUser	DataPointGraphPoint	

**Table 15.4. IO**

<b>Name</b>	<b>Type</b>	<b>Description</b>
reads_and_writes	DataPointGraphPoint	

**Table 15.5. Load Average**

Name	Type	Description
high load	ThresholdGraphPoint	
laLoadInt1	DataPointGraphPoint	
laLoadInt15	DataPointGraphPoint	
laLoadInt5	DataPointGraphPoint	

**Table 15.6. Memory Utilization**

Name	Type	Description
percentMemUsed	DataPointGraphPoint	
percentSwapUsed	DataPointGraphPoint	

### 1.1.3. Thresholds

**Table 15.7. Device**

Name	Type	Description
CPU Utilization	MinMaxThreshold	Alert if CPU is less than 2 percent used.
high load	MinMaxThreshold	Alert if fifteen minute load is greater than 1200.

## 1.2. ethernetCsmacd Performance Template

- Devices/Server/SSH/HP-UX

### 1.2.1. Data Points

**Table 15.8. ethernetCsmacd DataPoints**

Data Source	Data Point	Description
lanscan_and_lanadmin	ifInErrors	Lanscan and lanadmin providing inbound interface errors.
lanscan_and_lanadmin	ifInOctets	Lanscan and lanadmin providing inbound interface octets.
lanscan_and_lanadmin	ifInPackets	Lanscan and lanadmin providing inbound interface packet counts.
lanscan_and_lanadmin	ifOutErrors	Lanscan and lanadmin providing outbound interface errors.
lanscan_and_lanadmin	ifOutOctets	Lanscan and lanadmin providing outbound interface octets.
lanscan_and_lanadmin	ifOutPackets	Lanscan and lanadmin providing outbound interface packet counts.

### 1.2.2. Graphs

**Table 15.9. Throughput**

Name	Type	Description
ifInOctets	DataPointGraphPoint	

Name	Type	Description
ifOutOctets	DataPointGraphPoint	

### 1.2.3. Thresholds

**Table 15.10. ethernetCsmacd**

Name	Type	Description
Utilization 75 percent	MinMaxThreshold	Alert if inbound or outbound octets exceed 75% of NIC speed.

## 1.3. FileSystem Performance Template

- Devices/Server/SSH/HP-UX

### 1.3.1. Data Points

**Table 15.11. FileSystem DataPoints**

Data Source	Data Point	Description
disk	availBlocks	Disk blocks available using df.
disk	availInodes	Inodes available using df.
disk	percentInodesUsed	Used Inode percentage calculated from df.
disk	totalBlocks	Total number of blocks on disk using df.
disk	totalInodes	Total Inodes on disk using df.
disk	usedBlocks	Disk blocks used using df with threshold.
disk	usedInodes	Inodes used using df.

### 1.3.2. Graphs

**Table 15.12. Inode Utilization**

Name	Type	Description
percentInodesUsed	DataPointGraphPoint	

**Table 15.13. Utilization**

Name	Type	Description
high_disk_usage	ThresholdGraphPoint	
usedBlocks	DataPointGraphPoint	

### 1.3.3. Thresholds

**Table 15.14. FileSystem**

Name	Type	Description
high_disk_usage	MinMaxThreshold	Used blocks greater than 90% of total blocks.

## 1.4. OSProcess Performance Template

Monitors for OSProcess object

- Devices/Server/SSH/HP-UX

### 1.4.1. Data Points

**Table 15.15. OSProcess DataPoints**

Data Source	Data Point	Description
ps	count	Number of process matching process name.
ps	cpu	CPU consumed by processes.
ps	mem	Memory consumed by processes.

### 1.4.2. Graphs

**Table 15.16. CPU Utilization**

Name	Type	Description
cpu	DataPointGraphPoint	

**Table 15.17. Memory**

Name	Type	Description
mem	DataPointGraphPoint	

**Table 15.18. Process Count**

Name	Type	Description
count	DataPointGraphPoint	



---

# Chapter 16. HttpMonitor

**Table 16.1. HttpMonitor Details**

<b>Version</b>	2.0.4
<b>Author</b>	Zenoss

## 1. Monitoring Template Information

### 1.1. HttpMonitor Performance Template

- Devices

#### 1.1.1. Data Points

**Table 16.2. HttpMonitor DataPoints**

<b>Data Source</b>	<b>Data Point</b>	<b>Description</b>
HttpMonitor	size	The size of the page hit.
HttpMonitor	time	The amount of time the server takes to respond.

#### 1.1.2. Graphs

**Table 16.3. Size**

<b>Name</b>	<b>Type</b>	<b>Description</b>
size	DataPointGraphPoint	

**Table 16.4. Time**

<b>Name</b>	<b>Type</b>	<b>Description</b>
time	DataPointGraphPoint	

## 2. Event Class Information

**Table 16.5. HttpMonitor Event ClassInformation**

<b>Path</b>	<b>Name</b>	<b>Type</b>	<b>Code?</b>	<b>Description</b>
/Status/HTTP	HTTP	Event Class	no	

---

# Chapter 17. IISMonitor

**Table 17.1. IISMonitor Details**

<b>Version</b>	2.0.2
<b>Author</b>	Zenoss
<b>Dependencies</b>	ZenPacks.zenoss.ZenWinPerf

## 1. Monitoring Template Information

### 1.1. IIS Performance Template

Metrics for Microsoft IIS

- `Devices/Server/Windows/WMI`

#### 1.1.1. Data Points

**Table 17.2. IIS DataPoints**

<b>Data Source</b>	<b>Data Point</b>	<b>Description</b>
iisBytesReceived	iisBytesReceived	The number of bytes that are received by the server each second.
iisBytesSent	iisBytesSent	The number of bytes that are sent by the server each second.
iisCGIRequests	iisCGIRequests	The rate, in seconds, at which the server is processing simultaneous CGI (Common Gateway Interface) requests.
iisConnectionAttempts	iisConnectionAttempts	The number of connection attempts that have been made, per second, since the IIS server was started.
iisCopyRequests	iisCopyRequests	The rate, in seconds, at which HTTP requests that use the COPY method have been made to the WWW service.
iisDeleteRequests	iisDeleteRequests	The rate, in seconds, at which HTTP requests that use the DELETE method have been made to the WWW service.
iisFilesReceived	iisFilesReceived	The rate, in seconds, at which files have been received by the WWW service.
iisFilesSent	iisFilesSent	The rate, in seconds, at which files have been sent.
iisGetRequests	iisGetRequests	The rate, in seconds, at which HTTP requests using the GET method have been made to the server.
iisHeadRequests	iisHeadRequests	The rate, in seconds, at which HTTP requests that use the HEAD method have been made to the WWW service.
iisISAPIExtensionRequests	iisISAPIExtensionRequests	The rate, in seconds, at which the server is processing ISAPI extension requests.
iisLockRequests	iisLockRequests	The rate, in seconds, at which HTTP requests that use the LOCK method have been made to the WWW service.

Data Source	Data Point	Description
iisMkcolRequests	iisMkcolRequests	The rate, in seconds, at which HTTP requests that use the MKCOL method have been made to the WWW service.
iisMoveRequests	iisMoveRequests	The rate, in seconds, at which HTTP requests that use the MOVE method have been made to the WWW service.
iisOptionsRequests	iisOptionsRequests	The rate, in seconds, at which HTTP requests that use the OPTIONS method have been made.
iisOtherRequestMethods	iisOtherRequestMethods	The rate, in seconds, at which HTTP requests that do not use the methods listed for the Total Other Requests Methods counter have been made to the WWW service.
iisPostRequests	iisPostRequests	The rate, in seconds, at which HTTP requests using the POST method have been made to the server.
iisPropfindRequests	iisPropfindRequests	The rate, in seconds, at which HTTP requests that use the PROPFIND method have been made to the WWW service.
iisProppatchRequests	iisProppatchRequests	The rate, in seconds, at which HTTP requests that use the PROPPATCH method have been made to the WWW service.
iisPutRequests	iisPutRequests	The rate, in seconds, at which HTTP requests that use the PUT method have been made to the WWW service.
iisSearchRequests	iisSearchRequests	The rate, in seconds, at which HTTP requests that use the SEARCH method have been made to the WWW service.
iisTraceRequests	iisTraceRequests	The rate, in seconds, at which HTTP requests that use the TRACE method have been made to the WWW service.
iisUnlockRequests	iisUnlockRequests	The rate, in seconds, at which HTTP requests that use the UNLOCK method have been made to the WWW service.

### 1.1.2. Graphs

**Table 17.3. IIS - Connections**

Name	Type	Description
iisConnectionAttempts	DataPointGraphPoint	

**Table 17.4. IIS - Files**

Name	Type	Description
iisFilesReceived	DataPointGraphPoint	
iisFilesSent	DataPointGraphPoint	

**Table 17.5. IIS - Requests**

Name	Type	Description
iisCGIRequests	DataPointGraphPoint	

<b>Name</b>	<b>Type</b>	<b>Description</b>
iisCopyRequests	DataPointGraphPoint	
iisDeleteRequests	DataPointGraphPoint	
iisGetRequests	DataPointGraphPoint	
iisHeadRequests	DataPointGraphPoint	
iisISAPIExtensionRequests	DataPointGraphPoint	
iisLockRequests	DataPointGraphPoint	
iisMkcolRequests	DataPointGraphPoint	
iisMoveRequests	DataPointGraphPoint	
iisOptionsRequests	DataPointGraphPoint	
iisOtherRequestMethod	DataPointGraphPoint	
iisPostRequests	DataPointGraphPoint	
iisPropfindRequests	DataPointGraphPoint	
iisProppatchRequests	DataPointGraphPoint	
iisPutRequests	DataPointGraphPoint	
iisSearchRequests	DataPointGraphPoint	
iisTraceRequests	DataPointGraphPoint	
iisUnlockRequests	DataPointGraphPoint	

**Table 17.6. IIS - Throughput**

<b>Name</b>	<b>Type</b>	<b>Description</b>
iisBytesReceived	DataPointGraphPoint	
iisBytesSent	DataPointGraphPoint	

---

# Chapter 18. IRCDDMonitor

**Table 18.1. IRCDDMonitor Details**

<b>Version</b>	1.0.3
<b>Author</b>	Zenoss

## 1. Monitoring Template Information

### 1.1. IRCDD Performance Template

- `Devices/Server`

#### 1.1.1. Data Points

**Table 18.2. IRCDD DataPoints**

<b>Data Source</b>	<b>Data Point</b>	<b>Description</b>
IRCD	number	Number of connections

#### 1.1.2. Graphs

**Table 18.3. IRCDD User Count**

<b>Name</b>	<b>Type</b>	<b>Description</b>
number	DataPointGraphPoint	

## 2. Event Class Information

**Table 18.4. IRCDDMonitor Event ClassInformation**

<b>Path</b>	<b>Name</b>	<b>Type</b>	<b>Code?</b>	<b>Description</b>
/Status/IRCD	IRCD	Event Class	no	

---

# Chapter 19. JBossMonitor

**Table 19.1. JBossMonitor Details**

<b>Version</b>	2.4.1
<b>Author</b>	Zenoss
<b>Dependencies</b>	ZenPacks.zenoss.ZenJMX

## 1. Monitoring Template Information

### 1.1. JBoss Core Performance Template

- `Devices/Server/JBoss`

#### 1.1.1. Data Points

**Table 19.2. JBoss Core DataPoints**

<b>Data Source</b>	<b>Data Point</b>	<b>Description</b>
JBoss Active Thread Count	ActiveThreadCount	This metric shows the active thread count for JBoss Application Server.
JBoss Active Thread Group Count	ActiveThreadGroupCount	This metric shows the active thread group count for JBoss Application Server.
JBoss JMS Message Cache Current Memory Usage	CurrentMemoryUsage	The total memory currently in use by the JMS Message Cache
JBoss JMS Message Cache High Memory Mark	HighMemoryMark	The peak amount of memory the JMS Message Cache has actively used since server start
JBoss JMS Message Cache Hits	CacheHits	The number of cache hits to the JMS Message Cache
JBoss JMS Message Cache Max Memory Mark	MaxMemoryMark	The maximum amount of memory the JMS Message Cache is allowed to use
JBoss JMS Message Cache Misses	CacheMisses	The number of cache misses to the JMS Message Cache
JBoss JMS Message Cache Size	TotalCacheSize	The number of messages currently in the JMS Message Cache
JBoss JVM Free Memory	FreeMemory	Current Java Heap space available for future allocated objects
JBoss JVM Max Memory	MaxMemory	Maximum amount of Java Heap space the JVM will attempt to use
JBoss JVM Total Memory	TotalMemory	Total amount of Java Heap space available for current and future objects
JBoss Transactions Active	TransactionCount	Shows the number of current active transactions.
JBoss Transactions Committed	CommitCount	Shows the number of transaction that have been committed.
JBoss Transactions Rolledback	RollbackCount	Shows the number of transaction that have been rolled back.

## 1.1.2. Graphs

**Table 19.3. JBoss Active Threads**

Name	Type	Description
ActiveThreadCount	DataPointGraphPoint	
ActiveThreadGroupCount	DataPointGraphPoint	

**Table 19.4. JBoss JMS Message Cache Hits**

Name	Type	Description
CacheHits	DataPointGraphPoint	
CacheMisses	DataPointGraphPoint	
TotalCacheSize	DataPointGraphPoint	

**Table 19.5. JBoss JMS Message Cache Memory**

Name	Type	Description
CurrentMemoryUsage	DataPointGraphPoint	
HighMemoryMark	DataPointGraphPoint	
MaxMemoryMark	DataPointGraphPoint	

**Table 19.6. JBoss Memory Usage**

Name	Type	Description
FreeMemory	DataPointGraphPoint	
MaxMemory	DataPointGraphPoint	
TotalMemory	DataPointGraphPoint	

**Table 19.7. JBoss Transactions**

Name	Type	Description
CommitCount	DataPointGraphPoint	
RollbackCount	DataPointGraphPoint	
TransactionCount	DataPointGraphPoint	

## 1.2. JBoss JCA Connection Pool Performance Template

- `Devices/Server/JBoss`

### 1.2.1. Data Points

**Table 19.8. JBoss JCA Connection Pool DataPoints**

Data Source	Data Point	Description
JBoss Active Connections	InUseConnectionCount	The number of connections that are currently in use
JBoss Available Connections	AvailableConnectionCount	The maximum number of connections that are available
JBoss Connections Created	ConnectionCreatedCount	The number of connections that have been created since the datasource was last started

Data Source	Data Point	Description
JBoss Connections Destroyed	ConnectionDestroyedCount	The number of connections that have been destroyed since the datasource was last started
JBoss Max Connections	MaxSize	Shows the maximum size for managed connection pool for JBoss Application Server.
JBoss Min Connections	MinSize	Shows the minimum size for managed connection pool for JBoss Application Server.
JBoss Total Connections	ConnectionCount	The total number of connections made since the last reset.

## 1.2.2. Graphs

**Table 19.9. JBoss JCA Connection Pool**

Name	Type	Description
AvailableConnectionCount	DataPointGraphPoint	
InUseConnectionCount	DataPointGraphPoint	

**Table 19.10. JBoss JCA Connections Created and Destroyed**

Name	Type	Description
ConnectionCreatedCount	DataPointGraphPoint	
ConnectionDestroyedCount	DataPointGraphPoint	

**Table 19.11. JBoss JCA Total Connections**

Name	Type	Description
ConnectionCount	DataPointGraphPoint	

## 1.3. JBoss JGroups Channel Performance Template

- `Devices/Server/JBoss`

### 1.3.1. Data Points

**Table 19.12. JBoss JGroups Channel DataPoints**

Data Source	Data Point	Description
JBoss Number of Messages	NumMessages	The total number of messages
JBoss Received Bytes	ReceivedBytes	The number of bytes received by the service
JBoss Received Messages	ReceivedMessages	The number of messages received by the service
JBoss Sent Bytes	SentBytes	The number of bytes sent by the service
JBoss Sent Messages	SentMessages	The number of messages sent by the service

### 1.3.2. Graphs

**Table 19.13. JBoss JGroups Messages Sent and Received**

Name	Type	Description
ReceivedMessages	DataPointGraphPoint	



Name	Type	Description
SentMessages	DataPointGraphPoint	

**Table 19.14. JBoss JGroups Total Messages**

Name	Type	Description
NumMessages	DataPointGraphPoint	

**Table 19.15. JBoss JGroups Traffic**

Name	Type	Description
ReceivedBytes	DataPointGraphPoint	
SentBytes	DataPointGraphPoint	

## 1.4. JBoss JMS Cache Performance Template

- [Devices/Server/JBoss](#)

### 1.4.1. Data Points

**Table 19.16. JBoss JMS Cache DataPoints**

Data Source	Data Point	Description
JBoss Cache Hits	CacheHits	The number of cache hits to the JMS Message Cache
JBoss Cache Misses	CacheMisses	The number of cache misses to the JMS Message Cache
JBoss Hard Reference Cache Size	HardRefCacheSize	The number of messages in the cache that are not softened.
JBoss Soft Reference Cache Size	SoftRefCacheSize	The number of messages that are currently softened.
JBoss Total Cache Size	TotalCacheSize	The number of messages currently in the JMS Message Cache

### 1.4.2. Graphs

**Table 19.17. JBoss JMS Cache Hits**

Name	Type	Description
CacheHits	DataPointGraphPoint	
CacheMisses	DataPointGraphPoint	

**Table 19.18. JBoss JMS Cache Sizes**

Name	Type	Description
HardRefCacheSize	DataPointGraphPoint	
SoftRefCacheSize	DataPointGraphPoint	
TotalCacheSize	DataPointGraphPoint	

## 1.5. JBoss JMS Destination Performance Template

- Devices/Server/JBoss

### 1.5.1. Data Points

**Table 19.19. JBoss JMS Destination DataPoints**

Data Source	Data Point	Description
JBoss In Process Message Count	InProcessMessageCount	The number of messages received by clients but not acknowledged
JBoss Receivers Count	ReceiversCount	The number of ClientConsumers waiting for a message.
JBoss Scheduled Message Count	ScheduledMessageCount	The number of messages waiting to be scheduled

### 1.5.2. Graphs

**Table 19.20. JBoss JMS Destination Queue Receivers**

Name	Type	Description
ReceiversCount	DataPointGraphPoint	

**Table 19.21. JBoss JMS Destination Queue Size**

Name	Type	Description
InProcessMessageCount	DataPointGraphPoint	
ScheduledMessageCount	DataPointGraphPoint	

## 1.6. JBoss JMS Topic Performance Template

Note: Change the topic queue name in each Data Source.

- Devices/Server/JBoss

### 1.6.1. Data Points

**Table 19.22. JBoss JMS Topic DataPoints**

Data Source	Data Point	Description
All Message Count	AllMessageCount	The message count across all queue types associated with the topic.
All Subscriptions Count	AllSubscriptionsCount	The count of durable and non-durable subscriptions.
Durable Message Count	DurableMessageCount	The count of messages in durable subscription queues.
Durable Subscriptions Count	DurableSubscriptionCount	The count of durable subscribers.
Non Durable Message Count	NonDurableMessageCount	The count on messages in non-durable subscription queues.
Non Durable Subscriptions Count	NonDurableSubscriptionsCount	The count of non-durable subscribers.

### 1.6.2. Graphs

**Table 19.23. JBoss JMS Topic Messages**

Name	Type	Description
DurableMessageCount	DataPointGraphPoint	

Name	Type	Description
NonDurableMessageCount	DataPointGraphPoint	

**Table 19.24. JBoss JMS Topic Subscriptions**

Name	Type	Description
DurableSubscriptionCount	DataPointGraphPoint	
NonDurableSubscriptionsCount	DataPointGraphPoint	

## 1.7. JBoss Message Driven EJB Performance Template

Note: you must provide the JNDI name of your MDB in the ObjectName configuration for each data source!

- `Devices/Server/JBoss`

### 1.7.1. Data Points

**Table 19.25. JBoss Message Driven EJB DataPoints**

Data Source	Data Point	Description
Create Calls	CreateCount	Shows the number of instances created for this EJB by the container.
Messages Received	MessageCount	Shows the number of messages received by this EJB.
Remove Calls	RemoveCount	Shows the number of instance of this EJB that are removed from the EJB container.

### 1.7.2. Graphs

**Table 19.26. JBoss Message Driven EJB Bean Activity**

Name	Type	Description
CreateCount	DataPointGraphPoint	
RemoveCount	DataPointGraphPoint	

**Table 19.27. JBoss Message Driven EJB Message Count**

Name	Type	Description
MessageCount	DataPointGraphPoint	

---

# Chapter 20. JabberMonitor

**Table 20.1. JabberMonitor Details**

<b>Version</b>	1.0.3
<b>Author</b>	Zenoss

## 1. Monitoring Template Information

### 1.1. JabberMonitor Performance Template

- Devices

#### 1.1.1. Data Points

**Table 20.2. JabberMonitor DataPoints**

<b>Data Source</b>	<b>Data Point</b>	<b>Description</b>
JabberMonitor	time	The amount time the server takes to respond.

#### 1.1.2. Graphs

**Table 20.3. time**

<b>Name</b>	<b>Type</b>	<b>Description</b>
time	DataPointGraphPoint	

## 2. Event Class Information

**Table 20.4. JabberMonitor Event ClassInformation**

<b>Path</b>	<b>Name</b>	<b>Type</b>	<b>Code?</b>	<b>Description</b>
/Status/Jabber	Jabber	Event Class	no	

---

# Chapter 21. LDAPMonitor

**Table 21.1. LDAPMonitor Details**

<b>Version</b>	1.3.0
<b>Author</b>	zenoss

## 1. Monitoring Template Information

### 1.1. LDAPServer Performance Template

Monitors LDAP Server response time.

- `Devices/Server`

#### 1.1.1. Data Points

**Table 21.2. LDAPServer DataPoints**

<b>Data Source</b>	<b>Data Point</b>	<b>Description</b>
ldap	time	The amount of time it takes the server to respond

#### 1.1.2. Graphs

**Table 21.3. LDAP Server Response Time**

<b>Name</b>	<b>Type</b>	<b>Description</b>
time	DataPointGraphPoint	

#### 1.1.3. Thresholds

**Table 21.4. LDAPServer**

<b>Name</b>	<b>Type</b>	<b>Description</b>
BrokenLDAP	MinMaxThreshold	Alert sent if the server does not respond
SlowLDAP	MinMaxThreshold	Alert sent if the server is slow to respond

## 2. Event Class Information

**Table 21.5. LDAPMonitor Event ClassInformation**

<b>Path</b>	<b>Name</b>	<b>Type</b>	<b>Code?</b>	<b>Description</b>
/Status/LDAP	LDAP	Event Class	no	

---

# Chapter 22. MExchange

**Table 22.1. MExchange Details**

<b>Version</b>	2.0.4
<b>Author</b>	Zenoss
<b>Dependencies</b>	ZenPacks.zenoss.ZenWinPerf

## 1. Monitoring Template Information

### 1.1. MExchangeIS Performance Template

Microsoft Exchange Information Store

- `Devices/Server/Windows/WMI/MExchange/2007`

#### 1.1.1. Data Points

**Table 22.2. MExchangeIS DataPoints**

<b>Data Source</b>	<b>Data Point</b>	<b>Description</b>
activeMailboxDeliveryQueue- Length	activeMailboxDeliveryQueue- Length	
messagesCompletedDeliveryPer- Second	messagesCompletedDeliveryPer- Second	
mseisMailboxFolderOpensPerSec	mseisMailboxFolderOpensPerSec	
mseisMailboxLocalDeliveryRate	mseisMailboxLocalDeliveryRate	
mseisMailboxMessageOpensPer- Sec	mseisMailboxMessageOpensPer- Sec	
mseisRPCAveragedLatency	mseisRPCAveragedLatency	
mseisRPCOperationsPerSec	mseisRPCOperationsPerSec	
mseisRPCRequests	mseisRPCRequests	

#### 1.1.2. Graphs

**Table 22.3. Active Mailbox Queue Length**

<b>Name</b>	<b>Type</b>	<b>Description</b>
Active Mailbox Delivery Queue Length	DataPointGraphPoint	

**Table 22.4. Exchange - Mailbox Operations**

<b>Name</b>	<b>Type</b>	<b>Description</b>
mseisMailboxFolderOpensPerSec	DataPointGraphPoint	
mseisMailboxLocalDeliveryRate	DataPointGraphPoint	
mseisMailboxMessageOpensPer- Sec	DataPointGraphPoint	

**Table 22.5. Exchange - RPC Operations**

Name	Type	Description
mseisRPCAveragedLatency	DataPointGraphPoint	
mseisRPCOperationsPerSec	DataPointGraphPoint	
mseisRPCRequests	DataPointGraphPoint	

**Table 22.6. Message Delivery Rate**

Name	Type	Description
messagesCompletedDeliveryPerSecond	DataPointGraphPoint	

## 1.2. MSExchangeIS Performance Template

Microsoft Exchange Information Store

- `Devices/Server/Windows/WMI/MSExchange`

### 1.2.1. Data Points

**Table 22.7. MSExchangeIS DataPoints**

Data Source	Data Point	Description
mseisMailboxFolderOpensPerSec	mseisMailboxFolderOpensPerSec	
mseisMailboxLocalDeliveryRate	mseisMailboxLocalDeliveryRate	
mseisMailboxMessageOpensPerSec	mseisMailboxMessageOpensPerSec	
mseisRPCAveragedLatency	mseisRPCAveragedLatency	
mseisRPCOperationsPerSec	mseisRPCOperationsPerSec	
mseisRPCRequests	mseisRPCRequests	
smtpServerLocalQueueLength	smtpServerLocalQueueLength	
smtpServerMessagesDeliveredPerSec	smtpServerMessagesDeliveredPerSec	

### 1.2.2. Graphs

**Table 22.8. Exchange - Mailbox Operations**

Name	Type	Description
mseisMailboxFolderOpensPerSec	DataPointGraphPoint	
mseisMailboxLocalDeliveryRate	DataPointGraphPoint	
mseisMailboxMessageOpensPerSec	DataPointGraphPoint	

**Table 22.9. Exchange - RPC Operations**

Name	Type	Description
mseisRPCAveragedLatency	DataPointGraphPoint	
mseisRPCOperationsPerSec	DataPointGraphPoint	
mseisRPCRequests	DataPointGraphPoint	

**Table 22.10. SMTP Server - Local Queue Length**

Name	Type	Description
smtpServerLocalQueueLength	DataPointGraphPoint	

**Table 22.11. SMTP Server - Message Delivery Rate**

Name	Type	Description
smtpServerMessagesDelivered-PerSec	DataPointGraphPoint	

## 2. Event Class Information

**Table 22.12. MSEExchange Event ClassInformation**

Path	Name	Type	Code?	Description
/Win/Exchange	Exchange	Event Class	no	
/Win/Exchange/instances/Cloudmark Server Edition_2007	Cloudmark Server Edition_2007	Mapping		
/Win/Exchange/instances/MSEExchangeDSAccess_2064	MSEExchangeDSAccess_2064	Mapping		
/Win/Exchange/instances/MSEExchangeDSAccess_2069	MSEExchangeDSAccess_2069	Mapping		
/Win/Exchange/instances/MSEExchangeIS_9582	MSEExchangeIS_9582	Mapping		
/Win/Exchange/instances/MSEExchangeIS_9646	MSEExchangeIS_9646	Mapping		
/Win/Exchange/instances/MSEExchangeIS_9665	MSEExchangeIS_9665	Mapping		
/Win/Exchange/instances/MSEExchangeMGMT_3	MSEExchangeMGMT_3	Mapping		
/Win/Exchange/instances/msexchangeis_9665	msexchangeis_9665	Mapping		



---

# Chapter 23. MSSQLServer

**Table 23.1. MSSQLServer Details**

<b>Version</b>	2.0.3
<b>Author</b>	Zenoss
<b>Dependencies</b>	ZenPacks.zenoss.ZenWinPerf

## 1. Monitoring Template Information

### 1.1. MSSQLServer Performance Template

Microsoft SQL Server

- `Devices/Server/Windows/WMI/MSSQLServer`

#### 1.1.1. Data Points

**Table 23.2. MSSQLServer DataPoints**

<b>Data Source</b>	<b>Data Point</b>	<b>Description</b>
AccessMethodsFullScans	AccessMethodsFullScans	Full Scans/sec is the number of unrestricted full scans per second. These can be either base-table or full-index scans.
BufferManagerBufferCacheHitRatio	BufferManagerBufferCacheHitRatio	Buffer cache hit ratio is the percentage of pages found in the buffer cache without having to read from disk. The ratio is the total number of cache hits divided by the total number of cache lookups over the last few thousand page accesses.
BufferManagerFreePages	BufferManagerFreePages	Free Pages is the total number of pages on all free lists.
DatabasesTotalDataFileSize	DatabasesTotalDataFileSize	Data File(s) Size (KB) is the cumulative size (in kilobytes) of all the data files in the database including any automatic growth.
GeneralStatisticsUserConnections	GeneralStatisticsUserConnections	User Connections counts the number of users currently connected to SQL Server.
LatchesLatchWaits	LatchesLatchWaits	Latch Waits/sec is the number of latch requests that could not be granted immediately.
LocksTotalAverageWaitTime	LocksTotalAverageWaitTime	Average Wait Time (ms) is the average amount of wait time (in milliseconds) for each lock request that resulted in a wait.
LocksTotalLockRequests	LocksTotalLockRequests	Lock Requests/sec is the number of new locks and lock conversions per second requested from the lock manager.
LocksTotalNumberDeadlocks	LocksTotalNumberDeadlocks	Number of Deadlocks/sec is the number of lock requests per second that resulted in a deadlock.
SQLStatisticsBatchRequests	SQLStatisticsBatchRequests	Batch Requests/sec is the number of Transact-SQL command batches received per second.

### 1.1.2. Graphs

**Table 23.3. MS SQL - Buffer Manager**

Name	Type	Description
BufferManagerBufferCacheHitRatio	DataPointGraphPoint	
BufferManagerFreePages	DataPointGraphPoint	
low buffer hit ratio	ThresholdGraphPoint	

**Table 23.4. MS SQL - Data Size**

Name	Type	Description
DatabasesTotalDataFileSize	DataPointGraphPoint	

**Table 23.5. MS SQL - Lock Rates**

Name	Type	Description
LocksTotalLockRequests	DataPointGraphPoint	
LocksTotalNumberDeadlocks	DataPointGraphPoint	

**Table 23.6. MS SQL - Lock Times**

Name	Type	Description
LocksTotalAverageWaitTime	DataPointGraphPoint	

**Table 23.7. MS SQL - Metric Rates**

Name	Type	Description
AccessMethodsFullScans	DataPointGraphPoint	
LatchesLatchWaits	DataPointGraphPoint	
SQLStatisticsBatchRequests	DataPointGraphPoint	

**Table 23.8. MS SQL - User Connections**

Name	Type	Description
GeneralStatisticsUserConnections	DataPointGraphPoint	

### 1.1.3. Thresholds

**Table 23.9. MSSQLServer**

Name	Type	Description
low buffer hit ratio	MinMaxThreshold	This uses the BufferManagerBufferCacheHitRatio_BufferManagerBuff DataPoint. When the value exceeds 90 an event is sent.

## 2. Event Class Information

**Table 23.10. MSSQLServer Event ClassInformation**

Path	Name	Type	Code?	Description
/Win/MSSQLServer	MSSQLServer	Event Class	no	

---

# Chapter 24. MySqlMonitor

**Table 24.1. MySqlMonitor Details**

<b>Version</b>	2.1.3
<b>Author</b>	Zenoss

## 1. Monitoring Template Information

### 1.1. MySQL Performance Template

MySQL Server Instance Statistics

- Devices/Server

#### 1.1.1. Data Points

**Table 24.2. MySQL DataPoints**

<b>Data Source</b>	<b>Data Point</b>	<b>Description</b>
mysql	Bytes_received	The number of bytes received from all clients.
mysql	Bytes_sent	The number of bytes sent to all clients.
mysql	Com_delete	The number of times each delete statement has been executed.
mysql	Com_delete_multi	The number of times each delete_multi statement has been executed.
mysql	Com_insert	The number of times each insert statement has been executed.
mysql	Com_insert_select	The number of times each insert_select statement has been executed.
mysql	Com_select	The number of times each select statement has been executed.
mysql	Com_update	The number of times each update statement has been executed.
mysql	Com_update_multi	The number of times each update_multi statement has been executed.
mysql	Handler_delete	The number of times that rows have been deleted from tables.
mysql	Handler_read_first	The number of times the first entry in an index was read.
mysql	Handler_read_key	The number of requests to read a row based on a key.
mysql	Handler_read_next	The number of requests to read the next row in key order.
mysql	Handler_read_prev	The number of requests to read the previous row in key order.
mysql	Handler_read_rnd	The number of requests to read a row based on a fixed position.

Data Source	Data Point	Description
mysql	Handler_read_rnd_next	The number of requests to read the next row in the data file.
mysql	Handler_update	The number of requests to update a row in a table.
mysql	Handler_write	The number of requests to insert a row in a table.
mysql	Select_full_join	The number of joins that perform table scans because they do not use indexes.
mysql	Select_full_range_join	The number of joins that used a range search on a reference table.
mysql	Select_range	The number of joins that used ranges on the first table.
mysql	Select_range_check	The number of joins without keys that check for key usage after each row.
mysql	Select_scan	The number of joins that did a full scan of the first table.

### 1.1.2. Graphs

**Table 24.3. MySQL - Command Statistics**

Name	Type	Description
Com_delete	DataPointGraphPoint	
Com_delete_multi	DataPointGraphPoint	
Com_insert	DataPointGraphPoint	
Com_insert_select	DataPointGraphPoint	
Com_select	DataPointGraphPoint	
Com_update	DataPointGraphPoint	
Com_update_multi	DataPointGraphPoint	

**Table 24.4. MySQL - Handler Statistics**

Name	Type	Description
Handler_delete	DataPointGraphPoint	
Handler_read_first	DataPointGraphPoint	
Handler_read_key	DataPointGraphPoint	
Handler_read_next	DataPointGraphPoint	
Handler_read_prev	DataPointGraphPoint	
Handler_read_rnd	DataPointGraphPoint	
Handler_read_rnd_next	DataPointGraphPoint	
Handler_update	DataPointGraphPoint	
Handler_write	DataPointGraphPoint	

**Table 24.5. MySQL - Network Traffic**

Name	Type	Description
Bytes_received	DataPointGraphPoint	
Bytes_sent	DataPointGraphPoint	

**Table 24.6. MySQL - Select Statistics**

<b>Name</b>	<b>Type</b>	<b>Description</b>
Select_full_join	DataPointGraphPoint	
Select_full_range_join	DataPointGraphPoint	
Select_range	DataPointGraphPoint	
Select_range_check	DataPointGraphPoint	
Select_scan	DataPointGraphPoint	

## 2. Event Class Information

**Table 24.7. MySqlMonitor Event ClassInformation**

<b>Path</b>	<b>Name</b>	<b>Type</b>	<b>Code?</b>	<b>Description</b>
/App/MySQL	MySQL	Event Class	no	
/DB	DB	Event Class	no	

---

# Chapter 25. NetAppMonitor

**Table 25.1. NetAppMonitor Details**

<b>Version</b>	2.2.12
<b>Author</b>	Zenoss
<b>Dependencies</b>	ZenPacks.zenoss.StorageBase >=1.0

## 1. Monitoring Template Information

### 1.1. Device Performance Template

Device level collection for NetApp Filers

- `Devices/Storage/NetApp`

#### 1.1.1. Data Points

**Table 25.2. Device DataPoints**

<b>Data Source</b>	<b>Data Point</b>	<b>Description</b>
FibreChannel	ops	
FibreChannel	readBytes	
FibreChannel	writeBytes	
NFSCache	bwSavings	
NFSCache	bytesFromClients	
NFSCache	bytesFromServers	
NFSCache	bytesToClients	
NFSCache	bytesToServers	
NFSCache	ejectRequests	
NFSCache	hitRequests	
NFSCache	missCacheableRequests	
NFSCache	missRequests	
NFSCache	missUnCacheableRequests	
NFSCache	rpcRecords	
NFSCache	totalRequests	
NFSCache	verifyRequests	
cpuBusy	cpuBusy	
diskActiveCount	diskActiveCount	
diskFailedCount	diskFailedCount	
diskPrefailedCount	diskPrefailedCount	
diskReconstructingCount	diskReconstructingCount	
diskReconstructingParityCount	diskReconstructingParityCount	
diskScrubbingCount	diskScrubbingCount	

Data Source	Data Point	Description
diskSpareCount	diskSpareCount	
diskVerifyingParityCount	diskVerifyingParityCount	
iSCSI	ops	
iSCSI	readBytes	
iSCSI	writeBytes	
miscNetRcvdKB	miscNetRcvdKB	The total number of KBytes received on all the network interfaces, since the last boot.
miscNetSentKB	miscNetSentKB	The total number of KBytes received on all the network interfaces, since the last boot.
netapp	cifsOps	The total number of Server side CIFS calls since the last boot. This object returns the most significant 32 bits of the value.
netapp	httpOps	The total number of HTTP operations received since the last boot. This object returns the most significant 32 bits of the value.
netapp	nfsOps	The total number of Server side NFS calls since the last boot. This object returns the most significant 32 bits of the value.
sysUpTime	sysUpTime	System uptime from uptime command.

### 1.1.2. Graphs

**Table 25.3. CPU Utilization**

Name	Type	Description
cpuBusy	DataPointGraphPoint	

**Table 25.4. Disk Inventory**

Name	Type	Description
diskActiveCount	DataPointGraphPoint	
diskFailedCount	DataPointGraphPoint	
diskPrefailedCount	DataPointGraphPoint	
diskSpareCount	DataPointGraphPoint	

**Table 25.5. Disk Maintenance**

Name	Type	Description
diskReconstructingCount	DataPointGraphPoint	
diskReconstructingParityCount	DataPointGraphPoint	
diskScrubbingCount	DataPointGraphPoint	
diskVerifyingParityCount	DataPointGraphPoint	

**Table 25.6. Fibre Channel Traffic**

Name	Type	Description
readBytes	DataPointGraphPoint	

Name	Type	Description
writeBytes	DataPointGraphPoint	

**Table 25.7. NFS Cache Operations**

Name	Type	Description
ejectRequests	DataPointGraphPoint	
hitRequests	DataPointGraphPoint	
missCacheableRequests	DataPointGraphPoint	
missRequests	DataPointGraphPoint	
missUnCacheableRequests	DataPointGraphPoint	
rpcRecords	DataPointGraphPoint	
totalRequests	DataPointGraphPoint	
verifyRequests	DataPointGraphPoint	

**Table 25.8. NFS Cache Traffic**

Name	Type	Description
bytesFromClients	DataPointGraphPoint	
bytesFromServers	DataPointGraphPoint	
bytesToClients	DataPointGraphPoint	
bytesToServers	DataPointGraphPoint	

**Table 25.9. Network Traffic**

Name	Type	Description
miscNetRcvdKB	DataPointGraphPoint	
miscNetSentKB	DataPointGraphPoint	

**Table 25.10. Operations**

Name	Type	Description
cifsOps	DataPointGraphPoint	
httpOps	DataPointGraphPoint	
nfsOps	DataPointGraphPoint	
ops	DataPointGraphPoint	
ops2	DataPointGraphPoint	

**Table 25.11. iSCSI Traffic**

Name	Type	Description
readBytes	DataPointGraphPoint	
writeBytes	DataPointGraphPoint	

## 1.2. FileSystem Performance Template

Collection for NetApp Filer FileSystems

- Devices/Storage/NetApp



### 1.2.1. Data Points

**Table 25.12. FileSystem DataPoints**

Data Source	Data Point	Description
usedBlocks	usedBlocks	The total disk space in KBytes that is in use on the referenced file system. This object returns the least significant 32 bits of the value.

### 1.2.2. Graphs

**Table 25.13. Utilization**

Name	Type	Description
90 percent used	ThresholdGraphPoint	
usedBlocks	DataPointGraphPoint	

### 1.2.3. Thresholds

**Table 25.14. FileSystem**

Name	Type	Description
90 percent used	MinMaxThreshold	Alert if more than 90 percent of the CPU is used.

## 1.3. FileSystemSnapshot Performance Template

Collection for NetApp Filer FileSystem Snapshots

- `Devices/Storage/NetApp`

### 1.3.1. Data Points

**Table 25.15. FileSystemSnapshot DataPoints**

Data Source	Data Point	Description
usedBlocks	usedBlocks	The total disk space in KBytes that is in use on the referenced file system. This object returns the least significant 32 bits of the value.

### 1.3.2. Graphs

**Table 25.16. Utilization**

Name	Type	Description
120 percent used	ThresholdGraphPoint	
usedBlocks	DataPointGraphPoint	

### 1.3.3. Thresholds

**Table 25.17. FileSystemSnapshot**

Name	Type	Description
120 percent used	MinMaxThreshold	Alert if more than 120 percent of the CPU is used.

## 1.4. LUN Performance Template

- Devices/Storage/NetApp

### 1.4.1. Data Points

**Table 25.18. LUN DataPoints**

Data Source	Data Point	Description
LUNStats	errors	
LUNStats	otherOps	
LUNStats	readBytes	
LUNStats	readOps	
LUNStats	writeBytes	
LUNStats	writeOps	

### 1.4.2. Graphs

**Table 25.19. Bytes Per Cycle**

Name	Type	Description
readBytes	DataPointGraphPoint	
writeBytes	DataPointGraphPoint	

**Table 25.20. Operations Per Cycle**

Name	Type	Description
errors	DataPointGraphPoint	
otherOps	DataPointGraphPoint	
readOps	DataPointGraphPoint	
writeOps	DataPointGraphPoint	

## 1.5. NetApp - CIFS Performance Template

Performance metrics for CIFS

- Devices/Storage/NetApp

### 1.5.1. Data Points

**Table 25.21. NetApp - CIFS DataPoints**

Data Source	Data Point	Description
cifsReads	cifsReads	
cifsWrites	cifsWrites	

### 1.5.2. Graphs

**Table 25.22. CIFS Reads And Writes**

Name	Type	Description
cifsReads	DataPointGraphPoint	

Name	Type	Description
cifsWrites	DataPointGraphPoint	

## 1.6. NetApp - NFSv3 Performance Template

Performance metrics for NFSv3

- `Devices/Storage/NetApp`

### 1.6.1. Data Points

**Table 25.23. NetApp - NFSv3 DataPoints**

Data Source	Data Point	Description
nfsv3cRenames	nfsv3cRenames	
nfsv3cAccesses	nfsv3cAccesses	
nfsv3cCreates	nfsv3cCreates	
nfsv3cGetattrs	nfsv3cGetattrs	
nfsv3cLinks	nfsv3cLinks	
nfsv3cLookups	nfsv3cLookups	
nfsv3cMkdirs	nfsv3cMkdirs	
nfsv3cNulls	nfsv3cNulls	
nfsv3cReadCalls	nfsv3cReadCalls	
nfsv3cReadDirs	nfsv3cReadDirs	
nfsv3cReaddirPluss	nfsv3cReaddirPluss	
nfsv3cRemoves	nfsv3cRemoves	
nfsv3cRenames	nfsv3cRenames	
nfsv3cSymlinks	nfsv3cSymlinks	
nfsv3cWrites	nfsv3cWrites	

### 1.6.2. Graphs

**Table 25.24. NFSv3 Common Operations**

Name	Type	Description
nfsv3cReadCalls	DataPointGraphPoint	
nfsv3cWrites	DataPointGraphPoint	

**Table 25.25. NFSv3Calls**

Name	Type	Description
nfsv3cAccesses	DataPointGraphPoint	
nfsv3cCreates	DataPointGraphPoint	
nfsv3cGetattrs	DataPointGraphPoint	
nfsv3cLinks	DataPointGraphPoint	
nfsv3cLookups	DataPointGraphPoint	
nfsv3cMkdirs	DataPointGraphPoint	
nfsv3cNulls	DataPointGraphPoint	

Name	Type	Description
nfsv3cReadDirs	DataPointGraphPoint	
nfsv3cReaddirPluss	DataPointGraphPoint	
nfsv3cRemoves	DataPointGraphPoint	
nfsv3cRenames	DataPointGraphPoint	
nfsv3cSymlinks	DataPointGraphPoint	

## 2. Event Class Information

**Table 25.26. NetAppMonitor Event ClassInformation**

Path	Name	Type	Code?	Description
/Perf/ Filesystem/NetApp	NetApp	Event Class	yes	
/Storage/NetApp	NetApp	Event Class	no	NetApp specific events

---

# Chapter 26. NetScreenMonitor

**Table 26.1. NetScreenMonitor Details**

<b>Version</b>	2.1.7
<b>Author</b>	Zenoss

## 1. Monitoring Template Information

### 1.1. NetScreenDevice Performance Template

Device level metrics for NetScreen firewalls

- `Devices/Network/NetScreen`

#### 1.1.1. Data Points

**Table 26.2. NetScreenDevice DataPoints**

<b>Data Source</b>	<b>Data Point</b>	<b>Description</b>
cpuAvg	cpuAvg	Average System CPU utilization in percentage.
cpuLast15Min	cpuLast15Min	Last fifteen minutes CPU utilization in percentage.
cpuLast1Min	cpuLast1Min	Last one minute CPU utilization in percentage.
cpuLast5Min	cpuLast5Min	Last five minutes CPU utilization in percentage.
freeMemory	freeMemory	Memory Free/Left.
sessAllocate	sessAllocate	Allocate session number.
sessMaximum	sessMaximum	This takes the value of the sessMaximum Data-Source.
usedMemory	usedMemory	Memory used/allocated.

#### 1.1.2. Graphs

**Table 26.3. CPU Utilization**

<b>Name</b>	<b>Type</b>	<b>Description</b>
cpuAvg	DataPointGraphPoint	
cpuLast15Min	DataPointGraphPoint	
cpuLast1Min	DataPointGraphPoint	
cpuLast5Min	DataPointGraphPoint	
high CPU utilization	ThresholdGraphPoint	

**Table 26.4. Memory Utilization**

<b>Name</b>	<b>Type</b>	<b>Description</b>
freeMemory	DataPointGraphPoint	
low memory	ThresholdGraphPoint	
usedMemory	DataPointGraphPoint	

**Table 26.5. Sessions**

Name	Type	Description
sessAllocate	DataPointGraphPoint	
sessMaximum	DataPointGraphPoint	

### 1.1.3. Thresholds

**Table 26.6. NetScreenDevice**

Name	Type	Description
high CPU utilization	MinMaxThreshold	When the value for cpuLast5Min_cpuLast5Min exceed the default value of 95 an event is sent.
low memory	MinMaxThreshold	When the value for freeMemory_freeMemory exceed the default value of 524288 an event is sent.

## 1.2. netscreenInterface Performance Template

Metrics specific to interfaces discovered using the NETSCREEN-INTERFACE-MIB.

- Devices/Network/NetScreen

### 1.2.1. Data Points

**Table 26.7. netscreenInterface DataPoints**

Data Source	Data Point	Description
ifInOctets	ifInOctets	Incoming byte number arriving at this interface
ifInUcastPackets	ifInUcastPackets	Incoming packet number arriving at the this interface
ifOutOctets	ifOutOctets	Outgoing byte number sending through this interface
ifOutUcastPackets	ifOutUcastPackets	Outgoing packet number sending through this interface

### 1.2.2. Graphs

**Table 26.8. Packets**

Name	Type	Description
ifInUcastPackets	DataPointGraphPoint	
ifOutUcastPackets	DataPointGraphPoint	

**Table 26.9. Throughput**

Name	Type	Description
ifInOctets	DataPointGraphPoint	
ifOutOctets	DataPointGraphPoint	

## 1.3. VPNTunnel Performance Template

Per-tunnel metrics for NetScreen VPN tunnels

- Devices/Network/NetScreen

### 1.3.1. Data Points

**Table 26.10. VPNTunnel DataPoints**

Data Source	Data Point	Description
avail	avail	Percentage available over 30 samples.
bytesIn	bytesIn	Counter of the bytes in.
bytesOut	bytesOut	Counter of the bytes out.
delayAvg	delayAvg	A kind of rolling average of latency, in milliseconds. -1 has no meaning here, which means nsVpn-MonDelayAvg has not been calculated yet.
inSpi	inSpi	The SPI (Stateful Packet Inspection) for incoming packets
monState	monState	The monitoring status, if it is on, an icmp ping will be sent over the tunnel periodically to test the connectivity and latency
outSpi	outSpi	The SPI (Stateful Packet Inspection) for outgoing packets
p1State	p1State	The IKE's (Internet Key Exchange) Phase 1 status.
p2State	p2State	The IKE's (Internet Key Exchange) Phase 2 status.
packetsIn	packetsIn	Counter of the packets in.
packetsOut	packetsOut	Counter of the packets out.
tunnelState	tunnelState	The current tunnel status determined by the icmp ping if The monitoring status is on.

### 1.3.2. Graphs

**Table 26.11. Packets**

Name	Type	Description
packetsIn	DataPointGraphPoint	
packetsOut	DataPointGraphPoint	

**Table 26.12. SPI**

Name	Type	Description
inSpi	DataPointGraphPoint	
outSpi	DataPointGraphPoint	

**Table 26.13. Throughput**

Name	Type	Description
bytesIn	DataPointGraphPoint	
bytesOut	DataPointGraphPoint	

### 1.3.3. Thresholds

**Table 26.14. VPNTunnel**

Name	Type	Description
phase 1 inactive	MinMaxThreshold	When the value for p1State_p1State equals 1 an event is sent.

<b>Name</b>	<b>Type</b>	<b>Description</b>
phase 2 inactive	MinMaxThreshold	When the value for p1State_p1State equals 1 an event is sent.
tunnel down	MinMaxThreshold	When the value for tunnel down _tunnel down equals 1 an event is sent.



---

# Chapter 27. NtpMonitor

**Table 27.1. NtpMonitor Details**

<b>Version</b>	2.0.4
<b>Author</b>	Zenoss Team

## 1. Monitoring Template Information

### 1.1. NtpMonitor Performance Template

Monitors NTP offset

- Devices

#### 1.1.1. Data Points

**Table 27.2. NtpMonitor DataPoints**

<b>Data Source</b>	<b>Data Point</b>	<b>Description</b>
NtpMonitor	offset	The difference between the reference time and the system clock.

#### 1.1.2. Graphs

**Table 27.3. offset**

<b>Name</b>	<b>Type</b>	<b>Description</b>
offset	DataPointGraphPoint	

## 2. Event Class Information

**Table 27.4. NtpMonitor Event ClassInformation**

<b>Path</b>	<b>Name</b>	<b>Type</b>	<b>Code?</b>	<b>Description</b>
/Status/Ntp	Ntp	Event Class	no	

---

# Chapter 28. RANCIDIntegrator

**Table 28.1. RANCIDIntegrator Details**

<b>Version</b>	2.1.4
<b>Author</b>	Zenoss

## 1. Event Class Information

**Table 28.2. RANCIDIntegrator Event ClassInformation**

<b>Path</b>	<b>Name</b>	<b>Type</b>	<b>Code?</b>	<b>Description</b>
/Change/ instances/ciscoCon- figManEvent	ciscoConfigMan- Event	Mapping		

---

# Chapter 29. RPCMonitor

**Table 29.1. RPCMonitor Details**

<b>Version</b>	1.0.3
<b>Author</b>	zenoss

## 1. Monitoring Template Information

### 1.1. RPCServer Performance Template

Monitors RPC server availability.

- `Devices/Server`

#### 1.1.1. Data Points

**Table 29.2. RPCServer DataPoints**

<b>Data Source</b>	<b>Data Point</b>	<b>Description</b>
rpc	time	The amount of time that it takes to respond to a command

## 2. Event Class Information

**Table 29.3. RPCMonitor Event ClassInformation**

<b>Path</b>	<b>Name</b>	<b>Type</b>	<b>Code?</b>	<b>Description</b>
/Status/RPC	RPC	Event Class	no	

---

# Chapter 30. SolarisMonitor

**Table 30.1. SolarisMonitor Details**

<b>Version</b>	1.0.5
<b>Author</b>	Zenoss

## 1. Monitoring Template Information

### 1.1. Device Performance Template

Template for gathering performance data via SSH commands.

- `Devices/Server/SSH/Solaris`

#### 1.1.1. Data Points

**Table 30.2. Device DataPoints**

<b>Data Source</b>	<b>Data Point</b>	<b>Description</b>
cpu	ssCpuIdle	Template for CPU performance using mpstat.
cpu	ssCpuInterrupt	Template for CPU performance using mpstat.
cpu	ssCpuSystem	Template for CPU performance using mpstat.
cpu	ssCpuUser	Template for CPU performance using mpstat.
io	read	Template for IO performance using kstat. This is the value for total number of sectors read.
io	written	Template for IO performance using kstat. This is the value for total number of sectors written.
percent_memory	percentMemUsed	Template for memory usage using <code>/usr/sbin/swap -l</code> .
percent_swap	percentSwapUsed	Template for swap usage using <code>/usr/sbin/swap -l</code> .
uptime	laLoadInt1	Template for system load one minute average using uptime.
uptime	laLoadInt15	Template for system load fifteen minute after using uptime.
uptime	laLoadInt5	Template for system load five minute average using uptime.
uptime	sysUpTime	System uptime from uptime command.

#### 1.1.2. Graphs

**Table 30.3. CPU Utilization**

<b>Name</b>	<b>Type</b>	<b>Description</b>
ssCpuIdle	DataPointGraphPoint	
ssCpuSystem	DataPointGraphPoint	
ssCpuUser	DataPointGraphPoint	

**Table 30.4. IO**

Name	Type	Description
read	DataPointGraphPoint	
written	DataPointGraphPoint	

**Table 30.5. Load Average**

Name	Type	Description
high load	ThresholdGraphPoint	
laLoadInt1	DataPointGraphPoint	
laLoadInt15	DataPointGraphPoint	
laLoadInt5	DataPointGraphPoint	

**Table 30.6. Memory Utilization**

Name	Type	Description
percentMemUsed	DataPointGraphPoint	
percentSwapUsed	DataPointGraphPoint	

### 1.1.3. Thresholds

**Table 30.7. Device**

Name	Type	Description
CPU Utilization	MinMaxThreshold	
high load	MinMaxThreshold	

## 1.2. ethernetCsmacd Performance Template

ssh based performance collection of solaris network devices using netstat

- `Devices/Server/SSH/Solaris`

### 1.2.1. Data Points

**Table 30.8. ethernetCsmacd DataPoints**

Data Source	Data Point	Description
intf	ifInErrors	Inbound interface errors.
intf	ifInPackets	Inbound interface packet counts.
intf	ifOutErrors	Outbound interface errors.
intf	ifOutPackets	Outbound interface packet counts.
intf_octets	ifInOctets	Inbound interface octets.
intf_octets	ifOutOctets	Outbound interface octets.

### 1.2.2. Graphs

**Table 30.9. Packets**

Name	Type	Description
ifInPackets	DataPointGraphPoint	
ifOutPackets	DataPointGraphPoint	

**Table 30.10. Throughput**

Name	Type	Description
ifInOctets	DataPointGraphPoint	
ifOutOctets	DataPointGraphPoint	

### 1.2.3. Thresholds

**Table 30.11. ethernetCsmacd**

Name	Type	Description
Utilization 75 perc	MinMaxThreshold	Alert if inbound or outbound octets exceed 75% of NIC speed.

## 1.3. FileSystem Performance Template

Filesystem template

- `Devices/Server/SSH/Solaris`

### 1.3.1. Data Points

**Table 30.12. FileSystem DataPoints**

Data Source	Data Point	Description
disk	availBlocks	Disk blocks available using df.
disk	availInodes	Inodes available using df.
disk	percentInodesUsed	Used Inode percentage calculated from df.
disk	totalBlocks	Total number of blocks on disk using df.
disk	totalInodes	Total Inodes on disk using df.
disk	usedBlocks	Disk blocks used using df with threshold.
disk	usedInodes	Inodes used using df.

### 1.3.2. Graphs

**Table 30.13. Inode Utilization**

Name	Type	Description
percentInodesUsed	DataPointGraphPoint	

**Table 30.14. Utilization**

Name	Type	Description
high_disk_usage	ThresholdGraphPoint	
usedBlocks	DataPointGraphPoint	

### 1.3.3. Thresholds

**Table 30.15. FileSystem**

Name	Type	Description
high_disk_usage	MinMaxThreshold	Used blocks greater than 90% of total blocks.

## 1.4. OSProcess Performance Template

Monitors for OSProcess object

- Devices/Server/SSH/Solaris

### 1.4.1. Data Points

**Table 30.16. OSProcess DataPoints**

Data Source	Data Point	Description
ps	count	Number of process matching process name.
ps	cpu	CPU consumed by processes.
ps	mem	Memory consumed by processes.

### 1.4.2. Graphs

**Table 30.17. CPU Utilization**

Name	Type	Description
cpu	DataPointGraphPoint	

**Table 30.18. Memory**

Name	Type	Description
mem	DataPointGraphPoint	

**Table 30.19. Process Count**

Name	Type	Description
count	DataPointGraphPoint	

---

# Chapter 31. SugarCRMMonitor

**Table 31.1. SugarCRMMonitor Details**

<b>Version</b>	2.2.1
<b>Author</b>	Zenoss
<b>Dependencies</b>	ZenPacks.zenoss.ZenWebTx

## 1. Monitoring Template Information

### 1.1. SugarCRM Performance Template

SugarCRM web transaction tests

- `Devices/Web/SugarCRM`

#### 1.1.1. Data Points

**Table 31.2. SugarCRM DataPoints**

<b>Data Source</b>	<b>Data Point</b>	<b>Description</b>
SugarCRM Basic Functions	available	Provides whether Sugar is up or down.
SugarCRM Basic Functions	submitLoginParsedTime-time	Time it takes to login. Takes the sugar value from page.
SugarCRM Basic Functions	submitLoginTimer	Time it takes to complete the login
SugarCRM Basic Functions	totalTime	Total time to complete the transaction
SugarCRM Basic Functions	viewAccountParsedTime-time	The load time for the test or specified account. Takes the sugar value from page.
SugarCRM Basic Functions	viewAccountTimer	The load time for the test or specified account.
SugarCRM Basic Functions	viewAccountsParsedTime-time	The load time for the accounts page. Takes the sugar value from page.
SugarCRM Basic Functions	viewAccountsTimer	The load time for the accounts page.

#### 1.1.2. Graphs

**Table 31.3. SugarCRM - Basic Functions**

<b>Name</b>	<b>Type</b>	<b>Description</b>
totalTime	DataPointGraphPoint	

**Table 31.4. SugarCRM - Login**

<b>Name</b>	<b>Type</b>	<b>Description</b>
slow login	ThresholdGraphPoint	
submitLoginParsedTime-time	DataPointGraphPoint	
submitLoginTimer	DataPointGraphPoint	

**Table 31.5. SugarCRM - View All Accounts**

<b>Name</b>	<b>Type</b>	<b>Description</b>
slow account list	ThresholdGraphPoint	



Name	Type	Description
viewAccountsParsedTime-time	DataPointGraphPoint	
viewAccountsTimer	DataPointGraphPoint	

**Table 31.6. SugarCRM - View Single Account**

Name	Type	Description
slow account view	ThresholdGraphPoint	
viewAccountParsedTime-time	DataPointGraphPoint	
viewAccountTimer	DataPointGraphPoint	

**1.1.3. Thresholds****Table 31.7. SugarCRM**

Name	Type	Description
slow account list	MinMaxThreshold	When the value for the SugarCRM Basic Functions_viewAccountsParsedTime-time datapoint exceeds the default value of 6 an event is sent.
slow account view	MinMaxThreshold	When the value for the SugarCRM Basic Functions_viewAccountParsedTime-time datapoint exceeds the default value of 6 an event is sent.
slow login	MinMaxThreshold	When the value for the SugarCRM Basic Functions_submitLoginParsedTime-time datapoint exceeds the default value of 6 an event is sent.

---

# Chapter 32. TomcatMonitor

**Table 32.1. TomcatMonitor Details**

<b>Version</b>	2.2.1
<b>Author</b>	Zenoss
<b>Dependencies</b>	ZenPacks.zenoss.ZenJMX

## 1. Monitoring Template Information

### 1.1. Tomcat Cache Performance Template

- `Devices/Server/Tomcat`

#### 1.1.1. Data Points

**Table 32.2. Tomcat Cache DataPoints**

<b>Data Source</b>	<b>Data Point</b>	<b>Description</b>
Tomcat Access Count	accessCount	Access count.
Tomcat Cache Size	hitsCount	Hit count.

#### 1.1.2. Graphs

**Table 32.3. Tomcat Cache**

<b>Name</b>	<b>Type</b>	<b>Description</b>
accessCount	DataPointGraphPoint	
hitsCount	DataPointGraphPoint	

### 1.2. Tomcat Core Performance Template

- `Devices/Server/Tomcat`

#### 1.2.1. Data Points

**Table 32.4. Tomcat Core DataPoints**

<b>Data Source</b>	<b>Data Point</b>	<b>Description</b>
Tomcat Current Thread Cpu Time	CurrentThreadCpuTime	Returns the total CPU time for the current thread in nanoseconds.
Tomcat Current Thread User Time	CurrentThreadUserTime	Returns the CPU time that the current thread has executed in user mode in nanoseconds.
Tomcat Daemon Thread Count	DaemonThreadCount	Returns the current number of live daemon threads.
Tomcat Free Physical Memory Size	FreePhysicalMemorySize	Returns the amount of free physical memory in bytes.
Tomcat Free Swap Space Size	FreeSwapSpaceSize	Returns the amount of free swap space in bytes.
Tomcat Open File Descriptor Count	OpenFileDescriptorCount	The number of open file descriptors the JVM is working

Data Source	Data Point	Description
Tomcat Peak Thread Count	PeakThreadCount	Returns the peak live thread count since the Java virtual machine started or peak was reset.
Tomcat Process Cpu Time	ProcessCpuTime	Returns the CPU time used by the process on which the Java virtual machine is running in nanoseconds
Tomcat Thread Count	ThreadCount	Returns the current number of live threads including both daemon and non-daemon threads.
Tomcat UpTime	Uptime	The number of milliseconds that the Virtual Machine has been running.

## 1.2.2. Graphs

**Table 32.5. Tomcat CPU Time**

Name	Type	Description
ProcessCpuTime	DataPointGraphPoint	

**Table 32.6. Tomcat Open File Descriptors**

Name	Type	Description
OpenFileDescriptorCount	DataPointGraphPoint	

**Table 32.7. Tomcat Thread CPU Time**

Name	Type	Description
CurrentThreadCpuTime	DataPointGraphPoint	
CurrentThreadUserTime	DataPointGraphPoint	

**Table 32.8. Tomcat Threads**

Name	Type	Description
DaemonThreadCount	DataPointGraphPoint	
ThreadCount	DataPointGraphPoint	

## 1.3. Tomcat Global Request Processor Performance Template

- `Devices/Server/Tomcat`

### 1.3.1. Data Points

**Table 32.9. Tomcat Global Request Processor DataPoints**

Data Source	Data Point	Description
Tomcat Bytes Received	bytesReceived	The number of bytes received in this destination since the last reset.
Tomcat Bytes Sent	bytesSent	The number of bytes sent in this destination since the last reset.
Tomcat Error Count	errorCount	Number of errors while processing since last restart.
Tomcat Processing Time	processingTime	The total amount of time spent processing HTTP requests since Tomcat started

Data Source	Data Point	Description
Tomcat Request Count	requestCount	Total number of requests processed since last restart.

### 1.3.2. Graphs

**Table 32.10. Tomcat Global Request Hits**

Name	Type	Description
errorCount	DataPointGraphPoint	
requestCount	DataPointGraphPoint	

**Table 32.11. Tomcat Global Request Processing Time**

Name	Type	Description
processingTime	DataPointGraphPoint	

**Table 32.12. Tomcat Global Request Traffic**

Name	Type	Description
bytesReceived	DataPointGraphPoint	
bytesSent	DataPointGraphPoint	

## 1.4. Tomcat JSPs Performance Template

- [Devices/Server/Tomcat](#)

### 1.4.1. Data Points

**Table 32.13. Tomcat JSPs DataPoints**

Data Source	Data Point	Description
Tomcat JSP Count	jspCount	Returns the number of JSPs for which JspServletWrappers exist, i.e., the number of JSPs that have been loaded into the webapp.
Tomcat JSP Reload Count	jspReloadCount	Gets the current value of the JSP reload counter.

### 1.4.2. Graphs

**Table 32.14. Tomcat JSP Count**

Name	Type	Description
jspCount	DataPointGraphPoint	

**Table 32.15. Tomcat Reload Count**

Name	Type	Description
jspReloadCount	DataPointGraphPoint	

## 1.5. Tomcat Servlet Performance Template

- [Devices/Server/Tomcat](#)

### 1.5.1. Data Points

**Table 32.16. Tomcat Servlet DataPoints**

Data Source	Data Point	Description
Tomcat Class Load Time	classLoadTime	Time taken to load a class on the Servlet
Tomcat Error Count	errorCount	Number of erroneous requests received by the servlet since startup
Tomcat Load Time	loadTime	Time taken to load and initialize the Servlet
Tomcat Processing Time	processingTime	Time taken for processing all the requests since last collection
Tomcat Request Count	requestCount	Number of requests received by the servlet since startup

### 1.5.2. Graphs

**Table 32.17. Tomcat Servlet Requests**

Name	Type	Description
errorCount	DataPointGraphPoint	
requestCount	DataPointGraphPoint	

**Table 32.18. Tomcat Servlet Time**

Name	Type	Description
classLoadTime	DataPointGraphPoint	
loadTime	DataPointGraphPoint	
processingTime	DataPointGraphPoint	

## 1.6. Tomcat Thread Pool Performance Template

- `Devices/Server/Tomcat`

### 1.6.1. Data Points

**Table 32.19. Tomcat Thread Pool DataPoints**

Data Source	Data Point	Description
Tomcat Current Thread Count	currentThreadCount	Number of current threads.
Tomcat Current Threads Busy	currentThreadsBusy	Number of current busy threads.

### 1.6.2. Graphs

**Table 32.20. Tomcat HTTP Thread**

Name	Type	Description
currentThreadCount	DataPointGraphPoint	
currentThreadsBusy	DataPointGraphPoint	

## 1.7. Tomcat Web Module Performance Template

- Devices/Server/Tomcat

### 1.7.1. Data Points

**Table 32.21. Tomcat Web Module DataPoints**

Data Source	Data Point	Description
Tomcat Processing Time	processingTime	Processing time metrics for a web module.

### 1.7.2. Graphs

**Table 32.22. Tomcat Web Processing Time**

Name	Type	Description
processingTime	DataPointGraphPoint	

---

# Chapter 33. VMwareESXMonitor

**Table 33.1. VMwareESXMonitor Details**

<b>Version</b>	1.0.0
<b>Author</b>	Zenoss
<b>Dependencies</b>	ZenPacks.zenoss.ZenossVirtualHostMonitor

## 1. Monitoring Template Information

### 1.1. VirtualMachine Performance Template

Performance Template for a ESX Virtual Machine component.

- Devices/Server/Virtual Machine Host/ESX

#### 1.1.1. Data Points

**Table 33.2. VirtualMachine DataPoints**

<b>Data Source</b>	<b>Data Point</b>	<b>Description</b>
CPU Seconds	CPU Seconds	Time the virtual machine has been running on the CPU (seconds).
Current Memory	Current Memory	Amount of memory utilized by the vm. (KB; instantaneous)

#### 1.1.2. Graphs

**Table 33.3. CPU**

<b>Name</b>	<b>Type</b>	<b>Description</b>
CPU Seconds	DataPointGraphPoint	

**Table 33.4. Memory Usage**

<b>Name</b>	<b>Type</b>	<b>Description</b>
Current Memory	DataPointGraphPoint	

## 2. Event Class Information

**Table 33.5. VMwareESXMonitor Event ClassInformation**

<b>Path</b>	<b>Name</b>	<b>Type</b>	<b>Code?</b>	<b>Description</b>
/VMware/ MigrateAcquire	MigrateAcquire	Event Class	no	
/VMware/ MigrateRelease	MigrateRelease	Event Class	no	
/VMware/ instances/vmHBDe- tected	vmHBDetected	Mapping		

---

<b>Path</b>	<b>Name</b>	<b>Type</b>	<b>Code?</b>	<b>Description</b>
/VMware/ instances/vmHBLost	vmHBLost	Mapping		
/VMware/ instances/vmPow- eredOff	vmPoweredOff	Mapping		
/VMware/ instances/vmPowere- dOn	vmPoweredOn	Mapping		
/VMware/ instances/vmSus- pended	vmSuspended	Mapping		



---

# Chapter 34. WebLogicMonitor

**Table 34.1. WebLogicMonitor Details**

<b>Version</b>	2.2.1
<b>Author</b>	Zenoss
<b>Dependencies</b>	ZenPacks.zenoss.ZenJMX

## 1. Monitoring Template Information

### 1.1. WebLogic Core Performance Template

- `Devices/Server/WebLogic`

#### 1.1.1. Data Points

**Table 34.2. WebLogic Core DataPoints**

<b>Data Source</b>	<b>Data Point</b>	<b>Description</b>
WLS Restarts	RestartsTotalCount	Return the total number of restarts for this server since the cluster was last activated.
WLS Sockets Open	OpenSocketsCurrentCount	Return the current number sockets registered for socket muxing on this server.
WLS Sockets Opened Total Count	SocketsOpenedTotalCount	Return the total number of registrations for socket muxing on this sever.

#### 1.1.2. Graphs

**Table 34.3. WebLogic Open Sockets**

<b>Name</b>	<b>Type</b>	<b>Description</b>
OpenSocketsCurrentCount	DataPointGraphPoint	
SocketsOpenedTotalCount	DataPointGraphPoint	

**Table 34.4. WebLogic Restarts**

<b>Name</b>	<b>Type</b>	<b>Description</b>
RestartsTotalCount	DataPointGraphPoint	

### 1.2. WebLogic JCA Performance Template

- `Devices/Server/WebLogic`

#### 1.2.1. Data Points

**Table 34.5. WebLogic JCA DataPoints**

<b>Data Source</b>	<b>Data Point</b>	<b>Description</b>
WLS Active RA Count	ActiveRACount	Returns the number of resource adapters that are active.

Data Source	Data Point	Description
WLS Current Pool Count	ConnectionPoolCurrentCount	Returns the number of connection pools in all active RAs.
WLS RA Count	RACount	Returns an array of runtime information for all deployed and active resource adapters.
WLS Total Pools	ConnectionPoolsTotalCount	Returns the number of resource adapter connection pools that have been created since server start up.

## 1.2.2. Graphs

**Table 34.6. WebLogic JCA Pools**

Name	Type	Description
ConnectionPoolCurrentCount	DataPointGraphPoint	
ConnectionPoolsTotalCount	DataPointGraphPoint	

**Table 34.7. WebLogic RA Pools**

Name	Type	Description
ActiveRACount	DataPointGraphPoint	
RACount	DataPointGraphPoint	

## 1.3. WebLogic JMS Performance Template

- `Devices/Server/WebLogic`

### 1.3.1. Data Points

**Table 34.8. WebLogic JMS DataPoints**

Data Source	Data Point	Description
WLS Completed Requests	CompletedRequests	The number of requests that have been processed
WLS Pending Requests	PendingRequests	The number of waiting requests in the queue.
WLS Stuck Thread Count	StuckThreadCount	The number of thread that are considers stuck on the basis of any stuck thread constraints.
WLS Total Connections	ConnectionsTotalCount	The total number of connections made to this WebLogic Server since the last reset.
WLS Total Servers	JMSServersTotalCount	The total number of JMS servers that were deployed on this WebLogic Server instance since this server was started.

### 1.3.2. Graphs

**Table 34.9. WebLogic JMS Connections**

Name	Type	Description
ConnectionsTotalCount	DataPointGraphPoint	

**Table 34.10. WebLogic JMS Servers**

Name	Type	Description
JMSServersTotalCount	DataPointGraphPoint	

**Table 34.11. WebLogic JMS Status**

Name	Type	Description
CompletedRequests	DataPointGraphPoint	
PendingRequests	DataPointGraphPoint	
StuckThreadCount	DataPointGraphPoint	

## 1.4. WebLogic JMS Destination Performance Template

Note: Make sure you update the object name in each data source to reflect your domain, server, and queue name.

- `Devices/Server/WebLogic`

### 1.4.1. Data Points

**Table 34.12. WebLogic JMS Destination DataPoints**

Data Source	Data Point	Description
WLS JMS Destination Bytes Current	BytesCurrentCount	The current number of bytes stored in the destination.
WLS JMS Destination Bytes Pageable Current Count	BytesPageableCurrentCount	Return the total number of bytes in all the messages that are currently available to be paged out, but which have not yet been paged out.
WLS JMS Destination Bytes Paged In	BytesPagedInTotalCount	Return the total number of bytes that were read from the paging directory since the JMS server was started.
WLS JMS Destination Bytes Paged Out	BytesPagedOutTotalCount	Return the total number of bytes that were written to the paging directory since the JMS server was started.
WLS JMS Destination Bytes Pending	BytesPendingCount	The number of pending bytes stored in the destination.
WLS JMS Destination Bytes Received	BytesReceivedCount	The number of bytes received in this destination since the last reset.
WLS JMS Destination Bytes Threshold Time	BytesThresholdTime	The amount of time in the threshold condition since the last reset.
WLS JMS Destination Consumers Current	DestinationsCurrentCount	The current number of destinations for this JMS server.
WLS JMS Destination Consumers Total	DestinationTotalCount	The total number of destinations for this JMS server.
WLS JMS Destination Message Count	MessagesCurrentCount	The current number of messages in the destination.
WLS JMS Destination Message Pageable Count	MessagesPageableCurrentCount	Return the number of messages that are currently available for paging in this JMS server but have not yet been paged out.
WLS JMS Destination Messages Paged In	MessagesPagedInTotalCount	Return the total number of messages that were read from the paging directory since the JMS server was started.
WLS JMS Destination Messages Paged Out	MessagesPagedOutTotalCount	Return the total number of messages that were written to the paging directory since the JMS server was started.

Data Source	Data Point	Description
WLS JMS Destination Messages Pending Count	MessagesPendingCount	The current number of messages pending (unacknowledged or uncommitted) stored on this JMS server.
WLS JMS Destination Messages Received	MessagesReceivedCount	The number of messages received on this destination since the last reset.
WLS JMS Destination Messages Threshold Time	MessagesThresholdTime	The amount of time in the threshold condition since the last reset.

## 1.4.2. Graphs

**Table 34.13. WebLogic JMS Destination Message Status**

Name	Type	Description
MessagesCurrentCount	DataPointGraphPoint	
MessagesPagedInTotalCount	DataPointGraphPoint	
MessagesPagedOutTotalCount	DataPointGraphPoint	
MessagesPendingCount	DataPointGraphPoint	
MessagesReceivedCount	DataPointGraphPoint	

**Table 34.14. WebLogic JMS Destination Message Status (bytes)**

Name	Type	Description
BytesCurrentCount	DataPointGraphPoint	
BytesPagedInTotalCount	DataPointGraphPoint	
BytesPagedOutTotalCount	DataPointGraphPoint	
BytesPendingCount	DataPointGraphPoint	
BytesReceivedCount	DataPointGraphPoint	

## 1.5. WebLogic JTA Performance Template

- `Devices/Server/WebLogic`

### 1.5.1. Data Points

**Table 34.15. WebLogic JTA DataPoints**

Data Source	Data Point	Description
WLS Abandoned Count	TransactionAbandonedTotalCount	The total number of transactions that were abandoned since the server was started.
WLS Active Count	ActiveTransactionsTotalCount	The number of active transactions on the server.
WLS Committed Count	TransactionCommittedTotalCount	The total number of transactions committed since the server was started.
WLS Heuristics Count	TransactionHeuristicsTotalCount	The number of transactions that completed with a heuristic status since the server was started.
WLS Rollback Count	TransactionRolledBackTotalCount	The number of transactions that were rolled back since the server was started.
WLS Rollback Timeout Count	TransactionRolledBackTimeoutTotalCount	The number of transactions that were rolled back due to a timeout expiration.

Data Source	Data Point	Description
WLS Seconds Active Count	SecondsActiveTotalCount	The total number of seconds that transactions were active for all committed transactions.
WLS Total Count	TransactionTotalCount	The total number of transactions processed. This total includes all committed, rolled back, and heuristic transaction completions since the server was started.

## 1.5.2. Graphs

**Table 34.16. WebLogic JTA Rollback Timeout Count**

Name	Type	Description
TransactionRolledBackTimeout-TotalCount	DataPointGraphPoint	

**Table 34.17. WebLogic JTA Total Transactions**

Name	Type	Description
TransactionTotalCount	DataPointGraphPoint	

**Table 34.18. WebLogic JTA Transaction Execution Time**

Name	Type	Description
SecondsActiveTotalCount	DataPointGraphPoint	

**Table 34.19. WebLogic JTA Transactions by Category**

Name	Type	Description
ActiveTransactionsTotalCount	DataPointGraphPoint	
TransactionAbandonedTotalCount	DataPointGraphPoint	
TransactionCommittedTotalCount	DataPointGraphPoint	
TransactionHeuristicsTotalCount	DataPointGraphPoint	
TransactionRolledBackTotal-Count	DataPointGraphPoint	

## 1.6. WebLogic JTA Rollbacks Performance Template

- `Devices/Server/WebLogic`

### 1.6.1. Data Points

**Table 34.20. WebLogic JTA Rollbacks DataPoints**

Data Source	Data Point	Description
WLS Application Total Count	TransactionRolledBackAppTotal-Count	The number of transactions that were rolled back due to an application error.
WLS Resource Total Count	TransactionRolledBackResource-TotalCount	The number of transactions that were rolled back due to a resource error
WLS System Total Count	TransactionRolledBackSystemTo- talCount	The number of transactions that were rolled back due to an internal system error.

## 1.6.2. Graphs

**Table 34.21. WebLogic JTA Rollbacks by Category**

Name	Type	Description
TransactionRolledBackAppTotalCount	DataPointGraphPoint	
TransactionRolledBackResourceTotalCount	DataPointGraphPoint	
TransactionRolledBackSystemTotalCount	DataPointGraphPoint	

## 1.7. WebLogic JVM Performance Template

- `Devices/Server/WebLogic`

### 1.7.1. Data Points

**Table 34.22. WebLogic JVM DataPoints**

Data Source	Data Point	Description
WLS Copy Garbage Collection Count	CollectionCount	Returns the total number of collections that have occurred.
WLS Copy Garbage Collection Time	CollectionTime	Returns the approximate accumulated collection elapsed time in milliseconds.
WLS Daemon Thread Count	DaemonThreadCount	Returns the current number of live daemon threads.
WLS Free Memory	FreePhysicalMemorySize	Returns the amount of free physical memory in bytes.
WLS Heap Memory	used	Returns the current memory usage of the heap that is used for object allocation.
WLS MarkSweep Garbage Collection Count	CollectionCount	Returns the total number of collections that have occurred.
WLS MarkSweep Garbage Collection Time	CollectionTime	Returns the approximate accumulated collection elapsed time in milliseconds.
WLS Open File Descriptors	OpenFileDescriptorCount	The number of open file descriptors the JVM is working
WLS Total Memory	used	Returns the current memory usage of non-heap memory that is used by the Java virtual machine

### 1.7.2. Graphs

**Table 34.23. WebLogic Copy GC Performance**

Name	Type	Description
CollectionCount	DataPointGraphPoint	
CollectionTime	DataPointGraphPoint	

**Table 34.24. WebLogic Daemon Threads**

Name	Type	Description
DaemonThreadCount	DataPointGraphPoint	

**Table 34.25. WebLogic MarkSweep GC Performance**

Name	Type	Description
CollectionCount	DataPointGraphPoint	
CollectionTime	DataPointGraphPoint	

**Table 34.26. WebLogic Memory Usage**

Name	Type	Description
free memory	DataPointGraphPoint	
heap memory	DataPointGraphPoint	
non-heap memory	DataPointGraphPoint	

**Table 34.27. WebLogic Open File Descriptors**

Name	Type	Description
OpenFileDescriptorCount	DataPointGraphPoint	

## 1.8. WebLogic Thread Pool Performance Template

- Devices/Server/WebLogic

### 1.8.1. Data Points

**Table 34.28. WebLogic Thread Pool DataPoints**

Data Source	Data Point	Description
WLS Completed Requests	CompletedRequestCount	The number of completed requests in the priority queue.
WLS Execute Threads	ExecuteThreadTotalCount	The total number of threads in the pool.
WLS Idle Threads	ExecuteThreadIdleCount	The number of idle threads in the pool.
WLS Queue Length	QueueLength	The number of pending requests in the priority queue.
WLS Throughput	Throughput	The mean number of requests completed per second

### 1.8.2. Graphs

**Table 34.29. WebLogic Thread Pool Execution**

Name	Type	Description
ExecuteThreadIdleCount	DataPointGraphPoint	
ExecuteThreadTotalCount	DataPointGraphPoint	

**Table 34.30. WebLogic Thread Pool Queue Length**

Name	Type	Description
QueueLength	DataPointGraphPoint	

**Table 34.31. WebLogic Thread Pool Throughput**

Name	Type	Description
Throughput	DataPointGraphPoint	

**Table 34.32. WebLogic Thread Pool Usage**

Name	Type	Description
CompletedRequestCount	DataPointGraphPoint	

## 1.9. WebLogic Timer Service Performance Template

- `Devices/Server/WebLogic`

### 1.9.1. Data Points

**Table 34.33. WebLogic Timer Service DataPoints**

Data Source	Data Point	Description
WLS Exception Count	ExceptionCount	The number of times an exception type has been thrown since enabling exception counting. If exception counting has not been enabled for the specified type, the result is unspecified.
WLS Execution Count	ExecutionCount	Return the number of already executed statements.
WLS Executions per Minute	ExecutionsPerMinute	Return the number of executed statements per minute.
WLS Scheduled Triggers	ScheduledTriggerCount	The number of scheduled triggers.

### 1.9.2. Graphs

**Table 34.34. WebLogic Timer Scheduled Triggers**

Name	Type	Description
ScheduledTriggerCount	DataPointGraphPoint	

**Table 34.35. WebLogic Timer Service Performance**

Name	Type	Description
ExceptionCount	DataPointGraphPoint	
ExecutionCount	DataPointGraphPoint	

## 1.10. WebLogic User Lockouts Performance Template

Make sure you update the realm name in the data sources

- `Devices/Server/WebLogic`

### 1.10.1. Data Points

**Table 34.36. WebLogic User Lockouts DataPoints**

Data Source	Data Point	Description
WLS Invalid Login Attempts	InvalidLoginAttemptsTotalCount	Returns the number of invalid logins attempted since this server has been started and lockouts have been enabled. In a cluster, this method returns the number of invalid logins attempted that have occurred since the cluster has been started because all servers share login failure information.



Data Source	Data Point	Description
WLS Login Attempts While Locked	LoginAttemptsWhileLockedTotal-Count	Returns the number of invalid logins attempted since this server has been started and lockouts have been enabled.
WLS Total Locked Accounts	LockedUsersCurrentCount	Returns the number of users that are currently locked out of this server.
WLS Total Unlocked Users	UnlockedUsersTotalCount	Returns the number times users have been unlocked since this server has been started.
WLS User Lockouts	UserLockoutTotalCount	The number of user lockouts that have occurred since this server has been started. In a cluster, this method returns the number of user lockouts that have occurred since the cluster has been started because all servers share login failure information.

## 1.10.2. Graphs

**Table 34.37. WebLogic User Accounts**

Name	Type	Description
LockedUsersCurrentCount	DataPointGraphPoint	
UnlockedUsersTotalCount	DataPointGraphPoint	

**Table 34.38. WebLogic User Authentication Failures**

Name	Type	Description
InvalidLoginAttemptsTotalCount	DataPointGraphPoint	
LoginAttemptsWhileLockedTotal-Count	DataPointGraphPoint	

**Table 34.39. WebLogic User Lockouts**

Name	Type	Description
UserLockoutTotalCount	DataPointGraphPoint	

---

# Chapter 35. WebsphereMonitor

**Table 35.1. WebsphereMonitor Details**

<b>Version</b>	1.2.1
<b>Author</b>	Zenoss
<b>Dependencies</b>	ZenPacks.zenoss.ZenWebTx >=2.5

## 1. Monitoring Template Information

### 1.1. Websphere Performance Template

- Devices/Server

#### 1.1.1. Data Points

**Table 35.2. Websphere DataPoints**

<b>Data Source</b>	<b>Data Point</b>	<b>Description</b>
Websphere Basic	available	Time available
Websphere Basic	heapSize	Returns the size of the heap memory
Websphere Basic	threadPoolSize	Size of the thread pool
Websphere Basic	totalTime	Total time to complete transaction
Websphere Basic	usedMemory	Amount of Memory in Use

#### 1.1.2. Graphs

**Table 35.3. Thread Pool**

<b>Name</b>	<b>Type</b>	<b>Description</b>
Thread Pool Size	DataPointGraphPoint	

**Table 35.4. Websphere Memory**

<b>Name</b>	<b>Type</b>	<b>Description</b>
Heap Size	DataPointGraphPoint	
Used Memory	DataPointGraphPoint	

---

# Chapter 36. XenMonitor

**Table 36.1. XenMonitor Details**

<b>Version</b>	1.0.3
<b>Author</b>	Zenoss
<b>Dependencies</b>	ZenPacks.zenoss.ZenossVirtualHostMonitor

## 1. Monitoring Template Information

### 1.1. VirtualMachine Performance Template

Monitor Xen Virtual Machines

- `Devices/Server/Virtual Machine Host/Xen`

#### 1.1.1. Data Points

**Table 36.2. VirtualMachine DataPoints**

<b>Data Source</b>	<b>Data Point</b>	<b>Description</b>
resources	cpu	The amount of CPU that is being used.

#### 1.1.2. Graphs

**Table 36.3. CPU**

<b>Name</b>	<b>Type</b>	<b>Description</b>
cpu	DataPointGraphPoint	

---

# Chapter 37. ZenAWS

**Table 37.1. ZenAWS Details**

<b>Version</b>	1.0.7
<b>Author</b>	Zenoss

## 1. Monitoring Template Information

### 1.1. EC2Instance Performance Template

Monitor Statistics from an Amazon EC2 Instance Type (i-12345...)

- `Devices/AWS/EC2`

#### 1.1.1. Data Points

**Table 37.2. EC2Instance DataPoints**

Data Source	Data Point	Description
zencw2	CPUUtilization	
zencw2	DiskReadBytes	
zencw2	DiskReadOps	
zencw2	DiskWriteBytes	
zencw2	DiskWriteOps	
zencw2	NetworkIn	
zencw2	NetworkOut	

#### 1.1.2. Graphs

**Table 37.3. CPU Utilization**

Name	Type	Description
CPUUtilization	DataPointGraphPoint	

**Table 37.4. Disk Throughput - Operations**

Name	Type	Description
DiskReadOps	DataPointGraphPoint	
DiskWriteOps	DataPointGraphPoint	

**Table 37.5. Disk Throughput - Volume**

Name	Type	Description
DiskReadBytes	DataPointGraphPoint	
DiskWriteBytes	DataPointGraphPoint	

**Table 37.6. Network Throughput**

Name	Type	Description
NetworkIn	DataPointGraphPoint	

Name	Type	Description
NetworkOut	DataPointGraphPoint	

## 1.2. EC2InstanceType Performance Template

Monitor Statistics from an Amazon EC2 Instance Type (m1.small...)

- `Devices/AWS/EC2`

### 1.2.1. Data Points

**Table 37.7. EC2InstanceType DataPoints**

Data Source	Data Point	Description
zencw2	CPUUtilization	
zencw2	DiskReadBytes	
zencw2	DiskReadOps	
zencw2	DiskWriteBytes	
zencw2	DiskWriteOps	
zencw2	NetworkIn	
zencw2	NetworkOut	

### 1.2.2. Graphs

**Table 37.8. CPU Utilization**

Name	Type	Description
CPUUtilization	DataPointGraphPoint	

**Table 37.9. Disk Throughput - Operations**

Name	Type	Description
DiskReadOps	DataPointGraphPoint	
DiskWriteOps	DataPointGraphPoint	

**Table 37.10. Disk Throughput - Volume**

Name	Type	Description
DiskReadBytes	DataPointGraphPoint	
DiskWriteBytes	DataPointGraphPoint	

**Table 37.11. Network Throughput**

Name	Type	Description
NetworkIn	DataPointGraphPoint	
NetworkOut	DataPointGraphPoint	

## 1.3. EC2Manager Performance Template

Monitor Statistics that span an entire EC2 account (ie sum of all instances)

- `Devices/AWS/EC2`

### 1.3.1. Data Points

**Table 37.12. EC2Manager DataPoints**

Data Source	Data Point	Description
zencw2	CPUUtilization	
zencw2	DiskReadBytes	
zencw2	DiskReadOps	
zencw2	DiskWriteBytes	
zencw2	DiskWriteOps	
zencw2	NetworkIn	
zencw2	NetworkOut	

### 1.3.2. Graphs

**Table 37.13. CPU Utilization**

Name	Type	Description
CPUUtilization	DataPointGraphPoint	

**Table 37.14. Disk Throughput - Operations**

Name	Type	Description
DiskReadOps	DataPointGraphPoint	
DiskWriteOps	DataPointGraphPoint	

**Table 37.15. Disk Throughput - Volume**

Name	Type	Description
DiskReadBytes	DataPointGraphPoint	
DiskWriteBytes	DataPointGraphPoint	

**Table 37.16. Network Throughput**

Name	Type	Description
NetworkIn	DataPointGraphPoint	
NetworkOut	DataPointGraphPoint	

---

# Chapter 38. ZenHoltWinters

**Table 38.1. ZenHoltWinters Details**

<b>Version</b>	2.0.2
<b>Author</b>	Zenoss

## 1. Event Class Information

**Table 38.2. ZenHoltWinters Event ClassInformation**

<b>Path</b>	<b>Name</b>	<b>Type</b>	<b>Code?</b>	<b>Description</b>
/Perf/Predict	Predict	Event Class	no	

---

# Chapter 39. ZenJMX

**Table 39.1. ZenJMX Details**

<b>Version</b>	3.7.0
<b>Author</b>	Zenoss

## 1. Monitoring Template Information

### 1.1. Java Performance Template

- Devices

#### 1.1.1. Data Points

**Table 39.2. Java DataPoints**

<b>Data Source</b>	<b>Data Point</b>	<b>Description</b>
Heap Memory	committed	Returns the current amount of memory (in bytes) of the heap that is guaranteed to be available for use by the Java virtual machine.
Heap Memory	used	Returns the current memory usage of the heap that is used for object allocation.
Non-Heap Memory	committed	Returns the current amount of memory (in bytes) of the non-heap that is guaranteed to be available for use by the Java virtual machine.
Non-Heap Memory	used	Returns the current memory usage of non-heap memory that is used by the Java virtual machine
Open File Descriptors	OpenFileDescriptorCount	The number of open file descriptors the JVM is working
Thread Count	ThreadCount	Returns the current number of live threads including both daemon and non-daemon threads

#### 1.1.2. Graphs

**Table 39.3. Heap Memory**

<b>Name</b>	<b>Type</b>	<b>Description</b>
Heap Memory_committed	DataPointGraphPoint	
Heap Memory_used	DataPointGraphPoint	

**Table 39.4. Non-Heap Memory**

<b>Name</b>	<b>Type</b>	<b>Description</b>
Non-Heap Memory_committed	DataPointGraphPoint	
Non-Heap Memory_used	DataPointGraphPoint	

**Table 39.5. Open File Descriptors**

<b>Name</b>	<b>Type</b>	<b>Description</b>
Open File Descriptors_OpenFileDescriptorCount	DataPointGraphPoint	



**Table 39.6. Thread Count**

Name	Type	Description
Thread Count_ThreadCount	DataPointGraphPoint	

## 1.2. ZenJMX Performance Template

- Devices

### 1.2.1. Data Points

**Table 39.7. ZenJMX DataPoints**

Data Source	Data Point	Description
ZenJMX Heap Memory	committed	Returns the current amount of memory (in bytes) of the heap that is guaranteed to be available for use by the Java virtual machine.
ZenJMX Heap Memory	used	Returns the current memory usage of the heap that is used for object allocation.
ZenJMX Non-Heap Memory	committed	Returns the current amount of memory (in bytes) of the non-heap that is guaranteed to be available for use by the Java virtual machine.
ZenJMX Non-Heap Memory	used	Returns the current memory usage of non-heap memory that is used by the Java virtual machine
ZenJMX Open File Descriptors	OpenFileDescriptorCount	The number of open file descriptors the JVM is working
ZenJMX Thread Count	ThreadCount	Returns the current number of live threads including both daemon and non-daemon threads

### 1.2.2. Graphs

**Table 39.8. ZenJMX Heap Memory**

Name	Type	Description
ZenJMX Heap Memory_committed	DataPointGraphPoint	
ZenJMX Heap Memory_used	DataPointGraphPoint	

**Table 39.9. ZenJMX Non-Heap Memory**

Name	Type	Description
ZenJMX Non-Heap Memory_committed	DataPointGraphPoint	
ZenJMX Non-Heap Memory_used	DataPointGraphPoint	

**Table 39.10. ZenJMX Open File Descriptors**

Name	Type	Description
ZenJMX Open File Descriptors_OpenFileDescriptorCount	DataPointGraphPoint	

**Table 39.11. ZenJMX Thread Count**

<b>Name</b>	<b>Type</b>	<b>Description</b>
ZenJMX Thread Count_ThreadCount	DataPointGraphPoint	

## 2. Event Class Information

**Table 39.12. ZenJMX Event ClassInformation**

<b>Path</b>	<b>Name</b>	<b>Type</b>	<b>Code?</b>	<b>Description</b>
/Status/JMX	JMX	Event Class	no	
/Status/JMX/ Connection	Connection	Event Class	no	

---

# Chapter 40. ZenSQLTx

**Table 40.1. ZenSQLTx Details**

<b>Version</b>	2.3.1
<b>Author</b>	Zenoss

## 1. Event Class Information

**Table 40.2. ZenSQLTx Event Class Information**

<b>Path</b>	<b>Name</b>	<b>Type</b>	<b>Code?</b>	<b>Description</b>
/Perf/SQL	SQL	Event Class	no	
/Status/SQL	SQL	Event Class	no	

---

# Chapter 41. ZenVMware

**Table 41.1. ZenVMware Details**

<b>Version</b>	1.9.5
<b>Author</b>	Zenoss
<b>Dependencies</b>	ZenPacks.zenoss.DynamicView , ZenPacks.zenoss.StorageBase

## 1. Monitoring Template Information

### 1.1. VMwareCluster Performance Template

Metrics for VMware clusters

- `Devices/VMware`

#### 1.1.1. Data Points

**Table 41.2. VMwareCluster DataPoints**

Data Source	Data Point	Description
effectiveCPU	effectiveCPU	Total available CPU resources of all hosts within a cluster.
effectiveMem	effectiveMem	Total amount of machine memory of all hosts in the cluster that is available for use for virtual machine memory (physical memory for use by the Guest OS) and virtual machine overhead memory.

#### 1.1.2. Graphs

**Table 41.3. Effective CPU**

Name	Type	Description
Effective CPU	DataPointGraphPoint	

**Table 41.4. Effective Memory**

Name	Type	Description
Effective Memory	DataPointGraphPoint	

### 1.2. VMwareGuest Performance Template

Metrics for VMware virtual machines

- `Devices/VMware`

#### 1.2.1. Data Points

**Table 41.5. VMwareGuest DataPoints**

Data Source	Data Point	Description
cpuUsage	cpuUsage	The disk read rate. It indicates the amount of data read in the performance interval.

Data Source	Data Point	Description
cpuUsageAvg	cpuUsage	The CPU utilization over the interval of collection
cpuUsageMax	cpuUsageMax	The average CPU utilization over the interval of collection
cpuUsageMin	cpuUsageMin	The maximum possible value of CPU usage as a percentage during the interval.
diskUsage	diskUsage	The minimum possible value of CPU usage as a percentage during the interval.
memConsumed	memConsumed	The amount of memory that is not free.
memOverhead	memOverhead	Amount of machine memory allocated to a virtual machine beyond its reserved amount.
memUsage	memUsage	Memory usage as percentage of total configured or available memory.

## 1.2.2. Graphs

**Table 41.6. CPU Usage**

Name	Type	Description
CPU Usage (Average)	DataPointGraphPoint	
CPU Usage (Max)	DataPointGraphPoint	
CPU Usage (Min)	DataPointGraphPoint	

**Table 41.7. Disk Usage**

Name	Type	Description
diskUsage	DataPointGraphPoint	

**Table 41.8. Host Memory Usage**

Name	Type	Description
Host Memory Consumed	DataPointGraphPoint	
Overhead Memory	DataPointGraphPoint	

**Table 41.9. Memory Usage**

Name	Type	Description
Memory Usage	DataPointGraphPoint	

**Table 41.10. Raw CPU Usage**

Name	Type	Description
CPU Usage	DataPointGraphPoint	

## 1.3. VMwareGuest\_esxstop Performance Template

esxstop stats for VMware VMs

- Devices/VMware

### 1.3.1. Data Points

**Table 41.11. VMwareGuest\_esxstop DataPoints**

Data Source	Data Point	Description
Group Cpu	CPU Latency	
Group Cpu	CoStop	
Group Cpu	Max Limited	
Group Cpu	Ready	
Group Cpu	Swap Wait	
Group Cpu	Timers_sec	
Group Cpu	Used	
Group Memory	Memctl MBytes	
Group Memory	Numa _ Local	
Group Memory	Swap Read MBytes_sec	
Group Memory	Swap Written MBytes_sec	

### 1.3.2. Graphs

**Table 41.12. CPU Usage (esxstop)**

Name	Type	Description
Used	DataPointGraphPoint	

**Table 41.13. Contention Factors (esxstop)**

Name	Type	Description
CoStop	DataPointGraphPoint	
Max Limited	DataPointGraphPoint	
Ready	DataPointGraphPoint	

**Table 41.14. Timers per second (esxstop)**

Name	Type	Description
Timers_sec	DataPointGraphPoint	

## 1.4. VMwareHost Performance Template

Metrics for VMware hosts

- `Devices/VMware`

### 1.4.1. Data Points

**Table 41.15. VMwareHost DataPoints**

Data Source	Data Point	Description
cpuReservedcapacity	cpuReservedcapacity	Total CPU capacity reserved by the virtual machines.
cpuUsage	cpuUsage	The CPU utilization over the interval of collection
cpuUsagemhz	cpuUsagemhz	The CPU Utilization over the interval of collection.

Data Source	Data Point	Description
diskUsage	diskUsage	The sum of Disk Read and Disk Write on all disk instances of the host.
memActive	memActive	Sum of all active amounts of memory that is actively used, as estimated by VMkernel based on recently touched memory pages for all powered-on virtual machines plus vSphere services (such as COS, vpxa) on the host.
memConsumed	memConsumed	
memGranted	memGranted	Sum of all granted amounts of machine memory or “physical” memory for all powered-on virtual machines, plus machine memory for vSphere services on the host.
memSwapped	memSwapped	The amount of memory used for swap space.
sysUpTime	sysUpTime	Total time elapsed, in seconds, since last system startup.

## 1.4.2. Graphs

**Table 41.16. CPU Usage**

Name	Type	Description
CPU Usage	DataPointGraphPoint	

**Table 41.17. Disk Usage**

Name	Type	Description
Disk Usage	DataPointGraphPoint	

**Table 41.18. Memory**

Name	Type	Description
Active Memory	DataPointGraphPoint	
Consumed Memory	DataPointGraphPoint	
Granted Memory	DataPointGraphPoint	

**Table 41.19. Raw CPU Usage**

Name	Type	Description
CPU Reserved Capacity	DataPointGraphPoint	
CPU Usage	DataPointGraphPoint	

**Table 41.20. Swap**

Name	Type	Description
Swap Space Used	DataPointGraphPoint	

## 1.5. VMwareHost\_esxtop Performance Template

Performance stats from ESX/ESXi via the resxtop command

- Devices/VMware

### 1.5.1. Data Points

**Table 41.21. VMwareHost\_esxstop DataPoints**

Data Source	Data Point	Description
Group Cpu	Members	
Group Cpu	Processor Migrations_sec	
Memory	Free MBytes	
Memory	Memory Overcommit (5 Minute Avg)	
Memory	Swap Free MBytes	
Physical Cpu	Processor Time	
Physical Cpu	Util Time	
Physical Cpu Load	Cpu Load (5 Minute Avg)	

### 1.5.2. Graphs

**Table 41.22. CPU Load (esxstop)**

Name	Type	Description
CPU Load (5 Minute Avg)	DataPointGraphPoint	

**Table 41.23. Free Memory (esxstop)**

Name	Type	Description
Free MBytes	DataPointGraphPoint	

## 1.6. VMwareHostVolumePartition Performance Template

Metrics for disks on VMware hosts

- `Devices/VMware`

### 1.6.1. Data Points

**Table 41.24. VMwareHostVolumePartition DataPoints**

Data Source	Data Point	Description
diskRead	diskRead	
diskReadRequests	diskReadRequests	Number of disk reads during the collection interval.
diskWrite	diskWrite	The disk write rate. It indicates the amount of data written to disk in the performance interval.
diskWriteRequests	diskWriteRequests	Number of disk writes during the collection interval.

### 1.6.2. Graphs

**Table 41.25. Disk IO Rate**

Name	Type	Description
Read Rate	DataPointGraphPoint	
Write Rate	DataPointGraphPoint	



**Table 41.26. Disk Requests**

Name	Type	Description
Read Requests	DataPointGraphPoint	
Write Requests	DataPointGraphPoint	

## 1.7. VMwareNic Performance Template

Metrics for nics on VMware hosts

- Devices/VMware

### 1.7.1. Data Points

**Table 41.27. VMwareNic DataPoints**

Data Source	Data Point	Description
nicRx	nicRx	Average rate at which data was received during the interval. This represents the bandwidth of the network. Average rate at which data was received during the interval. This represents the bandwidth of the network.
nicTx	nicTx	Average rate at which data was transmitted during the interval. This represents the bandwidth of the network.

### 1.7.2. Graphs

**Table 41.28. Data Rates**

Name	Type	Description
Receive Rate	DataPointGraphPoint	
Transmit Rave	DataPointGraphPoint	

## 1.8. VMwareResourcePool Performance Template

Metrics for VMware resource pools

- Devices/VMware

### 1.8.1. Data Points

**Table 41.29. VMwareResourcePool DataPoints**

Data Source	Data Point	Description
cpuUsagemhz	cpuUsagemhz	
memActive	memActive	
memGranted	memGranted	

### 1.8.2. Graphs

**Table 41.30. Memory**

Name	Type	Description
Active Memory	DataPointGraphPoint	
Granted Memory	DataPointGraphPoint	

**Table 41.31. Raw CPU Usage**

Name	Type	Description
CPU Usage	DataPointGraphPoint	

## 1.9. VMwareVCpu Performance Template

- Devices/VMware

### 1.9.1. Data Points

**Table 41.32. VMwareVCpu DataPoints**

Data Source	Data Point	Description
cpuWait	cpuWait	

### 1.9.2. Graphs

**Table 41.33. CPU Wait**

Name	Type	Description
cpuWait	DataPointGraphPoint	

## 2. Event Class Information

**Table 41.34. ZenVMware Event ClassInformation**

Path	Name	Type	Code?	Description
/VMware	VMware	Event Class	no	
/VMware/Alarm	Alarm	Event Class	no	
/VMware/Alarm/ instances/VMware- Alarm	VMwareAlarm	Mapping		
/VMware/Datastore	Datastore	Event Class	no	
/VMware/ Datastore/Add	Add	Event Class	no	
/VMware/ Datastore/Destroy	Destroy	Event Class	no	
/VMware/ Datastore/Extend	Extend	Event Class	no	
/VMware/ Datastore/Remove	Remove	Event Class	no	
/VMware/Error	Error	Event Class	no	
/VMware/Fail	Fail	Event Class	no	
/VMware/Guest	Guest	Event Class	no	
/VMware/Guest/Add	Add	Event Class	no	
/VMware/Guest/ Connection	Connection	Event Class	no	
/VMware/Guest/ Connection/Connect	Connect	Event Class	yes	

<b>Path</b>	<b>Name</b>	<b>Type</b>	<b>Code?</b>	<b>Description</b>
/VMware/Guest/Connection/Disconnect	Disconnect	Event Class	yes	
/VMware/Guest/Connection/Inaccessible	Inaccessible	Event Class	no	
/VMware/Guest/Connection/Invalid	Invalid	Event Class	no	
/VMware/Guest/Connection/Orphan	Orphan	Event Class	yes	
/VMware/Guest/Migration	Migration	Event Class	no	
/VMware/Guest/Migration/Success	Success	Event Class	no	
/VMware/Guest/Power	Power	Event Class	no	
/VMware/Guest/Power/Off	Off	Event Class	yes	
/VMware/Guest/Power/On	On	Event Class	yes	
/VMware/Guest/Power/Shutdown	Shutdown	Event Class	yes	
/VMware/Guest/Power/Standby	Standby	Event Class	yes	
/VMware/Guest/Power/Suspend	Suspend	Event Class	yes	
/VMware/Guest/Remove	Remove	Event Class	yes	
/VMware/Host	Host	Event Class	no	
/VMware/Host/Add	Add	Event Class	no	
/VMware/Host/Connection	Connection	Event Class	no	
/VMware/Host/Connection/Connect	Connect	Event Class	yes	
/VMware/Host/Connection/Disconnect	Disconnect	Event Class	yes	
/VMware/Host/Connection/Lost-Connection	LostConnection	Event Class	yes	
/VMware/Host/Maintenance	Maintenance	Event Class	no	
/VMware/Host/Maintenance/Enter	Enter	Event Class	yes	
/VMware/Host/Maintenance/Exit	Exit	Event Class	yes	
/VMware/Host/Power	Power	Event Class	no	

---

<b>Path</b>	<b>Name</b>	<b>Type</b>	<b>Code?</b>	<b>Description</b>
/VMware/Host/ Power/On	On	Event Class	yes	
/VMware/Host/ Power/Shutdown	Shutdown	Event Class	yes	
/VMware/Host/ Power/Standby	Standby	Event Class	no	
/VMware/Host/ Power/Standby/Enter	Enter	Event Class	yes	
/VMware/Host/ Power/Standby/Exit	Exit	Event Class	yes	
/VMware/Host/ Power/Unknown	Unknown	Event Class	yes	
/VMware/Host/ Remove	Remove	Event Class	yes	
/VMware/User	User	Event Class	no	
/VMware/ User/Login	Login	Event Class	no	
/VMware/ User/Logout	Logout	Event Class	no	
/VMware/Warn	Warn	Event Class	no	

---

# Chapter 42. ZenWebTx

**Table 42.1. ZenWebTx Details**

<b>Version</b>	2.7.5
<b>Author</b>	Zenoss

## 1. Monitoring Template Information

### 1.1. ZenWebTx Example Performance Template

- Devices

#### 1.1.1. Data Points

**Table 42.2. ZenWebTx Example DataPoints**

<b>Data Source</b>	<b>Data Point</b>	<b>Description</b>
Index page	available	Time available
Index page	totalTime	The total time for the Web transaction to be completed.

## 2. Event Class Information

**Table 42.3. ZenWebTx Event ClassInformation**

<b>Path</b>	<b>Name</b>	<b>Type</b>	<b>Code?</b>	<b>Description</b>
/Perf/Web	Web	Event Class	no	
/Status/Web	Web	Event Class	no	

---

# Chapter 43. ZenWinPerf

**Table 43.1. ZenWinPerf Details**

<b>Version</b>	2.2.6
<b>Author</b>	Zenoss

## 1. Monitoring Template Information

### 1.1. Device\_WMI Performance Template

This template uses Windows WMI to collect standard Windows metrics (cpu, memory, paging, etc.)

- `Devices/Server/Windows`

#### 1.1.1. Data Points

**Table 43.2. Device\_WMI DataPoints**

<b>Data Source</b>	<b>Data Point</b>	<b>Description</b>
MemoryAvailableBytes	MemoryAvailableBytes	The Available Memory counter indicates the amount of memory that is left after nonpaged pool allocations, paged pool allocations, process' working sets, and the file system cache have all taken their piece.
MemoryCommittedBytes	MemoryCommittedBytes	Committed memory is the physical memory in use for which space has been reserved in the paging file should it need to be written to disk.
MemoryPagesInputSec	MemoryPagesInputSec	The total number of pages read from disk to resolve hard page faults.
MemoryPagesOutputSec	MemoryPagesOutputSec	This shows how many memory pages were written to the pagefile to free RAM page frames for other purposes each second.
PagingFileTotalUsage	PagingFileTotalUsage	The % Usage Peak counter indicates how much of the paging file is being used.
ProcessorTotalPrivilegedTime	ProcessorTotalPrivilegedTime	The percentage of time a process was running in privileged mode See "Processes in a Bottleneck" later in this chapter.
ProcessorTotalProcessorTime	ProcessorTotalProcessorTime	The percentage of time the processor was busy servicing a specific process.
ProcessorTotalUserTime	ProcessorTotalUserTime	The percentage of time a process was running in user mode.
sysUpTime	sysUpTime	This is the value for how the long the system has been running

#### 1.1.2. Graphs

**Table 43.3. CPU Utilization**

<b>Name</b>	<b>Type</b>	<b>Description</b>
ProcessorTotalProcessorTime	DataPointGraphPoint	

**Table 43.4. Memory Paging**

Name	Type	Description
MemoryPagesInputSec	DataPointGraphPoint	
MemoryPagesOutputSec	DataPointGraphPoint	

**Table 43.5. Memory Utilization**

Name	Type	Description
MemoryAvailableBytes	DataPointGraphPoint	
MemoryCommittedBytes	DataPointGraphPoint	

**Table 43.6. Paging File Usage**

Name	Type	Description
PagingFileTotalUsage	DataPointGraphPoint	

## 1.2. ethernetCsmacd Performance Template

Ethernet interface template that uses Windows WMI.

- `Devices/Server/Windows/WMI`

### 1.2.1. Data Points

**Table 43.7. ethernetCsmacd DataPoints**

Data Source	Data Point	Description
bytesReceivedSec	bytesReceivedSec	This is how many bytes you get from the NIC.
bytesSentSec	bytesSentSec	This is how many bytes of data are sent to the NIC.
packetsReceivedErrors	packetsReceivedErrors	Shows the number of inbound packets that contained errors preventing them from being deliverable to a higher-layer protocol.
packetsReceivedSec	packetsReceivedSec	Shows the rate at which packets are received on the network interface.
packetsSentErrors	packetsSentErrors	Shows the number of outbound packets that could not be transmitted because of errors.
packetsSentSec	packetsSentSec	Shows the rate at which packets are sent on the network interface.

### 1.2.2. Graphs

**Table 43.8. Errors**

Name	Type	Description
packetsReceivedErrors	DataPointGraphPoint	
packetsSentErrors	DataPointGraphPoint	

**Table 43.9. Packets**

Name	Type	Description
packetsReceivedSec	DataPointGraphPoint	

Name	Type	Description
packetsSentSec	DataPointGraphPoint	

**Table 43.10. Throughput**

Name	Type	Description
bytesReceivedSec	DataPointGraphPoint	
bytesSentSec	DataPointGraphPoint	

## 1.3. FileSystem Performance Template

FileSystem template that uses Windows WMI.

- `Devices/Server/Windows/WMI`

### 1.3.1. Data Points

**Table 43.11. FileSystem DataPoints**

Data Source	Data Point	Description
DiskReadBytesSec	DiskReadBytesSec	The % Processor Time counter provides a measure of how much time the processor actually spends working on productive threads and how often it was busy servicing requests.
DiskReadTime	DiskReadTime	It reports the percentage of time that the selected disk drive is busy servicing read requests.
DiskWriteBytesSec	DiskWriteBytesSec	It indicates the rate at which bytes are written and is the primary measure of disk throughput.
DiskWriteTime	DiskWriteTime	It reports the percentage of time that the selected disk drive is busy servicing write requests.
FreeMegabytes	FreeMegabytes	Reports the amount of bytes on the disk that are not allocated. This report is on LogicalDisks. There is no Free Megabytes counter for the PhysicalDisk object.

### 1.3.2. Graphs

**Table 43.12. Throughput**

Name	Type	Description
DiskReadBytesSec	DataPointGraphPoint	
DiskWriteBytesSec	DataPointGraphPoint	

**Table 43.13. Time**

Name	Type	Description
DiskReadTime	DataPointGraphPoint	
DiskWriteTime	DataPointGraphPoint	

**Table 43.14. Utilization**

Name	Type	Description
FreeMegabytes	DataPointGraphPoint	



Name	Type	Description
low disk space	ThresholdGraphPoint	

### 1.3.3. Thresholds

**Table 43.15. FileSystem**

Name	Type	Description
low disk space	MinMaxThreshold	When the value drops below the minimum value an event is sent.

## 2. Event Class Information

**Table 43.16. ZenWinPerf Event ClassInformation**

Path	Name	Type	Code?	Description
/Cmd	Cmd	Event Class	no	
/Cmd/Fail	Fail	Event Class	no	
/Cmd/Fail/WinExe	WinExe	Event Class	no	
/Cmd/Ok	Ok	Event Class	no	
/Conn	Conn	Event Class	no	
/Conn/Fail	Fail	Event Class	no	

---

# Chapter 44. vCloud

**Table 44.1. vCloud Details**

<b>Version</b>	1.2.0
<b>Author</b>	Zenoss
<b>Dependencies</b>	ZenPacks.zenoss.DynamicView >=1.0.0, ZenPacks.zenoss.ZenVMware >=1.3.4

## 1. Monitoring Template Information

### 1.1. Device Performance Template

- `Devices/vCloud`

### 1.2. vCloudProviderVDC Performance Template

Provider VDC metrics retrieved from the vCloud Cloud Director API.

- `Devices/vCloud`

#### 1.2.1. Data Points

**Table 44.2. vCloudProviderVDC DataPoints**

<b>Data Source</b>	<b>Data Point</b>	<b>Description</b>
providerVDC	cpuAllocation	
providerVDC	cpuOverhead	
providerVDC	cpuTotal	
providerVDC	cpuUsed	
providerVDC	creationStatus	
providerVDC	memoryAllocation	
providerVDC	memoryOverhead	
providerVDC	memoryTotal	
providerVDC	memoryUsed	
providerVDC	storageAllocation	
providerVDC	storageOverhead	
providerVDC	storageTotal	
providerVDC	storageUsed	

#### 1.2.2. Graphs

**Table 44.3. CPU**

<b>Name</b>	<b>Type</b>	<b>Description</b>
cpuAllocation	DataPointGraphPoint	
cpuOverhead	DataPointGraphPoint	

Name	Type	Description
cpuTotal	DataPointGraphPoint	
cpuUsed	DataPointGraphPoint	

**Table 44.4. Memory**

Name	Type	Description
memoryAllocation	DataPointGraphPoint	
memoryOverhead	DataPointGraphPoint	
memoryTotal	DataPointGraphPoint	
memoryUsed	DataPointGraphPoint	

**Table 44.5. Storage**

Name	Type	Description
storageAllocation	DataPointGraphPoint	
storageOverhead	DataPointGraphPoint	
storageTotal	DataPointGraphPoint	
storageUsed	DataPointGraphPoint	

### 1.3. vCloudResourceEntity Performance Template

- [Devices/vCloud](#)

#### 1.3.1. Data Points

**Table 44.6. vCloudResourceEntity DataPoints**

Data Source	Data Point	Description
resourceStatus	status	

### 1.4. vCloudVDC Performance Template

- [Devices/vCloud](#)

#### 1.4.1. Data Points

**Table 44.7. vCloudVDC DataPoints**

Data Source	Data Point	Description
vDC	cpuAllocated	
vDC	cpuLimit	
vDC	cpuOverhead	
vDC	cpuUsed	
vDC	creationStatus	
vDC	memoryAllocated	
vDC	memoryLimit	
vDC	memoryOverhead	

Data Source	Data Point	Description
vDC	memoryUsed	
vDC	storageAllocated	
vDC	storageLimit	
vDC	storageOverhead	
vDC	storageUsed	

## 1.4.2. Graphs

**Table 44.8. CPU**

Name	Type	Description
cpuAllocated	DataPointGraphPoint	
cpuLimit	DataPointGraphPoint	
cpuOverhead	DataPointGraphPoint	
cpuUsed	DataPointGraphPoint	

**Table 44.9. Memory**

Name	Type	Description
memoryAllocated	DataPointGraphPoint	
memoryLimit	DataPointGraphPoint	
memoryOverhead	DataPointGraphPoint	
memoryUsed	DataPointGraphPoint	

**Table 44.10. Storage**

Name	Type	Description
storageAllocated	DataPointGraphPoint	
storageLimit	DataPointGraphPoint	
storageOverhead	DataPointGraphPoint	
storageUsed	DataPointGraphPoint	

## 2. Event Class Information

**Table 44.11. vCloud Event ClassInformation**

Path	Name	Type	Code?	Description
/Status/vCloud	vCloud	Event Class	no	