System Monitor Connector

Monitor local server performance

- Name: SystemMonitor
- Version: 1.1
- Protocol: Proprietary
- Interface: TCP/IP
- Runtime: .NET 4.8 (Windows)
- Configuration:
  - Devices / Protocols

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Overview

System Monitor Communication Driver gets information about the local system, like processor, memory, hard disk and network information. When running a distributed application, the metrics will refer to the server computer. Using the Channel remote execution, you can get information from other computers running the application.



This page documents the System Monitor protocol driver (`T.ProtocolDriver.SystemMonitor`), which exposes performance counters as device tags. It runs on .NET 4.8 (Windows) and uses Windows Management Instrumentation (WMI) and Performance Counter APIs.

It is a separate feature from the `Server.SystemMonitor.*` runtime properties surfaced through the Built-in Namespaces and the AI Runtime. Those properties are cross-platform: on the .NET 10 runtime they fall back to native Win32 APIs (`GlobalMemoryStatusEx`, `GetSystemTimes`) and `System.IO.DriveInfo`, so they remain available even where this protocol driver is not loaded.

Communication Driver Information	
Driver name	SystemMonitor
Assembly Name	T.ProtocolDriver.SystemMonitor
Assembly Version	1.1
Available for Linux	False
Devices supported	N/A (Not Applicable)
Manufacturer	N/A (Not Applicable)
Protocol	Proprietary over TCP/IP
Max number of nodes	Only one node can be defined to each channel
PC Requirements	Ethernet port

Supported Operands

Operand	Read	Write	Data Type	Address size
Processor	**Yes**	-	Real	8 bytes
MemoryAvailable	**Yes**	-	Real	8 bytes
MemoryInUse	**Yes**	-	Real	8 bytes
MemoryTotal	**Yes**	-	Real	8 bytes
MemoryPhysicalAvailable	**Yes**	-	Real	8 bytes
MemoryPhysicalInUse	**Yes**	-	Real	8 bytes
MemoryPhysicalTotal	**Yes**	-	Real	8 bytes
HDWriteBytesPerSecond	**Yes**	-	Real	8 bytes
HDReadBytesPerSecond	**Yes**	-	Real	8 bytes
NetDataReceivedBytesPerSecond	**Yes**	-	Real	8 bytes
NetDataSentBytesPerSecond	**Yes**	-	Real	8 bytes

Nodes Configuration

Primary Station

The Primary Station configuration requires specifying only the IP Address, which identifies the main node in the network communication setup.

Points Configuration

The syntax for the Ping address points is: ***<Property>***

Where:

- ***<Property>***: can be one of the following:

Operand	Description
Processor	Percentage is being used
MemoryAvailable	Total of memory available (including virtual memory) in kilobytes
MemoryInUse	Total of memory is being used (including virtual memory) in kilobytes
MemoryTotal	Total of memory (including virtual memory) in kilobytes
MemoryPhysicalAvailable	Total of physical memory available in kilobytes
MemoryPhysicalInUse	Total of physical memory is being used in kilobytes
MemoryPhysicalTotal	Total of physical memory in kilobytes
HDWriteBytesPerSecond	Bytes per seconds are being written in the Hard Disk
HDReadBytesPerSecond	Bytes per seconds are being read in the Hard Disk
NetDataReceivedBytesPerSecond	Bytes per seconds are being received through the network
NetDataSentBytesPerSecond	Bytes per seconds are being sent through the network

You can map each property to a Tag in the application, or you can defined only one line on **Device Points**, mapping the entire data structure to a Template tag. In order to use template tags:

1. Create a Tag Template "**SystemMonitor**", using as Member names the properties names.
2. Create a tag from the Template "**SystemMonitor**"
3. On **Devices Points**, put your tag at the **TagName** column, and select the address **SystemMonitor** and the address field. The system will automatically get all the members of the template when running the application.

Troubleshoot

The most common error is related to the Windows cache of the performance counter. To recover the system, execute the following commands at the Command prompt, running the prompt as **Administrador**:

C:\windows\system32> lodctr /r

If you still have the error: **Error: Unable to rebuild performance counter setting from system backup store, error code is 2**

Then, you should run:

C:\windows\SysWOW64> lodctr /r

The expected rmessage is:

Info: Successfully rebuilt performance counter setting from system backup store

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Driver Revision History

SystemMonitor Revision History	
Version	**Notes**
1.1	Initial release on new documentation standards.

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