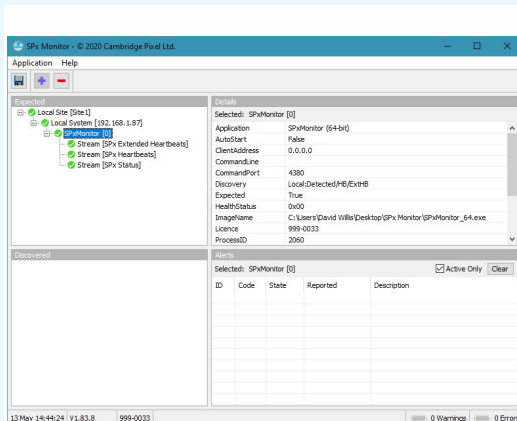


SPx Monitor

Network Monitoring and Alerting for Resilience and Redundancy

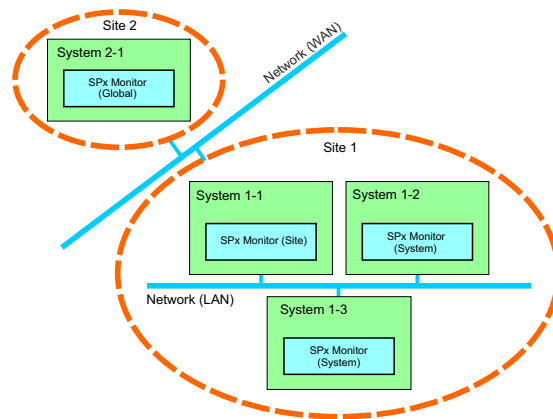


Features:

- Windows and Linux support
- GUI display (Windows only)
- Geographic map display (Windows only)
- Automatic detection of SPx-based applications on the network
- Remote start/stop of applications
- Auto-start of missing applications
- Supports hierarchical structures:
 - Sites
 - Systems
 - Applications
 - Streams
- Instances of SPx Monitor report to others
- Scope of reporting configurable
- SNMP support for reporting alerts and status
- Internal database of discovered and expected network items
- Reports errors and warnings:
 - Expected item missing
 - Control port clash
 - Application overload
 - Missing data stream
 - High CPU, memory or network load
- Configuration file support
- Web interface

SPx Monitor is an application that monitors and displays the health and status of SPx-based programs running on the network, reporting any problems it finds. SPx Monitor can save valuable time and resources, detecting and identifying issues automatically across wide networks.

SPx Monitor automatically monitors the network for problems, or potential problems, alerting the user to any issues it identifies. It can detect a number of fault conditions, such as: applications not running, network address clashes, system overloads, missing data streams and problems with input sources. SPx Monitor is an invaluable tool both during installation and for on-going system operation.



SPx Monitor can operate as a stand-alone monitoring tool or can be integrated into a multi-tiered installation, with data aggregated at different levels within the hierarchy. Monitoring may range from a site consisting of one or more systems, down to the individual data streams from a given SPx application. SPx Monitor reports on the items it finds within its scope and this scope may be the local machine, a site location or across the wider network of several sites. Full control is provided over the scope of both the monitoring and the reporting, allowing multiple instances of SPx Monitor to share and aggregate data across the network. Each instance of SPx Monitor is told which applications and data streams to expect and it can then ensure that this matches with its observation.

Discovery and Aggregation

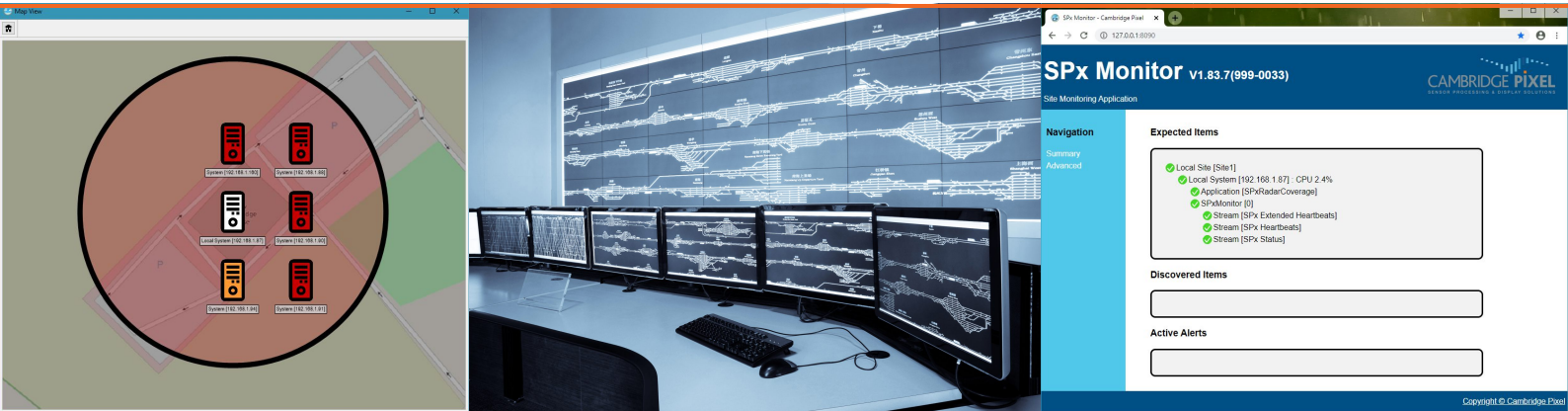
SPx Monitor uses intelligent discovery processes to analyse the network, at a local or global level, for SPx-related items. Discovered items are maintained within a database and these items are defined as:

- **Site** - a geographic location hosting one or more systems
- **System** - a host computer running one or more SPx applications
- **Application** - an SPx application (e.g. SPx server, SPx Fusion Server, etc.)
- **Stream** - an output data stream generated by an SPx application (e.g. radar video, tracks, plots, etc.)

Each instance of SPx Monitor may then be configured to report, locally or globally, on the items it has discovered.

Redundancy and Resilience

SPx Monitor is able to start and stop SPx applications running locally and can automatically start an application that is expected but is missing. This capability makes SPx Monitor a crucial element for providing solution resilience. In redundant configurations, where dual radar trackers are used to provide high reliability, SPx Monitor allows oversight of which tracker is actively sending track data onto the network at any given time.



Operating Systems:

Windows, Linux

Display:

Control and maintenance GUI (Windows), geographic display (Windows)

Web Interface:

Status display (Edge, Chrome, Firefox)

Monitored items:

Site, System, Application and Data stream

Discovery methods:

Local process monitoring, heartbeat receipt, packet detection

Application Control:

Application start/stop, application auto-start, system restart

SNMP Support:

SNMPv1 and SNMPv2 (not SNMPv3)

Monitoring Scope

System:

Machine hosting the instance of SPx Monitor

Site:

Multiple systems, on local area network

Global:

Multiple sites, across a wide area network

Warning Alerts

Unexpected Item
Hardware Over Temperature
System High CPU Load
System High Memory Load
System High Network Load
Stream Disabled

Error Alerts

Expected Item Missing
Application Command Port Clash
Application General Error
Application Licence Error
Application Overload
Application Radar Source General Error
Application Radar Source Setup Error
Application Radar Source No Returns
Application Radar Source No Azimuths
Application Radar Source No Video
Application Radar Source Secondary Data Error
Application AV Source Setup Error
Application AV Source No Data
Stream UDP Packets Not Detected
Stream UDP Address Clash

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