

# 1 SmartView™ WEB EMS

## Management Software

CTC<sup>®</sup>  
union

NEW

- » *Web-based User Interface*
- » *Remote Access and Centralized Device Management*
- » *Real-time visual representations & processing of alarms*
- » *Long term event storage (up to 1 year)*

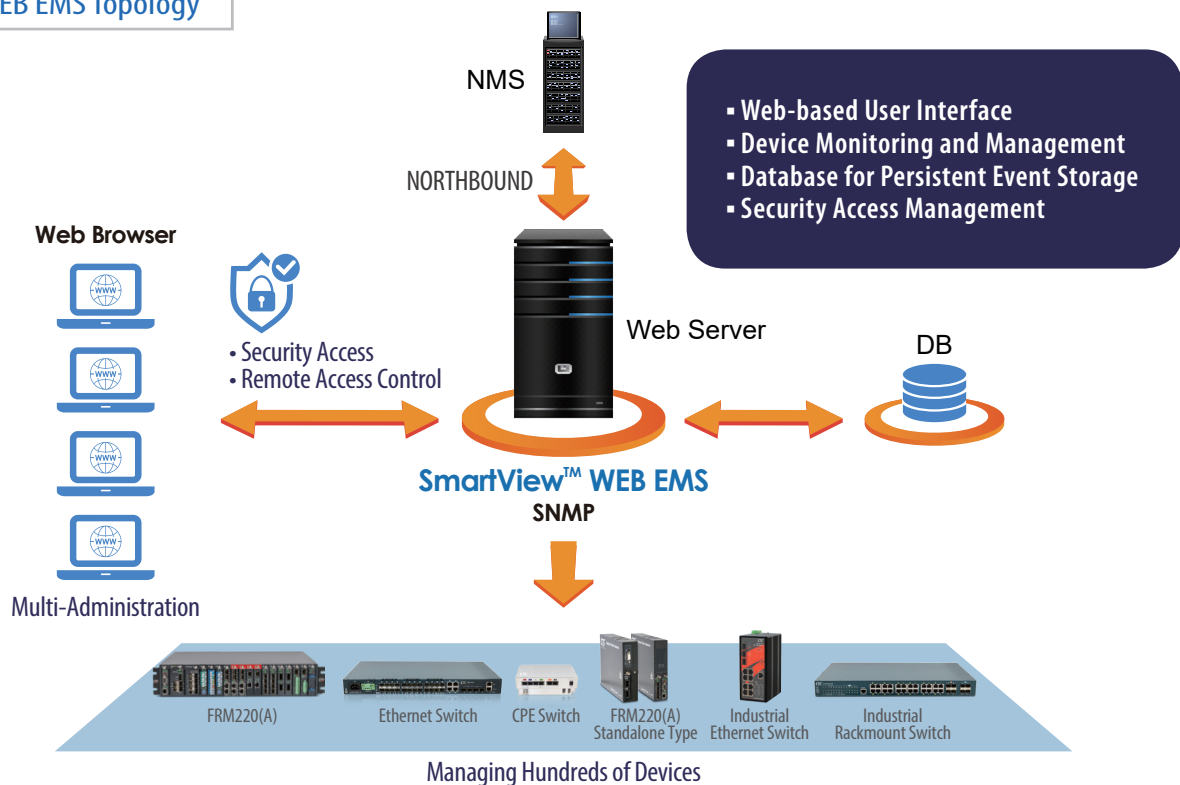


CTC Union's SmartView™ WEB EMS (Element Management System) is a comprehensive device management solution that monitors performance, enables remote configuration and provisioning and provides fault notification status for CTC Union network devices. Smartview™ Web EMS uses the Database Server for long term storage along with Web Server to provide a Web based management experience for device administrators. By utilizing a Web based platform, administrators are free to use their favorite Web browser on personal computers or on mobile devices anywhere. All devices under Smartview™ Web EMS management are accessed via the Simple Network Management Protocol or SNMP, as they are constantly polled and monitored for alarm traps. A single Smartview™ Web EMS server is capable of managing hundreds of devices.

### Features

- Main Functions (FCAPS): Fault Management, Configuration Management, Accounting Management, Performance Management, Security Management
- Remote access control for efficient configuration
- Network element performance monitoring
- Alarm event and notification
- Auto discovery and device viewer
- Allow multiple concurrent operating users

#### WEB EMS Topology



## **SmartView™ WEB EMS Server**

The server handles connection with the network devices using SNMP protocol, and is responsible for HTTP requests from management clients. Smartview™ Web EMS Server collects the information data from specific SNMP agents, stores the information into a persistent database and sends commands to control network elements.

## **Microsoft SQL Server Database**

SQL Server is the place where Smartview™ Web EMS stores collected data, such as alarms, traps and user actions, for long term retrieval. Smartview™ Web EMS supports the free Microsoft SQL Server Express Edition for data storage.

## **Multi-Administrators**

Management clients use web browser to monitor and control the devices at far end. Multiple operating connections are allowed, up to the limit of hardware and network.

## **Features at a Glance**

### **■ Fault Management**

#### **Alarm Detection**

SmartView™ WEB EMS continuously polls all network devices under its management and will visually display all alarm conditions found. Alarms will be categorized as Major, Minor or Warning, depending on severity and be cleared when alarm condition recovered.

#### **Alarm Selection**

Alarm events of network element are configurable. All alarm events are warned by default, but they can be manually disabled to ignore warning messages.

#### **Alarm Notification**

SmartView™ WEB EMS is capable of sending emails to selected administrators when critical alarms occur. Prompt notification of system problems aid in getting problems in the network devices fixed in the shortest time possible.

#### **Trap Collection**

When an SNMP agent experiences an abnormal condition, it will send a SNMP trap message to SmartView™ WEB EMS which then receives the message, and records it in the database.

#### **Network Topology**

Network elements and connections are monitored and displayed in network topology. Elements in color indicate some alarm condition is present. The screen may be zoomed in or out and a search function may be used to quickly find a device.

### **■ Configuration Management**

#### **Network Element Configuration**

SmartView™ WEB EMS is able to provide a single point of configuration for the device elements. Most settings only require mouse clicks and by using a tab format, most scrolling is eliminated. Current settings and status are displayed along with hardware and firmware versions for each element.

#### **Firmware Upgrade**

SmartView™ WEB EMS is able to upgrade firmware for a device. The upgrade status is displayed during upgrade process.

#### **Configuration Backup**

SmartView™ WEB EMS is able to backup configuration for a device. Backup configuration can be used to restore the settings to a device.

#### **Network Element Discovery**

SmartView™ WEB EMS has a tool for automatically discovering SNMP agents on the network. Simply enter an IP address range and the discovery program will ping every IP address looking for SNMP agents. Once discovered, the agents can be selected and brought into the polling.

### **■ Accounting Management**

#### **Network Inventory**

SmartView™ WEB EMS is able of accounting the number of network elements and line cards. Firmware version, MAC address and factory programmed serial number are displayed for each element.

# Management Software

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## ■ Performance Management

### Performance Monitor

SmartView™ Web EMS is able to monitor device performance parameters through polling of specific OIDs. Graphs of performance information (for example hardware parameters such as fan speed, temperature, optical Tx/Rx power) can be generated on an X Y axis showing different trend data.

## ■ Security Management

### User Privilege

The administrator can add necessary user logins with specific privileges, from Administrator to Operator and lastly to normal user.

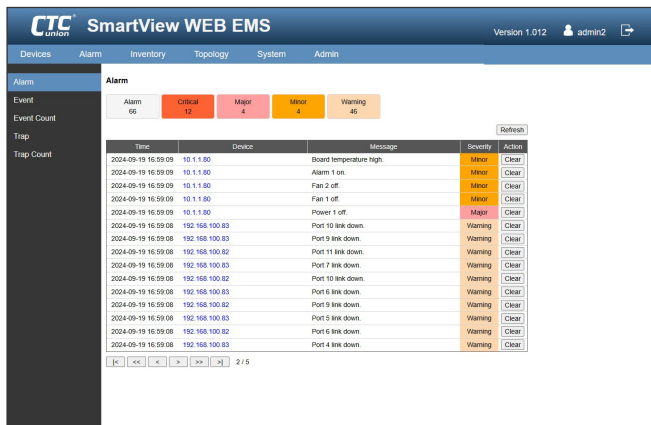
### User Role

A user role is a group and defines privileges for users to perform management tasks. The access to network elements is also restricted by user role.

### User Activity

Provides viewing and clearing of the user login and configuration action logs.

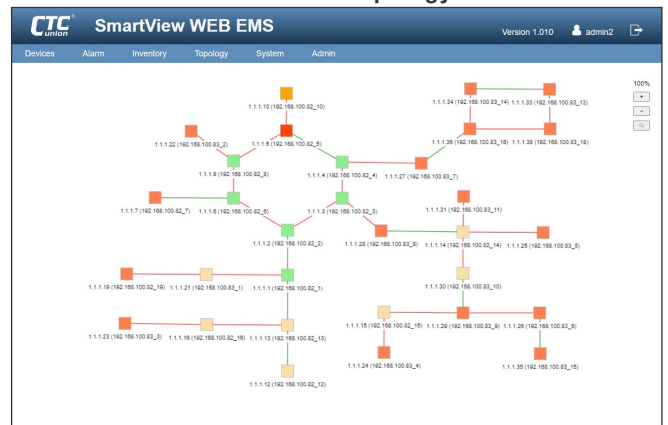
## Alarm Detection



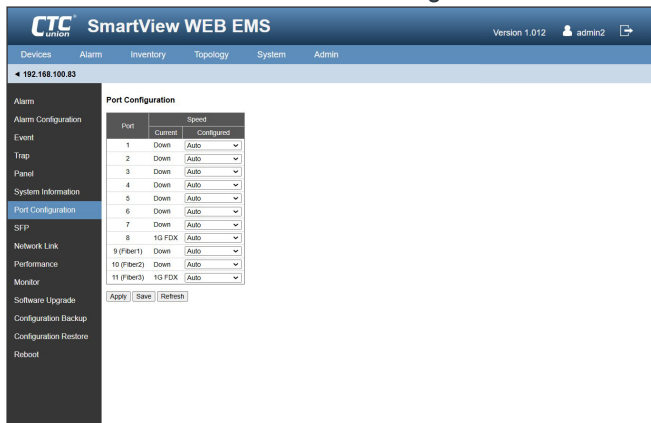
The screenshot shows the 'Alarm' tab in the SmartView WEB EMS interface. It displays a table of active alarms with columns for Time, Device, Message, Severity, and Action. The severity levels are color-coded: Critical (red), Major (orange), Minor (yellow), and Warning (green). The table shows several alarms related to board temperature, fan status, and power link down events.

Time	Device	Message	Severity	Action
2024-09-19 16:59:09	10.1.1.80	Board temperature high	Minor	Clear
2024-09-19 16:59:09	10.1.1.80	Alarm 1 on.	Minor	Clear
2024-09-19 16:59:09	10.1.1.80	Fan 2 off.	Minor	Clear
2024-09-19 16:59:09	10.1.1.80	Fan 1 off.	Minor	Clear
2024-09-19 16:59:09	10.1.1.80	Power 1 off.	Major	Clear
2024-09-19 16:59:08	192.168.100.83	Port 10 link down.	Warning	Clear
2024-09-19 16:59:08	192.168.100.83	Port 9 link down.	Warning	Clear
2024-09-19 16:59:08	192.168.100.82	Port 11 link down.	Warning	Clear
2024-09-19 16:59:08	192.168.100.83	Port 7 link down.	Warning	Clear
2024-09-19 16:59:08	192.168.100.82	Port 10 link down.	Warning	Clear
2024-09-19 16:59:08	192.168.100.83	Port 6 link down.	Warning	Clear
2024-09-19 16:59:08	192.168.100.82	Port 9 link down.	Warning	Clear
2024-09-19 16:59:08	192.168.100.83	Port 5 link down.	Warning	Clear
2024-09-19 16:59:08	192.168.100.82	Port 6 link down.	Warning	Clear
2024-09-19 16:59:08	192.168.100.83	Port 4 link down.	Warning	Clear

## Network Topology



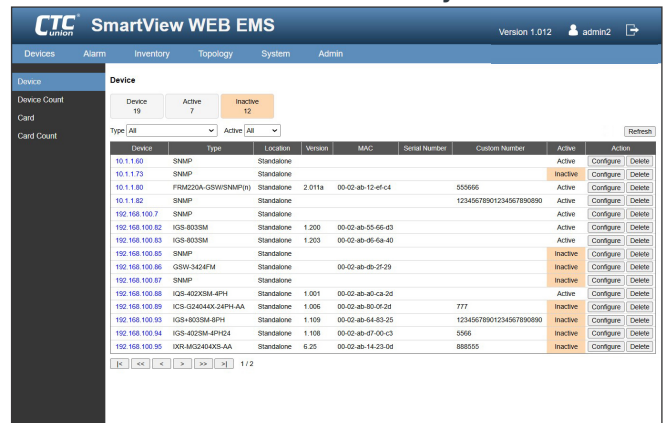
## Network Element Configuration



The screenshot shows the 'Port Configuration' tab in the SmartView WEB EMS interface. It displays a table for configuring network ports, with columns for Port, Current, and Speed. The table shows the configuration for ports 1 through 11, including their current status and configured speed.

Port	Current	Speed
1	Down	Auto
2	Down	Auto
3	Down	Auto
4	Down	Auto
5	Down	Auto
6	Down	Auto
7	Down	Auto
8	10 FDX	Auto
9 (Fiber)	Down	Auto
10 (Fiber)	Down	Auto
11 (Fiber)	10 FDX	Auto

## Network Inventory



The screenshot shows the 'Inventory' tab in the SmartView WEB EMS interface. It displays a table of network devices, including their Device, Type, Location, Version, MAC, Serial Number, Custom Number, and Action. The table shows a list of devices with their respective details and actions.

Device	Type	Location	Version	MAC	Serial Number	Custom Number	Action
10.1.1.80	SNMP	Standalone					Active
10.1.1.73	SNMP	Standalone					Inactive
10.1.1.80	FRM220A-GSW(SNMP)	Standalone	2.011a	00-02-ab-12-ef-c4	555566		Active
10.1.1.82	SNMP	Standalone				1234567890123456789090	Active
192.168.100.7	SNMP	Standalone					Active
192.168.100.82	IGS-803SM	Standalone	1.200	00-02-ab-55-66-d3			Active
192.168.100.83	IGS-803SM	Standalone	1.200	00-02-ab-55-66-d3			Active
192.168.100.85	SNMP	Standalone					Inactive
192.168.100.86	GSW-3424FM	Standalone		00-02-ab-d0-2f-29			Inactive
192.168.100.87	SNMP	Standalone					Inactive
192.168.100.88	IGS-402XSM-4PH	Standalone	1.001	00-02-ab-80-ca-2d			Active
192.168.100.89	IGS-G2404X-24PH-AA	Standalone	1.006	00-02-ab-80-ca-2d	777		Inactive
192.168.100.93	IGS-803SM-4PH	Standalone	1.100	00-02-ab-54-65-35	1234567890123456789090		Inactive
192.168.100.94	IGS-402XSM-4PH-2A	Standalone	1.108	00-02-ab-d7-04-c3	5566		Inactive
192.168.100.95	IGS-MQ240X3-AA	Standalone	6.25	00-02-ab-14-23-d4	888855		Inactive

## System Requirements

### ■ Operating System:

Windows Server 2016, Win 10 Pro 64bit.

### ■ Hardware:

Intel Core I5 or Xeon E5 2.4GHz 4 cores Processors, 8GB RAM, 100GB HD

## Ordering Information

Model Name	Description
SVW1-AGT-50	SmartView™ WEB EMS management software with 50 nodes
SVW1-AGT-100	SmartView™ WEB EMS management software with 100 nodes
SVW1-AGT-200	SmartView™ WEB EMS management software with 200 nodes
SVW1-AGT-500	SmartView™ WEB EMS management software with 500 nodes

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