

Connector Name

VCS IT NMS

Purpose

eCubix AMS is a comprehensive web-based intranet application designed for managing alarms. It covers alarm configuration, notification, acknowledgment, and actions in an efficient manner

Application Overview

eCubix IT NMS is a web-based intranet application hosted on an IIS server, with SQL Express 2016 as its backend database. The system supports network monitoring protocols such as SNMP and PING, and can be configured with or without OPC integration.

Key Features

REAL-TIME MONITORING

Continuous monitoring of network equipment using SNMP and PING to detect any anomalies or failures in real-time.

ALERTS AND NOTIFICATIONS

Instant alerts via email, SMS, or on-screen messages, ensuring administrators are informed of any issues immediately..

AUTOMATED ACTIONS

Capable of performing automated tasks like restarting devices or switching to backup systems to minimize network downtime.

DATA ANALYTICS

Analyzes historical data to predict potential failures and helps in identifying patterns that indicate upcoming problems.

COMPREHENSIVE REPORTING

Detailed reports on network performance and failure incidents, aiding in root cause analysis and planning for preventive maintenance.



Technical Specifications



DATABASE

SQL Express 2016 for storing network performance data and historical records.



MONITORING PROTOCOLS

Supports SNMP, PING, and optional OPC integration for enhanced network equipment monitoring.



SERVER REQUIREMENTS

IIS server for web hosting, with ports 1433 and 80 open for communication.



SUPPORTED DEVICES

Compatible with various network devices such as routers, switches, and firewalls, utilizing SNMP/PING for real-time monitoring.

Application Structure



HOSTING

On-premise hosting on IIS server



REQUIREMENTS

SMTP for email alerts, SMS web service for text message notifications, SQL Express 2016 for database management.



NETWORK MONITORING COMPONENTS

Monitors routers, switches, firewalls, and other network devices.



DATA FLOW

Monitors devices, collects real-time data, and sends alerts when performance issues or failures are detected



OPTIONAL OPC INTEGRATION

Allows for network data collection and analysis via OPC tags if configured.

Reports and Dashboards



KPI DASHBOARDS

Displays real-time performance metrics for various network devices.



PERFORMANCE REPORTS

Provides comprehensive reports on network performance, historical incidents, and failures..



FAILURE INCIDENT REPORTS

Helps with root cause analysis by tracking network downtime and failure events..



PREVENTIVE MAINTENANCE REPORTS:

Predictive insights based on historical data analytics for proactive issue resolution.

Alerts and Notifications

NOTIFICATION METHODS

Sends alerts via email, SMS, and on-screen notifications to administrators.



CUSTOMIZABLE RULES

Configure thresholds for notifications and automate responses to detected anomalies (e.g., device restarts or failover actions).



Additional Features



DATA ANALYTICS ENGINE

Predicts potential network failures by analyzing historical trends and anomalies.



AUTOMATED DEVICE CONTROL

Supports automated actions, such as restarting devices or switching to backup systems, to minimize network disruptions.

Security and Compliance



Authentication

Secure user authentication to ensure authorized access to the system.

Data Integrity

Ensures accuracy and integrity of network monitoring data with secure protocols.

Audit Logs

Records user activities and system events for compliance and traceability.

Prerequisites from Client



NETWORK CONFIGURATION

Proper configuration of network devices for SNMP and PING monitoring.



SQL EXPRESS 2016

Database management for historical and real-time data storage.



OPC SETUP (OPTIONAL)

OPC integration for tag-based monitoring if required.



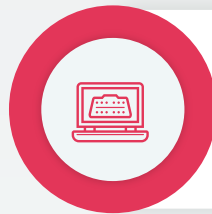
IIS SERVER

Configured IIS server for web-based hosting of the NMS application.



SMTP AND SMS WEB SERVICE:

Configured for email and SMS notifications.



PORTS

Ensure ports 1433 (SQL) and 80 (HTTP) are open for communication..

Compliance and Standards



- ▶ **SNMP Standards:** Follows industry-standard protocols for SNMP-based network monitoring.
- ▶ **Data Security:** Implements security measures to ensure the integrity and privacy of monitoring data.
- ▶ **OPC Compliance (Optional):** Compatible with OPC standards for integrating data from various systems.