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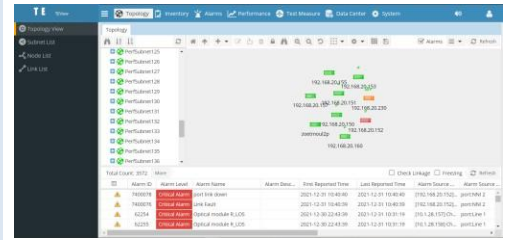### Solutions in Connectivity
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TEVIEW NETWORK MANAGEMENT SYSTEM

The TEView, designed and developed by Team Engineers, is oriented at multiple networks and services. It features rich functions and comprehensive applications. By providing comprehensive solutions with integrated management, intelligent deployment, and visualized operation and maintenance, it can improve management efficiency and operation stability,optimize capital expenditure utilization ratio, and lower operation cost.
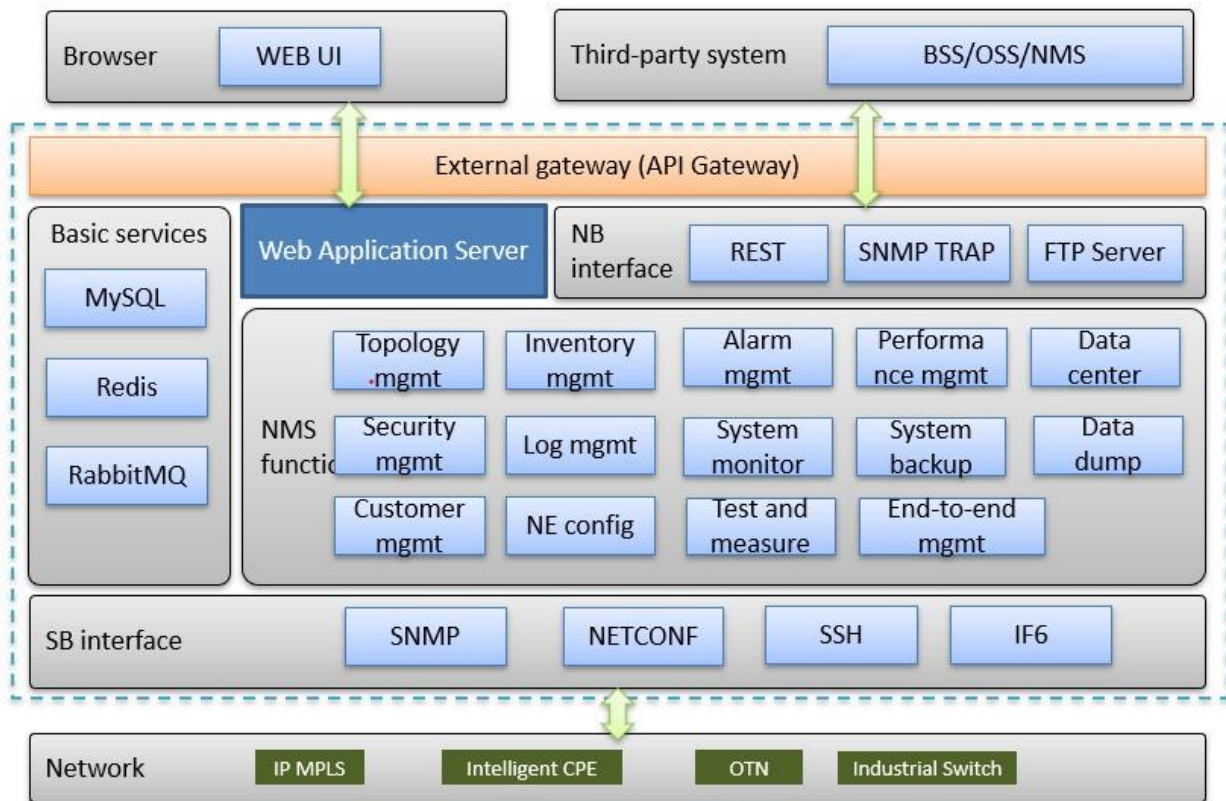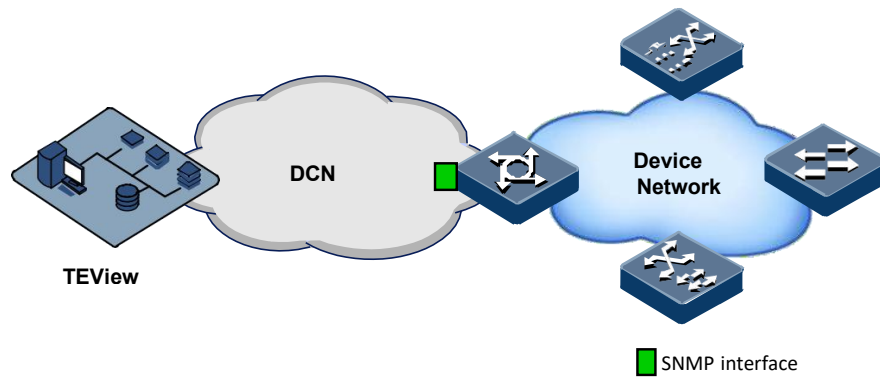

HIGHLIGHTS

System Architechture	Based on B/S distributed architecture
System Security	Support disallowing the weak password Support the captcha on the login page
Network Management System	Comply with security requirements. Alarm management Performance management Data center - High availability with automatic redundancy Topology management Inventory management Support for interfacing to OSS (NB) using RESTCONF etc.,
General	Supports multiple service types VPLS, H-VPLS, VLL, RFC2547, VPNs and Internet access SNMP V1, V2 & V3 support Automatic discovery Remote software upgrade FCAPS support Configuration backup and Remote software upgrade support
High Availability	Support HA feature Active and standby system automatic redundancy Geographical redundancy of platforms

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Team Engineers Advance Technologies India (P).Ltd
Plot No. A-1/2/A, Industrial Park, Uppal,
Hyderabad - 500 039,Telangana(India)
Phone : +91 -40-27204730 / 4873 / 4874,Fax : +91-40-27204731
e-mail : info@teamengineers.in, www.teamengineers.in

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TEView Architecture

| Browser | WEB UI | | Third-party system | BSS/OSS/NMS |

External gateway (API Gateway)

Basic services
- MySQL
- Redis
- RabbitMQ

Web Application Server

NB interface — REST | SNMP TRAP | FTP Server

NMS function

Topology mgmt	Inventory mgmt	Alarm mgmt	Performance mgmt	Data center
Security mgmt	Log mgmt	System monitor	System backup	Data dump
Customer mgmt	NE config	Test and measure	End-to-end mgmt	

SB interface — SNMP | NETCONF | SSH | IF6

Network — IP MPLS | Intelligent CPE | OTN | Industrial Switch

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B/S Structure and System Deployment

DCN

Device Network

TEView

■ SNMP interface

TEView Installation and Upgrade

The installation will install all function components.
Separate installation and deployment.

Uniform upgrade manager controls all upgrade and version rollback.

Operation system for running TEView system.

	Operation System	Language
Complete Installation	CentOS 7.9	English

Hardware Environment

Managed quantity (Equivalent)	Hardware Configuration	Remark
<1000	CPU : 4 Cores Memory: Min 16GB or Higher Hard Disk: Min 1TB or Higher	PC Single EMS - NMS
<20000	CPU :8 Cores Memory : Min 16GB or Higher Hard Disk : Min 1TB or Higher	Server Multiple EMS - NMS

Function and Features

Topology Management

The network topology shows the distribution and operating status of network resources in aglobal and visualized view. The TEViewallows you to execute functions of various NEs on the network topology.

Layer the physical network based on subnet to assign management domains and view network status conveniently. Visualize the physical network based on NE, link, symbol, location, and layout to monitor and manage themconveniently.

Visualize the logic network based on service view and management view to conveniently meet requirements formonitoring based on scenario.

Support automatically or manually entering information about subnets, NEs, links, and symbols during automaticdiscovery and manually entering. Support modifying attributes in a customized way.

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Configuration Management

Uniform platform for different EMS, different devices sharing topology, resource, fault, performance, security components : Reliable mechanism to create links LLDP protocol, MAC learning, BGP / LDP / OSPF

User-friendly device status displaying on device panels drawn by EMS - NMS

Real-time status changing feedback for every operation

Data center provided for centralized management of firmware upgrade and configuration files upload/download

Tools for point and click for creation of services

Provision to generate configuration file for remote station

Gross control of network resources and topologies

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Inventory Management

		NE Name	MAC Address	NE Type	NE Model	Managed IP	Manageme...	Online ...
	1	host1721661167		NMS		172.16.61.167	161	Online
	2	10.1.1.1	fe:aa:aa:00:00:00	NEON	NEON	10.1.1.1	161	Online
	3	10.1.1.2	fe:aa:aa:00:00:01	NEON	NEON	10.1.1.2	161	Online
	4	10.1.1.3	fe:aa:aa:00:00:02	NEON	NEON	10.1.1.3	161	Online
	5	10.1.1.4	fe:aa:aa:00:00:03	NEON	NEON	10.1.1.4	161	Online
	6	10.1.1.5	fe:aa:aa:00:00:04	NEON	NEON	10.1.1.5	161	Online
	7	10.1.1.6	fe:aa:aa:00:00:05	NEON	NEON	10.1.1.6	161	Online
	8	10.1.1.7	fe:aa:aa:00:00:06	NEON	NEON	10.1.1.7	161	Online
	9	10.1.1.8	fe:aa:aa:00:00:07	NEON	NEON	10.1.1.8	161	Online
	10	10.1.1.9	fe:aa:aa:00:00:08	NEON	NEON	10.1.1.9	161	Online
	11	10.1.1.10	fe:aa:aa:00:00:09	NEON	NEON	10.1.1.10	161	Online
	12	10.1.1.11	fe:aa:aa:00:00:10	NEON	NEON	10.1.1.11	161	Online
	13	10.1.1.12	fe:aa:aa:00:00:11	NEON	NEON	10.1.1.12	161	Online
	14	vkaacvh5gr	fe:aa:aa:00:00:12	NEON	NEON	10.1.1.13	161	Online
	15	10.1.1.14	fe:aa:aa:00:00:13	NEON	NEON	10.1.1.14	161	Online

Unified management tool for different resource, such as: device, chassis, cards, slots and ports

Comprehensive resource description, includes customer and fault information

Uniform query platform for quick search of resources

Manage and track the end to end physical information

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Alarm Management

Standard five-level alarm displaying, color coding, real time alarm display

Separate lists for current and historical alarm management

Alarm monitoring interface defined according to customer's need

Customized alarm filter rules that filter the displaying of less importance

Automatic alarm list creation service

Alarm forward service that forward alarms received on TEView

Alarm locating and troubleshooting library makes fault removal quicker and easier

Acknowledge clear individual alarms

Support Historical alarm database for cleared, deleted

Customer Management

Centralized customer information management

Customer-based resource management

Customer-based fault management

Customer information import and export

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Performance Management
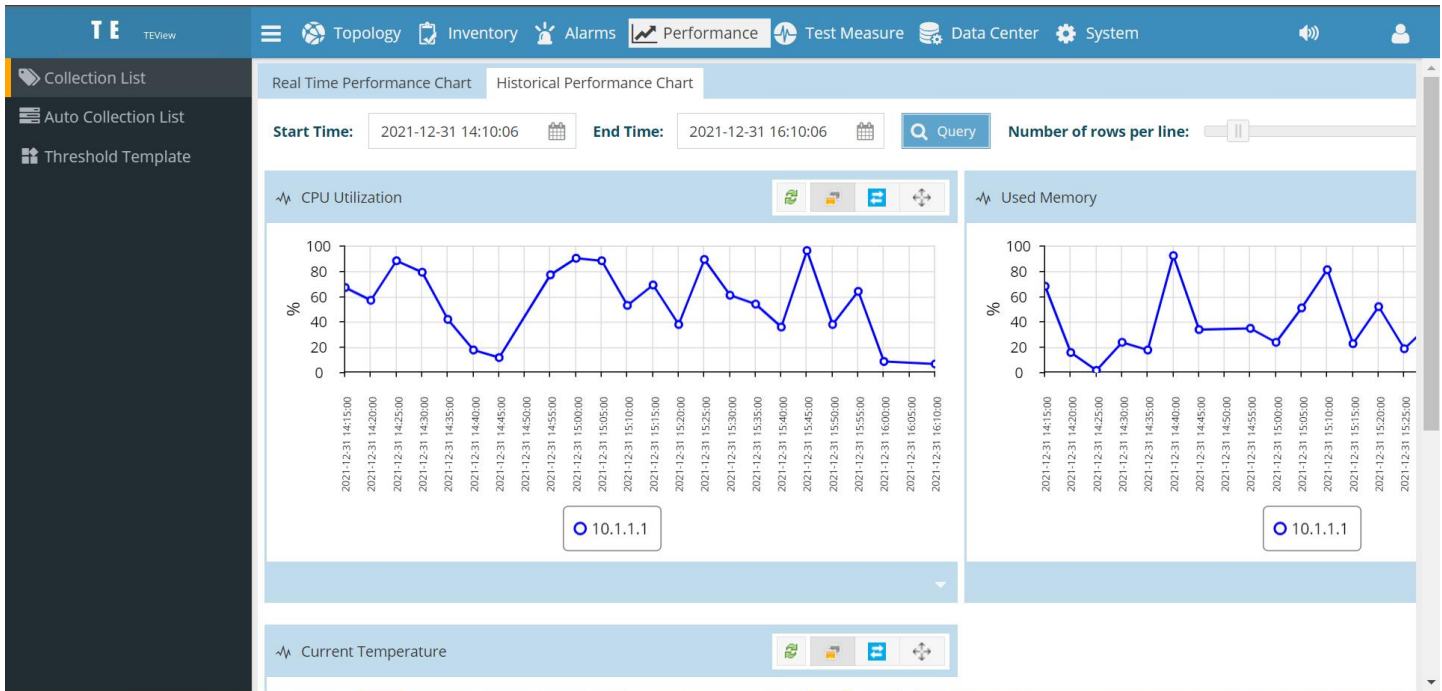
Uniform performance management for all devices under management end to end visibility of network

Comprehensive default performance metric templates and supports add/delete performance metric template manually

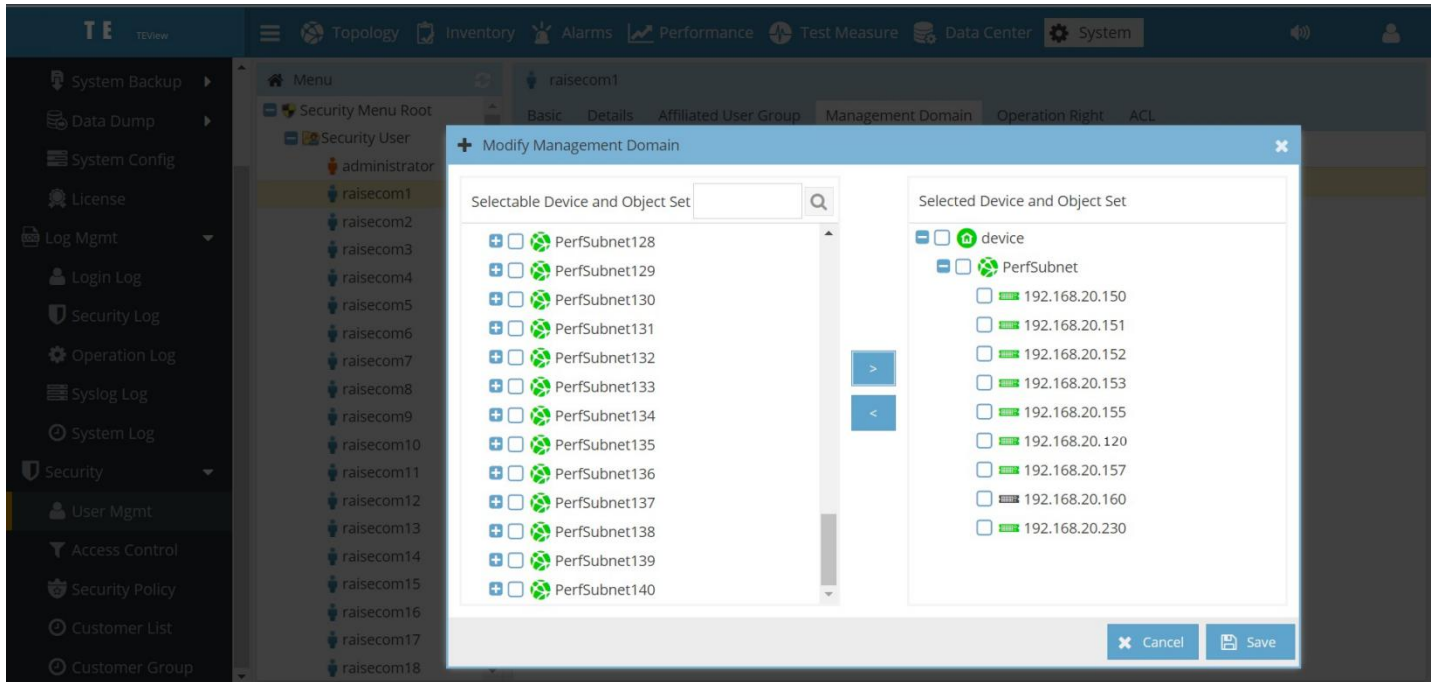Tailored deployment for network of different capacity

Collect port real-time and historical performance data

Performance graph drawn on the basis of performance data collected

Performance data exports

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Security Management

Multi-domain multi-authority management

Different user profiles have different read and/or write authorities over devices in different subnets

Client access control mechanism

Unauthorized login deny mechanism

Keeps system and device operation logs and supports log export

Support Netconf , SNMP , SSH etc, to access device

Support RADIUS, TACACS+, AAA systems

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NMS Control

	Component Name	IP Adress	Component Port	Running Status	Operation
1	CLI Service	172.16.61.167	9010	Normal	
2	Alarm	172.16.61.167	60030	Normal	
3	Alarm Mapping	172.16.61.167		Normal	
4	Performance Service	172.16.61.167	60040	Normal	
5	Performance Data Collector	172.16.61.167	60041	Normal	
6	DataCenter Service	172.16.61.167	60050	Normal	
7	Polling Service	172.16.61.167	3001	Normal	
8	Measure Service	172.16.61.167	61304	Normal	
9	Transmission Network Manage...	172.16.61.167	61308	Normal	
10	Switch Management	172.16.61.167	61403	Normal	

Start/Stop the service of functional component on TEView

Monitors the status of process, disk of PC, database and server improving maintenance efficiency

Keeps operation logs

Unauthorized login deny mechanism

License management for updating license and checking license information

Devices Under NView Management

NEON - DC : NEON - 01 : NEON - 02 : NEON - 03 : NEON - LSR

ORDERING INFORMATION	
TEView	TEView platform is the network management system developed by Team Engineers to manage TE IPMLPS devices. TEView provides a uniform platform for IPMPLS devices LER and LSR. Topology management component, inventory management component, alarm management component, security management component, log management component.
License	License file that verifies the legality of TEView series products. The License file defines the device types and the number of nodes to be managed on TEView platform