

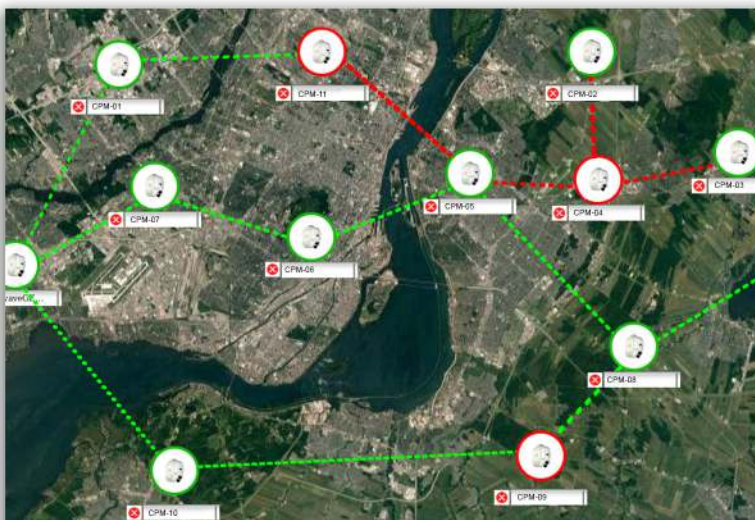
Dhyan NetMan[®] is a powerful and robust software suite to manage and control networks, in both telecom and data networking spaces. Dhyan NetMan[®] can be configured with a full complement of Fault, Configuration, Topology, Performance and Security features to simplify the management of complex networks.

Dhyan NetMan[®] enables network administrators to efficiently monitor status and performance of all devices. Administrators can monitor network performance from any browser and pinpoint bottlenecks in real-time. With advanced Fault management features, Dhyan NetMan[®] provides alarm filtering, alarm correlation, and alarm handling features to help administrators isolate and correct problems in the network.

The Dhyan NetMan[®] User Interface has been designed with ease of use in mind to simplify the administrator's tasks. Navigation between applications is simple and intuitive, with consistent access to reports and screens. Administrators can bring up any report quickly, in just two or three clicks. The user interface uses the latest technologies including AJAX, HTML5 and Bootstrap, to provide a rich and responsive user experience.

Topology Display

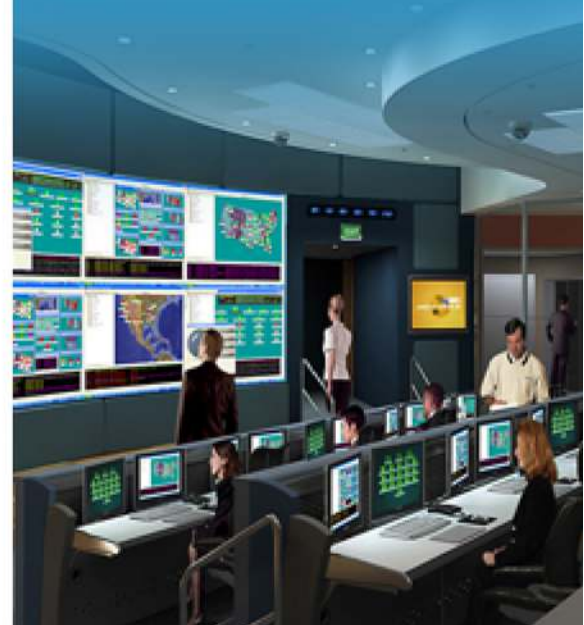
Dhyan NetMan[®] has the intelligence to automatically discover elements in the network and present a map view of all the deployed units, using a Google Map network view. It highlights faults in the network by using intuitive color coding for each network element. The operator can easily bring up details on any device from the map view.



Dhyan

KEY FEATURES

- Scalable architecture can handle large networks
- Powerful Fault Detection and Reporting for problem resolution
- Intuitive state of the art web-based GUI for operator efficiency
- Enhanced network visualization using Google Maps support
- Built-in Trouble Ticketing interface
- Network element Auto-discovery and provisioning simplifies installs
- Bulk & Scheduled Element Provisioning Support
- Flexible graphing & reporting of key network metrics
- Simple to use reports on Top 'N' and Bottom 'N' indicators
- Supports SLA monitoring and assurance.



Fault Reporting

Dhyan NetMan[®] offers an intuitive GUI for tracking alarms and recording all the faults in the network. It has a built-in trouble ticketing interface to aid the administrator in managing the faults. Dhyan NetMan[®] has a range of publishing and display tools including automatic filtering, and forwarding of alarms to email or pager to ensure timely notification of problems.

Alarm ID	Severity	Element Name	Group	IP Address	Message	Date Updated
125	CRITICAL	CPM_28	Mumbai	50.50.50.1	Master IO card is disconnected.	Jul-31-2017 15:56:07:388
123	MAJOR	CPM_46	Mumbai	50.50.50.1	SDCU link configuration is changed	Jul-31-2017 15:57:07:611
97	CLEARED	CPM_37	Mumbai	50.50.50.1	Device is Reachable	Aug-22-2017 17:29:23:315
105	CLEARED	CPM_29	Mumbai	60.60.60.1	Data collection of Interface stats succeeded for id	Aug-21-2017 09:34:23:513
107	CLEARED	CPM_55	Mumbai	60.60.60.2	Data collection of Interface stats succeeded for id	Jul-28-2017 16:09:21:246
122	MAJOR	CPM_43	Mumbai	50.50.50.1	ODU configuration is changed	Jul-28-2017 16:27:54:418
130	CRITICAL	CPM_65	Mumbai	50.50.50.1	Power Supply Upper card is disconnected.	Jul-28-2017 16:27:54:560
124	WARNING	CPM_98	Mumbai	50.50.50.1	License expires in less than 2 weeks	Jul-28-2017 16:27:54:569
129	CLEARED	CPM_79	Mumbai	50.50.50.1	Mini IO card is connected.	Jul-28-2017 16:27:54:603
136	MAJOR	CPM_33	Mumbai	50.50.50.1	Dateline configuration is changed	Jul-28-2017 16:27:54:627
126	CRITICAL	CPM_58	Mumbai	50.50.50.1	Expansion IO card is disconnected.	Jul-28-2017 16:28:58:717
132	MINOR	CPM	Mumbai	50.50.50.1	Controller have low battery voltage.	Jul-28-2017 16:28:58:729
135	MAJOR	CPM_23	Mumbai	50.50.50.1	Controller card is fault.	Jul-28-2017 16:28:58:724
137	MAJOR	CPM_45	Mumbai	50.50.50.1	Controller fan is failure.	Jul-28-2017 16:28:58:735
210	MAJOR	CPM_75	Mumbai	60.60.60.1	Dateline configuration is changed	Jul-31-2017 16:00:14:254
289	CLEARED	CPM_41	Mumbai	70.70.70.1	Data collection of Reachability stats succeeded f	Aug-21-2017 17:34:21:705
138	CLEARED	CPM_35	Mumbai	50.50.50.1	Modem Wlan card is connected	Jul-28-2017 16:28:58:698
212	CRITICAL	CPM_36	Mumbai	60.60.60.1	Mini IO card is disconnected	Jul-31-2017 16:00:43:807
133	CLEARED	CPM_52	Mumbai	50.50.50.1	Modem East card is connected	Jul-28-2017 16:28:58:706
290	CLEARED	CPM_29	Mumbai	70.70.70.1	SNMP Agent up.	Aug-22-2017 17:34:21:716
128	CRITICAL	CPM_31	Mumbai	50.50.50.1	Power Supply Lower card is disconnected.	Jul-28-2017 16:28:41:684
109	CLEARED	CPM_96	New York	40.40.41.2	Data collection of Reachability stats succeeded f	Aug-22-2017 17:34:21:448

Configuration

Dhyan NetMan[®] supports provisioning and software update of network elements. The operator can make use of template-driven bulk provisioning to update multiple network elements with a single command. Periodic scheduling of repeated tasks, including software upgrade, in non-peak hours can also be done to minimize impact on services and reduce administrator task load.

Software Schedule - New

Schedule Name:

Software Release:

Select Elements

Router_21
Router_27
Router_29

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Switch_17
Switch_20
Switch_23

Begin Schedule Time:

Credential Details

Run as:

User Name:

Password:

Confirm Password:

Reports

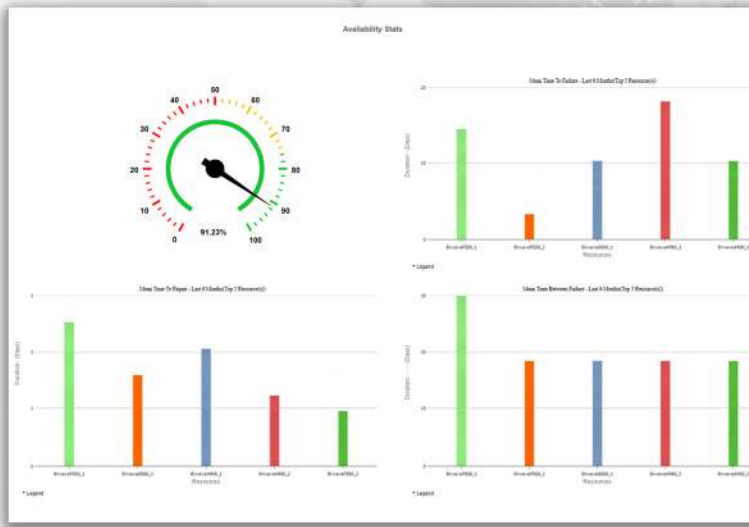
Dhyan NetMan[®] can monitor multiple key performance metrics continuously for each configured network element, and display the results in multiple report formats for the convenience of the administrators. It can generate reports such as Top 'N' Users, Bottom 'N' subscribers bandwidth usage or other key metrics within the defined network. These reports help the administrator to quickly identify the bottlenecks and problems within a specific network.



Both real-time reports and historical data reports are readily available.

SLA Assurance

Dhyan NetMan® generates reports on availability of all configured network elements and makes that data available in intuitive report formats. These availability reports help the service provider monitor the availability of all equipment within the network so as to offer a guaranteed SLA (Service Level Agreement) for the end-customer. Dhyan NetMan® provides availability statistics such as MTTR (Mean time to Repair), MTTF (Mean time to Failure) and MTBF (Mean time between Failure) to help the administrator

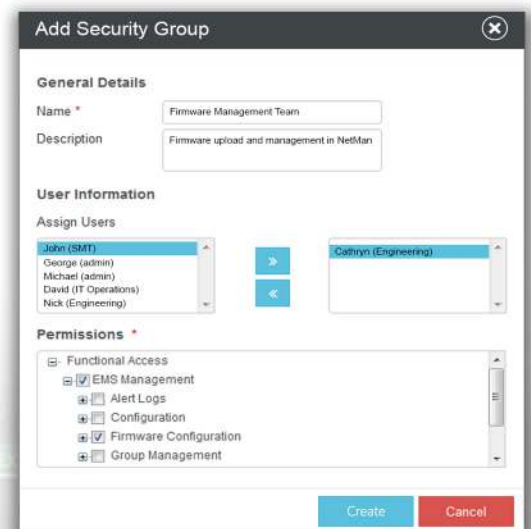


narrow down the network problems related to specific equipment.

Dhyan NetMan® also has support for enforcing thresholds of various performance metrics. Using the threshold support, administrators can be warned of performance degradation rapidly and take necessary preventive actions to provide the guaranteed SLA.

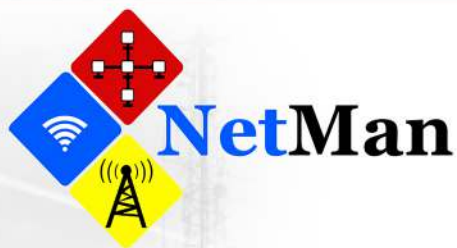
Security

Dhyan NetMan® includes extensive security features for management of administrative user logins, based on the JAAS framework. These security features enable administrators to implement fine-grained security policies, with user-friendly access tools, to provide appropriate controls over access to network resources.



Robust Scalable Component Architecture

Dhyan NetMan® is built on a robust EJB and J2EE server infrastructure to provide an easily extensible, highly available, management solution that can be deployed in a small configuration and then grow as needed. Dhyan NetMan® can be deployed in highly available configurations using clustering. Dhyan NetMan® can work with any JDBC-compliant database, and can run on either Unix or Windows servers.



Customizable

Dhyan NetMan® can be customized for most application environments and equipment. The component-based architecture supports either delivery of a subset of the product features for rapid deployment, or the full management application suite, fully customized.

Minimum Hardware Configuration for Dhyan NetMan®

System Requirements	Microsoft	Linux
Server Operating System	Windows 2008, 2012 R2 Server Windows 7,8,10 (32 and 64 bit)	Red Hat Enterprise Linux 6 CentOS 7 (32 and 64 bit)
Server Processor Type	Xenon and Equivalent	Xenon and Equivalent
Server Processor Speed	2GHz	2GHz
Server RAM	8 GB Minimum	8 GB Minimum
Server Disk Space	40 GB Minimum	40 GB Minimum
Client Browser	Internet Explorer 10.0 or higher Mozilla Firefox 50 or higher Chrome 40 or higher	Internet Explorer 10.0 or higher Mozilla Firefox 50 or higher Chrome 40 or higher
Database	Oracle, MySQL, PostgreSQL, MS SQL	Oracle, MySQL, PostgreSQL, MS SQL

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