DATACOM

DMVIEW
NETWORK MANAGEMENT

PRODUCT DESCRIPTION
11.0.1

DMVIEW
NETWORK MANAGEMENT

SERVICE, NETWORK AND ELEMENT MANAGEMENT

DmView is an Integrated System of Service, Network and Element Management, which provides a robust, scalable and standard management solution for all Datacom product lines, covering several network technologies in a hybrid way (L2, L3 and MPLS Carrier/Metro Ethernet, GPON, xDSL, SDH and PDH), including DmOS, the unified operating system of Datacom new generation of devices.

The available functionalities are CLI templates, configuration, provisioning, supervision, fault, OAM, inventory, user administration, security, accounting, performance and traffic monitoring, topological maps, network discovery and self-management.

It is possible to build a complete network View and execute all management functions through the system. The elements are added or discovered and are then viewed in a Web graphical interface or hierarchical topology map, with OAM and configuration functions. The network elements and links representation is easily organized and navigated in the topological map, and the network events are received, correlated and treated in a standard way. The network services and infrastructure are provisioned as managed entities, with OAM and configuration specific functions for a more adequate and complete view of each network service, including the devices and interfaces used by the service. This way, the management and use can be made in each level (element, network and service) according to the needs of each process or work team.

DmView includes service and features for TR-069 management, performing the ACS (Auto Configuration Server) role of the TR-069 protocol, allowing to manage the TR-069 CPEs network through functions for CPEs view and search, CPEs parameters view and search, configuration of the CPEs parameters, reboot and firmware and configuration files download.

The set of functionalities, as well as the architecture and infrastructure options, make DmView an autonomous solution to manage the Datacom network in telecommunication providers and enterprise customers, being used independently of other systems. The system can also be used integrated with north-bound platforms (OSS e BSS systems). The system architecture is also extensible to south-bound integrations (non-Datacom devices) and allows customizations to specific customer scenarios and necessities, which can be contracted and delivered only to this customer.

The DmView software is the same to large, medium and small networks, so it is possible to organically grow the network without needing to exchange the system, being only necessary the hardware infrastructure evolution in tandem with the network. DmView can be used in the field in a notebook, in small networks through a centralized server with all services, or in a large networks architecture, with multiple application, database and remote access servers or Virtual Machines (VMs). The system allows the distributed and simultaneous access of multiple users.

DmView can be installed with HA (High Availability), providing redundancy, fail-over and load balancing to the management services and network devices access.

It is possible to install DmView in Windows and Linux operating systems. DmView uses the database Oracle - being certified to operate with Oracle RAC (Real Application Cluster) – and MongoDB.

Web and Desktop graphic interfaces are available, bringing agility and speed to the operation in a user-friendly way, integrating the most common operations in a unified workflow.

The system follows world-wide established concepts and standards in the Management Network, Telecommunications, Ethernet Services and Web areas: ITU-T TMN standards, ISO FCAPS model, IETF RFCs, Broadband Forum TRs, MEF services and W3C standard. The system is compatible with NETCONF, TR-069, SSH, Telnet, SNMPv1, SNMPv2, SNMPv2c and SNMPv3.

Main Characteristics

CLI TEMPLATES

The CLI templates functionality, completely available in Web graphic interface, allows the creation of CLI templates with any set of CLI commands, and the templates application in multiple devices simultaneously. Through the templates, it is possible to organize and reuse commonly deployed commands (examples: service creation, basic infrastructure, default troubleshooting), simplifying and greatly reducing the daily operation effort.

In the CLI templates, the fixed and variable commands can be defined (the variable commands will be defined in the network deploy moment). When applying, the user only needs to define the variable fields, and has a complete preview of the configuration which will be sent to the devices, as well as can follow, command by command, the deploy and answers received from the devices. The application can be made in the moment of network configuration, or later, and it can be reapplied at any moment. Removal commands can be associated to a template, to be deployed when it is desired to delete the configuration sent to specific devices.

Any logical construction can be made, with the use of loops to execute commands in lists and conditionals for commands that depend on other values to be defined. It is possible to define variables such that the values to be included and/or blocked for user selection be obtained from the devices selected in the moment of templates application, as ports lists, ONUs lists or device IP.

The CLI templates can be easily exported to file and imported in another DmView installation, facilitating the sharing of templates between Datacom and its customers. It is possible to create favorite variables, to quickly reuse the most useful variables between different templates.

It is possible to trace, through the audit feature, all the operations executed and all the parameters changed, in management templates creation as well as in each command sent and each answer received from the devices, with information of user name, user IP and date/time of operation.

The CLI templates can be created with device model and FW version restrictions. It is possible also to restrict which CLI templates can be applied by user or users group. These restrictions are considered in the moment of application, allowing to select only templates which are compatible with the chosen devices and that the user is allowed to apply.

It is possible to use the same template in devices with distinct CLI syntax (commands set), with the template logic varying according to the chosen devices models. This allows to configure an application scenario with several different types of devices in a single operation, abstracting all the CLI differences for the user.

The most common application scenarios can be easily configured through default templates, which are installed together with DmView. A set of scenarios is available for the GPON solution, being easy and fast to setup the infrastructure (VLANs and profiles) for a GPON network, and activate bridge and router ONUs in the daily operation. Also available are application scenarios for bulk firmware update for all switches, routers and GPON families; L3 interfaces, link aggregation, LLDP, rate limit, SNTP and ONUs firmware update for DmOS; and OSPF and MPLS for DmOS and DM4000 and DM4100 families.

The CLI templates user can execute the discovery, addition, edition, removal and search of devices directly through the Web interface. It is possible to configure the system to use the logged DmView user name and password to connect with devices using SSH or Telnet to send commands.

The CLI templates feature is available for all Datacom line that supports CLI, according to the supported Devices section at the end of this document.

The solution is prepared for any new FW version of these device lines, or any new device model that becomes part of the Datacom portfolio in the future, without the need to upgrade DmView platform and version, allowing the zero-day field support to new FW and devices, considering the management platform.

The CLI templates can be easily expanded to Multivendor support, through licensing. For these cases, please contact Datacom.
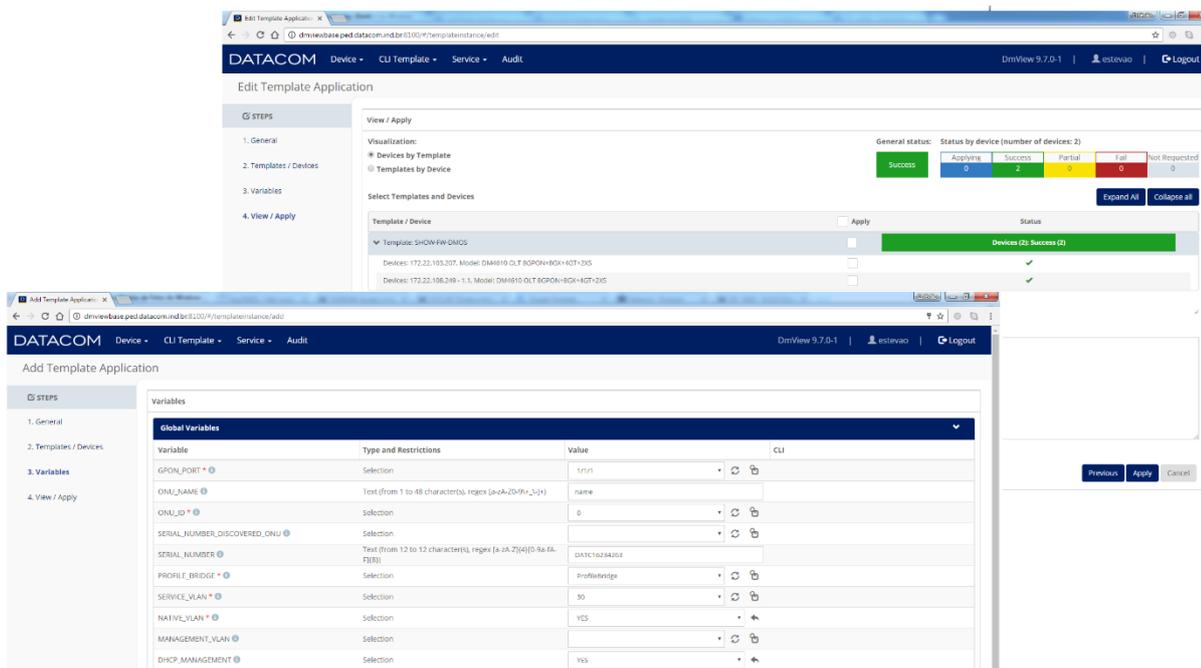
DYNAMIC SUPPORT FOR DMOS DEVICES

The support for devices with DmOS operating system (unified system for the new generation of devices from Datacom line) is available completely in a Web interface. The summary, status and configuration features are available.

The DmOS devices have a model-based dynamic support in DmView. The solution is ready for any new device model and any new FW version that will be supported in DmOS in the future, without the need to upgrade DmView platform and version, allowing the zero-day field support to new device models and FW versions, considering the management platform.

The status and configuration screens and components are dynamically rendered from YANG models obtained from DmOS. With this, all the nomenclature, hints, field types, allowed values and configuration coherences of CLI are available in a uniform and structured way in the Web graphic interface. It can be chosen to view only status data, only configuration data, or both simultaneously. It is also possible to execute searches by text in the status and configuration structure of the device, rapidly accessing the desired feature or entity, without needing to navigate the whole path in the structure.

It is possible to trace, through the audit feature, all the operations executed and all the changed configuration parameters, with information of user name, user IP and date/time of operation.

The configuration can be done by adding and/or editing multiple items simultaneously, through ranges or directly selecting the desired items. This allows to configure several ports, create several VLANs, etc, in a single operation.

The user of DmOS devices can execute the discovery, addition, edition, removal and search of devices directly through the Web interface. It is possible to configure the system to use the logged DmView user name and password to connect with devices using NETCONF to send configurations.

On DmOS devices, if the model of the device responding in a specific IP is changed (for example, exchanging a DM4610 4GPON by a DM4610 8GPON or a DM4404 by a DM4408), the DmView polling will identify and load this change transparently to the user, generating an audit record for this model exchange.

The DmOS devices can be managed without the need to enable SNMP in the devices, in which case they are managed exclusively through NETCONF (for traps and traffic monitoring, it is necessary to enable SNMP in DmOS).
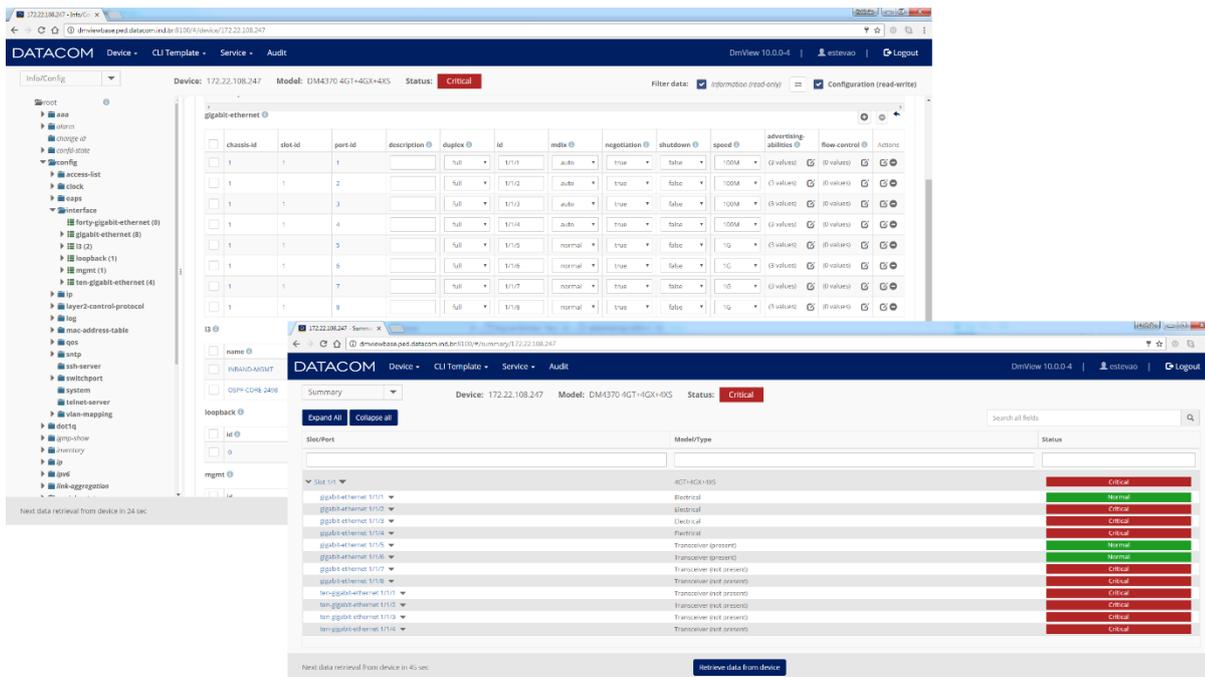
GPON ONUS MANAGEMENT

The GPON ONUs management can be executed through a single screen, which presents all ONUs of the network, available in a Web interface. This screen allows to view all ONUs data as columns, choose which data to present and in which order, sort by any of the columns, and execute searches by text or comparative for numeric fields. All these search and view options are saved by user. With these options, the screen allows to easily manage, monitor and find the desired ONUs in the set of all ONUs of the network.

The available data includes operational state, serial number, inventory, name, uptime, IP addressing, configured profiles, service VLANs, configured bandwidth, firmware, optical power and in/out traffic, among others.

From a device or port, in other screens of the system, it is possible to navigate directly to the ONUs of the selected device or port, opening the ONUs management screen with the appropriate filters.

In the ONUs management screen, action items are available for quick, one-step configuration of the GPON application scenarios, available in DmView through CLI templates. Clicking in an ONU and in the application scenario, a screen with all the settings will be displayed, loading all data of the clicked ONU. In this screen, one needs only to set the remaining data, optionally verify the resulting CLI commands that will be sent, and apply the configuration. After the application, the resulting data is loaded from the device and refreshed. The available scenarios can be customized to the client operation, so that the specific and more frequent actions in the network of each customer can be performed in the fastest possible time.
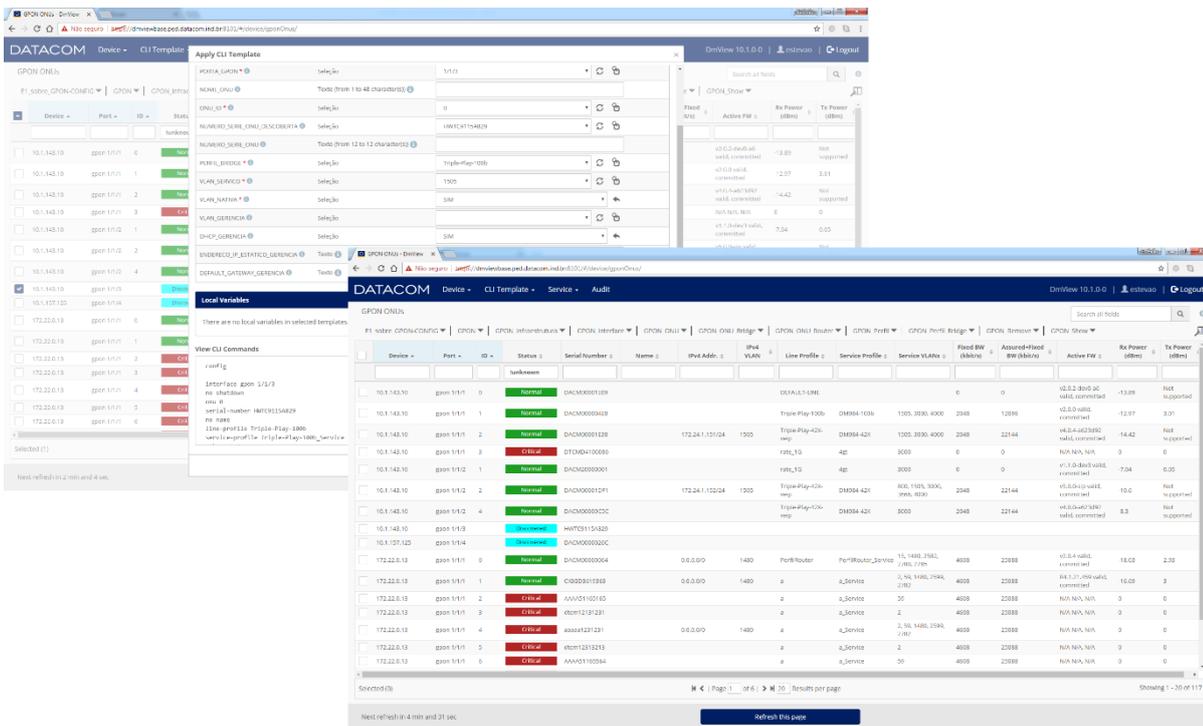
TR-069 MANAGEMENT (ACS)

DmView includes a TR-069 CPES management (ACS) service. TR-069 protocol allows the complete management of the CPEs (Customer Premise Equipments) management functions, guaranteeing interoperability between management (denominated ACS – Auto Configuration Server) and CPEs, in a vendor-independent fashion. DmView, when installed, always brings as integrating part the ACS management. The TR-069 management can be used for Datacom CPEs as well as for Multivendor (non-Datacom) CPEs.

The TR-069 supported features include the reception, registration and authentication of the CPEs sent Informs, configuration of the CPEs access user/password, view and search of the network CPEs by several parameters, connectivity test for troubleshooting (ping and TR-069), view and search of all status and configuration parameters by CPE, configuration, addition and removal of all configuration parameters by CPE, download of firmware and configuration files for multiple CPEs simultaneously, reboot for multiple CPEs simultaneously, and complete audit of all operations executed in the CPEs, with values of all parameters sent by the management and responses received from the CPEs.

TRAFFIC AND PERFORMANCE MONITORING

It is possible to monitor traffic and performance data in DmView. The data can be viewed, benchmarked (for example, what devices are above 80% CPU or which ports are above 500 Mbps), and sort the network by these data, verifying which devices has more or less traffic, CPU, memory, etc.

The available data for ports are in/out rate, patckets with error, discarded, unknown, unicast, broadcast and multicast. For devices, the monitored data are CPU and memory. For GPON ONUs, the data are optical power and in/out rate.

DmView integrates with Zabbix for traffic and performance monitoring. The configuration of the integration parameters (URL, user and password) is done through Web interface, and once configured, DmView starts to obtain the data from Zabbix and summarize it in the devices, ports and ONUs screens. From these present data, shortcuts can be clicked to open the Zabbix history graphs. It is possible to configure DmView to automatically create hosts in Zabbix, corresponding to the devices present and added in DmView, and automatically associate them with a Zabbix monitoring template (also configured by DmView) that collects all necessary data, including treating differences between SNMP objects in distinct device lines. Therefore, the user only needs to indicate to DmView where Zabbix is installed, and then all monitoring and hosts configuration in Zabbix is performed by DmView itself. Zabbix versions 3.4, 4.0, 4.2 and 4.4 are homologated.
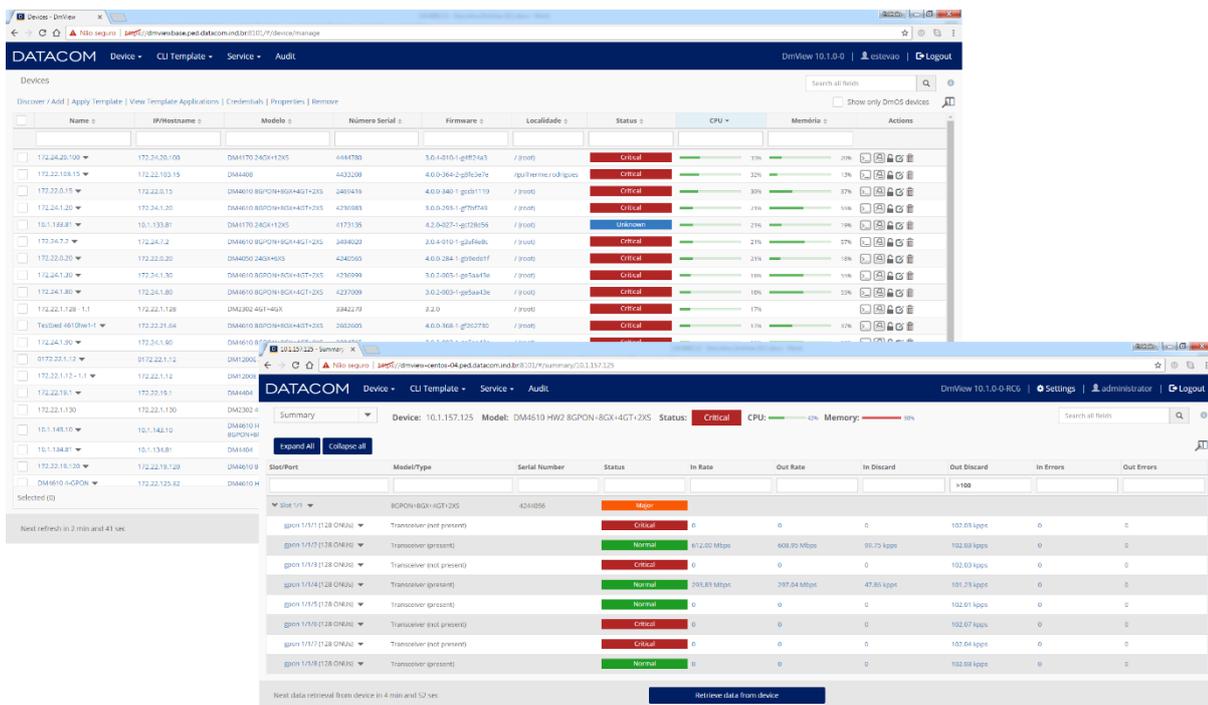
PROVISIONING AND CONFIGURATION

The end-to-end services provisioning allows to configure and active customer services, abstracting and unifying the entire necessary configuration in a service View, as a managed entity. The configuration operation is executed through a step-by-step interface, simplifying and speeding up the workflow.

The services provisioning is available to the Switches, SDH and DM705 line. According to the technologies of each line, the service level can be Nx64K (E1/T1, G.SHDSL TM, V.35, G64, FXS, FXO, E&M), 2M (E1/T1), VC-12/VC-3/VC-4 (SDH), VLAN L2, MPLS L2VPN (Ethernet) and G.SHDSL EFM. It is possible to configure service hierarchies, with a lower level service (i.e., Nx64K) traversing a higher-level services (i.e., VC-12). A unique end-to-end service can represent hybrid services, as TDM over Ethernet and Ethernet over TDM, as well as L2 and MPLS hybrid networks.

The network path can be discovered by DmView or defined step-by-step by the user, in SDH and DM705 lines. In the Switches line, the path is always discovered by DmView. It is possible to define protection paths for the provisioned services.

QoS configuration profiles can be used to standardize and reuse in services of the same type. The QoS profiles are available for the Switches line.

It is possible to register customers and service types, associating them to provisioned services. It is possible to search circuits by customer and service type.

The network protection protocols provisioning is also available, abstracting in a managed entity the necessary configuration in several elements. In the Switches line, this feature is available for EAPS rings, STP topologies and LSPs in MPLS rings. In SDH line, it is possible to provision MS-SPRing rings.

A service configured in the network through external means to DmView (CLI, Web interface) can be imported to DmView, becoming a managed entity with the same features as if it had been provisioned by DmView.

In the SDH and DM705 lines, it is possible to provision a service through a non-managed device, represented in DmView as a "Custom" model device. The custom devices can be equipped with interfaces to represent the end-to-end service in multivendor networks.

Topological migrations can be executed in DmView, updating transparently the topological maps links, services and protection topologies path and devices configuration in the network. The topological migrations are supported in the insertion and removal of devices in a link (Switches, SDH and DM705 lines) and ports changed (Switches line).

The device configuration is available for all supported devices. The only exception is switches which do not use the DmOS operating system – for these switches, the main functionalities configuration is supported (i.e., ports, SNMP, QoS). In the Switches line, it is also possible to view the running-config in text format (the same format presented in the device CLI).

Identification and localization data can be registered in the devices ports, and searches by these data can be made.

It is possible to configure logical cards, configuring and provisioning them in devices that support this feature (SDH and DM705 line). The logical configuration, discovery and authentication of GPON ONUs is available in the DM4610 8GPON model.

It is possible to execute and restore device configuration backups. The backup can be executed on-demand, or backup jobs can be scheduled to a specific date or frequency. The backups can be exported to and imported from files; therefore, they can be used to local restore. The backup restore can be made in the device from which the backup was retrieved, as well as in other devices, if their model is compatible. In DmOS devices, it is allowed to restore a backup of any DmOS device, regardless of the model (the DmOS of the device in which the backup is being restored will validate if the configuration can be applied). There is an automatic purge mechanism for automatic removal of old backups.

The configuration Mismatch feature allows identifying if a DmView protected configuration was changed by means external do DmView, allowing the user to decide if the adequate is to get the changed configuration from the device to DmView database, or set the preserved DmView configuration back to the device. This feature is available by provisioned service in SDH and DM705 lines, and by device in SDH and DM705-SUB lines, as well are Switches (except DmOS, DM1200, DM2500 and DM2300).

The firmware upgrade can be executed. It is possible to send FW images to one or several devices simultaneously.
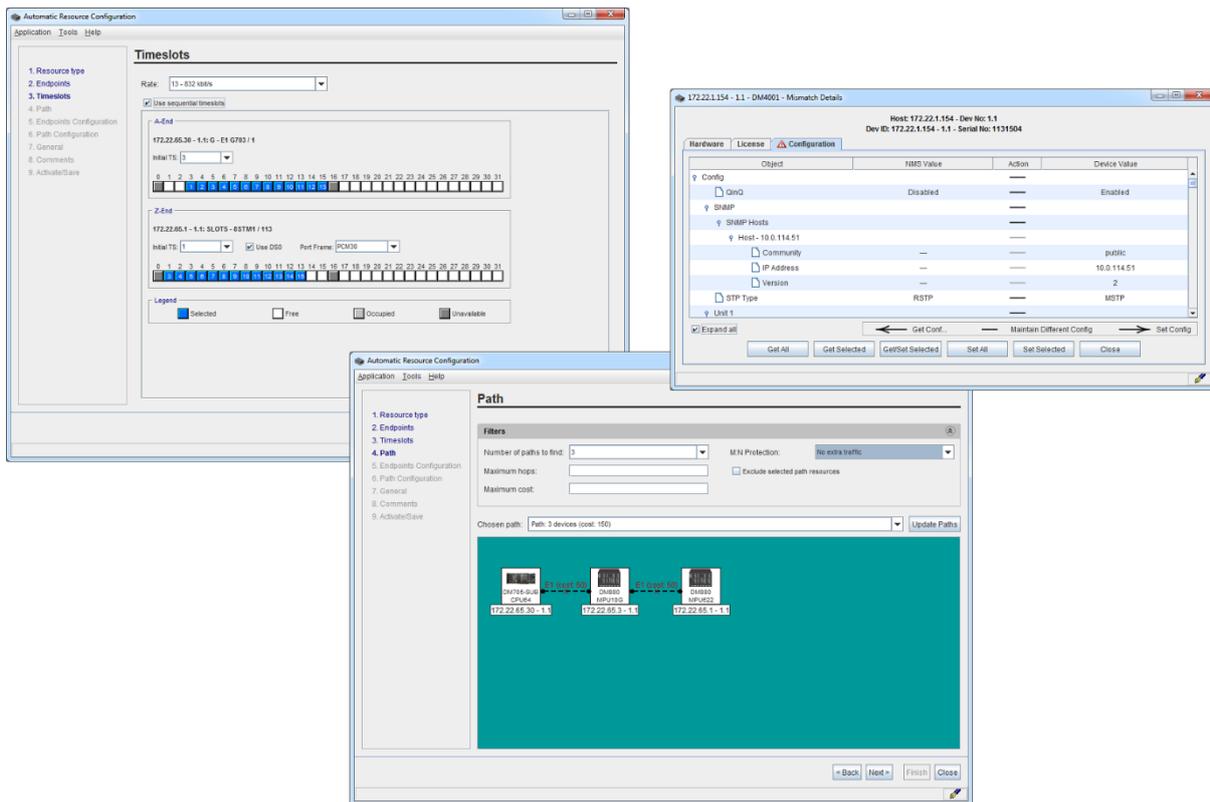
SUPERVISION, FAULT AND OAM

The fault supervision and OAM functionalities allow proactively monitoring the network failures in real time, identifying root cause, failure details and affected resources. From the identified failures, diagnostic and resolution actions can be executed, and DmView can be configured to generate warnings to anticipate these actions (i.e.: e-mail, scripts). Active failures in treatment can be marked to avoid duplicated effort between different users.

DmView receives the SNMP traps sent by the network devices, and organizes them in network events, grouping and correlating by source cause (traps of the same type, originated in the same resource – i.e., a port), and indicating if the failure is active or not. It is possible to mark an event correlation with an Ack (indicating that a user is in charge of the issue) or Terminate (the problem does not exist anymore). Each event has a standard severity, which can be changed by the user.

In the DmOS line, the SNMP traps support is prepared for any new FW version and new traps which become available for DM4610 8GPON in DmOS, without the need to upgrade DmView platform and version, allowing the zero-day field support no new FWs, considering the management platform.

DmView supports InformRequest SNMP PDUs (notifications with a similar purpose of traps, but with delivery guarantee), available from SNMPv2.

The system can be configured to automatically execute actions when receiving specific traps. The possible actions are sending e-mail and executing scripts and sounds.

The events have mechanisms to export them to CSV file, avoiding the inadequate growth of the database, and it is possible to generate events reports through several search fields and result export formats, with the same features described in the Inventory section of this document.

DmView constantly monitors the connectivity between devices and management, sending a SNMP or NETCONF request in 5-minutes intervals (this standard value can be changed). When the connectivity with a device is lost or recovered, DmView notifies the user through an event, and updates the status of the device and its interfaces.

It is possible to view the status and failures of the devices and their interfaces through a centralized summary, with the status of all slots and ports, allowing the easy identification of the device structure and problems. From this view, it is possible to navigate to the detailed status, configuration and alarms of the device.

There are windows with status data and diagnostic commands execution, with integral support, except in Switches line, in which the status and tests available are the most frequently used (i.e., ports and transceivers). In devices with alarm list, it is possible to identify the alarms in a specific view (DmOS, DM2300, SDH and DM705 lines).

In SDH and DM705 lines, it is possible to identify the resumed status of a service, and view its topological path in the network, with the status of each device, port and logical entity used by the service. In these lines, the devices log files are retrieved periodically (at each 15 minutes) by DmView, allowing to view, search and export over the set of all logs generated in the network.
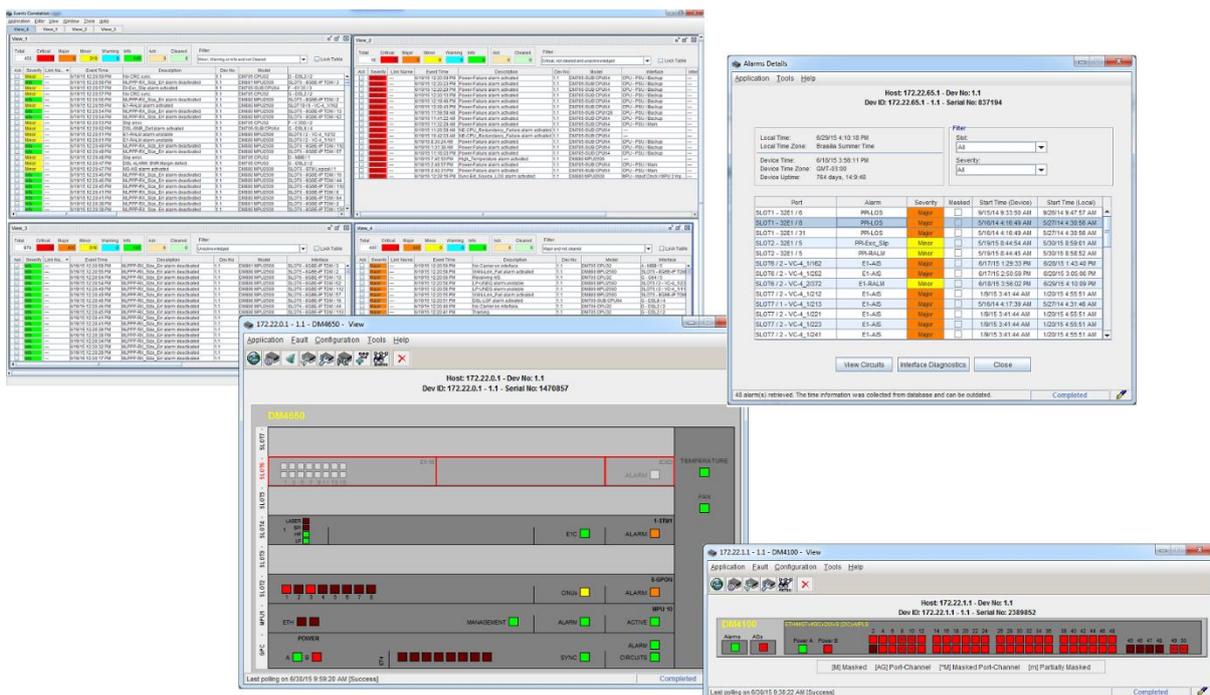
INVENTORY

The inventory solution is available in a Web interface, and allows physical inventory (devices, interfaces, ports, transceivers, links, GPON ONUs), logical inventory (circuits, protection topologies), network occupation (timeslots, KLMs, VLANs, ports and cards available for service provisioning) and register (customers, users). Several search criteria options and result export formats allow great flexibility for different scenarios and needs.

The generated reports can be exported to HTML, CSV, PDF, XLS and XLSX.

It is possible to create favorite reports (individual or visible to all users) and schedule reports to specific dates or frequencies, sending them by e-mail or FTP/SFTP server.

The Web reports also include events inventory and users operations audit. These features are described in their respective sections in this document, and their reports have the same standard functionalities that are available for all reports (export formats, favorites and scheduling).

DM705-SUB CPU64 - device1									
Slot/Port	Port Model	Configured Rate	Occupied Rate	Occupied (%)	Available Rate	Available (%)	Circuits Nº*	Circuits vs E1 No.	Aggregate
CPU / WAN #1	WAN	128	128	100.0%	0	0.0%	1	1	✓
A / 1	E1Q	1984	1152	58.06%	832	41.93%	3	1	✓
A / 2	E1Q	1984	1408	70.96%	576	29.03%	4	1	✓
A / 3	E1Q	1984	1984	100.0%	0	0.0%	2	0	
C / 1	6V.35	128	128	100.0%	0	0.0%	1	0	
C / 3	6V.35	512	512	100.0%	0	0.0%	1	0	
C / 5	6V.35	512	512	100.0%	0	0.0%	1	1	✓
C / 6	6V.35	256	256	100.0%	0	0.0%	1	0	
E / 1	DSL8	512	512	100.0%	0	0.0%	1	0	
E / 2	DSL8	64	0	0.0%	64	100.0%	0	0	
E / 3	DSL8	256	0	0.0%	256	100.0%	0	0	
E / 4	DSL8	512	0	0.0%	512	100.0%	0	0	
E / 6	DSL8	512	512	100.0%	0				
E / 7	DSL8	512	0	0.0%	512				
E / 8	DSL8	512	512	100.0%	0				
F / 2	DSL8	256	0	0.0%	256				
F / 3	DSL8	256	0	0.0%	256				
F / 4	DSL8	1024	0	0.0%	1024				

USER ADMINISTRATION, SECURITY AND ACCOUNTING

The AAA (Authentication, Authorization and Accounting) solution offers functionalities to user administration, security and audit. There is a wide range of users and user groups permissions, password security criteria and an extensive audit of users operations.

The Authentication and Authorization functions can be managed in local base or using an external LDAP server. The Accounting function is managed always in local base. It is possible to define user groups, and the permissions can be applied by user or by group.

It is possible to configure permissions by location, by device model and for several specific functions of the system, as service provisioning, Web features and topological map. For each location and device model, the permission level can be defined as View (only visualization), Test (visualization and tests) and Manage (visualization, tests and configuration).

DmView can be configured to use CAPTCHA in the login screens, as well as configure the Web features to integrated access using Access Manager systems, which allow single sign-on between different Web systems used by the customer.

Password security criteria can be defined, as ageing, minimum size, maximum size and number of wrong password retries. It is also possible to define an inactivity timeout (the standard is 120 minutes), in which the user connection is closed by the server, avoiding incorrect resource occupation.

The history of user-audited operations can be recovered using several search filters and result export formats, with the same features described in the Inventory section of this document.
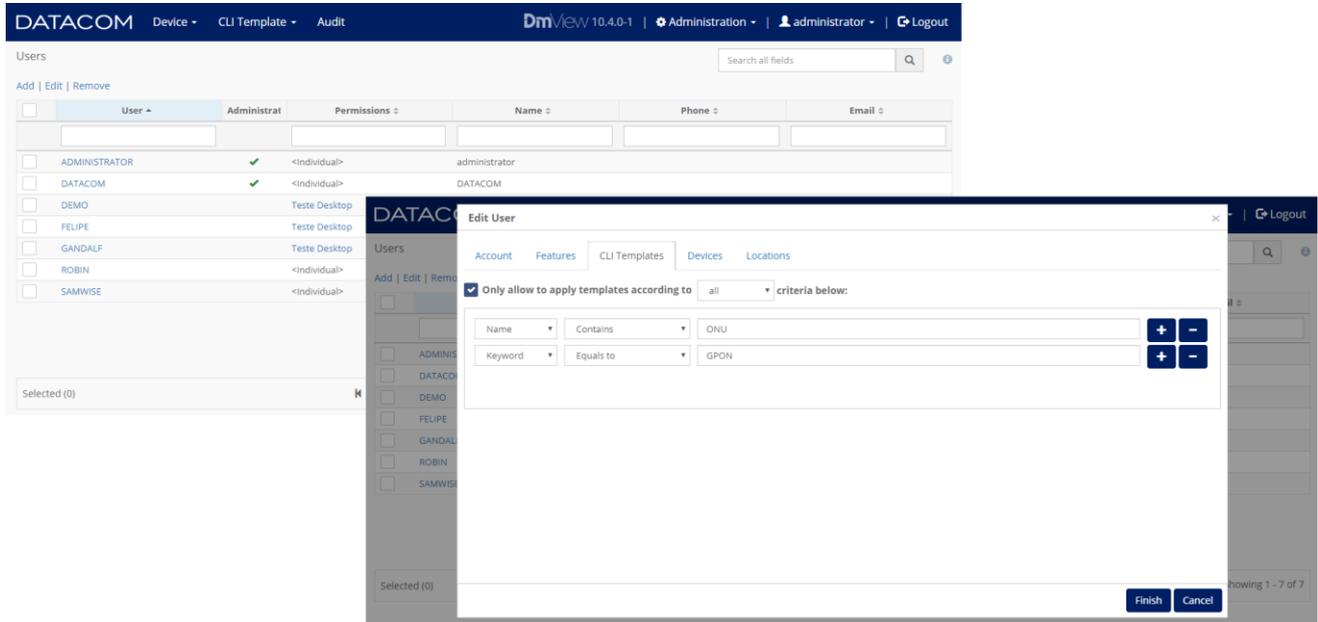
TOPOLOGICAL MAPS AND NETWORK DISCOVERY

The topological maps allow a hierarchical organization of the network, with location-based navigation, devices and links View, bottom-up status propagation and representation of non-managed devices. It possible to register identification and localization data, and to discover the devices in a subnetwork or IP range.

The maps allow adding devices, locations and links between the devices. The locations are presented in a hierarchical tree. When there are links between devices from different locations, shortcuts represent the other location and the existent connection, allowing a fast navigation between the linked devices.

The devices and ports status are propagated from bottom to up in the map. Therefore, in the locations and links, the worst failure status is viewed, considering all the network hierarchy below that location or link.

In the SDH and DM705-SUB lines, it is possible to enable a clock synchronism layer in the map, which allows viewing synchronism reference links, as well as their clock status and quality level.

From the map, there are several navigation menus to the device summary, status and configuration Windows, as well as to the links and circuits of the selected devices or locations.

It is possible to discover the Datacom devices in a desired sub-network or IP range, in a Web graphic interface. DmView contacts the IPs in the network, discovering and informing in a list which were found and which is the device model and serial number. From this list, it is possible to add the desired devices. It is possible to remove multiple devices simultaneously, and import the devices list to and export from CSV files.

It is possible to test the connectivity between the management platform and the devices for several protocols, used in the various device lines: ping, SSH, Telnet, NETCONF, SNMP, HTTP/HTTPS and proprietary protocol for SDH and DM705.

When viewing a location in the topological map, it is possible to enable the view of an events panel, which will show the events for the devices in that location.
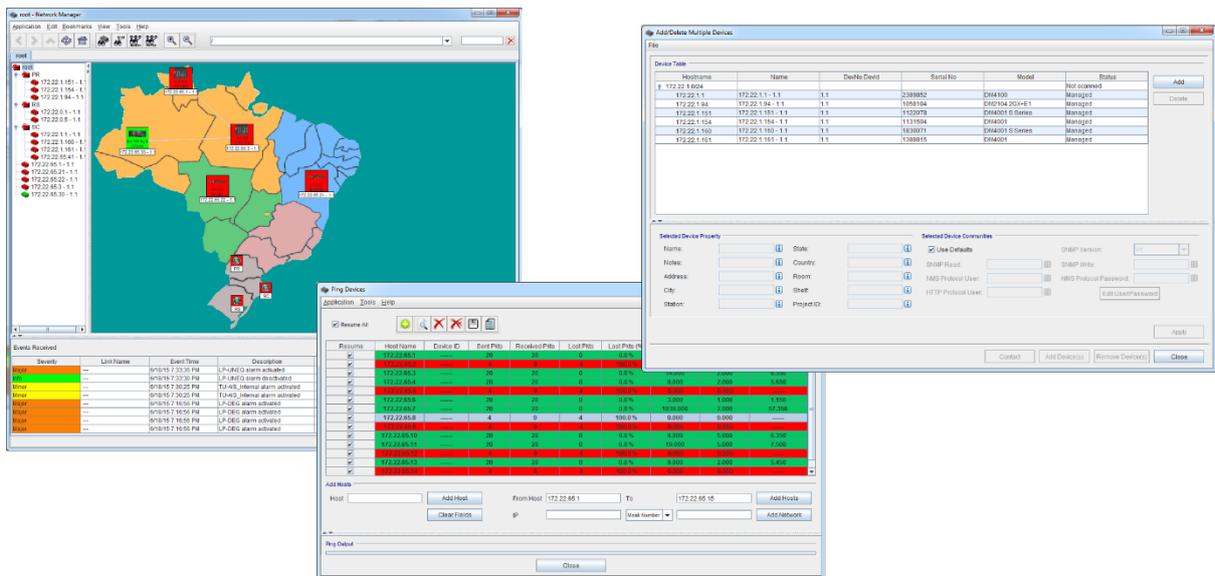
SELF-MANAGEMENT

The system has self-management monitoring, collecting server, database and software components parameters. Windows and reports allow verifying this data and proactively acting when a threshold is triggered, as well as performing maintenance tasks.

NORTH-BOUND AND SOUTH-BOUND INTEGRATIONS

DmView has an extensible architecture which allows integration with Northbound platforms (as OSS and BSS systems) and Southbound (manage 3rd-party devices). There are features implemented and deployed in customer live networks, and protocols and functionalities specific for the scenario of each customer can be modularly added to the system.

The Northbound integration is in live networks operation for SNMP traps, with DmView receiving the Datacom devices traps, encapsulating them in management traps and forwarding them to OSS traps systems. There is also integration to export physical and logical inventory data to CSV files. The software components for service provisioning, CLI templates, network discovery and devices management are prepared for REST API integration. These integration options are documented for easy integration operationalization.

The Southbound integration for 3rd-party devices is available for specific cases with each customer, with the supported features and communication protocols according to the specific case. DmView supports, for Datacom or 3rd-party devices, SNMP, Datacom proprietary protocol, XML over HTTP/HTTPS, XML over TCP, JSON-RPC, CLI over SSH, CLI over Telnet and NETCONF.

DEVICES

The following Datacom device lines are supported in DmView:

- Switches line (with DmOS): DM4700, DM4300, DM4200, DM4170 and DM4050;
- Switches line: DM4000, DM4100, DM3000, DM2100-EDD, DM2300 and DM1200 families;
- Routers line: DM2500 family.
- GPON line (with DmOS):
  - OLTs: DM4610 and DM4615 families;
  - ONUs (with TR-069): DM985-424, DM985-102 and DM986-414 models;
  - ONUs: DM984 family and DM985-100 model;
- SDH line: DM880, DM881, DM830, DM820, DM810 and DmSTM-1 models;
- Multiservice line: DM705 and DM706 families;
- PDH line: DM16E1 – DM4E1 family and DM4E1S model;
- Modems line: DM229x and DM991 models and DMG20 management card;
- Converters line: DM704 family.

Devices with DmOS operating system are fully supported, including models that will be released in the future, which is achieved through the DmOS dynamic model-based support existent in DmView.

CPEs with TR-069 support are fully supported, including models that will be released in the future, which is achieved through the adherent TR-069 protocol support existent in DmView.

LICENSING

DmView is available in the following licensing options:

- DmView Enterprise Lite (free): up to 15 managed devices.
- DmView Enterprise 50: up to 50 managed devices.
- DmView Enterprise 150: up to 150 managed devices:
- DmView Enterprise Unlimited: no limit of managed devices (in this case, the practical limitation will be given by the available HW, which can receive upgrade to raise the limit. Contact Datacom for HW dimensioning).

The managed devices referenced above don't include the TR-069 CPEs. DmView Enterprise Lite allows to manage through TR-069 until 2000 Datacom CPEs and until 100 Multivendor (non-Datacom) CPEs. It is possible to manage more CPEs through licensing.

The above options do not include the features which require a specific licensing option, which are these:

- CLI Template Multivendor: allows to apply CLI templates on third party devices.
- High Availability: allows the high availability of DmView through HW redundancy.

The following license option, already including the licensable features, is also available:

- DmView Enterprise Unlimited Plus: no limit of managed devices, including the CLI Template Multivendor and High Availability options.

The Enterprise Lite option is free, and is available for download in the self-service site of Datacom support (request an user access to the site, if you do not have access yet): https://supportcenter.datacom.com.br.

SOFTWARE AND HARDWARE

DmView can be installed with all its components in a centralized server, or in a notebook for field operations and training, or in an installation for medium and large network, with its services installed in multiple servers or Virtual Machines (VMs), with operation redundancy for each service, as application (main), database and remote access servers.

It is possible to use High Availability (HA), providing redundancy, fail-over and load balancing for the management services and network devices access, ensuring the continuous management operation with minimum loss in case of failures, and horizontal and agile scalability to growing networks. Oracle Data Guard is required for database HA. It is also possible to use database clustering through the Oracle RAC solution.

The minimum HW required for DmView installation and operation is the following:

- Processor: Intel Core I5 or higher.
- Memory: 8 GB RAM.
- HD available space: 10 GB.

The following operating systems are homologated for DmView, always in 64 bits:

- Server in environment without HA: CentOS Linux 6.5/7.3, Windows Server 2008/2012/2016, Windows 7/8.1/10;
- Server in environment with HA: CentOS Linux 6.5/7.3;
- Database: CentOS Linux 6.5/7.3, Oracle Linux 7.2, Windows Server 2008/2012/2016, Windows 7/8.1/10.

The supported Oracle versions are (exclusively in non-container mode):

- Oracle 18c (XE – Express, SE – Standard and EE – Enterprise);
- Oracle 12c (SE – Standard and EE – Enterprise);
- Oracle 11g (XE – Express, SE – Standard and EE – Enterprise).

The supported MongoDB versions are:

- MongoDB 3.2;
- MongoDB 3.4.

Java is a requirement for DmView execution. The minimum version is:

- SUN JDK 1.8.0_121.

Specifications and products may change without prior notice

DATACOM

Rua América, 1000 | 92990-000 | Eldorado do Sul | RS | Brasil
+55 51 3933 3000
sales@datacom.com.br