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Release Notes Connectivity Suite

05 December 2022

Release 3.1.0

This release incorporates several changes and updates which are depicted as follows.

Release Information

Version 3.1.0

Date: 05. December 2022

Supported NetModule Router software (NRSW): 4.3, 4.4, 4.6, 4.7

Supported OS: Ubuntu 20.04 / 22.04, Debian 10, 11.

Summary Of Improvements

Various bug fixes and improvements.

Features added

- **Custom routes support**
    - Simplifies direct access to given devices residing behind a NAT
- **AP3400, WiFi 6 Access Point device support**
    - New device type Access Point (AP) being supported
    - Visibility of Access Points in Connectivity Suite, installed behind a Router
    - Functions of Connectivity Suite can now be used to manage Access-Points AP3400

Bugfixes

Various Bugs discovered and fixed in the previous releases 3.0.1 – 3.0.11 are now part of release 3.1.0.

Releases 3.0.1 - 3.0.11

The releases v3.0.1 to v3.0.11 incorporate several changes and updates which are depicted as follows.

Release Information

Version 3.0.1 - 3.0.11

Date: 10. November 2022

Supported NetModule Router software (NRSW): 4.3, 4.4, 4.6, 4.7

Supported OS: Ubuntu 20.04 / 22.04, Debian 10, 11.

Summary Of Improvements

Various bug fixes and improvements have been done.

Furthermore, the migration from version 2.6 to version 3.x has been further advanced, making the transition smoother and more reliable.

Migrating From Version 2.6 To 3.0.x

Before upgrading to release 3.0.x, consult the instructions in the dedicated section of the Release Notes v3.0.0.

Release 3.0.0

The version v3.0 contains a major modernisation of the architecture as well as an extension of the switch management functions.

Release Information

Version 3.0.0

Date: 31 August 2022

Supported NetModule Router software (NRSW): 4.3, 4.4, 4.6, 4.7

Supported OS: Ubuntu 20.04 / 22.04, Debian 10.

What are the new features?

- Integration of of Tronteq Switches in addition to NetModule ES3300
  - Deployment of software and configuration
  - Monitoring of online/offline states
  - Remote service access
- The following Tronteq Switch models are supported
  - ROQSTAR 2GE+8FE M12 Managed Gigabit Switch (006-130-117)
  - ROQSTAR 2GE+8FE M12 Managed Gigabit PoE Switch (006-130-118)
  - ROQSTAR 4GE+12FE M12 Managed Gigabit Switch (006-130-124)
  - ROQSTAR 4GE+12FE M12 Managed Gigabit PoE Switch (006-130-125)
- Mass configuration a fleet of routers and switches is now possible by deploying the complete configuration via the Connectivity Suite

What are the improvements?

New API

The CS v3.0 offers a new REST API which allows customers to easily integrate the Connectivity Suite into their environment. It provides an OpenAPI file which allows easy client generation or integration into 3rd party platforms. Compared to previous versions, the v3 REST API is more consistent when it comes to the following aspects:

- HTTP Verbs/Actions
- HTTP Status Codes
- HTTP Request & Response Headers
- Request & Response Models
- Payload Format
- Wording
- Endpoint Names

New Command Line Tool "cs-cmd"

Connectivity Suite v3.0 comes with a new console application that allows the user to install, upgrade, configure and remove a Connectivity Suite instance to make the installation more user-friendly.

UI Improvements

The UI has undergone various improvements to further increase usability. The most significant changes are a new structure of the main menu and an improved terminology.

Backend Improvements

The backend of the Connectivity Suite has been restructured and simplified leading to reduced system complexity, improved performance, maintainability, reliability, and security. 3rd party components such as KeyCloak, Traefik, etc. have been upgraded to their latest versions.

Events

The Connectivity Suite now has a new event store which contains relevant events that occur within the Connectivity Suite. These events include requests such as "move device", "deploy software", "revoke certificate", "create user", etc. and can be used as an audit source. The information is only available via the REST API and not via the user interface.

Structured Logs

The logging messages created by the Connectivity Suite API are now stored as structured data. Exporting these structured logs as json documents and then processing them in third-party applications such as ELK-Stack or New Relic enables flexible and intelligent monitoring of the logs.

W3C trace context support

End-to-end transaction tracing in distributed systems is possible thanks to W3C trace context support. When a third-party application triggers an API request and provides a trace context header, it is processed accordingly and stored in the logs, etc.

Service Access VPN configuration files

The VPN client configuration for service access is now provided as a single OVPN configuration file including the keys.

What are the Bug fixes?

- Long VPN network (tenant) names can now be displayed in the user role list without overlapping each other

- Service Access file names can now handle umlauts correctly

- VPN network t names can now handle slashes correctly

- A UDP port used for a VPN network can be reused if the VPN network is deleted without displaying an error message

- Snippet jobs that trigger a restart of a device are no longer recognised as failed due to the reboot

- Grouping of switches and routers that are connected to each other now works

Upgrade from Version to 2.6 to Version 3.0

During the upgrade from v2.6 to v.3.0 not all data of v2.6 will be migrated:

- **Replacement Devices**
  Devices which should replace an existing device and their replacement provisioning config will not be migrated. Please make sure to complete all device replacement jobs before performing the upgrade to v3.0.
- **Provisioning Devices**
  Devices currently connected to the provisioning network will not be migrated. Please make sure to move all devices to their network before performing the upgrade to v3.0.
- **Provisioning Configurations**
  Provisioning configuration templates will be converted during migration. Already downloaded Provisioning configuration files from CS v2.6 will no longer work for CS v3.0.
- **Jobs**
  Jobs will not be migrated. Please make sure that there are no open jobs before performing the upgrade to v3.0.
- **Logs**
  The plain-text logs will not be migrated.
- **Device health data**
  Max. 6 Months Online/Offline device state changes per Device will be migrated.

Release 2.6.0

Version V2.6 offers the possibility to access the web interface of devices quickly and easily. In addition, usability and performance have been improved.

Release Information

Version 2.6.0

Date: 03 November 2021

Supported NetModule Router software (NRSW): 4.6, 4.5, 4.4, 4.3

What are the new features?

- Access your routers Web Manager directly from the Connectivity Suite user interface without requiring an OpenVPN client on your computer. This feature is available not only to platform and tenant admins, but also to tenant users.

What are the improvements?

- The Connectivity Suite can now be operated on Ubuntu 20 and Debian 10 (older versions are no longer supported)

- Various usability and performance improvements of the user interface have been implemented

  - A Tenant admin no longer sees the platform admin accounts in the user management

  - Root users are no longer able to perform installations and updates, as this leads to faulty installations

  - Various user interface optimizations

Release 2.5.0

The web interface appears in a new, radiant design. Furthermore, the Connectivity Suite can now also manage switches as well as routers. It is now also possible to exchange devices.

What are the new features?

- Easy procedure to replace a defective router
- Support for NetModule Switches
    - Deployment of software, configurations and snippets
    - Monitoring of online/offline states
    - Remote service access

What are the improvements?

Completely reworked user interface

- Improvements in robustness, reliability, and response time
- Improvements in overall usability
- Customizable tables with advanced sorting and filtering options
- For labelling and organizing, tags can be assigned to devices in the tables of the UI

Release 2.4.0

The newest version provides mainly some basic improvements for the installation but also for the handling of the Connectivity Suite.

What are the new features?

The newest version can manage integrations of the Connectivity Suite into an Active Directory for a uniform administration of user rights. This is can be done based on the LDAP protocol which is integrated in the Connectivity Suite from now on.

What are the improvements?

- Assigning devices to a Tenant is now considerably faster
- During the installation additional checks are performed to ensure a successful installation (e.g. checking if the corresponding ports are open)
- When a device is moved to a tenant, the NAT rules for network assignment and host assignment found in the router configuration are automatically adapted to the IP address scheme of the new tenant
- Finally, we are able to connect and manage 2500 devices per Connectivity Suite

Release 2.3.0

The newest version provides features for better monitoring and large-scale installations. Next to that it even provides better overall stability.

What are the new features?

Also, now you can surveillance your devices even better with the new monitoring features that shows you the connection state history of a device in a fancy graph.

What are the improvements?

- Finally, you can add 500 devices to one Tenant. However, we also have to mention that if you want to transfer huge amount of data this can reduce the performance of the system, but we are talking about a big amount of data. This should not have any influence under normal conditions.
- The UI appears in a new shiny design based on the new corporate design of NetModule.
- Improved guidance during the installation process for a fault tolerant installation
- Improved configuration validation during the tenant creation process
- Overall stability and performance improvements

Improved device state monitoring mechanism:

The devices are no longer pinged periodically, but the Health component is informed by the OpenVPN servers when the connection state of a device changes, what results in a reduction of the CPU load

Removed function:

The NAT function has been removed due to some required improvements which are necessary. Meanwhile to use NAT the configuration on the router is required.

Release 2.2.12

We have eliminated some bugs and improved the features of the software itself and the stability for an even more satisfying experience.

What are the improvements?

- Allow user to change his password (previously, it had to be reset by a platform admin)
- Job schedules: enter and display start/end times in local time
- Proper handling of a case where a router which was assigned to a tenant is provisioned again
- Prevent adding more than 150 devices to a tenant
- Replaced the previously used API gateway by a more stable one

Bug fixes

- Prevent selecting unwanted devices when clicking on a device list entry
- Downloading multiple log files at once is possible again
- Fixed a potential timing problem when deleting a tenant
- Prevent a platform admin from removing his platform admin role or locking his own account

Release 2.2.0

The latest version of the Connectivity Suite provides a smoother and faster experience. Some major changes include better overall stability and performance improvements.

What are the new features?

Event notifications are added in the web interface. Whenever a new Tenant is setup or a device is assigned to a Tenant, a notification will pop up in the notification menu showing the progress of the operation.

What improvements did we include?

- Overall stability improvements
- User management improvements (enable multiple organizations on a single CS instance)
- Job handling logic improvements
- Concurrency management improvements (prevent concurrent manipulations on the same device)
- Performance improvements

Release 2.1.0

Thanks to the Connectivity Suite you can remotely build, monitor and manage your devices from a central system in a secure way. You can manage complete network device groups at once. Powerful enough for projects with hundreds of devices, with the flexibility to choose between a convenient cloud-based installation or an on-premise server solution to keep all data strictly internally. The Connectivity Suite provides the following main features:

Build

- Automatic setup of secured VPN network (Open VPN)
- Remote provisioning of NetModule routers
- Automatic setup of router and VPN server configuration
- Remote device assignment to a network
- Assign device and network specific information for identification
- Setup different networks with identical IP addresses using 1:1 NAT
- Connect generic devices (VPN Clients) to a network
- Integration of Devices via private APN

Monitor

- Monitors the connection status of connected devices and networks
- Monitors the uptime of connected devices
- Comprehensive and central overview of connected devices and networks
- Overview of the scheduled configuration & software updates
- Event notifications of device operations

Manage

- Remotely create, delete or modify networks
- Remotely add, disconnect or modify devices
- OTA bulk configurations and firmware updates of NetModule devices
- Central management for device configuration and firmware updates
- Upload and store complete configurations or apply configuration Snippets
- Remotely change configurations or configuration Snippets
- historicize all configuration changes
- Schedule device configuration and firmware updates
- VPN (OpenVPN) to directly access the connected devices

Interfaces

- HMI communication interface based on a https web interface
- M2M communication interface based on a REST API

Platform

- User Management (Roles, Groups, Tenants)

- Install the CS instance on an in-house or cloud server

- Open platform to be customized on UI

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