Nexthink V6.26

Product Overview

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Nexthink End-User IT Analytics

Software components

Nexthink is the main innovator in the field of end user digital experience for security, ITSM, and workplace transformation. Nexthink maps all the IT services, how they are being consumed, and how the IT infrastructure is operating, from the perspective that matters most: the perspective of the end user (employee). Nexthink provides essential visibility and insight into IT operations and security for IT Governance.

Nexthink Architecture

The architecture of Nexthink has been designed to simplify operations, ensure scaling and allow a rapid deployment. The system is composed of six main software components:

- The Collector captures information from all end-user desktops and laptops.
- The Mobile Bridge captures mobile device information from Microsoft Exchange.
- The Engine aggregates Collector and Mobile Bridge information and provides real-time IT analytics.
- The Finder is the rich client application for searching and analyzing data on Engines.
- The Portal aggregates Engine information and provides dashboarding, reporting, and long-term trending analytics.
- The Library is a cloud knowledge database.

Modular product structure

Nexthink offers a modular product structure that can grow with your needs. The product is licensed with respect to the number of monitored physical or virtual devices and, optionally, server users. On top of the basic product (Nexthink Analytics), the following modules can be purchased:

- *Nexthink Act* offers you a way to remotely act on the devices of the end-users for automated or assisted servicing.
- *Nexthink Engage* gives you the means to reach out to the end-users, gather their feedback regarding IT or other subjects, and notify them of relevant issues.
- *Nexthink Enhance* provides additional classification and security-related information to Analytics, including binary threat level and category, as well as web domain reputation, category and hosting country.
- *Nexthink Web & Cloud* grants access to analytics related to intranet and extranet HTTP and HTTPs web requests (now included in the Nexthink Analytics offer for new contracts).
- *Nexthink Integrate* enables the product API and access to continuously improved integration samples, reports, etc.

Nexthink Analytics as well as the modules grant access to investigations, widgets, dashboards, categories, etc. directly from the Nexthink Library, our cloud repository of content.

Operational data sent to Nexthink

Nexthink gathers operational data from customers to offer them additional valuable services:

- *Support telemetry*, for an improved support service.
- *Cloud Intelligence*, for anonymized comparative analysis (including the Digital Experience Score benchmarking).
- *Enhance data*, for risk and compliance management of applications and web browsing. Applies to licensees of the Nexthink Enhance module.

Digital Experience Score

The *Digital Experience Score* measures both the ability to get things done and the satisfaction of your employees with the provided IT environment.

By automatically providing benchmark data to Nexthink, compare the Digital Experience Score of your company to the scores of other companies in the same or in different industries.

Collector

Introduction

The Collector is a light-weight agent based on patented technology. It captures and reports network connections, program executions, web requests, and many other activities and properties from the devices of the end-users on which it runs. It is implemented as a kernel driver and an accompanying service, offering remote and automated silent installations and negligible impact on the performance of local desktops, while minimizing network traffic.

CPU usage	Memory usage	Network traffic
• Less than 0.015% (in average)	• Kernel: Around 500 KB • User: Around 20 MB	• **UDP** (Optional) 0.1 - 0.3 Kbps (in average) • **TCP**

		Depending on · Campaigns · Remote actions · Updates In TCP-only configs · Add documented UDP traffic

The following figure depicts the role of the Collector within the Nexthink solution.

Collector components

The capability of the Collector for gathering user activity data is shared by the kernel driver and the helper service (or daemon) components. By running close to the operating system, the kernel driver detects some kinds of user activities that are only visible at this level.

Click to see the detailed list of components of the Collector.

Features

Multi-Platform

The Collector is available for both Windows and macOS operating systems. The present documentation states the platforms to which each feature applies. Likewise, the data model details the individual pieces of information collected for each platform.

Applies to platforms:

CrashGuard

Since the Windows Collector driver is a kernel-mode component, any error in its internals or its interaction with a misbehaving third-party driver can lead to system instabilities. Even with Nexthink putting as much attention as possible towards delivering bug-free software, the principle of precaution holds. The CrashGuard feature detects every system crash and, by default, it disables the Collector driver itself if the system crashes more than three times in a row after installation.

Applies to platforms:

Kernel traffic interception

Some applications may send and receive data to and from the network using kernel-mode components, actually hiding their network traffic from user-space monitoring applications. Being a kernel driver itself, the Windows Collector is nevertheless able to detect and report such traffic.

Applies to platforms:

Paths aliasing

The Collector identifies commonly used paths (e.g. C:\WINDOWS\, C:\Program Files\) and other special mount locations (removable mount points, network drives) with paths aliases. For example, if the DVD-Rom drive is mounted under D:, the Collector reports an application **setup.exe** being launched from this media as **%RemovableDrive%\setup.exe**.

Reliable connectivity via TCP

When configured to send data through TCP, the Collector relies on the connection-oriented features of the protocol to ensure that the information reaches the Engine.

In addition, when the connection between the Collector and the Engine is lost or not established yet, the Collector is able to buffer up to 15 minutes of data (a maximum of 2500 packets not older than 15 minutes) to send to the Engine once the connection is (re-)established.

Network switching

A change of network interface is transparent to the Collector, except when it invalidates the DNS resolution of the Engine. In the latter case, the process of

adapting to a different network may take a few minutes and the Collector resends the whole context to the Engine.

Event logging

Connection events to the Nexthink Appliance and main errors are written to either the standard Windows event logs or the macOS system log.

On-the-fly configuration

The Collector driver parameters can be changed through the Collector Control Panel extension or the Collector Configuration tool. There is no need to restart the computer for the changes to become effective.

Code signed software

To be able to load and run on Windows devices, the kernel components of the Windows Collector are signed with an official Microsoft certificate. Likewise, user-space components are signed with a valid Nexthink certificate.

In turn, the Mac Collector is signed with the Developer ID certificate of Nexthink and follows Apple notarization process to ensure that it can be installed and run seamlessly on macOS devices.

Related tasks

- Installing the Collector on Windows
- Installing the Collector on macOS

Related references

- Collector configuration tool
- Components of the Collector
- Data model

Mobile Bridge

The Mobile Bridge is a server software component that gathers information about the mobile devices which connect to your Microsoft Exchange mail servers through the ActiveSync protocol. The Mobile Bridge sends all the gathered data back to the Engine, where it is organized and stored along with the information

sent by the Collectors.

Thanks to the Mobile Bridge, you can keep an eye on the access status and last synchronization time of all the mobile devices in your corporate network and establish links between your mobile users and desktop users. Nexthink offers you this information and much more from a single place in a uniform way, helping you keep your BYOD infrastructure under control. Query Nexthink about mobile devices and users by applying the same mechanisms that you would use for querying about desktop devices and users.

Related tasks

- Installing the Mobile Bridge

Finder

Nexthink Finder, built upon powerful visualization techniques, is the search and user interface to render visibility into your IT infrastructure. Analyze IT services and query what you need within seconds. Expand or drill-down the results in a few clicks to reveal swiftly, across the entire network, how many versions of a particular application are in use and on which workstations, the bandwidth consumed by the application, the servers and domains that the application accesses, the network response times, which users experienced issues, and much more.

Engine

Nexthink Engine is a high-performance analytics software capable of processing millions of endpoint activities in seconds. Events sent in real time by Collectors populate the Engine with activity data, furnishing a rich repository of historical and live IT infrastructure usage data from the end-user perspective. Engine leverages an in-memory database for rapid queries (via the Nexthink Finder) and flexible reporting (via the Nexthink Portal).

Related tasks

- Installing the Appliance

Portal

Nexthink Portal is the reporting tool, collaboration platform and centralized management platform of the Nexthink End-User IT analytics platform. A comprehensive set of dashboards are delivered out-of-the-box but it is possible in a matter of minutes to construct custom dashboards, valuable for anyone in the organization. Personalized metrics are simple to define as drag-and-drop widgets and can be quickly published and shared. Nexthink Portal front-end is a web application running inside a browser.

Related tasks

- Installing the Appliance

Nexthink Library

The Nexthink Library is an online knowledge database that gives you access to content packs with a large set of ready-to-use predefined investigations, templates, dashboards, remote actions, and campaigns that you can directly install and use on your Nexthink setup.

Digital Experience Score

Overview

The *Digital Employee Experience* can be defined as the ability of an employee to get things done by interacting with the IT environment in a safe and enjoyable manner.

By combining user sentiment with hard data retrieved from the endpoints, the Digital Experience Score provides a simple yet actionable way to both monitor the real experience of the employees with their digital workplace and identify opportunities for improvements, which might lead to increased productivity, reduced costs, reduced attrition and reduced time to market. The Digital Experience Score assesses six areas impacting the digital employee experience:

- Device
- Web browsing
- Business applications

- Productivity & collaboration tools
- Security
- Overall employee satisfaction

The Digital Experience Score implements each one of these areas as a subscore:

All subscores (except for *Employee satisfaction*) give an objective measure of the digital experience with hard metrics obtained from the Collector. In addition, if Nexthink Engage is enabled, each score provides the subjective view of the employee as sentiment data.

The Digital Experience Score is thus available in the Nexthink Library for both Windows and macOS in two versions: the full version with sentiment data and the version with hard metrics only.

Full version with sentiment data	for Windows	for macOS
Hard metrics only	for Windows	for macOS

Hard metrics in the Digital Experience Score

The objective part of the subscores that compose the Digital Experience Score are based on the following metrics of the NXQL Data Model:

Digital Experience Subscore	Data model metric	Available in platforms
Device Score		
Boot speed	average_boot_duration	
Logon duration	average_logon_duration	
BSOD	number_of_errors	
Hard resets	number_of_errors	
System free space	system_drive_free_space	
CPU usage	high_device_overall_cpu_time_ratio	
Memory usage	high_device_memory_time_ratio	
Web Browsing Score		
Browser		
Crashes	application_crash_ratio	
Freezes	application_not_responding_event_ratio	
Internal destinations		
Web req duration	average_request_duration	
	average_network_response_time	

Network resp. time		
External destinations		
Web req duration	average_request_duration	
Network resp. time	average_network_response_time	
Business apps Score		
App (desktop)		
Crashes	application_crash_ratio	
Freezes	application_not_responding_event_ratio	
Connectivity	successful_connections_ratio	
Network resp. time	average_network_response_time	
App (web)		
Web req. duration	average_request_duration	
Network resp. time	average_network_response_time	
Productivity & collaboration Score		
Word		
	application_crash_ratio	

Crashes		
Freezes	application_not_responding_event_ratio	
Excel		
Crashes	application_crash_ratio	
Freezes	application_not_responding_event_ratio	
PowerPoint		
Crashes	application_crash_ratio	
Freezes	application_not_responding_event_ratio	
Outlook		
Crashes	application_crash_ratio	
Freezes	application_not_responding_event_ratio	
Connectivity	successful_connections_ratio	
Network resp. time	average_network_response_time	
OneNote		
Crashes	application_crash_ratio	
Freezes	application_not_responding_event_ratio	
SharePoint		
	average_request_duration	

Web req. duration		
Network resp.	time average_network_response_time	
Teams		
Crashes	application_crash_ratio	
Freezes	application_not_responding_event_ratio	
Connectivity	successful_connections_ratio	
Network resp. time	average_network_response_time	
OneDrive		
Crashes	application_crash_ratio	
Freezes	application_not_responding_event_ratio	
Connectivity	successful_connections_ratio	
Network resp. time	average_network_response_time	
Security score		
AV RTP status	antivirus_rtp	
AV signatures status	antivirus_up_to_date	
Firewall RTP status	firewall_rtp	

High threat domains	number_of_web_requests	
High threat binaries	number_of_executions	

Benchmarking the Digital Experience Score

Starting from V6.21, a minimal set of components from the Digital Experience Score are embedded in the product to provide anonymized benchmark data to Nexthink Cloud Intelligence.

Thanks to the quarterly reports offered by Nexthink Customer Success Services, compare the Digital Experience Score of your company to the average score of other companies in the same or in different industries. Know where your company stands regarding employee experience and look for the areas where you need improvement.

Related tasks

- Connecting to Nexthink Cloud Services

Related references

- Digital Experience Score (hard metrics and sentiment data)
- Digital Experience Score (hard metrics only)
- Digital Experience Score for macOS (hard metrics and sentiment data)
- Digital Experience Score for macOS (hard metrics only)
- NXQL Data Model

Licensing terms

License agreement

The links provided on this page hold the terms and conditions that govern the use of Nexthink software by customers who purchased a commercial license of Nexthink.

On-premises offering

Customers of Nexthink's on-premises offering are bound by either one the following terms:

- If you purchased your license directly from Nexthink:
  Nexthink On-premise License Agreement
- If you purchased your license from an authorized reseller (excluding Middle East, Turkey, Africa):
  Nexthink On-premise License Agreement (for indirect customers)
- If you purchased your license from an authorized reseller (within Middle East, Turkey, Africa):
  Nexthink On-premise License Agreement (for indirect customers in the META region)

Once the product is installed, find a copy of the licensing terms in any of the provisioned Nexthink Appliances under:

```
/var/nexthink/eula/license.txt
```

Cloud offering

Customers of Nexthink's cloud offering are bound by either one of the following terms:

- If you purchased your license directly from Nexthink:
  Cloud Master Services Agreement
- If you purchased your license from an authorized reseller (excluding Middle East, Turkey, Africa):
  Cloud Terms and Conditions (for indirect customers)
- If you purchased your license from an authorized reseller (within Middle East, Turkey, Africa):
  Cloud Terms and Conditions (for indirect customers in the META region)

Open source software licenses

Nexthink software components make use of third-party software libraries that follow an open source licensing model. These libraries are redistributed in binary form within selected Nexthink components.

Nexthink is grateful to the authors and contributors of all the high quality open source projects that make possible the development of our own product.

Find the full list of open source software libraries used by Nexthink, along with their corresponding licenses, on every deployed Nexthink Appliance under:

```
/var/nexthink/eula/Libraries_licenses.txt
```

Related references

- Nexthink On-premise License Agreement
- Nexthink On-premise License Agreement (for indirect customers)
- Nexthink On-premise License Agreement (for indirect customers in the META region)
- Cloud Master Services Agreement
- Cloud Terms and Conditions (for indirect customers)
- Cloud Terms and Conditions (for indirect customers in the META region)
- Mutual Confidentiality Terms & Conditions November 2020

What's new in V6.26

In a nutshell

Apollo Design

Apollo design is now available for on-premise customers

To ensure visual consistency, the new Apollo design is now available for on-premise customers.

Customized login screen is available.

Modules and widgets have a new look and feel.

Software metering dashboard has new design and simplified interaction.

Engage

Campaign auto dashboards

The following content applies exclusively to the Nexthink Cloud offering.

To gain more visibility on running campaigns, a new dashboard is automatically created when a campaign is published. The dashboard provides an overview of each campaign as well as its results.

Find out more

All features

Apollo Design

Apollo design is now available for on-premise customers

To ensure visual consistency, the new Apollo design is now available for on-premise customers.

Customized login screen is available.

Modules and widgets have a new look and feel:

When migrating from V6.25 or earlier, scroll bars may appear in preexisting densely-packed dashboards because of the additional spacing between widgets of the new design.

Software metering dashboard has new design and simplified interaction.

Device locator has a new design as well.

Engage

Campaign auto dashboards

The following content applies exclusively to the Nexthink Cloud offering.

To gain more visibility on running campaigns, a new dashboard is automatically created when a campaign is published. The dashboard provides an overview of each campaign as well as its results.

Campaign dashboards will be available by the end of May.

Act

Act API v2

The new version of the Act API enables targeting particular Engines when triggering the execution of a remote action.

Find out more

Proxy support

To reach the Nexthink Cloud from a corporate network, both Finder and Collector support the connection through a proxy server.

Finder proxy support

The Finder supports connection through a proxy server by using the proxy settings specified in Windows. When connecting to the Nexthink Cloud, the Finder communicates both with the Portal and with the Engines through a single port (TCP 443).

Find out more

Mac Collector proxy support

Specify the custom proxy settings for the Mac Collector either manually or by providing a *proxy auto-configuration (PAC)* file during installation.

Find out more

Windows Collector improved proxy support

The Windows Collector now supports Integrated Windows Authentication when connecting through a proxy.

In addition to the system settings, you can now configure the proxy settings for the Collector either manually or by providing a dedicated PAC file expressly for the Windows Collector.

Specify the proxy settings during installation via the Nexthink Collector Installer or after installation with the Collector Configuration Tool (Nxtcfg).

Find out more

Windows Virtual Desktop

The Collector supports the installation on *Windows Virtual Desktop (WVD)*, Microsoft's VDI for Azure. Check out the especial conditions that apply when installing the Collector on WVD, in particular for multi-session Windows 10.

Find out more

More data from Active Directory

The following content applies exclusively to the Nexthink Cloud offering.

User objects hold four additional fields of data coming from Active Directory:

- Location
- Locality name
- Country code

- Organizational unit name.

These fields will be populated by the next version of the Data Enricher; therefore, although present in all Engines, the fields will hold meaningful data in Nexthink Cloud only.

Find out more

Data-model changes

Data from Active Directory

The following content applies exclusively to the Nexthink Cloud offering.

User objects hold four additional fields of data coming from Active Directory:

- Location
- Locality name
- Country code
- Organizational unit name.

These fields will be populated by the next version of the Data Enricher; therefore, although present in all Engines, the fields will hold meaningful data in Nexthink Cloud only.

Field	Group	Type			
Country code	Properties	Field			
	Country/Region, represented as a 2-character code based on ISO-3166, as listed in Active Directory.				
	NXQL ID:	country			
Locality name	Properties	Field			
	The user's locality as city or town, as listed in Active Directory.				
	NXQL ID:	locality			
Location	Properties	Field			
	The user's location as listed in Active Directory.				

	NXQL ID:	location			
Organizational unit name	Properties	Field			
	The name of the organizational unit, as listed in Active Directory.				
	NXQL ID:	org_unit			

What's new in V6.25

In a nutshell

Apollo Design

The following content applies exclusively to the Nexthink Cloud offering.

To modernize user experience, Cloud customers have a refreshed Portal interface that introduces the visual components of the in-house developed Apollo Design system.

Reduce eye strain in low ambient light conditions thanks to the new **Dark** mode.

Login screen, modules and widgets have a new look look and feel.

Engage

Do Not Disturb period (Windows)

To avoid interrupting employees too frequently, configure the new *Do Not Disturb* period in the Portal. Within this period, an employee who just answered a campaign does not receive any other campaign notification. The default Do Not Disturb period is 6 hours.

For matters that cannot wait, override the Do Not Disturb period with urgent campaigns. When creating a new campaign in the Finder, set the urgency of the campaign to be either **urgent** or **non-urgent**. Urgent campaigns are displayed as soon as they are published, regardless of the Do Not Disturb period. For their part, non-urgent campaigns respect the Do Not Disturb period.

Find out more

Report device errors on macOS

The Mac Collector now reports macOS kernel panic errors (as system crashes) and better detects all kinds of hard resets.

All features

Nexthink Cloud

The following content applies exclusively to the Nexthink Cloud offering.

Apollo Design

To modernize user experience, Cloud customers have a refreshed Portal interface that introduces the visual components of the in-house developed Apollo Design system.

Reduce eye strain in low ambient light conditions thanks to the new **Dark** mode.

Login screen, modules and widgets have a new look look and feel.

Collector proxy support

To facilitate communication to the cloud, the Collector supports HTTP and SOCKS5 proxy.

Identity and proxy support

Identity Brokers provides simplified onboarding and improved user experience.

Data Enricher

The Data Enricher complements the information about users and destinations that Collectors send to your Nexthink Cloud instance.

Find out more

Engage

Do Not Disturb period (Windows)

To avoid interrupting employees too frequently, configure the new *Do Not Disturb* period in the Portal. Within this period, an employee who just answered a campaign does not receive any other campaign notification. The default Do Not Disturb period is 6 hours.

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Find out more

GetSID API

The *GetSID API* lets you retrieve the Security Identifier (SID) of end users.

Find out more

macOS Collector

Report device errors on macOS

The Mac Collector now reports macOS kernel panic errors (as system crashes) and better detects all kinds of hard resets.

Collector Assignment

Improvements to the rule-based assignment of Collector to Engines and entities include:

- The use of the new **Collector string tag** in the assignment rules.
- Assignment rules for entities only (and not for Engines).
- The dynamic reassignment of Collectors when assignment rules change.
- The assignment simulation takes into account whether rule-based assignment is actually enabled in Collectors.

Find out more

Support for Windows 10 version 1909

Nexthink supports the latest update of Windows 10, namely version 1909. The Windows Collector has been extensively tested on this new version of the popular operating system and can be confidently installed on any device that runs Windows 10 version 1909.

Deprecated features

Print monitoring dropped

Since version V6.18, print monitoring has been disabled by default in Nexthink. Starting from V6.25, print monitoring is officially deprecated; which means that the feature can still be enabled, but it is no longer supported and it can be completely removed from a future version of Nexthink.

Mobile unsupported in Nexthink Cloud offering

The Nexthink Cloud offering supports both Windows and Mac OS platforms, but not Mobile. Therefore, no data related to mobile devices are available through managed appliances that belong to the Nexthink Cloud offering.

Discontinued support for macOS Sierra

Although the Mac Collector V6.25 can still run on macOS 10.12 Sierra, official support for this platform is discontinued, as Apple no longer supports this version of the popular operating system. Future versions of the Mac Collector are not guaranteed to run on macOS 10.12 Sierra.

Data-model changes

Device errors on MacOS

The Mac Collector now reports macOS kernel panic errors (as system crashes) and hard resets.

Field	Group	Type			
Number of application not responding events	Errors	Aggregate			
	Number of application not responding events				
	NXQL ID:	number_of_application_not_responding_events			
Number of system crashes	Errors	Aggregate			
	Indicates the number of system crashes.				

New Collector String Tag

Improvements to the rule-based assignment of Collector to Engines and entities include the use of the new Collector string tag in the assignment rules.

Find out more

Field	Group	Type			
Collector string tag	Nexthink Collector	Field			
	Indicates the Collector string tag				
	NXQL ID:	cltr_string_tag			

What's new in V6.24

New features

Engage

Updated appearance of Engage notifications

To improve the readability of questions and answers, campaign notifications have a refreshed look and feel on the Windows operating system, approaching the philosophy of Engage on macOS.

Starting from Windows Collector V6.24, answers to campaign questions are arranged vertically and the width of notifications is kept uniform, so that end users experience a gentler transition between questions.

Find out more

Collector connectivity and assignment

Collector communicates via TCP port 443 by default

To simplify network management, the Collector now sends all data through TCP port 443 by default. Sending data through a single well-known port reduces the chances of firewalls blocking Collector traffic. Communication through TCP port 443 cannot rely on the default set of certificates generated during Appliance federation though. To enable the communication of Collector data through TCP port 443, replace the default digital certificates in the Appliance by your own custom certificates or reload them in case of migration. When migrating, Appliances keep their previous configuration to communicate with your installed base of Collectors; therefore you need to make the changes manually. Contact Nexthink Customer Success Services in case of doubt.

Nevertheless, it is still possible to configure Collectors to either send all data through a custom TCP port (above TCP 1024) or send activity data through UDP, as in previous versions of Nexthink; although the latter is no longer recommended.

The Cloud offering of Nexthink requires a custom TCP port for the Collector (default 8443), as TCP port 443 is not supported yet.

Find out more

Local IP address to assign Collectors

The Collector now reports the local IP address of the device; that is, the IP address of the device in the local network. The local IP address provides an alternative to the conventional IP address of the device, which is obtained from the source IP address of Collector packets and thus subject to change in transit if network address translation takes place; that is, if the device and the Engine lie on different networks. This is always the case, for example, when Collectors report to an instance of Nexthink in the Cloud.

The new local IP address can be used in place of or in combination with the conventional IP address of the device to write the rules for assigning Collectors to Engines.

Find out more

Assigning Collectors to Appliances with multiple names

When entering the network parameters of the Nexthink Appliances, administrators can specify more than one fully qualified domain name (DNS name) or IP address per Appliance. Remember that only the first of the external DNS names specified is used for rule-based Collector assignment.

Find out more

Finder improvements

Score tabs navigation

Both the user and the device views in the Finder display up to ten score tabs. On some screens, not all tabs fit simultaneously.

Now the Finder includes a navigation tool that let you scroll through the score tabs when they do not fit on the screen.

Find out more

Cross-Engine search without auto-complete

To enable search across Engines in setups where the connectivity between Finder and Portal is limited, specify a new intermediate level of Cross-Engine features that includes the search but not the auto-complete feature, which might be too costly in terms of network resources.

Find out more

APIs and integrations

Two new APIs let you retrieve information about services and connected Engines programmatically from the Portal Appliance and NXQL now fully supports JSON output.

Services API

Programmatically retrieve data about the health and performance of the IT services monitored by Nexthink as perceived by the end users.

Find out more

List Engines API

Programmatically retrieve the list of Engines that are linked to the Portal, including their connection status.

Find out more

NXQL fully supports JSON output

Responses to NXQL queries can come in different formats. The available output formats are CSV, HTML, XML and JSON. The JSON output format was offered as a technical preview until now. Starting from V6.24, JSON format is fully supported as output format for NXQL queries.

Find out more

Login and access

Protection of local accounts

To protect local accounts against brute force attacks, a local account is temporarily blocked after five failed login attempts.

Find out more

Portal error pages

The default server pages that indicate an error in the connection of the web browser to the Portal have been replaced by custom error pages that keep the look and feel of the Portal.

Find out more

Report application not responding events in macOS

The Mac Collector now reports *application not responding* events. Note that the semantics of a non-responding application in macOS are different from Windows.

Find out more

Helping Support diagnose your issues

After contacting Nexthink Support, you are usually requested to download a diagnostics script to your Appliances. The results of executing this Support script are an invaluable resource for the Support team to pinpoint the cause of any issue on your Appliances. However, the script had to be manually downloaded and executed from the CLI of the impacted Appliances.

Starting from V6.24, the Support script is included in all Nexthink Appliances by default and you can run it comfortably from the Web Console.

Find out more

Data-model changes

Last local IP address

In line with improvements around local IP address reporting, the last local IP address has been added to the data model for devices.

Field	Group	Type			
Last local IP address	Network	Field			
	Indicates the local IP address of the device. This field requires a collector version newer than 6.23 and connected through TCP.				
	NXQL ID:	last_local_ip_address			

What's new in V6.23

New features

Engage

Trigger campaign API

To engage with the end user through third-party tools (for instance, to automatically launch a satisfaction survey from a ticketing system after a ticket is closed), trigger campaigns programmatically thanks to the new Engage API.

Find out more

Increased number of custom fields available for campaigns

The number of custom fields dedicated to Engage campaigns has been increased from 150 to 500 custom fields. In practice, this means that you can run more campaigns simultaneously.

Find out more

Portal APIs

Get data from the Portal programmatically thanks to two new APIs.

Count metrics API

Retrieve the details of count metrics to know about the objects that took part in the count and their attributes.

Find out more

Software Metering API

Get statistics about actual program usage to optimize the purchase of software licenses.

Find out more

Digital Experience Score on Mac devices

Assess the Digital Employee Experience of all employees that use Mac devices and take action to continuously improve it.

Find out more

Data collection

Collector support for recent OS updates

The Collector supports the latest versions of the popular operating systems on which it runs:

- Windows 10, version 1903
- macOS 10.15 Catalina

Find out more

Collector configuration available in Finder

Find out the configuration options of every deployed Collector comfortably from the Finder without having to connect to each device individually. Leverage investigations to look for unusual or unwanted Collector setting.

The Collector requires an active TCP connection with the Engine to send its configuration information.

Find out more

User Management

Password of local accounts

For centralized user management and improved security, Nexthink recommends provisioning individual accounts from corporate identity management solutions (SAML-compliant or Active Directory). Local accounts are still useful for creating accounts to call Nexthink APIs.

As a first step to make local accounts more secure in Nexthink, there is a new requirement on the minimum password length of local accounts. By default, new passwords must be eight characters long (no impact on existing passwords).

This minimum length is configurable.

Find out more

Data-model changes

Additional reported Collector fields

The following fields concerning the Collector have been added. Note that **Collector assignment license UID** is not new, but is now accessible via NXQL.

Field	Group	Type			
Collector assignment	Nexthink Collector	Field			
	Indicates whether Collector assignment service is enabled or disabled • disabled: indicates that the Collector feature is disabled • enabled: indicates that the Collector feature is enabled "-" : data not available				
	NXQL ID:	cltr_ca_status			
Collector assignment license UID	Nexthink Collector	Field			
	Indicates the Collector assignment license UID				
	NXQL ID:	cltr_ca_license_uid			
Collector CrashGuard count	Nexthink Collector	Field			
	Indicates the number of consecutive hard resets or system crashes of the device				
	NXQL ID:	cltr_crash_guard_count			
Collector CrashGuard limit	Nexthink Collector	Field			
	Indicates the Collector CrashGuard limit				
	NXQL ID:	cltr_crash_guard_limit			
		Field			

Collector CrashGuard protection interval	Nexthink Collector				
	Indicates the CrashGuard monitoring interval in minutes				
	NXQL ID:	cltr_crash_guard_protection_interval			
Collector CrashGuard reactivation interval	Nexthink Collector	Field			
	Indicates the Collector CrashGuard reactivation interval in hours				
	NXQL ID:	cltr_crash_guard_react_interval			
Data transport protocol	Nexthink Collector	Field			
	Specifies if the Collector data is sent over TCP or UDP • UDP: the Collector data traffic is sent over UDP • TCP: the Collector data traffic is sent over TCP "-" : data not available				
	NXQL ID:	cltr_data_channel_protocol			
Engage	Nexthink Collector	Field			
	Indicates whether Engage is enabled or disabled • enabled: indicates that the status of Engage service in Collector is enabled • enabled except on server OS: indicates that the status of Engage service in Collector is enabled on all devices except on servers • disabled: indicates that the status of Engage service in Collector is disabled "-" : data not available				
	NXQL ID:	cltr_engage_service_status			
IP protocol DNS resolution	Nexthink Collector	Field			
	Indicates the DNS resolution preference for Collector in terms of IP protocol version on the device • IPv4: prefer IPv4				

	• IPv6: prefer IPv6 "-" : data not available				
	NXQL ID:	cltr_dns_res_preference			
Message maximum segment size	Nexthink Collector	Field			
	Indicates the maximum segment size of packets sent by Collector				
	NXQL ID:	cltr_max_segment_size			
Monitoring of unresponsive applications	Nexthink Collector	Field			
	Indicates whether the Collector is monitoring for unresponsive applications on the device • disabled: indicates that the Collector feature is disabled • enabled: indicates that the Collector feature is enabled "-" : data not available				
	NXQL ID:	cltr_freezes_monitoring			
Packages and updates scan interval	Nexthink Collector	Field			
	Indicates the interval, in hours, after which the Collector checks for newly installed packages and updates				
	NXQL ID:	cltr_installs_scan_interval			
Print monitoring	Nexthink Collector	Field			
	Indicates whether the Collector printing monitoring is enabled or disabled • disabled: indicates that the Collector feature is disabled • enabled: indicates that the Collector feature is enabled "-" : data not available				
	NXQL ID:	collector_print_monitoring_status			

Script execution policy	Nexthink Collector	Field			
	Indicates the Powershell script execution policy • unrestricted: indicates that Act service in Collector can execute any kind of scripts • signed, trusted: indicates that Act service in Collector can only execute scripts signed by a trusted authority • signed, trusted or nexthink: indicates that Act service in Collector can only execute scripts signed by a trusted authority or by Nexthink • disabled: indicates that Act service in Collector cannot execute scripts "-" : data not available				
	NXQL ID:	cltr_ra_execution_policy			
SMB print monitoring	Nexthink Collector	Field			
	Indicates whether SMB printing monitoring is enabled or disabled • disabled: indicates that the Collector feature is disabled • enabled: indicates that the Collector feature is enabled "-" : data not available				
	NXQL ID:	cltr_smb_print_mon_status			
VDI/Kiosk support	Nexthink Collector	Field			
	Indicates whether the Collector reports user logon events and user interactions in virtualized and embedded (kiosk mode) environments • disabled: indicates that the Collector feature is disabled				

	• enabled: indicates that the Collector feature is enabled "-" : data not available				
	NXQL ID:	cltr_custom_shells			
Visibility from Add or Remove Programs	Nexthink Collector	Field			
	Indicates whether Collector is hidden in the "Add or Remove Programs" • invisible: indicates that the Collector application is not shown in the "add or remove programs" list • visible: indicates that the Collector application is shown in the "add or remove programs" list "-" : data not available				
	NXQL ID:	cltr_is_visible			
Web & Cloud monitoring	Nexthink Collector	Field			
	Indicates whether Web & Cloud monitoring is enabled or disabled • disabled: indicates that the Collector feature is disabled • enabled: indicates that the Collector feature is enabled "-" : data not available				
	NXQL ID:	cltr_web_mon_status			

User UID now accessible via NXQL

Field	Group	Type			
UID	Properties	Field			
	Indicates the universally unique identifier (based on user SID).				
	NXQL ID:	user_uid			

What's new in V6.22

New features

Engage

Support more languages

To increase the chances of addressing end-users in their mother tongue, the user interface of campaign notifications now supports additional languages. Remember to update all Collectors to ensure compatibility with the new languages.

Find out more

Increased limit on published campaigns

Create and publish more campaigns to better engage with the end users. Starting from V6.22, the limit on the number of campaigns that you can publish is linked to the type of campaign:

- 15 one-off or recurring campaigns.
- 15 continuous satisfaction measurement campaigns.
- 100 manual campaigns.
- 1000 campaigns embedded in remote actions.

Note however that the limit on the number of available custom fields may actually be more restrictive than the limit on the number of campaigns.

Find out more

User management

Support for single sign-on with Azure AD

To broaden the choice of single sign-on solutions, Azure AD is now officially supported in addition to AD FS to simplify the login experience of Nexthink users.

Instructions are given on how to configure Azure AD to act as a SAML identity provider for the Nexthink Portal.

Find out more

Just-In-Time provisioning of user accounts with SAML

Avoid manually adding users to your system -- a process that can be both tedious and error prone -- by leveraging SAML to provide relevant user information on user logon.

Find out more

Hardening of local accounts

To enforce end users to log in to Nexthink via a corporate account and thus improve security, disable local accounts for interactive users.

Find out more

Data Collection

Logging the connection status of the Collector

To improve the visibility of the status of the connection between the Collector and the Nexthink Appliance, the changes in the connection status, as well as related errors, are now logged.

- Windows Collectors log messages to the Windows Event Log.
- Mac Collectors log messages to the system log.

Find out more

Reduce Collector unloading by CrashGuard

When the Collector driver has issues with other kernel drivers in a device, the *CrashGuard* mechanism prevents the device from repeatedly crashing time and again by stopping the loading of the Collector driver on startup. The

CrashgGuard protection is triggered when the Collector detects that the device is reset a few consecutive times within a particular time interval after being started.

To reduce the number of false positives, the default values that trigger the CrashGuard mechanism have been updated. Starting from V6.22, the Collector must detect five hard resets, each one within the first four hours after the device has started, to trigger the CrashGuard protection.

Find out more

Miscellaneous

Copy and paste dashboards and widgets

Reusing Portal content has been greatly simplified by introducing the ability to copy and paste individual widgets and full dashboards.

Create dashboards faster by reusing widgets from other dashboards or by starting from an existent dashboard, and not from scratch.

Find out more

Additional audit logs

The Nexthink Appliance V6.22 registers additional messages in its log to let you find out the relevant activities that took place in your setup: successful or failed logons, changes in the configuration, component start and stop, etc.

Find out more

Data-model changes

Collector assignment license UID field added

In order to improve license management by ensuring devices can be clearly, reliably and uniquely identified across Engines, the field **Collector assignment license UID** has been added to Device objects.

Field	Group	Type			
Collector assignment license UID	Nexthink Collector	Field			
	Indicates the Collector assignment license UID				

User UID field added to NXQL data model

To make the unique identifier of users available through NXQL.

Name	Type				Properties
user_uid	md5				
	Indicates the universally unique identifier				

Security upgrade

Nexthink strongly recommends that customers upgrade all Windows Collectors to version V6.22.2.10, released on September 5, 2019, and downloadable from here.

This new version addresses a couple of currently known security vulnerabilities.

Related references

- Windows Collector V6.22.X (Release Notes)
- Nexthink V6.22 Release (Product Downloads)
- Security bulletin (Knowledge base)

What's new in V6.21

New features

Employee communications with Nexthink Engage

In addition to getting feedback from end users, Nexthink Engage campaigns are useful for spreading information across an organization. Starting from Nexthink V6.21, a couple of new features improve the communication of urgent or important matters to employees via campaigns:

Suppressing the delay in campaign delivery
: After the publication of a campaign, Nexthink V6.20 and lower introduced a delay of around five minutes before sending the questions to the end users. Campaigns are now sent to the end users almost immediately after being published, reducing the total waiting time to less than one minute.

Triggering campaigns manually
: Instead of specifying the recipients of a campaign with an investigation or a remote action, declare the campaign to be manually triggered. Later, quickly target a group of users by first selecting them from the list of results of an investigation, right-clicking the selection, and triggering the campaign from the context menu. Manual triggering works as well in the context of a search on users and on the User view.

Skipping notifications
: Notifications let end users decide whether to participate in a campaign or not, but this step is counterproductive when all that you want is to quickly pass a notice to the end users. To improve the chances of your message being timely read, configure your campaign to skip the notification step.

After being displayed for one minute, campaign notifications no longer automatically hide by default in V6.21, so that end users are less likely to miss campaign notifications:

Persistent notifications

In Nexthink V6.20 and lower, when the end user did not pick any choice, the notification of a campaign on Windows disappeared from the screen after 60 seconds. Starting from Nexthink V6.21, a notification stays on the screen indefinitely by default, until the end user accepts or declines to participate in the campaign. This is the same default behavior as for the Mac Collector. For Windows devices, however, you have the choice of configuring the campaign to show the notification for 60 seconds only.

Find out more

Display the numeric values of outputs from remote actions on your dashboards

See numeric values as returned by remote actions on your dashboards. In Nexthink V6.20 and lower, displaying the aggregate outputs of remote actions in Portal dashboards was only indirectly possible through the use of scores:

1. A leaf score normalized the value of the output.
2. A metric was based on the score.
3. A widget displayed the metric in a dashboard of the Portal.

Starting from Nexthink V6.21, create quantity metrics directly based on the numerical outputs of remote actions:

- Simplify the process of adding outputs of remote actions to dashboards:
  No scores necessary.
- See the actual values returned by the outputs of remote actions:
  No normalization required.

Find out more

Corporate login with SAML

To improve the login experience of Nexthink users and make it more secure, Nexthink V6.21 introduces user authentication via SAML, a single sign-on

solution widely extended in the corporate world.

A reference configuration of Microsoft Active Directory Federation Services (AD FS) is given, such that AD FS works as identity provider for the Portal. The feature is offered as *technical preview* for other configurations and SAML identity providers.

Find out more

End-user data over TCP

In Nexthink V6.20 and lower, the Collector communicates with the Engine over two separate channels:

TCP
: For transmitting data related to Nexthink Engage, Nexthink Act, and software updates.

UDP
: For transmitting end-user data.

Being a connectionless protocol, UDP is very flexible, but it requires ad hoc security to protect the data and a retransmission strategy to compensate for packet losses.

Starting from Nexthink V6.21, configure the Collector to send all the data over the TCP channel for better reliability and security. To protect data against malicious attacks on public networks, the Collector implements standard security mechanisms over TCP that provide encryption and enable client authentication. In addition to the delivery guarantees of a connection-oriented protocol such as TCP, the Collector is able to buffer data for improved reliability.

Find out more

Fixed-scale line charts

Although the automatic scaling of line chart widgets ensures an optimal fit of the line in the display area, it sometimes makes it difficult to visually compare values in dashboards.

Starting from Nexthink V6.21, line charts accept a numeric range in their configuration (**from** *minimum* - **to** *maximum* values) to fix the scale of the widget, in a similar way to the maximum value that bar charts accept. A fixed scale is particularly useful when you know in advance the range of values that a widget will display (e.g. when displaying scores).

Find out more

Digital Experience Score benchmarking

The Digital Experience Score measures both the ability of your employees to get things done in their digital workplace and their degree of satisfaction with respect to the IT environment. Currently, the Digital Experience Score is offered as a library pack, which is available for download from the Nexthink Library in two versions:

- Digital Experience Score based on hard data and user sentiment (requires Nexthink Engage)
- Digital Experience Score based on hard data only

Starting from Nexthink V6.21, a minimal set of components from the Digital Experience Score are embedded in the product to provide anonymized

benchmark data to Nexthink Cloud Intelligence. Gain additional insight about the experience of your employees by obtaining quarterly reports from Nexthink Customer Success Services that compare the Digital Experience Score of your company to the average score of other companies in the same or in different industries.

Find out more

Deprecated features

Dropped support for OS X 10.11 El Capitan

Starting from Nexthink V6.21, the Mac Collector no longer supports the last of the OS X family of operating systems: OS X 10.11 El Capitan, which Apple stopped supporting in August 2018.

All supported versions are now part of the macOS family:

- macOS 10.12 Sierra
- macOS 10.13 High Sierra
- macOS 10.14 Mojave

Windows 7 readiness

Because Windows 7 is currently under extended support and it will reach its end of life on January 2020, it no longer makes sense to verify the readiness of software packages to Windows 7.

In V6.21, the fields of the Package object related to Windows 7 readiness are no longer visible in the Finder and, therefore, not usable in Portal dashboards. Nevertheless, Windows 7 readiness fields are still available in NXQL, although

marked as deprecated.

Data-model changes

Last known connection status modified

Because the UDP connection of the Collector is now optional, the messages of the last known connection status: **UDP**, **TCP**, and **UDP+TCP** have changed to **UDP only**, **TCP only**, and **Fully connected**:

Field	Group	Type			
Last known connection status	Nexthink Collector	Field			
	Indicates the last known connection status of the device: • 'UDP only': the device is successfully connected via UDP. • 'TCP only': the device is successfully connected via TCP. • 'Fully connected': the device is successfully connected via both UDP and TCP, unless it has been configured to transmit only over TCP, in which case it has successfully connected via TCP.				
	NXQL ID:	last_known_connection_status			

Windows 7 Readiness removed

The following package fields have been removed from the data-model, although they are still kept in NXQL as deprecated fields.

Field	Group	Type			
Windows 7 (32-bit) compatibility	Nexthink Library (deprecated)	Field			
	Indicates the Windows 7 (32-bit) compatibility of the package: • '-' : not yet tagged • No information available: not known by Nexthink Library • Compatible: compatible with Windows 7				
	NXQL ID:	windows_7_32bit_compatibility			

Windows 7 (64-bit) compatibility	Nexthink Library (deprecated)	Field			
	Indicates the Windows 7 (64-bit) compatibility of the package: • '-' : not yet tagged • No information available: not known by Nexthink Library • Compatible: compatible with Windows 7				
	NXQL ID:	windows_7_64bit_compatibility			