



OEMConfig App for Nokia phones

Product Description

App version 3.5.6

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1 Introduction

This document provides a functional description of OEMConfig App for Nokia phones, which is HMD Global Oy's ("HMD") offer for Nokia smartphones and tablets for enabling additional Android management features on top of Android Enterprise based Enterprise Mobility Management (EMM) functionality.

1.1 Enterprise Mobility Management

EMM is a solution that enables company IT to manage organisation's mobile devices by pushing needed apps, setting security policies, and by defining what application usage is allowed and not allowed. EMM solution enables also remote lock and remote wipe of devices in case they are lost or stolen. Depending on their needs, company IT can deploy devices to Kiosk mode, Fully Managed and Work Profile (Company Owned or BYOD), subject to EMM solution capabilities and supported features.

An example of an EMM solution is HMD Enable Pro (<https://www.hmdglobal.com/hmdenablepro>).

1.2 OEMConfig App

OEMConfig App (Original Equipment Manufacturer Configuration Application) complements an Android Enterprise based EMM solution by allowing device or OEM specific managed configurations to be deployed as part of an EMM Policy. OEMConfig is an Android Enterprise based capability, which Android launched in July 2019. More information can be found at: <https://blog.google/products/android-enterprise/oemconfig-supports-enterprise-device-features/>.

OEMConfig app may be developed by a device manufacturer at their will. HMD Global has developed their own OEMConfig app for Nokia devices, and this document covers its functionalities as well as how to take them to best use.

1.3 OEMConfig App for Nokia smartphones

OEMConfig App for Nokia phones allows company's IT to add managed configurations to EMM managed Nokia devices.

The OEMConfig app for Nokia phones works across all new Nokia devices which run Android 10 or later from the beginning of year 2021. Currently supported Nokia devices are listed in section 2.6.

The app is available at Google Play store by searching with name 'OEMConfig for Nokia', or by the following link: <https://play.google.com/store/apps/details?id=com.hmdglobal.app.oemconfig>.

The OEMConfig for Nokia phones app features have been developed based on various inputs and most importantly customer requests, including use cases in-office and remote work, logistics & transport and IoT. Supported features evolve constantly, and can be used for settings related to areas such as:

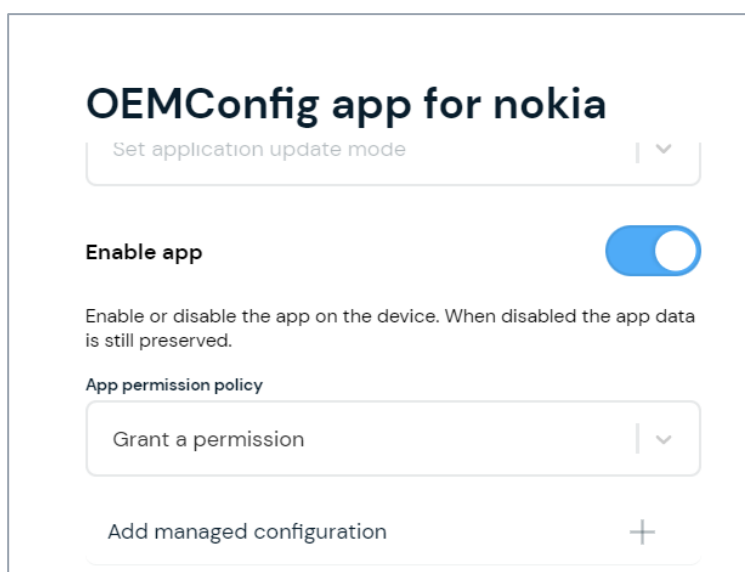
- Network
- Display

- Location
- Sound
- System

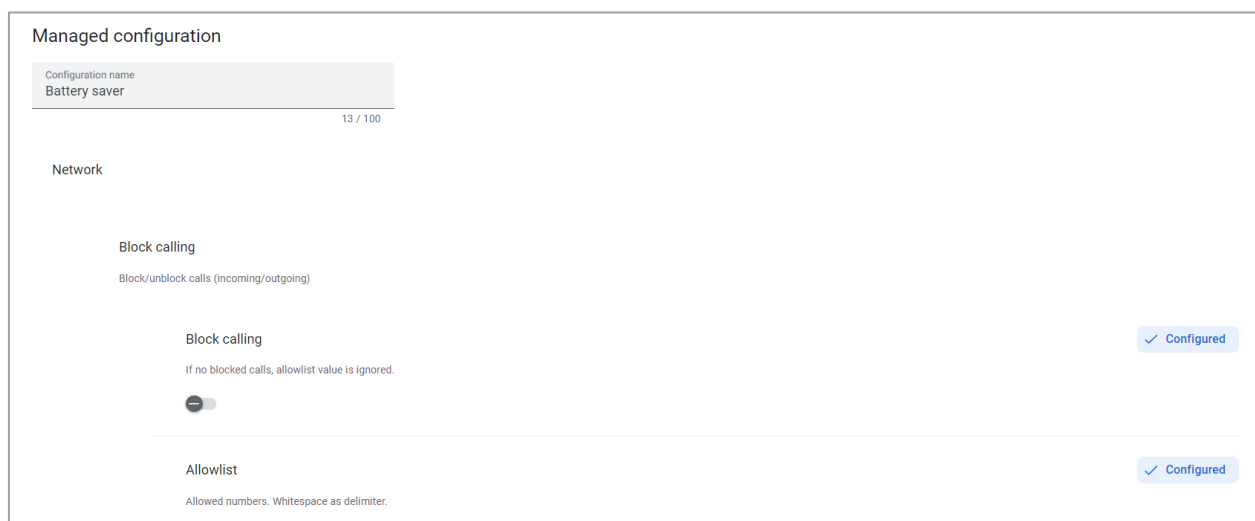
2 Functionality

This chapter covers the features supported in app version 3.5.6, which was released on June 2, 2022.

OEMConfig for Nokia phones App enables IT administrator to create managed configurations for Nokia devices by using a compatible EMM solution. An example from HMD Enable Pro solution:



By clicking 'Add managed configuration', admin can select and define needed additional management settings for their management Policy. Each Managed configuration needs to have its own name; in the example below, admin has given "Battery saver" as the configuration name.



Note: OEMConfig App does not persist all listed settings. The persistent device settings are marked with * across the feature descriptions.

2.1 Network functions

- Block calling*

Block calling-function allows to configuring blocking and/or unblocking incoming and outgoing calls. If the function is turned on, the calls on the device are blocked. It is possible to allow certain numbers by adding those to Allowlist in Managed configuration settings. If calls are not blocked, Allowlist value is ignored.

- Data roaming on/off

Data roaming setting can be configured on/off for a single SIM card as well as for dual SIM cards. If the setting is on, it will allow the device to connect to networks other than the home network.

- Mobile data on/off

The setting can be configured to control whether mobile data transfer is allowed.

- Connectivity Guardian for mobile data connectivity (network) monitoring

Monitoring follows changes in network connectivity, and in case of a network drop attempts to re-establish the connection either by toggling mobile data "on" and "off" or by rebooting the device.

Behaviour and configuration options

Once a connectivity drop is detected, the app will queue a worker for handling the reconnection attempts. The work is queued with a three second initial delay to deal with e.g. transitions between different networks (cellular to WiFi or vice versa). If network connection is still missing, the following means of reconnecting are attempted:

- If mobile data SIM is explicitly selected, mobile data will be toggled off and back on with increasing delay between retries. First try has a ten (10) second waiting period and the period is increased by ten (10) seconds for each subsequent try. A maximum of four (4) retries are done after which the device will be rebooted if network connection has not been re-established.
- If no mobile data setting is selected, the app will fall back to rebooting the device. In such case, there is a 30 second waiting period before the reboot is initiated to allow the device to recover network connection by itself.

Monitoring has three (3) configuration options:

- On/off toggle; default is "off". Turning monitoring on will automatically enable reconnection cycles.
- Reconnection interval - minimum one (1) hour, maximum 24 hours; default one (1). Time in hours which the app will wait before starting a new reconnection cycle.
- Reconnection maximum try amount – minimum one (1) try, maximum ten (10) tries; default one (1). Maximum number of reconnection cycles to run in total before giving up. In case the limit is reached, it is plausible that something that cannot be recovered, and the device requires user's attention.

Changing the options will not interfere with ongoing reconnection cycles, meaning that those will complete with the initial values. New values will be considered in the next connection drop.

- **APN configuration**

APN configuration can be used to add new APNs or update existing ones remotely. APN configuration lines are given in following format (columns are separated with semicolon, empty values are ignored):

```
entryName;apn;apnType;mcc;mnc;operatorNumeric;mvnoType;mvnoData;isPreferredApn
```

Only valid configurations will be visible on the device. Each line is considered as a separate APN entry. If multiple APNs are marked as preferred, the last valid one will be selected.

Note: APN entries are not explicitly concerned as new rows just as the entry name is different. The system may interpret the entries as duplicate if e.g. MNVO data matches a previous entry, and does an update instead.

The following example would add three new APN configurations and set the last one as preferred APN:

```
ExampleEntryName;exampleapn;default,supl;123;45;12345;imsi;1234x;1  
ExampleEntryName2;exampleapn2;default,supl,ims;567;89;56789;imsi;5678x;0  
ExampleEntryName3;exampleapn3;default,supl,ims;;;56789;imsi;567890x;1
```

2.2 Display functions

- **PureDisplay on/off**

If PureDisplay setting is on, all footage is transformed in real time to high dynamic range (HDR), providing more vibrant colors and a clearer picture.

- **Screen off timeout**

The feature allows choosing the amount of time in seconds before the device goes to sleep or begins to "dream" after a period of inactivity.

- **Screen brightness**

Screen brightness can be adjusted from 0 to 100%.

- **Accelerometer rotation**

The feature allows controlling whether the accelerometer will be used to change screen orientation.

2.3 Sound functions

- **Volume control**

The feature includes control of media, alarm, notification, during a call and ring-sound volumes.

- **Touch sound on/off**

Sounds activated by screen touch can be enabled.

2.4 Location functions

- Turn off location

Tracking device's location can be enabled or disabled.

- Turn on/off Wi-Fi scanning

The function allows apps and services to scan for Wi-Fi networks at any time, even when Wi-Fi is off. It can be used e.g. to improve location-based features and services.

- Turn on/off Bluetooth scanning

The function allows apps and services to scan for nearby devices at any time, even when Bluetooth is off. It can be used e.g. to improve location-based features and services.

2.5 System functions

- System locales

Locale represents a language/country/variant combination. Locales are used to alter the presentation of information such as numbers or dates to suit the conventions in the region they describe. Add locales separated by comma: zh-Hant-TW,en-US,ja-JP. Leave empty if keeping user setting. Feature is supported only on Android 10 or higher. Allowing system locales can be configured or disabled to prevent changes in locales.

- Configure Nokia XR20 hardware buttons*

The function allows configured application to receive events from the Emergency key or the Google Assistant key. Supported only on Nokia XR20. Package name of application can be entered. Use when locked can be configured; when enabled, the hardware keys can be used also when the device is locked.

- Enable/disable Google Assistant button

The function supports activating Google Assistant button located on the side of the device.

- Block system OTA*

System OTA (over-the-air) updates can be triggered by Google. If the function is configured on, Google service still can download the OTA but cannot trigger the device to install.

- Low power/battery saver mode

The feature allows controlling whether low power/battery saver mode is active or not.

- Language configuration

The feature allows to set system language as well as enable/disable possible change of language*.

- Use network time

The feature allows automatic date and time fetching from the network.



- Set hour format

The feature allows to set hour format presentation either to 12 or 24.

- Set time zone

Time zone can be set in Olson ID format. Setting time zone manually disables automatic network-based time zone fetching.

- Boot on power

When boot on power is enabled, the device boots up automatically once connected to a power source (e.g. a charger).

Note: The feature is currently supported for Nokia T20 and Nokia G21 only. Scheduled reboots

Scheduled reboots can be turned on from managed configuration with the following options:

- Interval - off, daily, every other day or weekly; default "off".
- Starting day – one (1) to seven (7); default 1, i.e. weekday from which the initial schedule will start. If current weekday is selected and preferred hour is before current time, first reboot will be scheduled for next week.
- Preferred hour (0-23) - reboot will happen around the preferred hour; default one (1). The aforementioned timing is not exact; in addition, there is a two (2) hour flex time window in place during which the reboot should happen.

Changes in any of the configuration options will cause existing schedule to be cancelled and replaced with the new one. Once scheduled reboots are turned on, the reboots will happen indefinitely as scheduled until turned off from the configuration.

2.6 List of currently supported devices

OEMConfig App can be used with any Nokia smartphone operating on Android 10 and later versions. Currently supported devices include:

- Nokia 1.4
- Nokia 2.2
- Nokia 2.4
- Nokia 3.2
- Nokia 3.4
- Nokia 4.2
- Nokia 5.3
- Nokia 5.4
- Nokia 8.3 5G
- Nokia C2 Tennen
- Nokia G10
- Nokia G11
- Nokia G20
- Nokia G21
- Nokia G50
- Nokia X10
- Nokia X20
- Nokia XR20
- Nokia T20



If you have any questions, please reach out to HMD Enable Pro Support Team (hmdenableprosupport@hmdglobal.com).

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