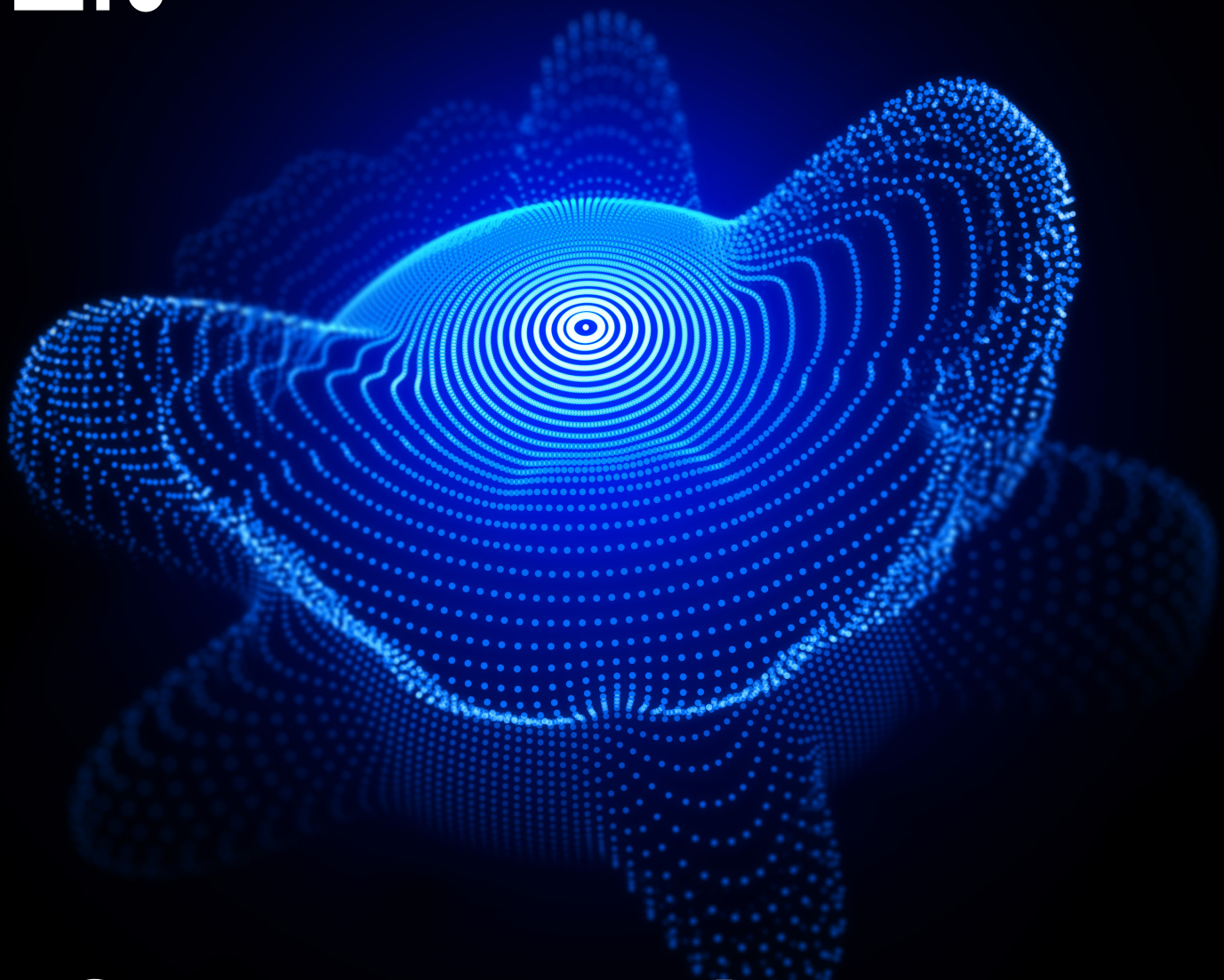


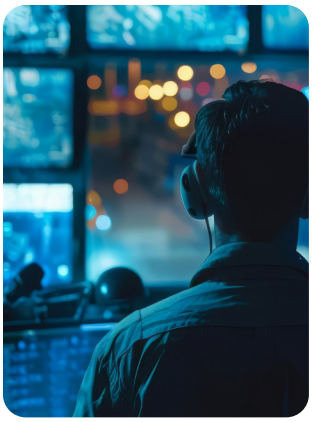
2N Integration Possibilities

In today‘s dynamic digital environment, integration is paramount to unleashing full potential. Experience the power of 2N’s integration, where every connection opens up endless possibilities for operational efficiency and customer satisfaction.

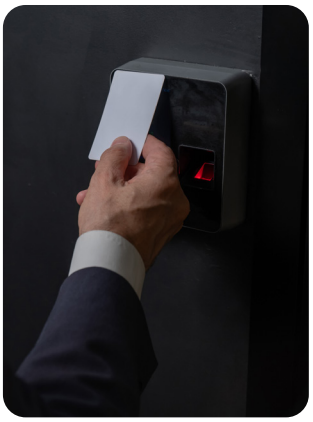
2N.com

We have **over 200 official technology partners,** and **our products are built on open protocols,** which means you can **integrate smoothly with a diverse array of third-party systems,** including:

Home automation



Video Management Systems (VMS)

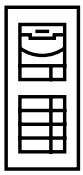


Attendance systems

And many more!

If you need more information on integrations, head to the 2N Integration Hub – it‘s packed with all the resources you need for every technology partner.

2N IP Intercoms, 2N Access units and SIP audio

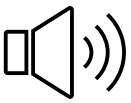


IP Intercoms:

Experience effortless communication and enhanced security with 2N‘s IP intercom solutions. Perfect for residential and commercial spaces, these intercoms offer advanced features for convenient and reliable access control.

2N Access Units:

Elevate your access control systems with 2N‘s Access Units. Designed for efficient management of entry points, these units provide secure and flexible solutions tailored to your specific needs.



SIP Audio:

Transform your communication infrastructure with 2N‘s SIP audio solutions. Enjoy crystal-clear audio quality and seamless integration for paging, and emergency announcements, enhancing both efficiency and safety.

Unlock integration opportunities with 2N devices using the versatile ONVIF Profile S/T, SIP, or HTTP API. Connect with a wide range of third-party hardware and software solutions to elevate your system‘s performance and expand its capabilities.

Techniques suitable primarily for usage in LAN

ONVIF Profile S/T:

- Applicable to 2N IP intercoms and SIP audio
- Typically used to add an intercom camera to VMS or NVR system
- Switch control to open doors remotely from VMS
- Transport of Events such as motion detection, call state change, button pressed etc.
- Bidirectional audio/video communication between intercom & VMS client
- Live announcements (paging) from VMS to 2N SIP Speaker Horn

Frequent Scenario:
Integration with 3rd party video management systems or NVRs via ONVIF protocol

Both office and lately residential buildings often have multiple cameras that give operators an overview of what's happening in front of and inside the building.

Thanks to the support of the ONVIF S/T standard, you can easily add 2N IP Intercoms to the system as additional cameras, ensuring a clear image focused directly on the face of the incoming person.

If needed, the operator can start recording video from the Video Management Platform, initiate an audio/video call to the intercom, or open the door directly. Communication works the other way round too - if the 2N IP intercom detects any specific activity (e.g. forced open door, tamper alarm, motion detection), it can trigger an alarm in the VMS and alert the operator to the event.

SIP:

- Applicable to 2N IP intercoms as well as SIP audio
- Protocol used for initiating, maintaining and terminating communication sessions - typically audio-video calls
- Allows seamless integration with 3rd party PBXs
- Bidirectional audio support, DTMF code-based door opening

Frequent scenario: Connection to existing IP PBXs via SIP

In office and government buildings, you'll find an IP phone on almost every employee's desk. To be able to call each other, these IP phones are registered to an IP PBX.

You can register a 2N IP intercom in the same way to the IP PBX and ensure that guests reach the exact employee they are visiting. Both audio and video calls can be transmitted via the IP PBX (supporting SIP protocol).

The employee can then see who is standing at the door on the display of their IP phone (e.g. the 2N IP phone D7A), pick up the call, and open the door for the visitor by entering an access PIN code on the IP phone display (DTMF option)

Wiegand and OSDP

- Helps to connect equipment such as third-party RFID card readers, UHF readers, keypads, or biometric readers to 2N IP intercoms and Access Unit 2.0 readers
- 2N IP intercoms with built-in readers can be connected to 3rd party access control or security systems

Frequent scenario:
Interconnection with external door controllers using Wiegand or OSDP

We often encounter installations where there is an intercom at the front door from one manufacturer and an access reader in a completely different design from another one. Typically, this is because an access control system is already installed and used throughout the building and the intercom is there only as an „add-on" for calling.

However, even this somewhat tricky requirement can be solved nicely - 2N IP intercoms offer a variety of built-in access readers (RFID, fingerprint, and Bluetooth) and keypads that can be easily connected to the existing access control system via Wiegand or OSDP interface.

Full control of the door still lies with the existing access system (door controller) to which the intercom reader is connected. The difference, however, is that at the front door there is only one sleek, compact, and well-designed device that will impress users and visitors.

REST HTTP API:

- System API – For changing configuration, tracking intercom status, and upgrading intercoms
- Switch API – For controlling and tracking the status of switches, for example opening door locks etc.
- I/O API – For controlling and tracking the status of logical inputs and outputs of intercoms
- Camera API – For controlling the camera and watching video from it (this service is available without a license)
- Display API – For controlling the display as well as showing user information on the display
- Phone/Call API – For controlling and tracking incoming and outgoing calls
- API Log – To get events and alarms from devices (credentials used, motion & noise detection, tamper switch alarm
- User API - For full User profile and data management

LINK TO API HTTP API

Frequent scenario:

Integration into (umbrella) security or building management systems via API

Nowadays, in highly complex buildings full of different modern technologies, it's common that property owners and managers use enhanced system services that allow them to monitor and regulate various aspects.

This not only includes building management data like temperature, lighting, and HVAC, but also systems related to physical security information management such as video surveillance, internal communication, access control, fire alarms, intrusion management systems, and so on.

REST HTTP API offers a very versatile, flexible, and robust way of integrating 2N IP devices into these so-called 'umbrella systems' - making them part of a complex centrally managed infrastructure.

2N Access Commander

Capability without complexity: your all-in-one solution for streamlined access control management.

Elevate your user experience effortlessly with our advanced synchronization tools. Whether it‘s through our intuitive API, smooth CSV/LDAP integration, or lightning-fast SignaR technology, stay connected to your user database and online logs with ease. No matter the network, LAN or WAN, our solutions deliver unparalleled performance and reliability.

REST HTTP API:

- **User Management** – enables the creation of users and assignment of AC credentials – PIN, Card ID, Fingerprint, LPR and Bluetooth. Users are organized in Groups
- **Device Management** – enables the creation of new Devices which are found in the network. Devices are sorted in Zones
- **Time Profiles** – each time profile defines the availability of specific functions (outgoing calls, RFID card or numeric code access) via a weekly calendar
- **Access Rules** – access rules define where, when, and to whom access is granted
- **Attendance and Presence** – provides data related to users’ availability e.g. in the office (attendance), in different formats (structured data, .CSV, .PDF)
- **Visitors & Visitor Cards** – enables you to create and delete access cards and rights for visitors
- **Notifications** – the notification module helps monitor selected device properties via e-mail (device status. Input/Output status change, tamper switch activation, door open too long, etc.)

LINK to API

Frequent scenario: Integration with different types of reservation systems - meaning automated User/Visitor creation and credential assignment based on 3rd party system data/request. (API)

An access control system has become a natural part of our daily life. We enounter various systems that determine who is allowed to enter or exit different places at different times – and not just in the workplace.

The rise in popularity of access credentials that are easily portable and electronically distributed also creates the foundation for different kinds of online reservation systems and booking platforms.

2N Access Commander API is a great tool to be used for the integration of such systems with Access control. It allows automated user or visitor creation and credential assignment based on the data retrieved from those platforms.

SignalR

Allows 2N Access Commander to push data automatically to connected clients as it happens in real-time. System and access logs, area change (occupancy) and device monitoring are typical examples of where SignalR can be used.

Frequent scenario:
„Real-time push of logs and events" using SignalR for automating and monitoring devices, room capacity, temperature, humidity controls etc.

Access control SW is a central collector of important and relevant data that different 3rd party systems can use for further processing and usage.

Many applications can make use of online data about users who have for example opened the door, used incorrect credentials repeatedly, forced the door open, etc.

SignalR can, for example, push real-time data about the occupancy in a restricted area to building management systems which in turn will set the air-conditioning or heating accordingly.

CSV SYNCHRONIZATION:

User data can be synchronized via a CSV file. In many cases, database programs store data in a proprietary format, which is hardly ever employed by other applications. However, such data can most likely be exported into a CSV file allowing automatic synchronization with 2N Access Commander.

LDAP SYNCHRONIZATION:

2N Access Commander supports Lightweight Directory Access Protocol (LDAP) which is used for download of users and user data changes (i.e. name, e-mail address, phone number, password, and log in) from an external system: an Active Directory.

Once deleted in the Active Directory, the user is deleted in 2N Access Commander as a result of periodic synchronization.

Frequent scenario:
Automated User synchronization (CSV and LDAP, also API).

Many companies run a central database that contains a whole range of information about its employees. The access control system is one of the underlying systems which can typically be fed by the data from such a database and then use them for user provisioning.

CSV and LDAP are the most common formats used for user data export and import. For more complex operations, API can be used as well.

The My2N Management Platform

Integrate your 2N devices with a wide range of third-party software solutions and effortlessly bridge the gap over the vast landscape of the internet. Elevate your experience with unparalleled compatibility and efficiency.

REST HTTP API:

- **Cloud calling** – enables audio and video calls from intercoms to be received on third-party answering units or mobile devices using cloud SIP Proxy
- **Access control** - can be used to manage access control tasks like adding users with PIN codes, RFID cards, or BLE credentials
- **Monitoring** – allows the setup of various monitoring features (e.g. tamper switch alert, audio loop test, etc.) over SQS queue
- **Remote Configuration** – used to establish a secure VPN tunnel between devices and the cloud. This enables remote setting of devices from any place in the world

Frequent scenarios:
Video calls and BLE-based Access control integrated in 3rd party mobile apps

Its more and more common for big property management companies to have their own app which serves as a single point of contact with their clients.

Tenants can use it for different purposes – from rent and service payments, to managing energy and water consumption online and communication with building managers about system outages or repairs.

Using 2N SDKs and including door opening and visitor calls into the tenant's app is simply a natural progression.

Efficient and remote user management from 3rd party software, based on cloud2cloud integration

The My2N Management Platform is a versatile tool that offers automatic and remote management of complex setups in residential buildings. Its user-friendly design allows building managers to comfortably manage tenants, their access control and calling setup.

As there are many powerful PMS tools in place which already include most of the tenant's information, the question of how to connect these two systems together arises. Our API is the best way to make this integration work and get a fully automated process with a need for a human intervention.