

Access Control Playbook

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How it Works - Technical Overview (Visitor)

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Required Building Information

The following information is required to enable the Visitor workflows.

☐ **Visitor Clearances**

Once Cohesion has completed the Access Control integration and associated the building's Access Control system with the Cohesion system, the Solutions Engineer will work with the building staff to identify clearances for employees and visitors per tenant and configure each company in Cohesion

This is done in Cohesion via **Settings > Tenant Companies > Access Control**.

☐ **Check-In Method**

The visitor check-in method should be defined in Cohesion via **Building Details > Configurations > Visitors > Visitor check-in**.

- For Automatic upon Visitor badging at Card Reader, QR Scanner are required where visitors enter the building.
- For Manual Check-in, this is used for buildings that are not integrated with a Visitor Management system.

☐ **Configure Visitor Card Reader Clearances**

For integrated systems, configure the Visitor card readers in Cohesion via **Settings > Integrations > Access Control**.

Visitor Workflows

Below is a description of the visitor workflows that can occur and what happens in the background during each process.

NOTE: These workflows assume the building is integrated with a Visitor Management system [unless otherwise noted].





- [Create New Visit](#)
- [Create Visitor](#)
- [Edit Visit](#)
- [Cancel Visit](#)
- [Visitor Checks-In at QR Code Scanner](#)
- [Manual Visitor Check-In](#)
- [Add Visitor to Watchlist](#)

Create New Visit

Play

User submits a new visit in Cohesion

Players Involved

Building	Cohesion
 Access Control system	 Cohesion Visitors module
	 Building Security API/ Access Control API Visit API
	 Building Security database/ Access Control database Visit database


About Building Security API and Access Control API

Depending on the building system, either the Building Security API or Access Control API is used in the Visitor workflow. The Building Security API was the original access control API and is still used

in some integrations. The Access Control API is a newer iteration and has been designed with more flexibility and functionality for more complex access control building systems.


Execution Plan

In Add Visit Screen...

Enter visit details (including host, subject, date, location), visitor, and clearance in **Cohesion** . Visitors and clearances that are in the building's Access Control system are available to be selected in the Add Visit screen in Cohesion because API connection details were configured as part of the initial building set up.

NOTE: In a Manual Check-In workflow (building not integrated with Visitor Management system), a clearance would not be selected for the visitor as part of the visit details.




When Visit is Submitted...

Visit, clearance, and visitor data is sent to the **Building Security/Access Control database**  via **Building Security/Access Control API**  and to the **Visit database**  via **Visit API** .

Visit, clearance, and visitor data is synced to the **Access Control system**  24-hours before the scheduled visit. A Visitor ID and Badge Number are returned from the **Access Control system** and added to the **Building Security/Access Control database** .

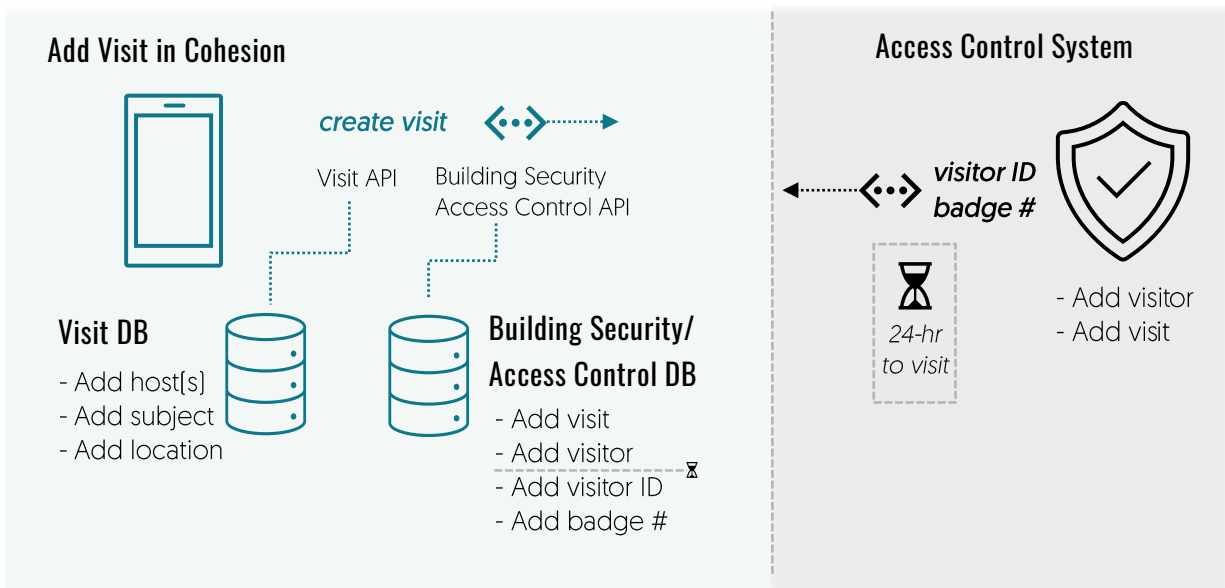
NOTE: Some building Access Control systems only have the concept of visitors (not visits), so for these cases visit and visitor data can be summarized as visitor data.

Add New Visitor to the Visit...

If a Visitor does not yet exist in the Access Control system, they can be added from the Add Visit screen in Cohesion  and are then created in the **Building Security/Access Control database**  via **Building Security/Access Control API** .

A Visitor ID and Badge Number is returned from the Access Control system and added to the **Building Security/Access Control database**  within 24-hours of a scheduled visit.

Successful Execution Example







Create Visitor

Play

User creates a new visitor in Cohesion

Players involved

Building	Cohesion
 Access Control system	 Cohesion Visitors module
	 Building Security API/ Access Control API Visit API
	 Building Security database/ Access Control database Visit database

NOTE: For information about the Building Security API and the Access Control API, see [About Building Security API and Access Control API](#).



Execution Plan

In Add Visitor screen...

Visitor details are entered in **Cohesion** .

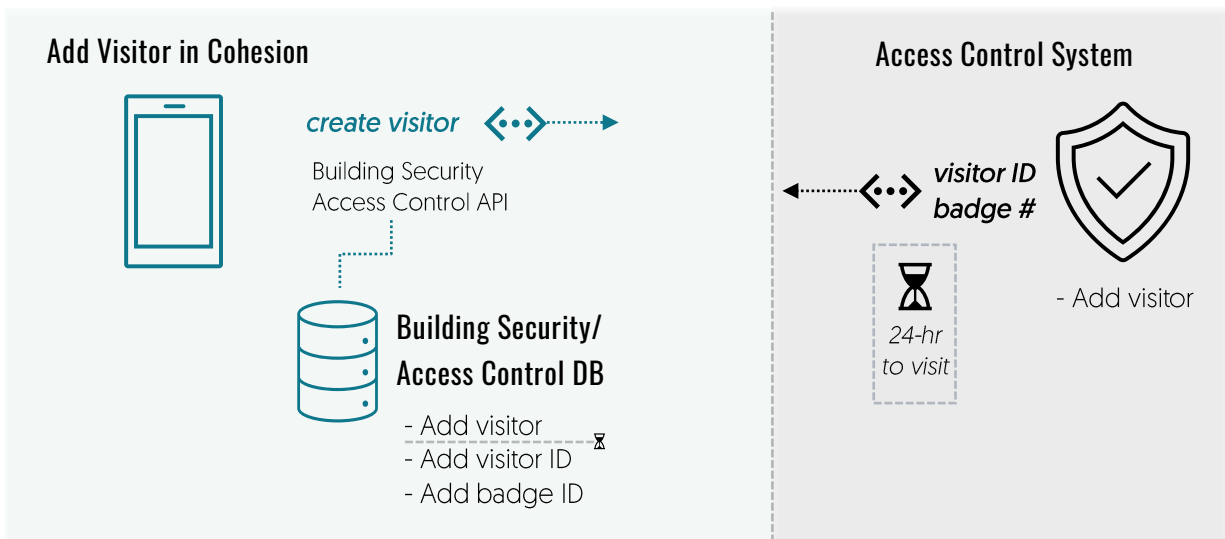
When Visitor is Submitted...

Visitor data is sent to the **Building Security/Access Control database**  via **Building Security/Access Control API** .

When a visitor record is created but they are not saved within a future visit, they will not be synced to the integrated access control system until a visit is scheduled. After a visit is scheduled, the visitor is synced to the **Access Control system**  24-hours before a scheduled visit for that visitor. A Visitor ID and Badge Number are returned from the **Access Control system** and added to the **Building Security/Access Control database** .

NOTE: A visitor may be represented in the system more than once if they are entered by different hosts. This is because a unique visitor ID is generated for a visitor with each host, which results in a visitor for each ID.

Successful Execution







Edit Visit

Play

User submits an updated visit in Cohesion


Players Involved

Building	Cohesion
 Access Control system	 Cohesion Visitors module
	 Building Security API/ Access Control API Visit API
	 Building Security database/ Access Control database Visit database





NOTE: For information about the Building Security API and the Access Control API, see [About Building Security API and Access Control API](#).


Execution Plan


In Edit Visit Screen...

Edit visit details [including host, subject, date, location], visitor, and clearance in **Cohesion** . Visitors and clearances that are in the building’s Access Control system are available to be selected in the Edit Visit screen in Cohesion because API connection details were configured as part of the initial building set up.



When Updated Visit is Submitted...

Visit, clearance, and visitor data is sent to the **Building Security/Access Control database**  via **Building Security/Access Control API**  and to the **Visit database**  via **Visit API**  and future visits associated with previous visit are deleted.

If the update occurs more than 24-hours from the visit, no action is taken in the Access Control system because the visit has not been synced there yet. If the update occurs within 24-hours of the visit, then the visit has been sent to the Access Control system, so the updated visit, clearance, and visitor data is updated in the **Access Control system**  in one of two ways:




- Visit date is not changed:
 - If the updated visit is within 24-hours, the visit data is synced to the **Access Control system**  immediately. A Visitor ID and Badge Number are returned from the

Access Control system and added to the **Building Security/Access Control database** .

- If the updated visit is more than 24-hours in the future, no action occurs since the visit is has not been synced to the Access Control system.
- Visit date is changed:
 - If the updated visit is within 24-hours, the visit data is synced to the **Access Control system**  immediately. A Visitor ID and Badge Number are returned from the Access Control system and added to the **Building Security/Access Control database** .
 - If the updated visit is more than 24-hours in the future, the original visit is deleted and the visit will be synced once it is within 24-hours of occurring.

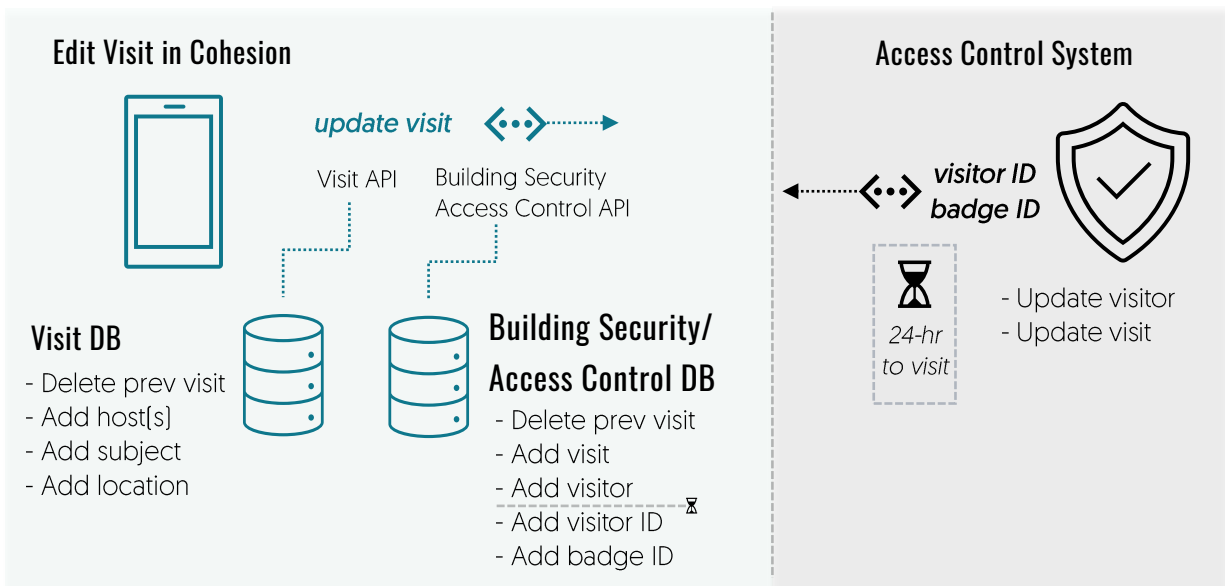
NOTE: Some building Access Control systems only have the concept of visitors (not visits), so for these cases visit and visitor data can be summarized as visitor data.

Add New Visitor to the Visit...

If a Visitor is added with the visit update, they can be added from the Edit Visit screen in **Cohesion**  and are then created in the **Building Security/Access Control database**  via **Building Security/Access Control API** .

A Visitor ID and Badge Number is returned from the Access Control system and added to the **Building Security/Access Control database**  within 24-hours of a scheduled visit.

Successful Execution Example







Cancel Visit

Play

User cancels a visit in Cohesion

Players Involved

Building	Cohesion
 Access Control system	 Cohesion Visitors module
	 Building Security API/ Access Control API Visit API
	 Building Security/Access Control database Visit database





NOTE: For information about the Building Security API and the Access Control API, see [About Building Security API and Access Control API](#).

Execution Plan

On Visits Screen...

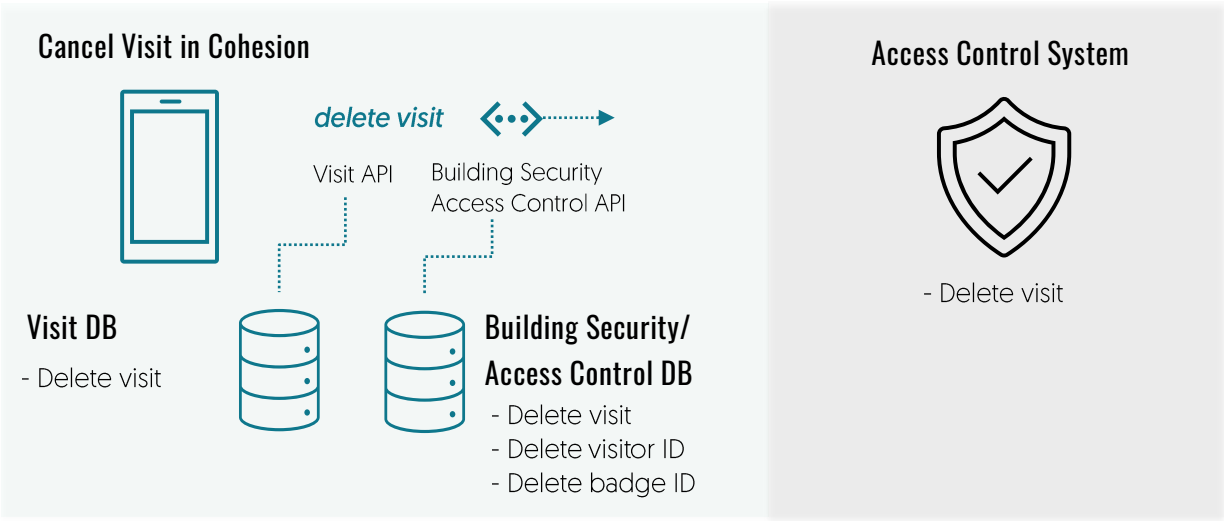
User cancels a visit in Cohesion .

When Cancelled Visit is Submitted...

Visit delete is sent to the Building Security/Access Control database  via Building Security/Access Control API  and to the Visit database  via Visit API  and future visits associated with previous visit are deleted.

Visit in the Access Control system  are deleted.

Successful Execution Example










Visitor Checks-In at QR Code Scanner

Play

Visitor arrives at building for a scheduled visit with a QR Code as their credential.

An automated visitor check-in scenario involves QR Scanners being installed near elevators, where visitors scan a QR Code they received via email so they can be directed to an elevator that takes them to their cleared space in the building.





Players Involved

Building	Cohesion
 QR Code Scanner	 Notification API Building Security API/ Access Control API Visit API
 Access Control system	 Building Security/Access Control database Visit database
 Elevator	 Kubernetes job
	 Visitor email





NOTE: For information about the Building Security API and the Access Control API, see [About Building Security API and Access Control API](#).

Execution Plan



1. Visitor receives email about visit...

When a visit is submitted in Cohesion that includes a visitor, a **Kubernetes job**  that is listening to the **Building Security/Access Control database**  for new visits initiates an **Upcoming Visit email**  to the visitor via the **Notification API** .

2. Visitor receives email with check-in info + QR Code prior to visit...

A **Kubernetes job**  runs every 30-minutes against the **Building Security/Access Control database**  to look for upcoming visits. On the day of a visit, the Access Control credential number is generated and converted to a QR code, which the visitor receives as an automated **Visitor Badge email**  via the **Notification API** .

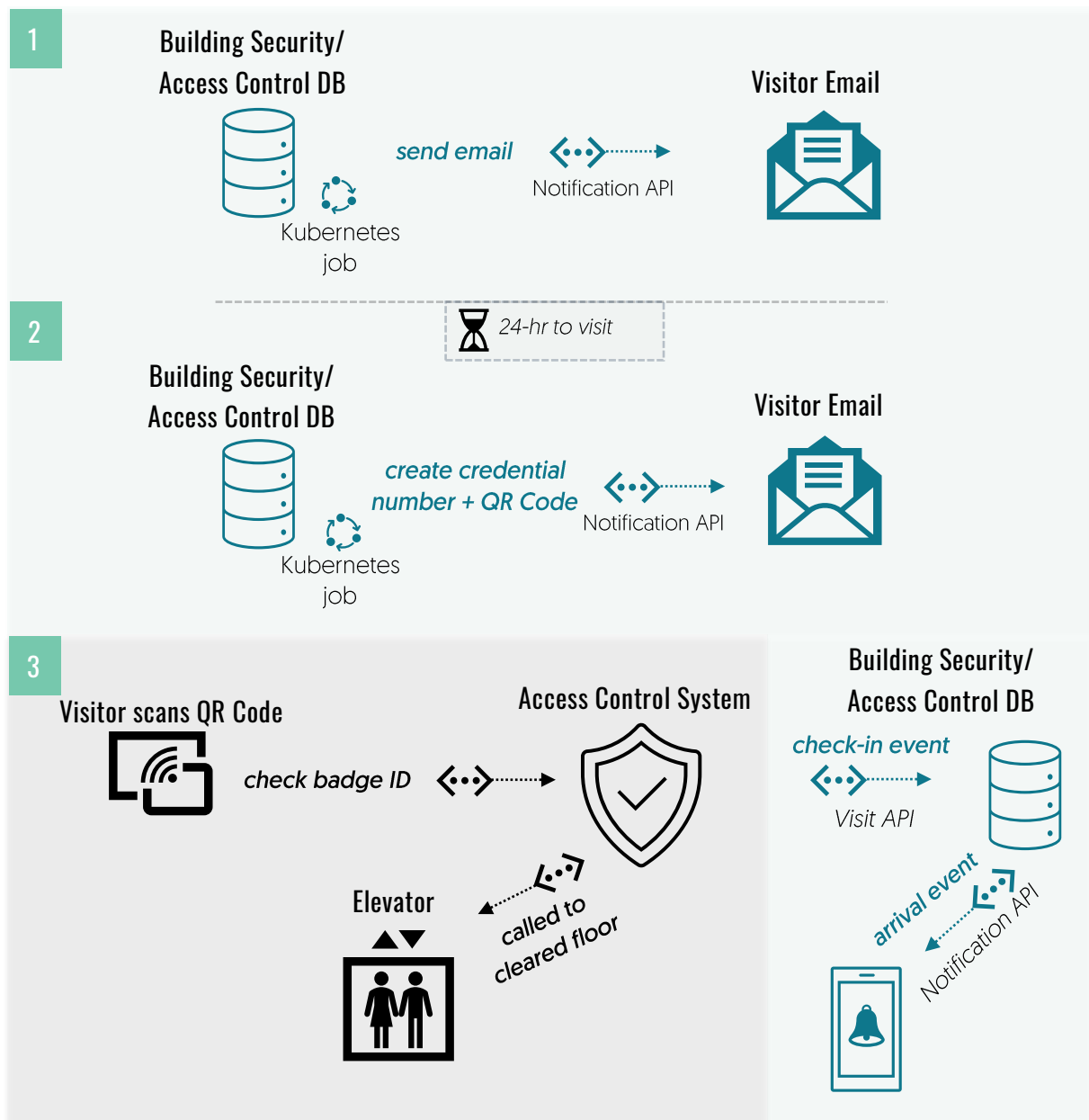
3. At QR Code scanner...

Visitor scans their QR Code badge at the **QR Code Scanner**  upon arrival. The badge number associated with their QR Code is checked in the **Access Control system** . Assuming the credential matches, they are cleared to enter and a check-in event occurs in the Access Control system.

If building elevators are integrated into the visitor Access Control process, an elevator brings the visitor to their cleared floor.

The **Building Security/Access Control database**  receives a check-in event via the **Visit API** . The host then receives an arrival notification via the **Notification API** .

Successful Execution Example



Manual Visitor Check-In

There are two manual check-in scenarios that vary depending on visitor clearance.

- [Visitor with Clearance](#)
- [Visitor without Clearance](#)







Visitor with Clearance

Play

Visitor arrives for a scheduled visit at a building where they are asked to check-in with Building Security to receive a temporary badge. This could occur if the visitor does not have an email address in their record (so they cannot receive a QR Code) or if they misplace their email that includes their QR Code.

Building Security checks-in the visitor in Cohesion, which initiates a notification to the host, and prepares a physical badge for the visitor.


Players Involved

Building	Cohesion
 Access Control system	 Cohesion Visitors module
 QR Code Scanner	 Visit API Notification API
 Elevator	 Visit database


Execution Plan

1. Visitor arrives to the building for a scheduled visit...



Building Security performs visitor check-in using **Cohesion** .

The **Visit database**  receives a check-in event via the **Visit API** . The host then receives an arrival notification via the **Notification API** .

2. Security provides badge for visitor...

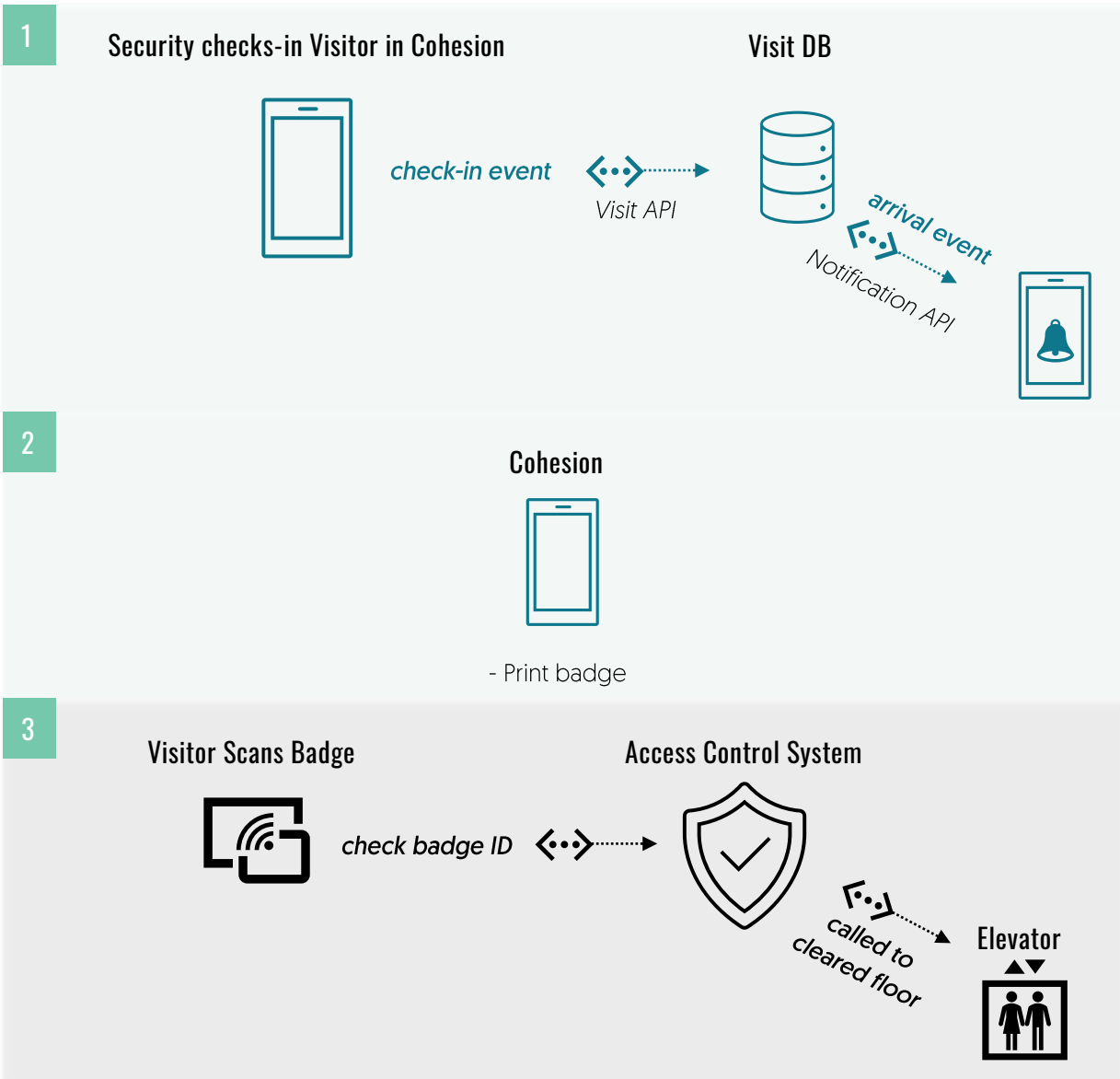
Building Security prints a badge for the visitor from **Cohesion** . This badge includes the assigned clearance[s] from the visit that was created for this visitor.

3. Visitor badges in...

The visitor scans their badge at the **QR Code Scanner** . Their badge number is checked in the **Access Control system** . Assuming the credential matches, they are cleared to enter.

If building elevators are integrated into the visitor Access Control process, an elevator brings the visitor to their cleared floor.

Successful Execution Example






Visitor without Clearance

Play

Visitor who does not have a clearance assigned arrives for a scheduled visit, or arrives at a building where QR Scanners are not installed for Visitor Management.

Building Security checks-in the visitor in Cohesion, which initiates a notification to the host.

Players Involved

Cohesion	
	Cohesion Visitors module
	Building Security API/ Access Control API Visit API Notification API
	Building Security database/ Access Control database Visit database

NOTE: For information about the Building Security API and the Access Control API, see [About Building Security API and Access Control API](#).

Execution Plan

1. Visitor arrives to the building for a scheduled visit...

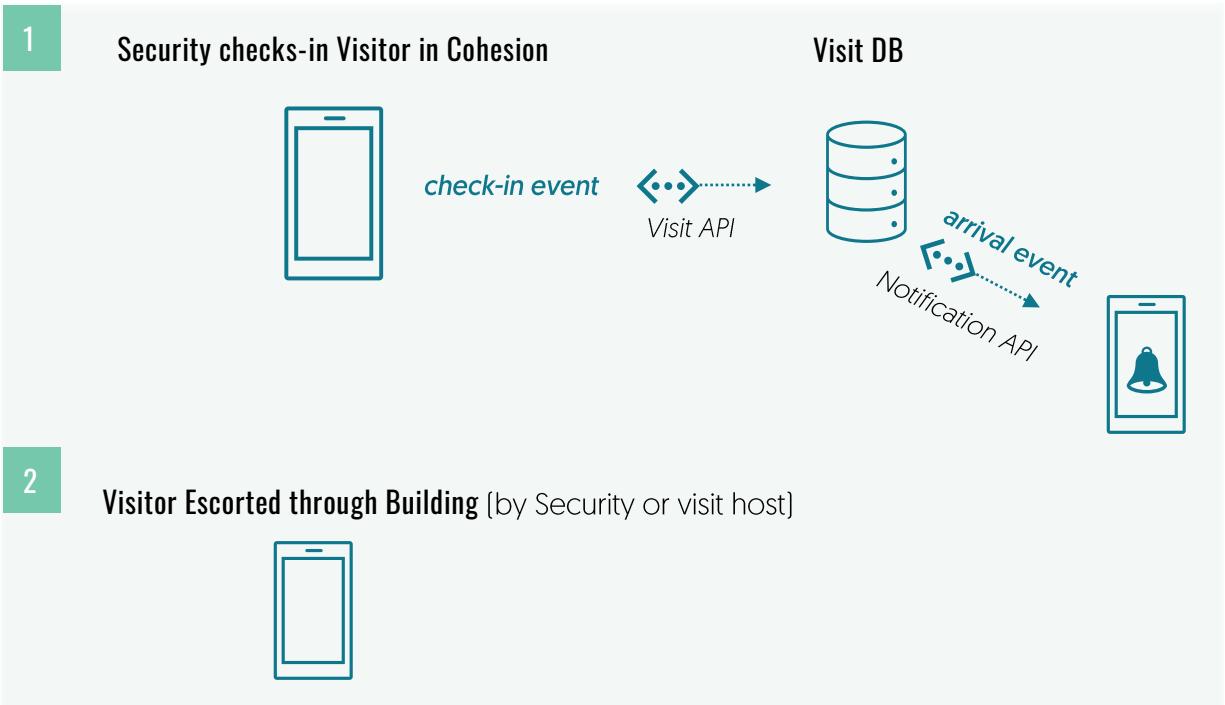
Building Security performs visitor check-in using **Cohesion** .

The **Visit database**  receives a check-in event via the **Visit API** . The host then receives an arrival notification via the **Notification API** .

2. Visitor is badged in...

Building Security or the visit host badges-in the visitor and escorts them through the building.

Successful Execution Example





Add Visitor to Watchlist

Play


Users add an individual to the watchlist

Players Involved

Cohesion	
	Visit API
	Visit database

Execution Plan

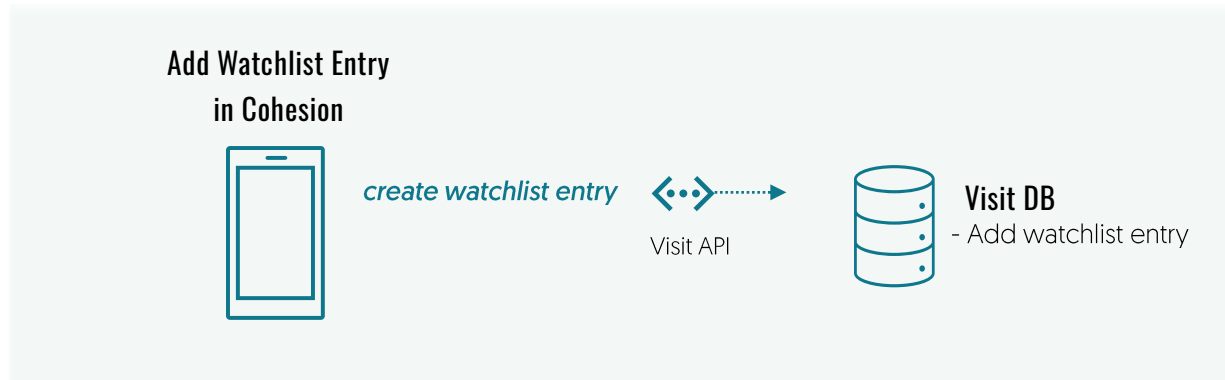
In Building Watchlist screen...

An individual's details are entered in the Visitors module in Cohesion .

When Watchlist entry is Submitted...

Watchlist data is sent to the **Visit database**  via the **Visit API** .

Successful Execution Example



Integration Discussion Topics

Below are questions to ask when discussing the integration with building vendors. This is intended for an internal audience.

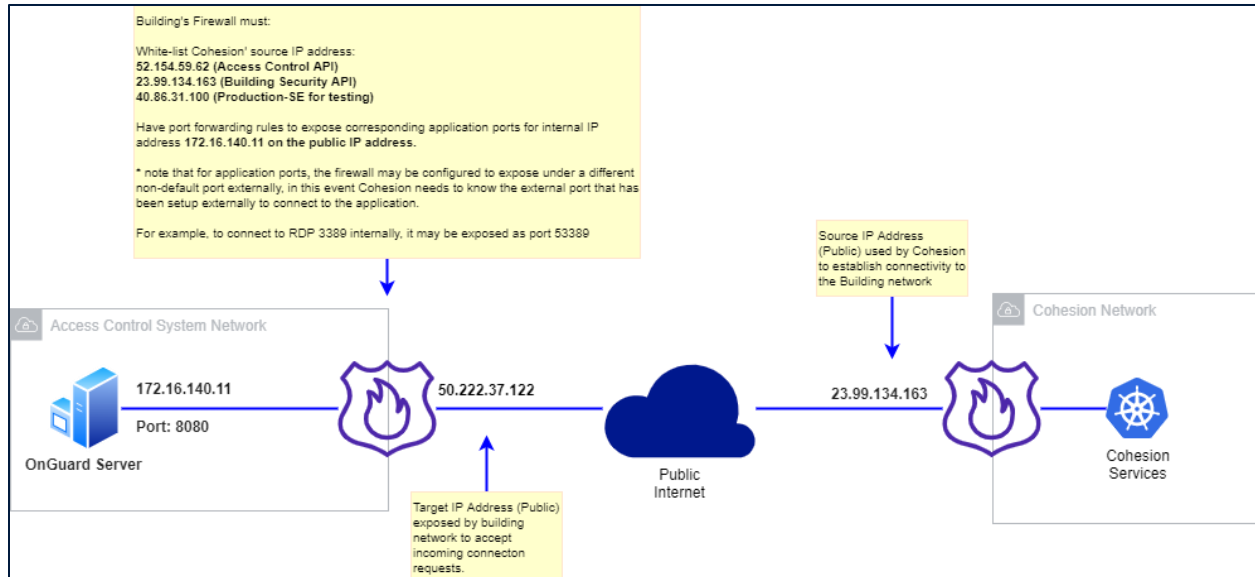
Review each question and gather the response. For those questions that do not require a deliverable from the site [e.g. a diagram], a text box is available for adding notes.

- [Network Connectivity](#)
- [Access Control](#)
- [Service Requests](#)
- [Parking](#)
- [Amenities](#)
- [MindBody Fitness Management](#)
- [Elevators](#)
- [Stripe](#)

Network Connectivity

Can you provide a network diagram with information on how the building's network is setup, specifically the servers we will interact with and their IP addresses?

This helps when getting to the point of connecting to the Production environment and going live with the building.



Example network diagram

Do you have an SSL certificate installed? If so, what is the key?

Cohesion needs to install the certificate key on our server.

If SSL certificate is not installed, then no additional information is required for this step.

[Enter text]

What is the Production system URL? If this is not available, please provide the following:

- The Public IP address configured to NAT to the private IP address of the server we will connect to.
- The Port number you have opened on your firewall to route the traffic to internal server.

What are the Production system API keys?

Is there a database Cohesion needs to connect to?

If so, please provide the following details:

Integration Discussion Topics — Network Connectivity

- Public IP
- Connection string
- Verify which port has been opened to allow traffic

What is the Building Automation System provider and system version?

What kind of HVAC equipment you have in the building? Ex. AHU's, VAV/FPB's, FCU's, etc.?

Is BACnet enabled on all BAS devices? If not all, how many are BACnet?

Is your network converged?

Please indicate if one converged building data network supports the following systems:

- BAS
- Lighting Control
- Security
- Wi-Fi

Access Control

User/General

What are the current workflows for user access control?

If possible, provide a diagram [or any document discussing how the building uses or intends to use the access control system].

Useful workflow descriptions:

- User creation process
- Credential creation process
- Clearance assignment
- Updates to all
- Deletions of all

How are Clearances and Credential Types configured?

Are Time-Based clearances used? Are there Access Groups or Access Levels? This is important so that clearance and credential type are configured properly for badges to work at all readers/turnstiles.

[Enter text]

Which access control system(s) are used [product name and version]?

There may be multiple access control systems because the parking system may differ from the building system. If the building is using an access control system that is not already in Cohesion it will need to be added.

Which required fields are expected to be populated by Cohesion in the access control system?

This will help us when designing the sync from Cohesion to the access control system.

Are there fields for user Activation/Deactivation? If so, please describe how they are populated.

Is the access control system setup on-premises or in the cloud?

If on-prem, this requires various hardware setup and may need help from DevOps.

Does the Access Control system support the notion of a “company”?

Are there lobby turnstiles or other key-in stations in the lobby?

Which brand of card readers are installed?

If the building is using readers that is not already in Cohesion they will need to be added.

Are the Card readers BLE-enabled?

What are the current API Fees, mobile credential fees, and/or reader API fees?

Are the card-readers going to be flashed with Cohesion MOB-Key?

Visitor

What are the current workflows for visitor access control?

If possible, provide a diagram [or any document discussing how the building uses or intends to use the access control system].

Useful workflow descriptions:

- Visitor creation process
- Visit creation process
- Visitor clearance assignment
- QR code emails

When a visitor arrives, what is the Visitor Management process (QR scanners? Stop at desk? ID required?)?

[Enter text]

How does the system identify the visitors (unique ID or field)?

This will be used for mapping Cohesion users to integrated system visitors.

[Enter text]

Does the building intend to install QR Code scanners?

QR Code scanners are required if the visitor workflow will be automated check-in with no required interaction with Security.

[Enter text]

Does the integrated system allow for visitor arrival notifications?

For the visitor flow, when the QR code is scanned, an event will be sent from the integrated system to confirm Access Granted or Access Denied. If the integrated system does not send event notifications, we cannot send arrival notifications or provide occupancy insights.

[Enter text]

Is the integrated system's visitor badge/card ID available through the API?

In order to generate a QR code for a visitor, Cohesion needs access to the integrated system's card ID. The QR code is populated by the card ID which points to the clearance for the visitor.

[Enter text]

Are there fields for Visitor QR Code Activation/Deactivation?

Visitor access is controlled via the time range selected for the visit. Cohesion also has the ability for each tenant to default to how long before the start of the appointment and after the end of the appointment the QR Code should remain activated.

[Enter text]

Can visitors have more than one access level for their visit?

Cohesion allows visitors to have multiple access levels associated to their QR Code.

[Enter text]

Credential + Clearances

How do clearances work in the access control system and how does the building intend to use them?

This will determine how Cohesion maps our clearance to those in the integrated system. Depending on the system, clearances can be assigned at the credential level or the user level.

[Enter text]

How are clearances managed (one-by-one, groups, etc.)?

Cohesion can support mapping to one type of clearance: Single clearances or Group clearances (a single clearance in Cohesion would map to a group clearance in the integrated system).

[Enter text]

Is the integrated system's Card Number (BadgeID) available through the API?

The readers look at this ID to figure out what access the person should have.

[Enter text]

Which credential type(s) are supported?

Various credential types are supported across different card readers. Generally, a building will only have certain types of card types they support. We need to know which card types are supported so that those are the only selections available in our UI.

[Enter text]

Can you provide an example of what the credential numbers look like?

Since different systems use different card numbers, this helps ensure we can handle the data that will be sent across.

[Enter text]

How does the mobile credentialing Mob Key process currently work?

[Enter text]

What is the Name (and ID, if available) for the Mobile Credential Type?

Cohesion needs a way to differentiate between the physical credential [card] and the mobile credential. Typically, this will be through the entity that represents the Cohesion concept of 'CredentialType'. Cohesion requires a single mobile credential type to be used for all Cohesion mobile credentials.

[Enter text]

What is the MOB key (e.g. MOBX1XX) and Part Number (MID-SUB-CRD_FTPN_123456)?

[Enter text]

How many credentials can be assigned to a user?

If multiple credentials can be assigned to a user, can they have different clearances?

Is there a limit to how many credentials can be created per credential type?

[Enter text]

How many clearances can be assigned to a user or a credential?

[Enter text]

Do you support time-based clearances?

[Enter text]

Service Requests

Is the building planning to use Cohesion's native service request functionality or planning to integrate to their current CMMS system?

[Enter text]

If integration is required, what is the Service Request Management System provider and version?

[Enter text]

Is billing required for any service request types?

[Enter text]

Parking

Can you provide a map of the parking garage?

This is helpful when creating parking spots in the Cohesion system.

Does your building have a separate access control system for parking? If so, please provide the name and version.

Is parking tied into access control or is it separate?

Do you allow Transient parking?

Is Parking billable?

Does your building offer bicycle parking?

If the building has bike parking, does it charge tenants to use it?

Amenities

Does the building use a space/amenity booking system? If so, what is the manufacturer and version?

Integration Discussion Topics — MindBody Fitness Management

[Enter text]

Does the building include conference/meeting room(s)?

[Enter text]

Does the building have any other rentable or reservable spaces?

[Enter text]

Is there a fitness center in the building?

[Enter text]

MindBody Fitness Management

For MindBody fitness management, the following information is needed.

Studio ID

[Enter text]

Activation Link

[Enter text]

Gym Manager's Name

[Enter text]

Gym Manager's Staff ID setup in MindBody

[Enter text]

Gym hours

[Enter text]

Gym phone number to be displayed on the app

[Enter text]

Elevators

Can you provide a diagram of the building layout?

This will be used for importing and mapping data.

What is the Elevator Management System provider and EMS version?

[Enter text]

Does your system provide destination dispatch?

[Enter text]

Does your EMS enable home floor programming?

[Enter text]

How does the system identify floors?

[Enter text]

How does the system identify elevators?

[Enter text]

Does the API contain an endpoint that returns live status information for the elevator?

If not, we cannot provide statuses to the customer [e.g. Arriving, Arrived...]

Stripe

Will the building process bill payments through Cohesion?

Access Control - Management by Building

Below is a summary of access control data and how it can be synced between the Cohesion system and the Access Control system. In some cases, data can be entered in either system and then synced to the other system. In other cases, data can only be synced to Cohesion after it is entered in the Access Control system.

Personnel/User			
First Name	COH	→	AC
Last Name	COH	→	AC
Email	COH	→	AC
User ID	COH	←	AC
Credential/Badge/Keycard/FOB			
Badge Number	COH	→	AC
Credential Type IDs	COH	←	AC
Credential ID	COH	←	AC
Clearance/Access Level			
Clearance Name	COH	←	AC
Clearance ID	COH	←	AC
Elevator			
Elevator Home Floor	COH	→	AC

Key

COH = Cohesion system

AC = Access Control system

→ Data can only be entered in Cohesion and then synced to the Access Control system

← Data can only be entered in the Access Control system and then synced to Cohesion