

<https://blog.spectologic.com>

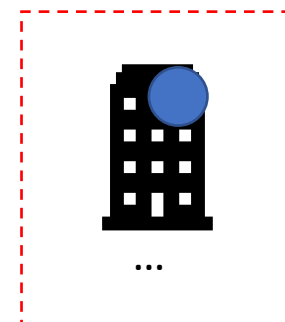
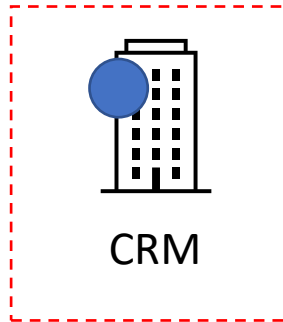


# Securing external SaaS APIs with Azure API Management

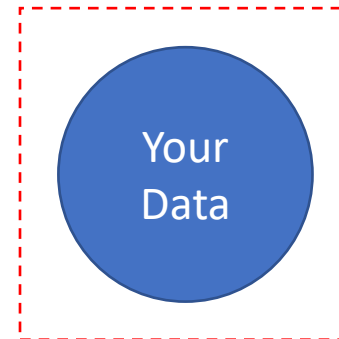
Nina Pollak, Azure Enthusiast

**Join me on Friday, May 6th, 10:00 - 10:50 CEST**

<https://hopin.com/events/global-azure-austria-2022>



Your company / organisation



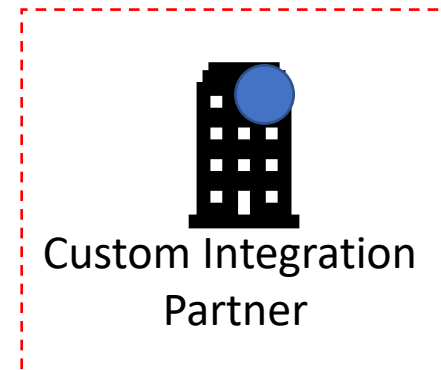
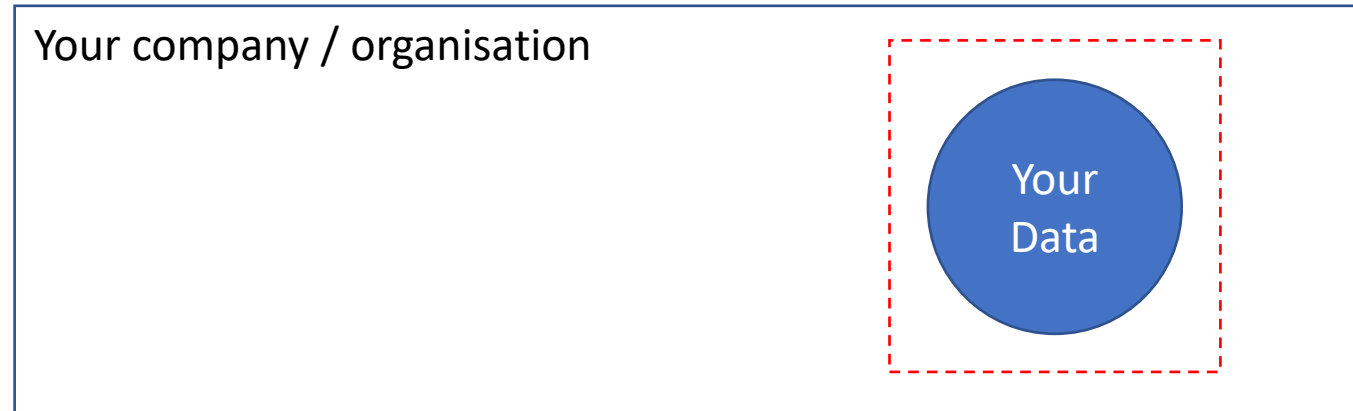
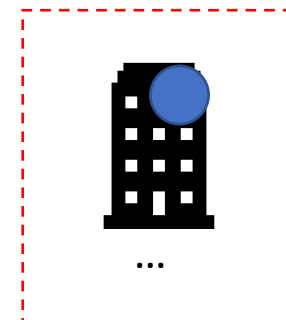
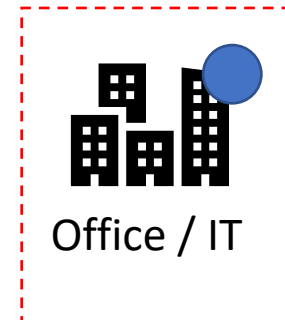
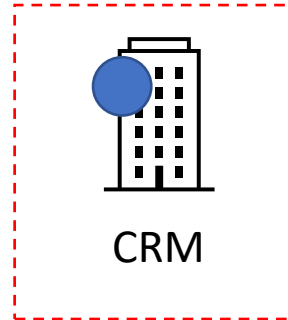
# Most vendors provide API's for integration





# Integration

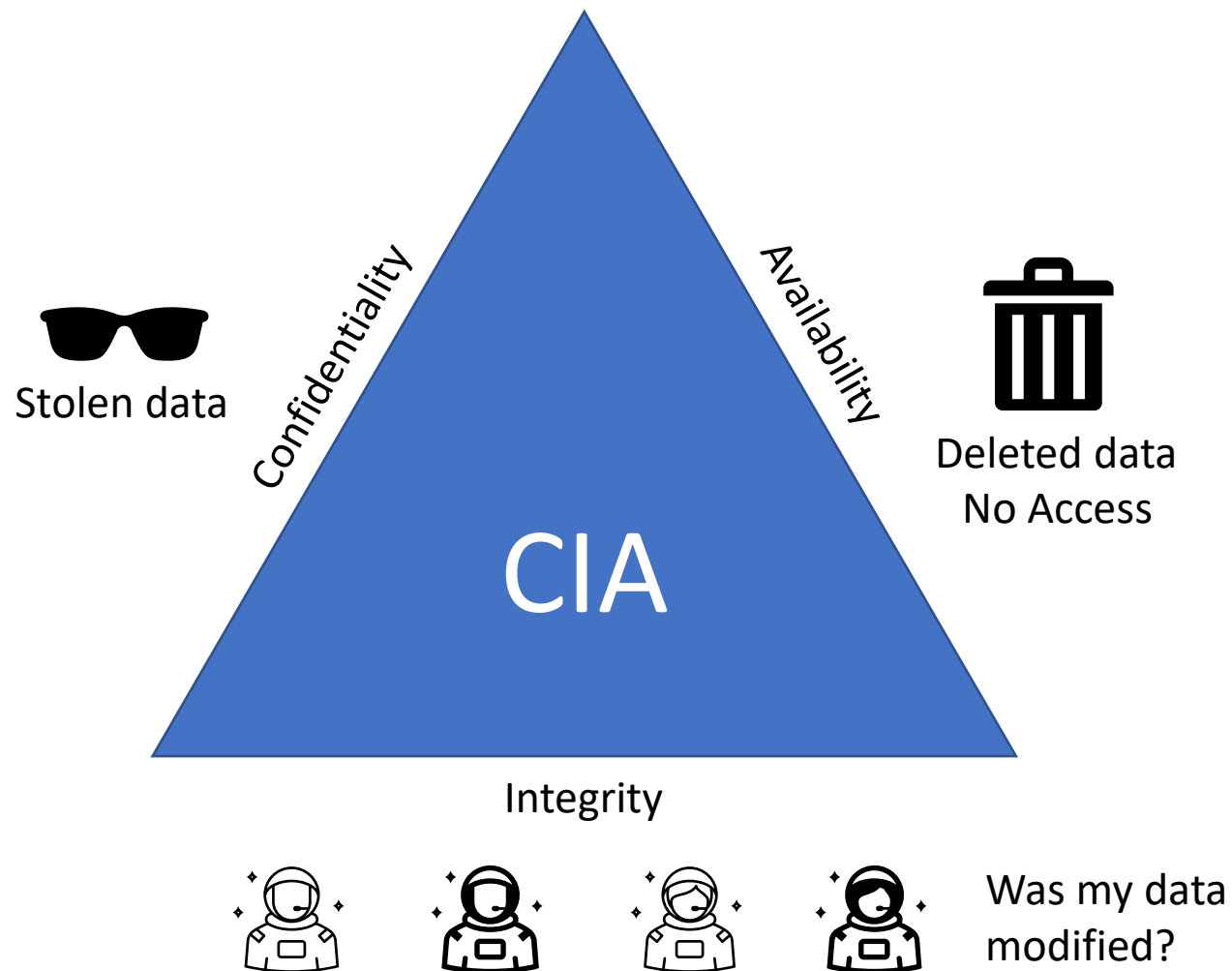
Integration with other systems can add a lot of value



### Integration Requirements

Find customer by email and set certification ID after completing the certification.

# Data & Systems need to be well protected!







API - KEY





## OAuth with Scope

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# Monitoring & Logging



# Requirements & Scenario

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- Learning Partner Integration
  - Store Certification-ID in HubSpot Contact
- Required functionality
  - Search contact by email
  - Get contact details
  - Set Certification-ID field in customer contact

# Security Requirements

- Increase obstacles for potential attackers
- Client Certificate Authentication
- Filter data (read / write)
- Logging / Monitoring



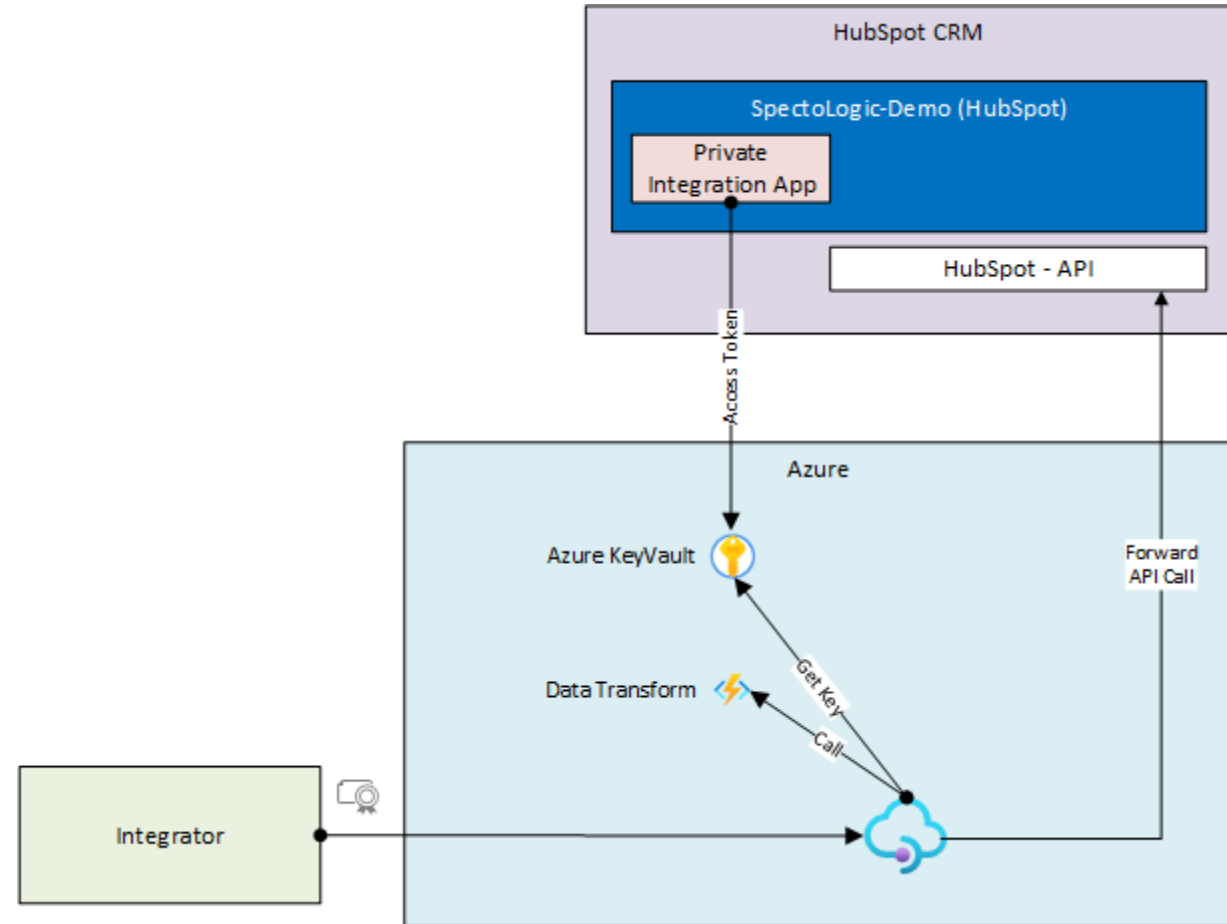
Today's  
Setup

# Recent HubSpot Improvements

- Private Integration Apps
- Read / Write Scopes
- More granular scopes



# Architecture

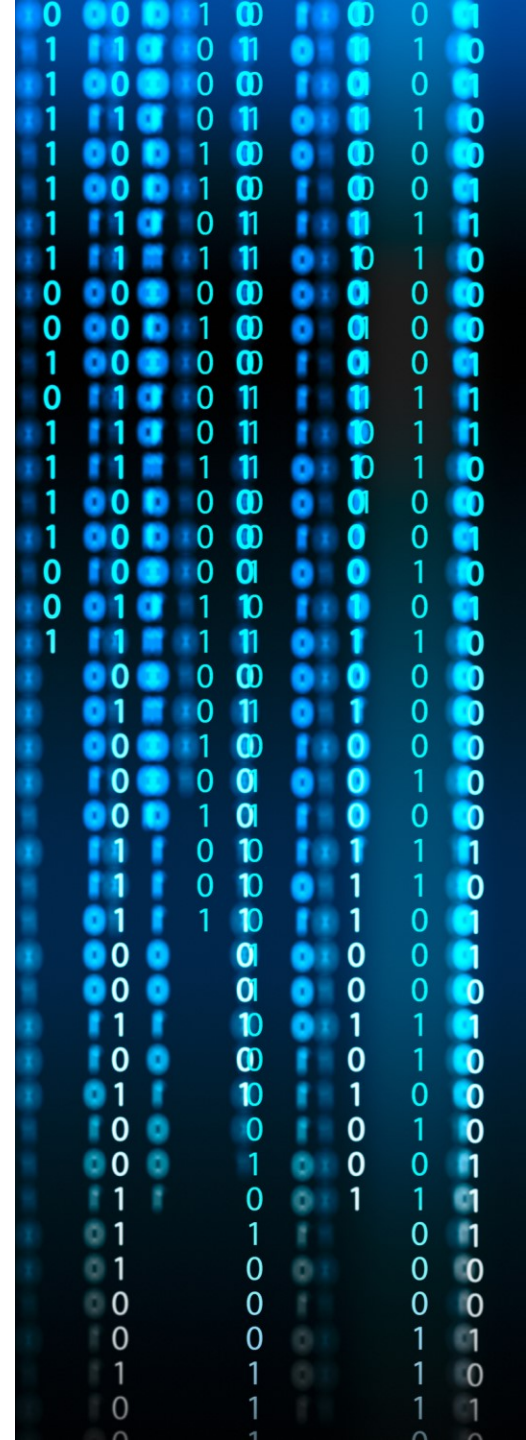




# Demo

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Create HubSpot Private App

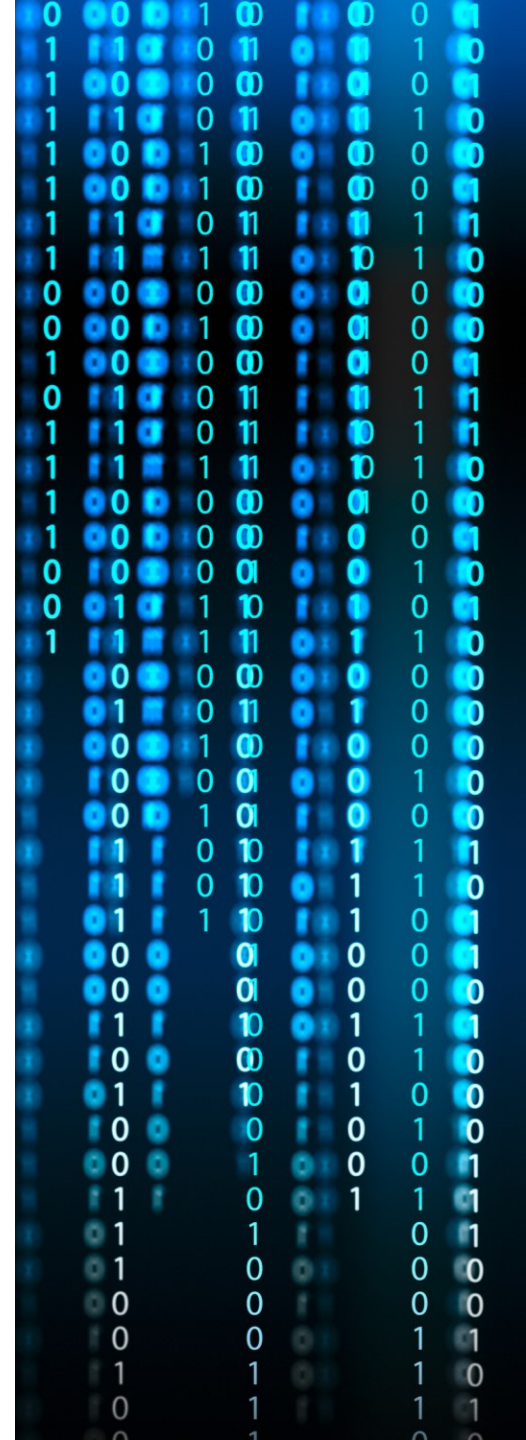




# Demo

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Quick glance at Hubspot API  
through Postman



# API - Design

## Search for Email Intention

Make the request simpler for the caller and only return the necessary data

**GET**

<https://gab2022api.azure-api.net/search?email=bh.hubspot.com>

```
{  
  "id": "51",  
  "certification_id": "Test",  
  "email": "bh@hubspot.com"  
}
```



# API - Design

## Get Contact Details Intention

Get a bit more verbose data, but not all data (auto restrict to set of properties and does not allow to send additional parameters)

### GET

<https://gab2022api.azure-api.net/crm/v3/objects/contacts/51>

```
{
  "id": "51",
  "properties": {
    "certification_id": "Test",
    "createdate": "2022-04-26T15:01:54.475Z",
    "email": "bh@hubspot.com",
    "firstname": "Brian",
    "hs_object_id": "51",
    "lastmodifieddate": "2022-04-27T10:21:29.146Z",
    "lastname": "Halligan (Sample Contact)"
  },
  "createdAt": "2022-04-26T15:01:54.475Z",
  "updatedAt": "2022-04-27T10:21:29.146Z",
  "archived": false
}
```

# API - Design

## Update Contact Intention

Only allow "certification\_id" to be updated

### PATCH

<https://api.hubapi.com/crm/v3/objects/contacts/51>

```
{
  "properties":{
    "certification_id": "ABC"
  }
}
```

```
{
  "id": "51",
  "properties": {
    "certification_id": "ABC",
    "lastmodifieddate": "2022-04-27T10:32:35.081Z"
  },
  "createdAt": "2022-04-26T15:01:54.475Z",
  "updatedAt": "2022-04-27T10:32:35.081Z",
  "archived": false
}
```



# Demo

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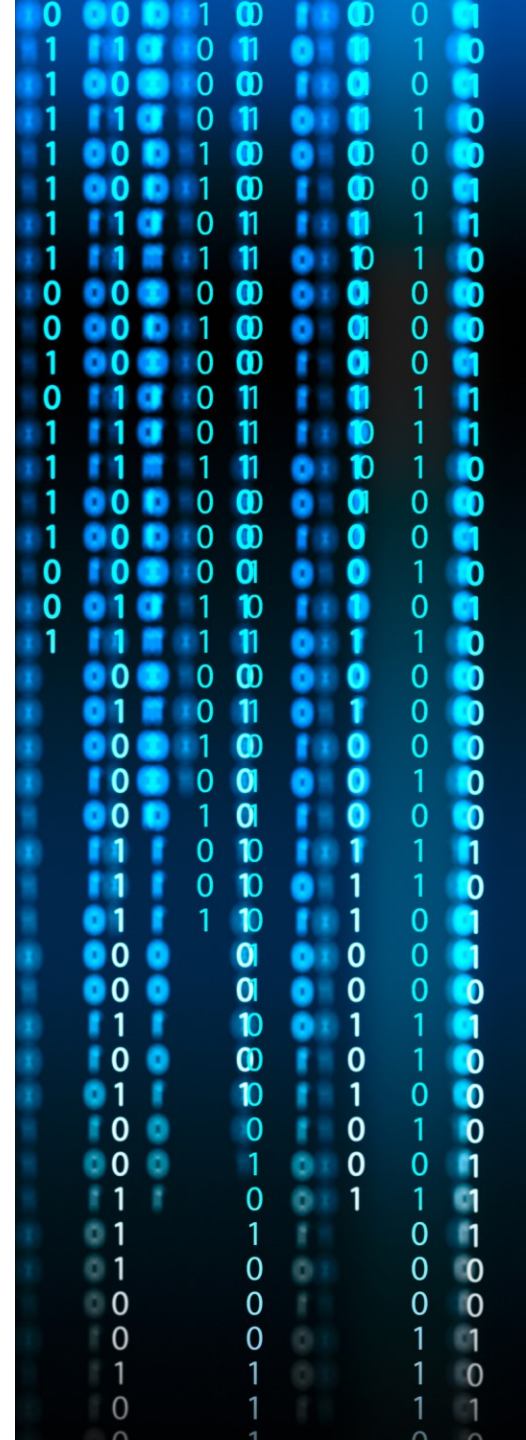
Create Azure Ressources

Create Certificates

Configure API MGMT & KeyVault

Define API

Add Client Certificate Authentication





# Thank you!

Find my slides and config at

<https://github.com/SpectoLogic/GAB2022-Securing-External-SaaS-APIs.git>

<https://blog.spectologic.com/2022/05/06/securing-external-saas-apis-with-azure-api-management-gab2022>

<https://www.linkedin.com/in/ninapollak>

**Securing external SaaS APIs with Azure API Management**

Join the next session at the full hour!