July 6, 2021

Cloud Application Integration Using COVID-19 API Application as Example

Anton Kuzmin, Principal Consultant, Informatica

Victor Chliapnikov, Senior Consultant, Informatica

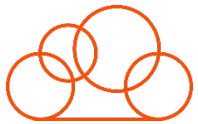
Informatica™

Housekeeping Tips

- Today's Webinar is scheduled for 1 hour
- The session will include a webcast and then your questions will be answered live at the end of the presentation
- All dial-in participants will be muted to enable the speakers to present without interruption
- Questions can be submitted to "All Panelists" via the Q&A option and we will respond at the end of the presentation
- The webinar is being recorded and will be available on our INFASupport YouTube channel and Success Portal - where you can download the slide deck for the presentation. The link to the recording will be emailed as well.
- Please take time to complete the post-webinar survey and provide your feedback and suggestions for upcoming topics.

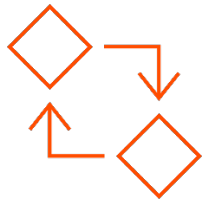
© Informatica. Proprietary and Confidential.

Feature Rich Success Portal



Bootstrap trial and POC Customers

Enriched Customer Onboarding experience



Product Learning Paths and Weekly Expert Sessions

Informatica Concierge

Tailored training and content recommendations

© Informatica. Proprietary and Confidential.

Informatica

More Information

Success Portal

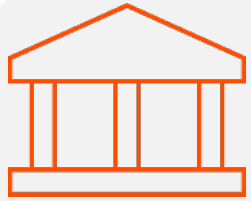
https://success.informatica.com

Communities & Support

https://network.informatica.com

Documentation

https://docs.informatica.com



University

https://www.informatica.com/in/services-and-training/informatica-university.html

© Informatica. Proprietary and Confidential.

Informatica

Safe Harbor

The information being provided today is for informational purposes only. The development, release, and timing of any Informatica product or functionality described today remain at the sole discretion of Informatica and should not be relied upon in making a purchasing decision.

Statements made today are based on currently available information, which is subject to change. Such statements should not be relied upon as a representation, warranty or commitment to deliver specific products or functionality in the future.

© Informatica. Proprietary and Confidential.

Agenda

- Use Case 1 – Loading COVID API data into Azure and Oracle
- Use Case 2 – Consuming and processing COVID API data and loading it into MongoDB
- Q&A

© Informatica. Proprietary and Confidential.

Informatica Cloud and CAI Covid API . Use case 1

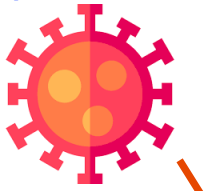
- **Victor Chliapnikov**
- IPS Consultant .EMEA Germany

Hackathon 2021

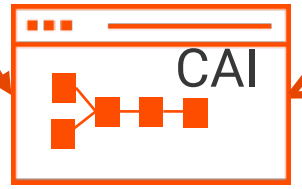
Covid API Project . Use case 1

covid-api.com

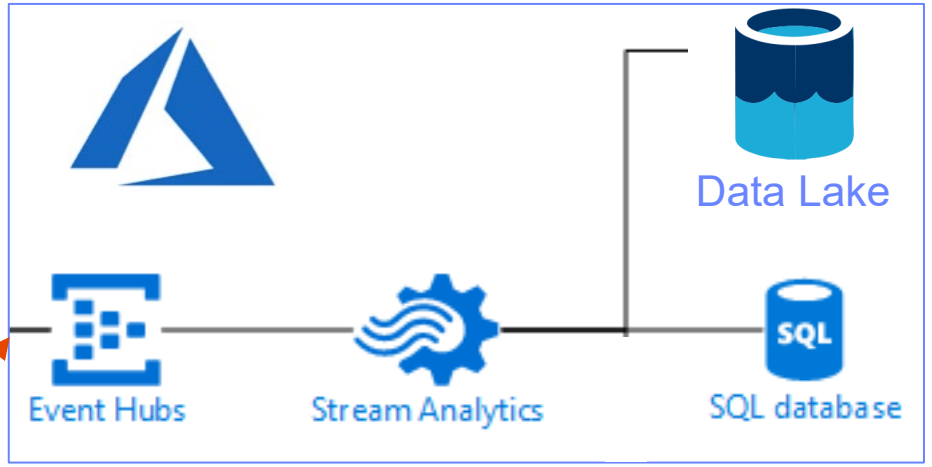
https://covid-api.com/api/



Cloud Agent



REST API



https://XXXXX.servicebus.windows.net/biometricstats/messages

https://XXXXXdwh.adb.eu-frankfurt-1.oraclecloudapps.com/...

© Informatica. Proprietary and Confidential.

Informatica

Challenge

- Use „Cloud only“ Infrastructure. No Localhost. No Secure Agent
- Create Targets in Azure and to Oracle cloud
- Security settings for Azure and Oracle Autorisation. New standarts with Bearer token SharedAccessSignature
- Use Existing Covid REST API and Create REST API to Azure Event Hub and Oracle Autonomous Database
- Use list of objecs in Rest API and loop over this list

© Informatica. Proprietary and Confidential.

Security settings for Azure Event Hub

With Bearer token and SharedAccessSignature

HTTP Headers

Name*	Source
Authorization	Bearer eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiIsIng1dCI6Im5PbzNaRHJPRFhFSzFqS1doWHNsSFJfS1hFZyIsImtpZCI6Im5PbzNaRHJPRFhFSzFqS1doWHNsSFJfS1hFZyJ9.eyJhdWQiOiJodHRwczovL2V2ZW50aHVicy5henVyZS5uZXQiLCJpc3MiOiJodHRwczovL3N0cy53aW5kb3dzLm5ldC8yNjM4ZjQzZS1mNzdkLTRmYzctYWI5Mi03Yjc1M2I3ODc2ZmQvIiwiaWF0IjoxNjEyOTkyNDk2LCJuYmYiOjE2MTI5OTI0OTYsImV4cCI6MTYxMzA3OTE5NiwiYWlvIjoiRTJaZ1lKQlp4TFpkNTVnUXo2MnovWHJmbHRmekFnQT0iLCJhcHBpZCI6ImZiOWYwZGYyLTkzNjAtNDM3Ny04ZTJiLTcyMWRjYzEzZTNkMCIsImFwcGlkYWNyIjoiMSIsImlkcCI6Imh0dHBzOi8vc3RzLndpbmRvd3MubmV0LzI2MzhmNDNlLWY3N2QtNGZjNy1hYjkyLTdiNzUzYjc4NzZmZC8iLCJvaWQiOiI4OGJlM2QxYS1hNDUzLTQwMTgtOTkxYy00MDQzYjQ0OWM5ODMiLCJyaCI6IjAuQVJzQVB2UTRKbjMzeDAtcmtudDFPM2gyX2ZJTm5fdGdrM2REaml0eUhjd1Q0OUFiQUFBLiIsInN1YiI6Ijg4YmUzZDFhLWE0NTMtNDAxOC05OTFjLTQwNDNiNDQ5Yzk4MyIsInRpZCI6IjI2MzhmNDNlLWY3N2QtNGZjNy1hYjkyLTdiNzUzYjc4NzZmZCIsInV0aSI6IjByY2pMVmlObjB1bmhCbzljRDlQQUEiLCJ2ZXIiOiIxLjAifQ.I1Qs85_Bbg6n3RusPAHnVQ8GOzIDwgUc2SdZnWor4tl-UKalyrnlI0SWHigvNxetVlYoZr6SOf0taiAuN2VTQXGYHuc5o3jrYlmzKtL-BAy_R5WWaUsnzUXqAd3bqKf5wyCjfsWdsW0rnWblhk_xVPhUx6z0BmA8Sw8z5lQenGMXJgH-lQmHlArMm9886_V4qAiSgaiUZ6ql2hoZD1-QjVF1hASQkswrjb109M81sZSYmicrpqyQRSnc4fbVTGRX6u5h-2OrdJ-zizmmbWFqa30ELsGUgjDjiR-CrVdST3nivKv5wTgsdEDSEX87B13AEw54xfwlhpXwQIAx-O6wlw
Content-Type	

Binding Type

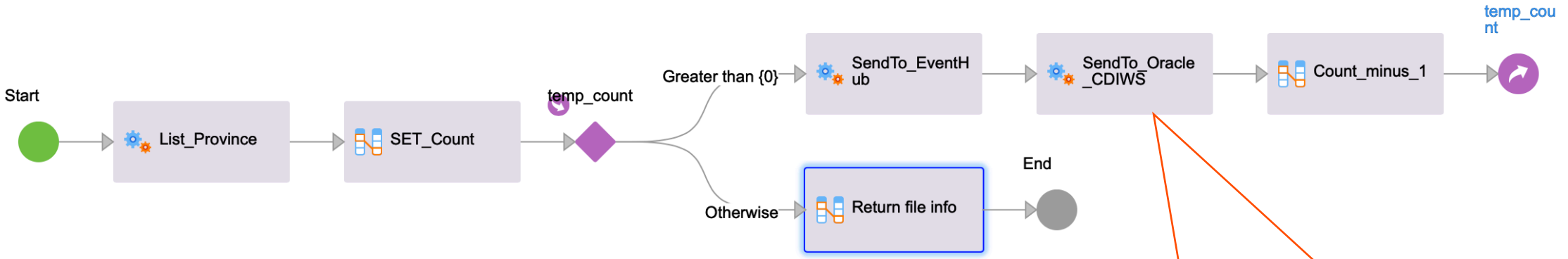
JSON

```
$key =  Get-AzEventHubKey -ResourceGroupName vchliapnikov_res_group  -NamespaceName "vcv-hubs-name-space"
-EventHubName biometricstats  -AuthorizationRuleName biometricstats-hub-writer
$URI="vcv-hubs-name-space.servicebus.windows.net/biometricstats"
$Expires=([DateTimeOffset]::Now.ToUnixTimeSeconds())+3000
$SignatureString=[System.Web.HttpUtility]::UrlEncode($URI)+ "`n" + [string]$Expires
$HMAC = New-Object System.Security.Cryptography.HMACSHA256
$HMAC.key = [Text.Encoding]::ASCII.GetBytes($key.PrimaryKey)
$Signature = $HMAC.ComputeHash([Text.Encoding]::ASCII.GetBytes($SignatureString))
$Signature = [Convert]::ToBase64String($Signature)
$SASToken = "SharedAccessSignature sr=" +[System.Web.HttpUtility]::UrlEncode($URI) + "&sig=" +
[System.Web.HttpUtility]::UrlEncode($Signature) + "&se=" + $Expires + "&skn=" + $key.KeyName
$endpoint = "https://vcv-hubs-name-space.servicebus.windows.net/biometricstats/messages" + "?timeout=60&api-
version=2014-01"
$headers = New-Object "System.Collections.Generic.Dictionary[[String],[String]]"
$headers.Add("Authorization", $SASToken)
$headers.Add("Content-Type","application/atom+xml;type=entry;charset=utf-8")
$headers.Add("Host", "vcv-hubs-name-space.servicebus.windows.net")
```


© Informatica. Proprietary and Confidential.

Informatica

Process :List_Province_EventHub



Name	Required	Value	
iso	☐	Formula	st_province[$temp.temp_count]/iso
province	☐	Formula	vince[$temp.temp_count]/province
name	☐	Formula	$output.List_province[$temp.temp
lat	☐	Formula	$output.List_province[$temp.temp
long	☐	Formula	$output.List_province[$temp.temp

© Informatica. Proprietary and Confidential.

Informatica

Informatica Cloud and CAI

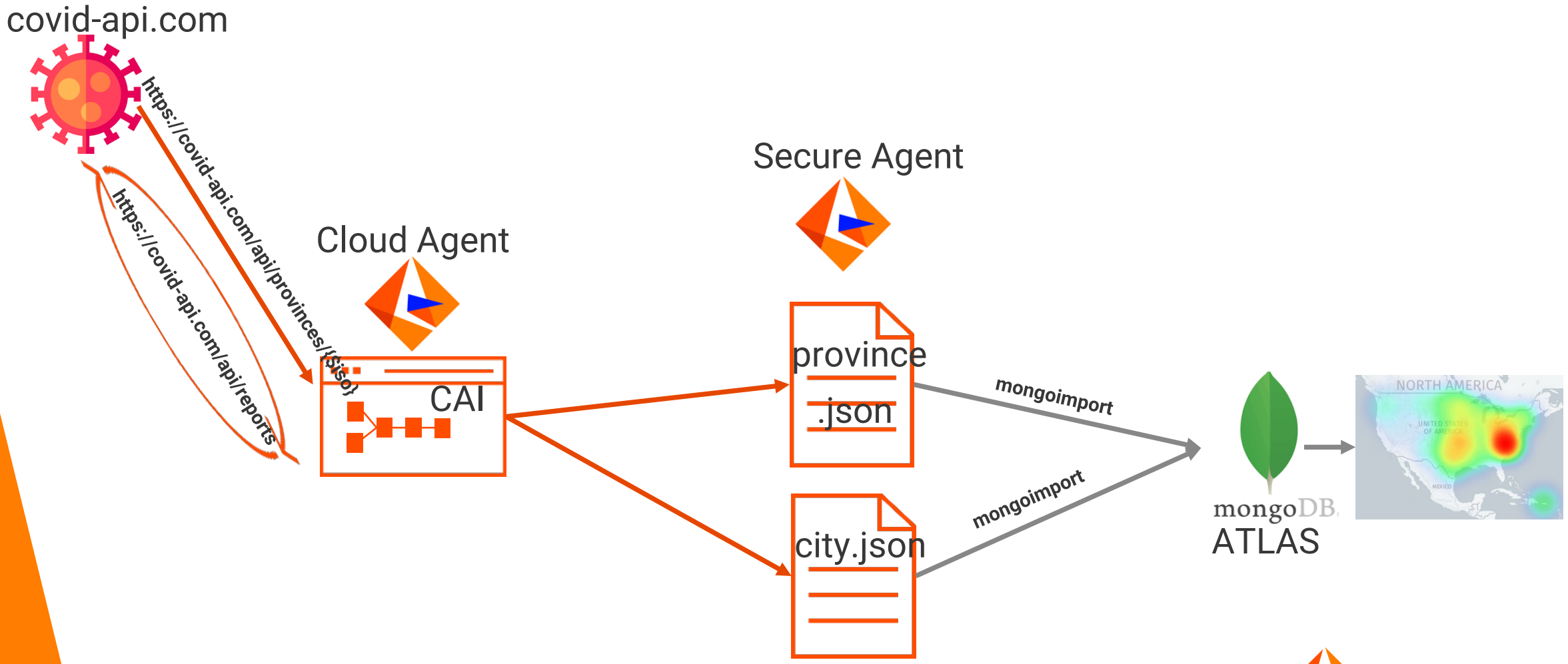
Covid API . Use case 2

Consuming and processing COVID API data and loading it into MongoDB

- **Anton Kuzmin**
- IPS Consultant .EMEA UK

Hackathon 2021

Covid API Project . Use case 2



© Informatica. Proprietary and Confidential.

Informatica

Challenge

- Receive, transform and send complex json structure with Informatica CAI
- Use local secure Agent for saving json File on hard drive.
- Use MongoDB as target
- REST API Loop over list of json objects
- Don‘t use any temp tables

© Informatica. Proprietary and Confidential.

Responce JSON transformation

API responce
https://covid-api.com/api/reports

```
<root>
   <data>
      <date>2020-12-16</date>
      <confirmed_diff>6624</confirmed_diff>
      <active_diff>6556</active_diff>
      <deaths_diff>68</deaths_diff>
      <recovered>0</recovered>
      <recovered_diff>0</recovered_diff>
      <fatality_rate>0.0182</fatality_rate>
      <last_update>2020-12-17 05:28:12</last_update>
      <active>550391</active>
      <region>
         <iso>USA</iso>
         <cities>
            <date>2020-12-16</date>
            <confirmed_diff>25</confirmed_diff>
            <deaths_diff>0</deaths_diff>
            <last_update>2020-12-17 05:28:12</last_update>
            <name>Appling</name>
            <fips>13001</fips>
            <confirmed>1456</confirmed>
            <long>-82.28909114</long>
            <lat>31.74847232</lat>
            <deaths>42</deaths>
         </cities>
         <province>Georgia</province>
         <name>US</name>
         <long>-83.6431</long>
         <lat>33.0406</lat>
      </region>
      <confirmed>560619</confirmed>
      <deaths>10228</deaths>
   </data>
</root>
```

province.json

```
{
  "iso": "USA",
  "date": "2020-12-16",
  "region": "Iowa",
  "active_diff": "2507",
  "deaths_diff": "14",
  "confirmed_diff": "2521",
  "recovered_diff": "0",
  "fatality_rate": "0.0128",
  "last_update": "2020-12-17 05:28:12",
  "active": "257424",
  "recovered": "0",
  "confirmed": "260774",
  "deaths": "3350",
  "long": "-93.2105",
  "lat": "42.0115",
  "coord": {
    "long": "-93.2105",
    "lat": "42.0115"
  },
  "coordinat": "[ -93.2105 ,42.0115 ]"
}
```

city.json

```
{
  "iso": "USA",
  "region_province": "Georgia",
  "date": "2020-12-16",
  "confirmed_diff": "41",
  "deaths_diff": "0",
  "last_update": "2020-12-17 05:28:12",
  "name": "Gordon",
  "fips": "13129",
  "confirmed": "4140",
  "long": "-84.87296253",
  "lat": "34.50487351",
  "coord": {
    "long": "-84.87296253",
    "lat": "34.50487351"
  },
  "coordinat": [
    -84.87296253,
    34.50487351
  ],
  "deaths": "60"
}
```


© Informatica. Proprietary and Confidential.

Informatica

Questions?

Thank You