Using **Proactive Monitoring** to Ensure Your Application Performance Delights Your Users

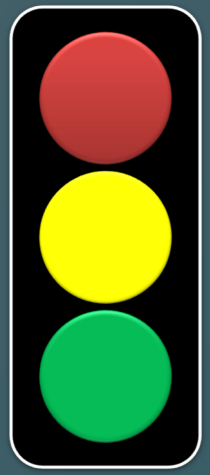
Who Am I?

Troy Presley
Product Manager
Apica Synthetic Monitoring (ASM)

Ramen & Motorcycle Enthusiast

Monitoring Goals

Focusing on APPLICATION Monitoring

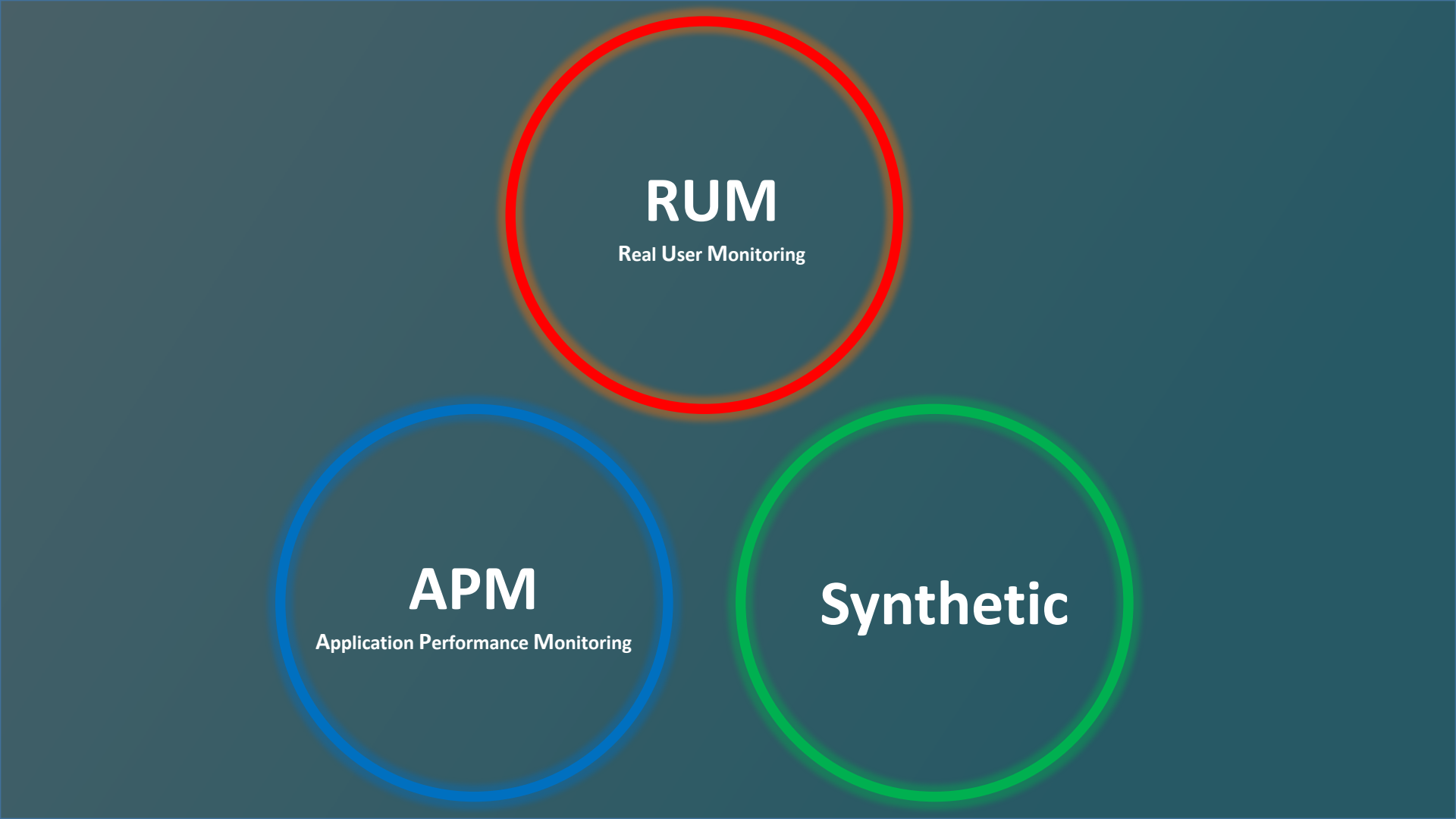


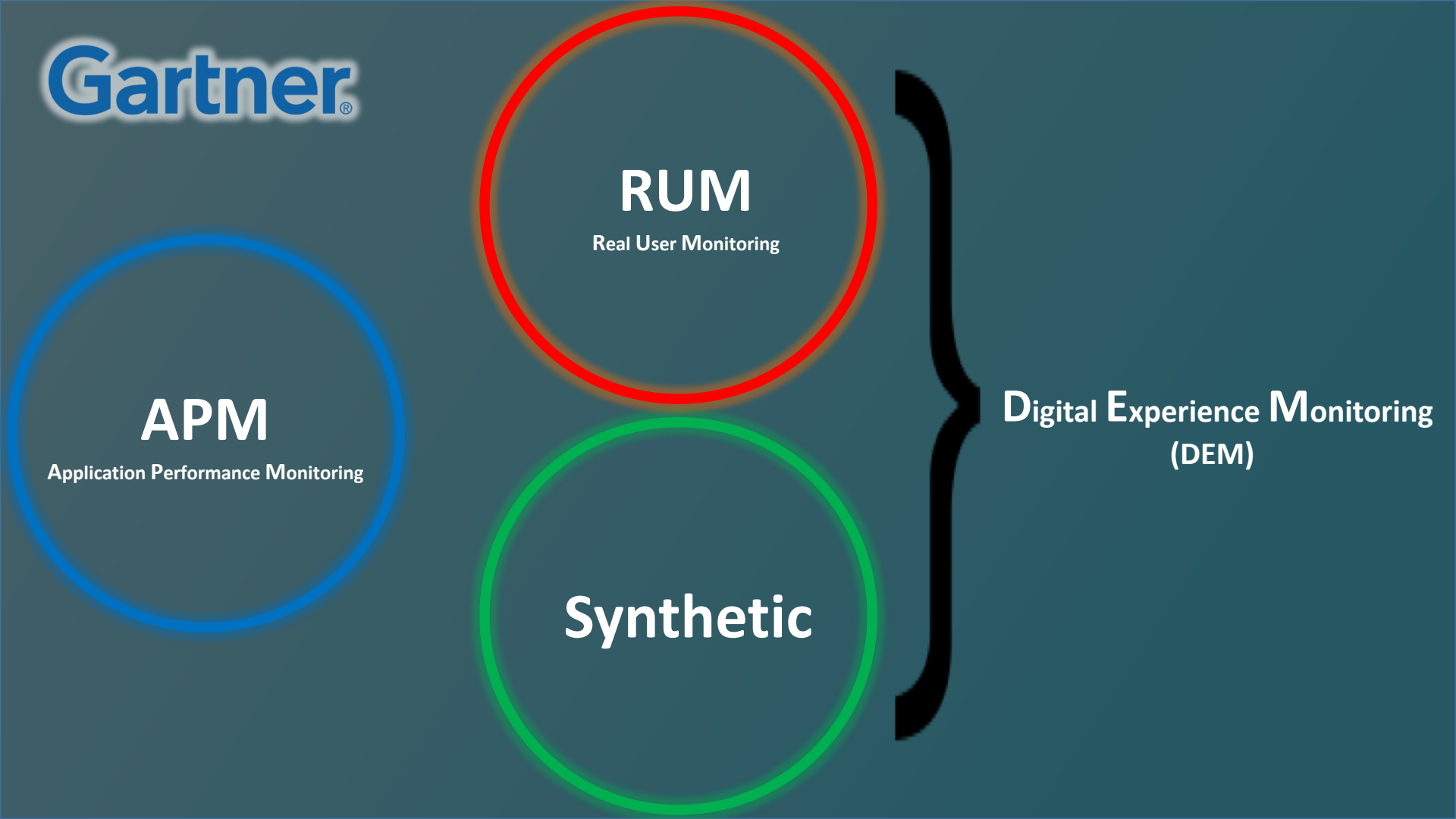
Availability

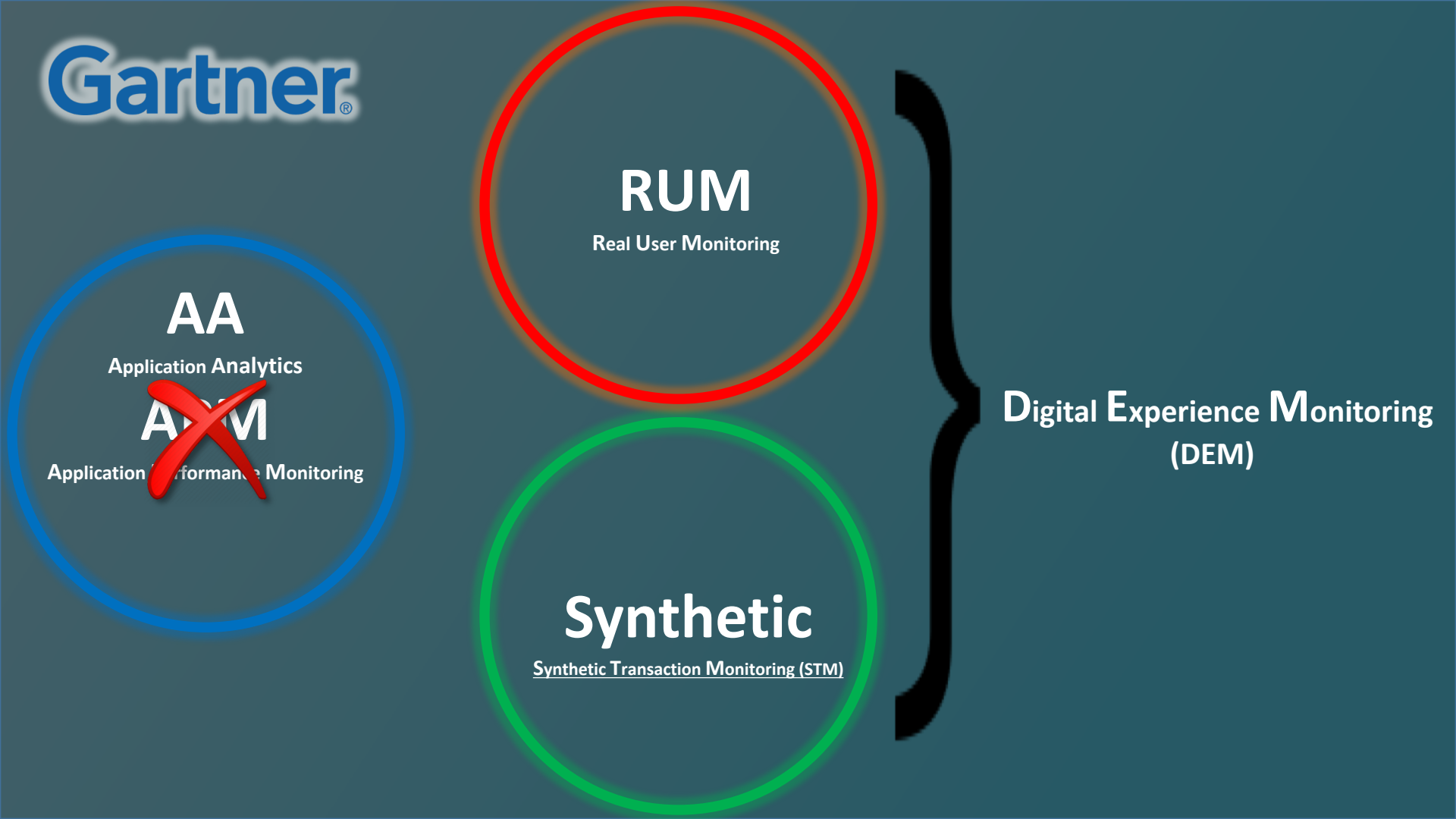
Performance

Functionality

Monitoring Types


RUM
Real User Monitoring
APM
Application Performance Monitoring
Synthetic


Gartner
RUM
Real User Monitoring
APM
Application Performance Monitoring
Synthetic
Digital Experience Monitoring
(DEM)


Gartner
AA
Application Analytics
APM
Application Performance Monitoring
RUM
Real User Monitoring
Synthetic
Synthetic Transaction Monitoring (STM)
Digital Experience Monitoring
(DEM)

Real User Monitoring

Deployment: **Injected or included code**

Strengths:
- **Actual information from real users**
- **Provides insight into geographical performance issues**
- **Can give insight into demographics and usage patterns**
- **Potentially highlights unforeseen usage flows**

Weaknesses:
- **Beacon code must be added or injected into application**
- **Potentially impacts application performance**
- **Information only reliable with high usage (statistical significance)**
- **No information if application or beacon fail to run**

Application Performance Monitoring

Deployment: **Typically an agent installed on servers**
May require code changes or libraries/APK's to be added

Strengths: **Provides detailed information from most/all application layers**
Insight into data flow and code level performance
Advanced providers offer auto-discovery features

Weaknesses: **Hosted or SaaS applications/dependencies may not allow agents**
Difficult to correlate back-end transactions to user actions
Susceptible to information overload without careful setup
Little or no information when application is not being used

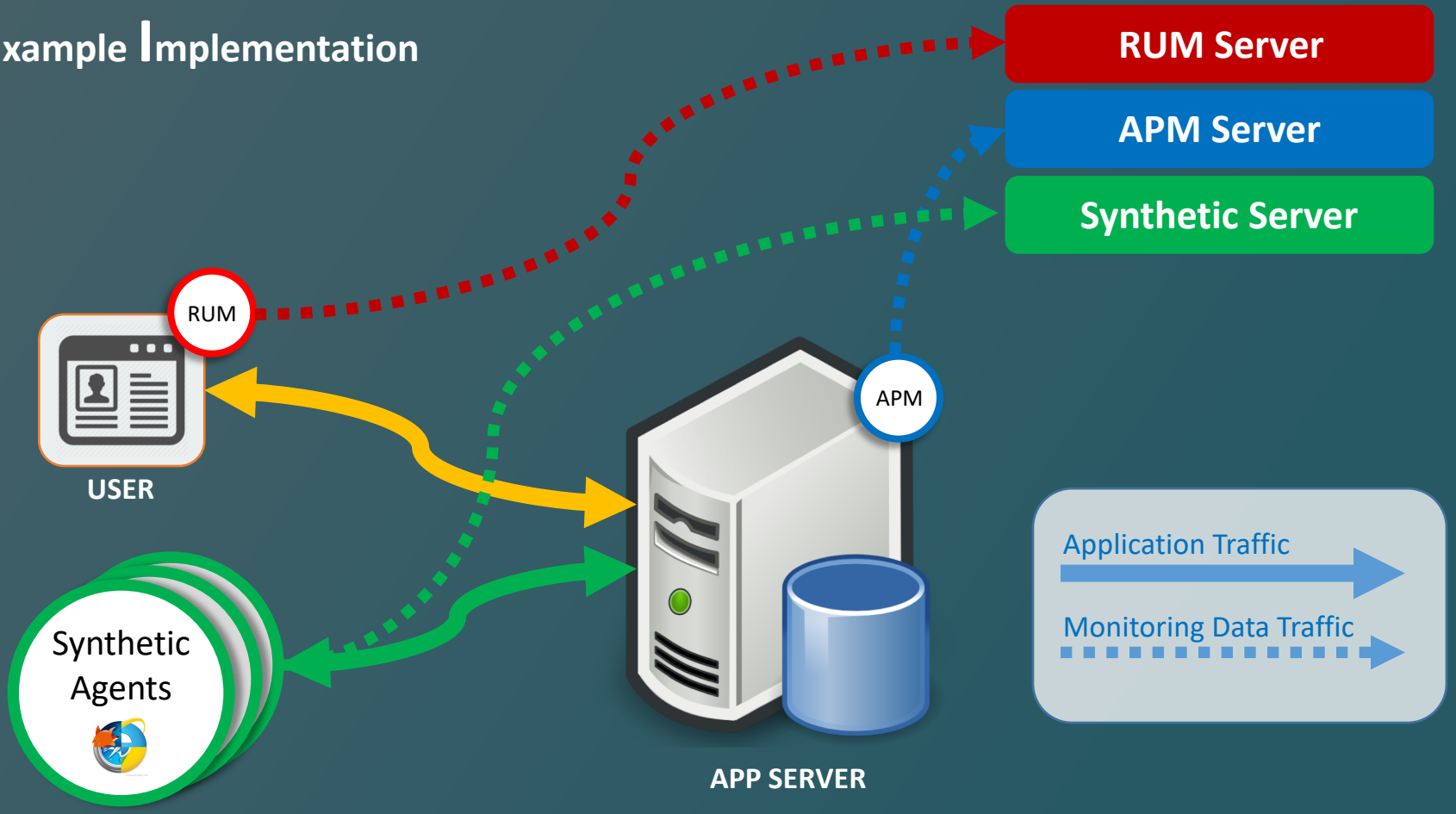
Synthetic Monitoring

Deployment: **SaaS or self hosted agents (separate from app server)**

Strengths:
- **No modifications to existing applications**
- **Consistent measurements from the same locations**
- **Recreate transactions in the same way as normal users**
- **Monitor applications even when not in use (proactive!)**

Weaknesses:
- **No access to back-end processes**
- **Only measures from pre-determined locations**
- **Creating/maintaining scripts requires ongoing work**

Example Implementation



Enterprise Challenges

Defined Schedules

SaaS Apps/Dependencies

3rd Party API's

Defined Schedules

SaaS Apps/Dependencies

3rd Party API's

Defined
Schedules

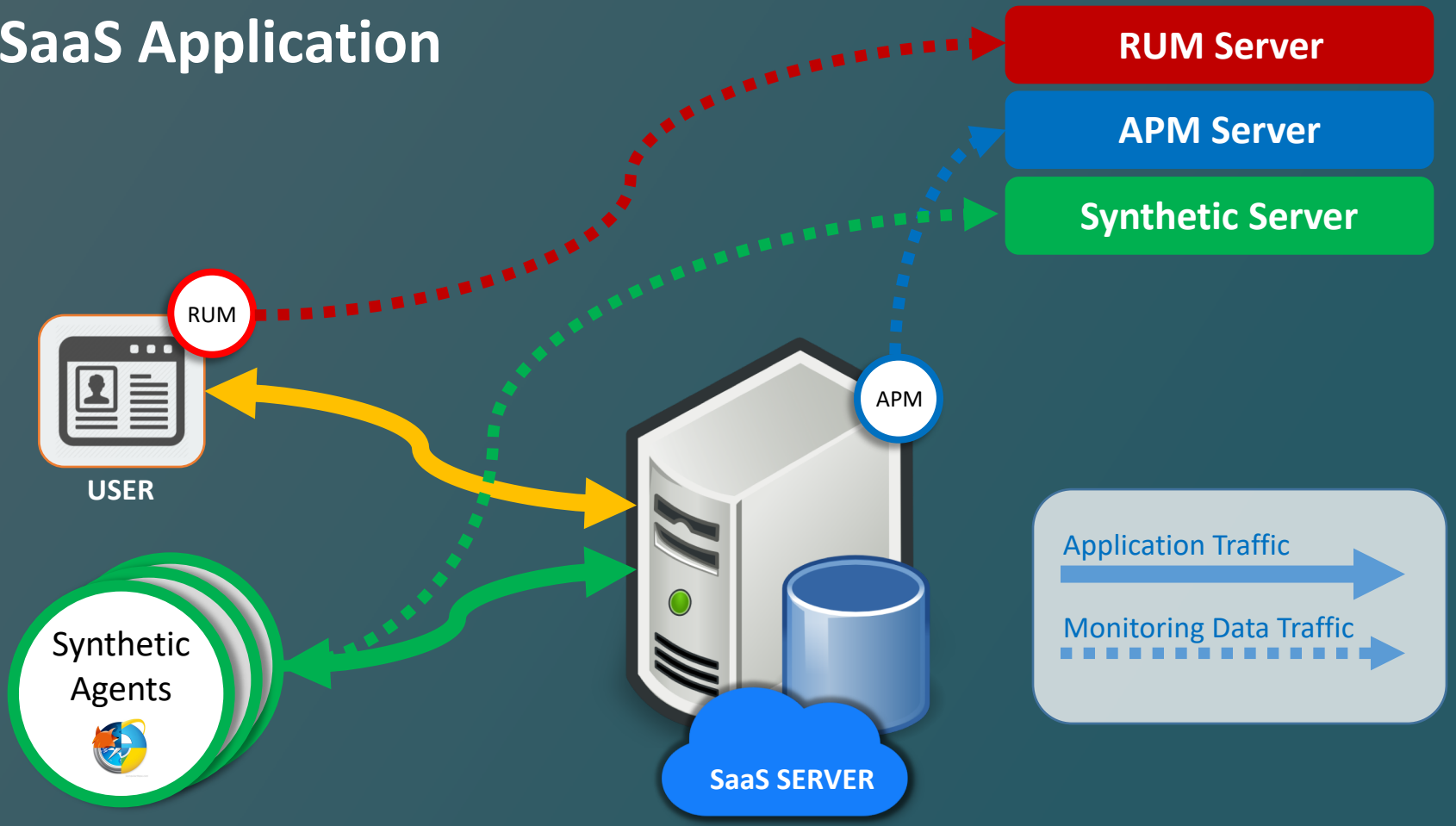
SaaS
Apps/Dependencies

3rd Party
API's

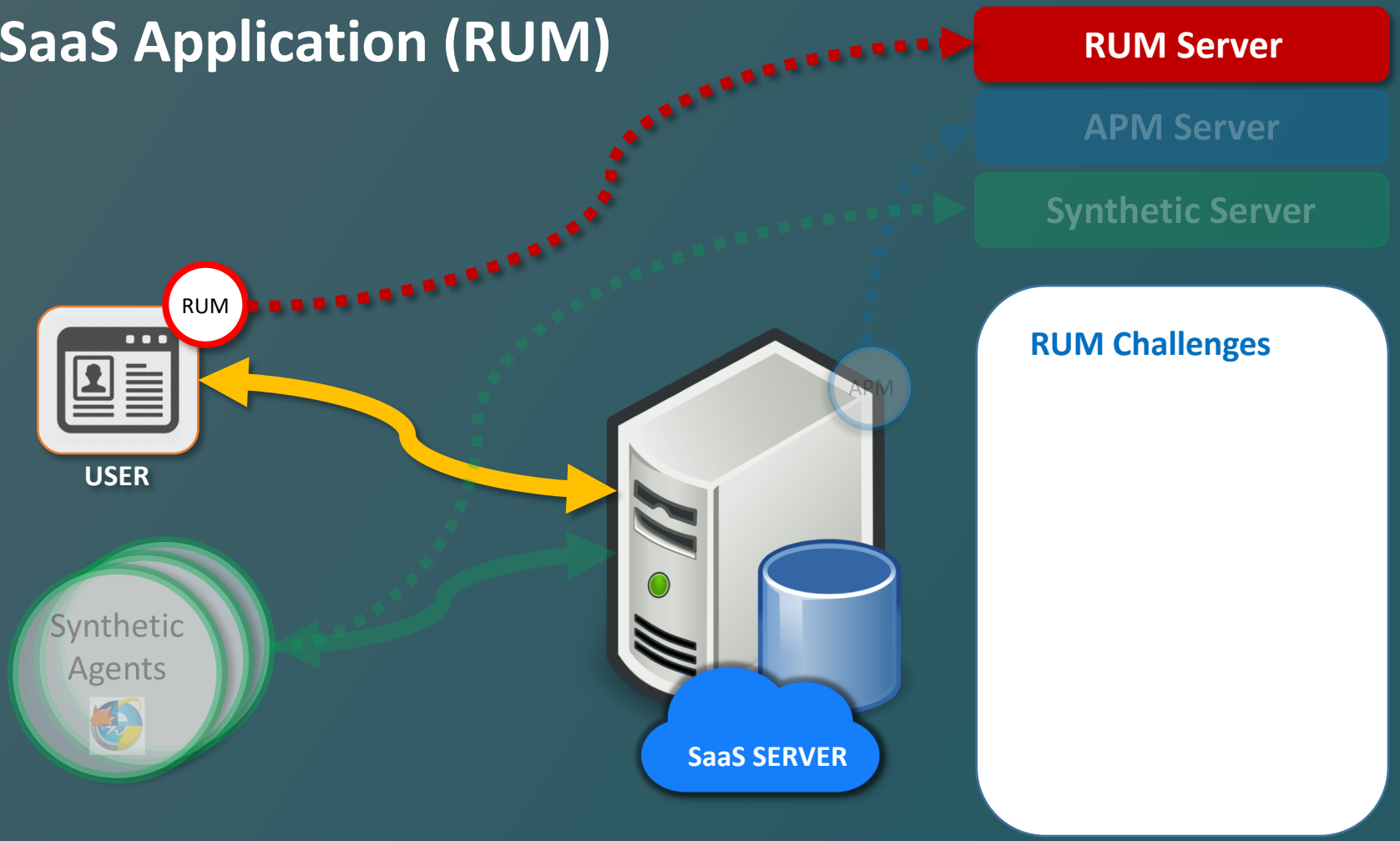
Example Challenge

- SaaS Application -

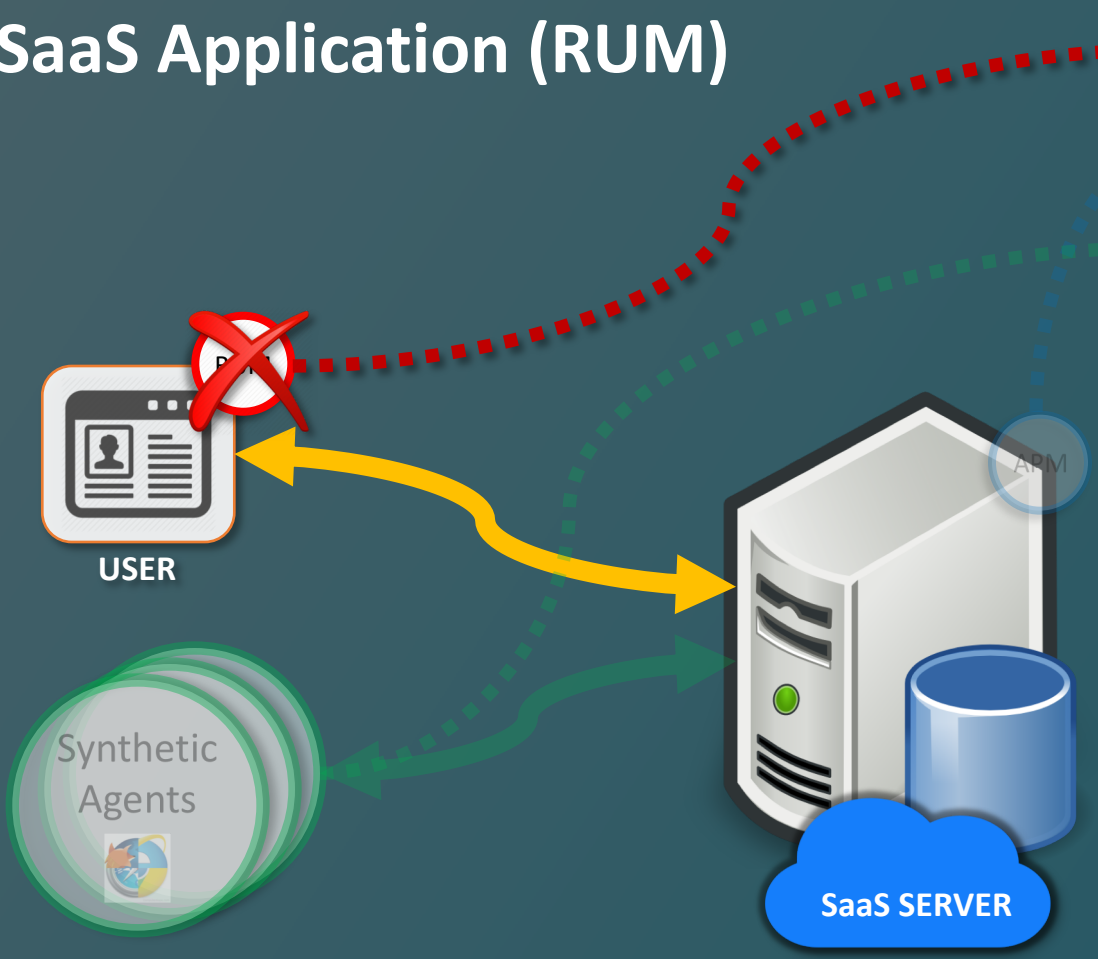
SaaS Application



SaaS Application (RUM)



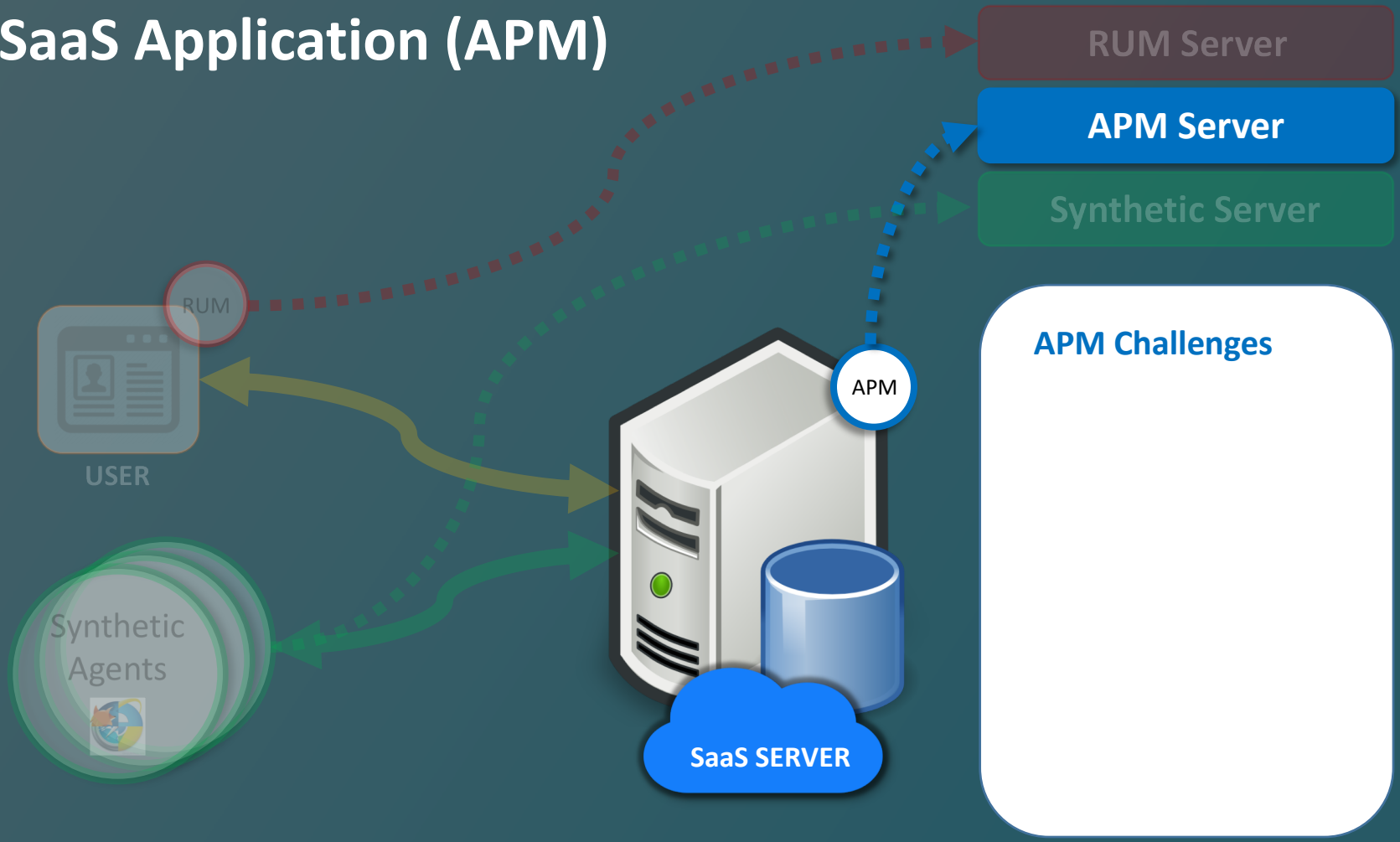
SaaS Application (RUM)



RUM Challenges

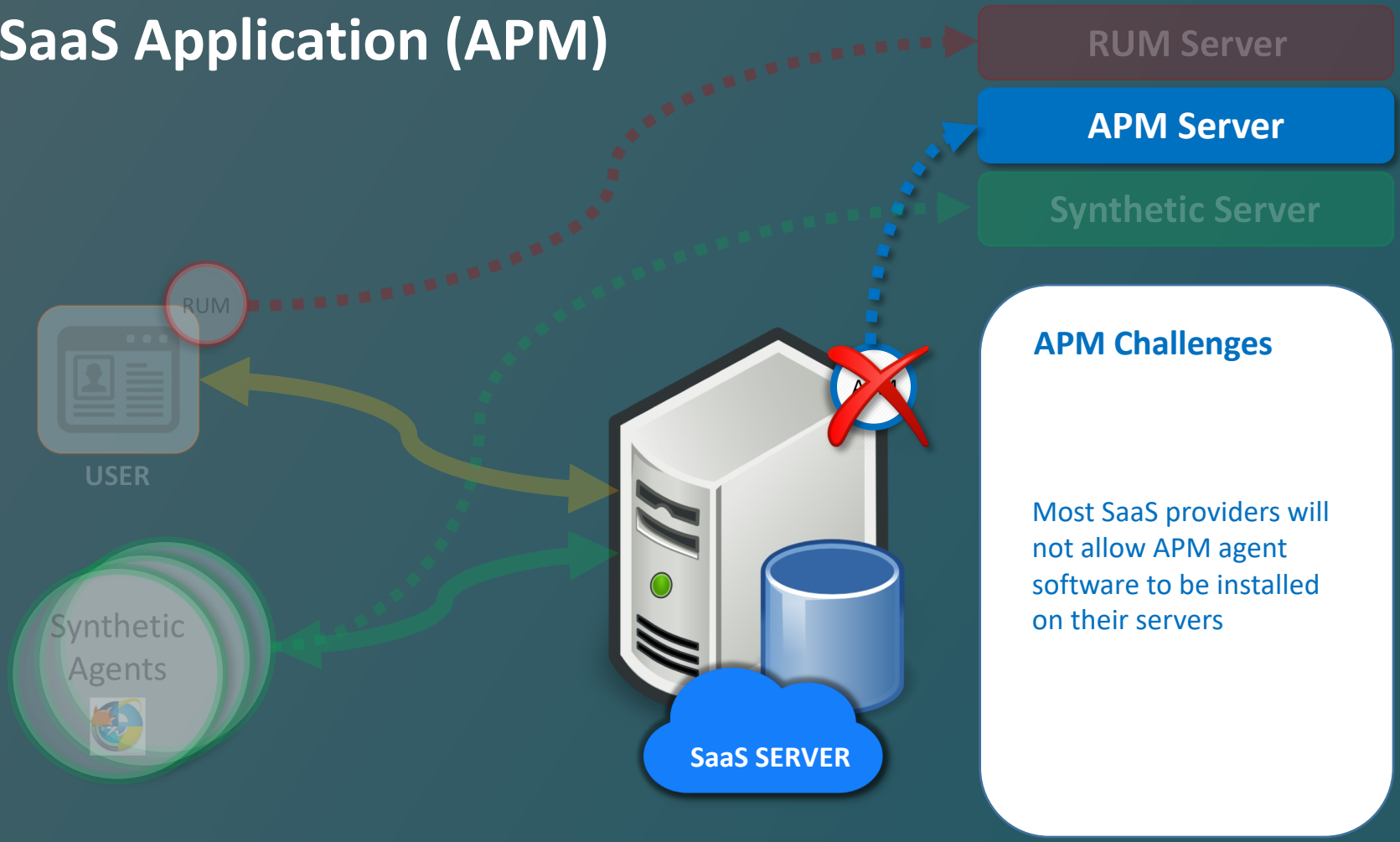
SaaS providers may not allow RUM code to be included in web pages or mobile apps run by users

SaaS Application (APM)



APM Challenges

SaaS Application (APM)



APM Challenges

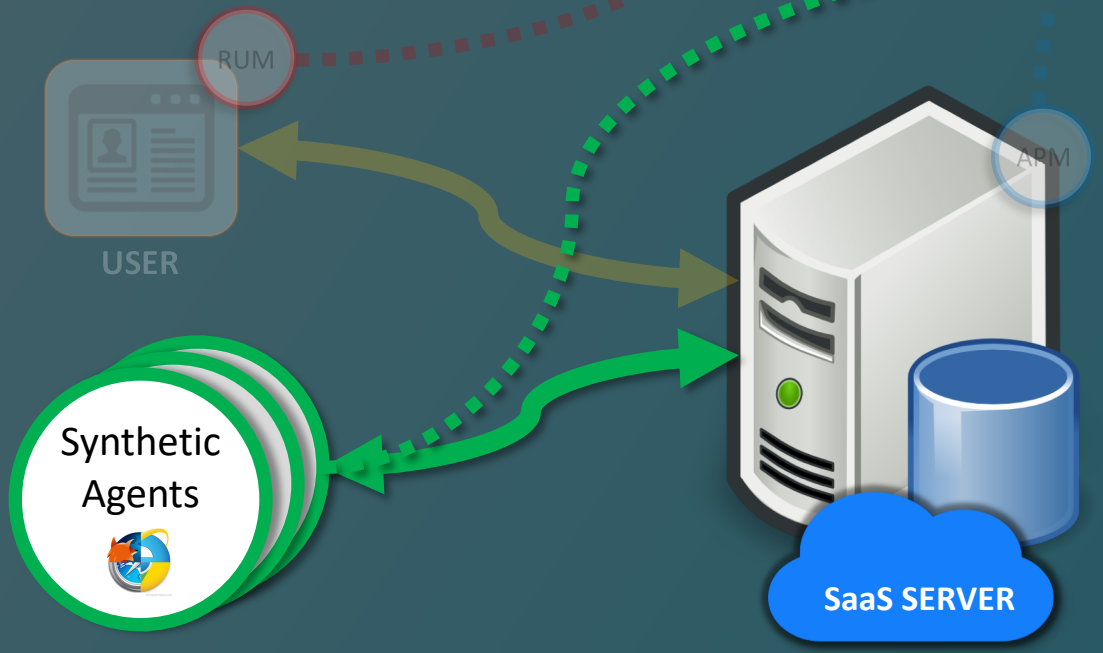
Most SaaS providers will not allow APM agent software to be installed on their servers

SaaS Application (Synthetic)

RUM Server

APM Server

Synthetic Server



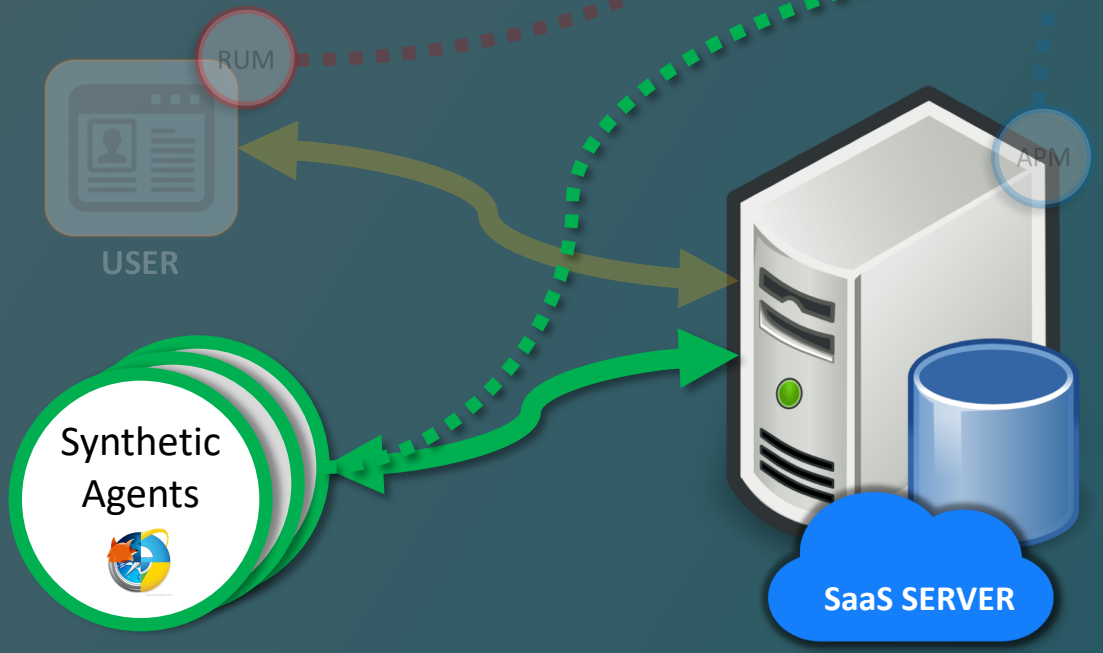
Synthetic Challenges

SaaS Application (Synthetic)

RUM Server

APM Server

Synthetic Server



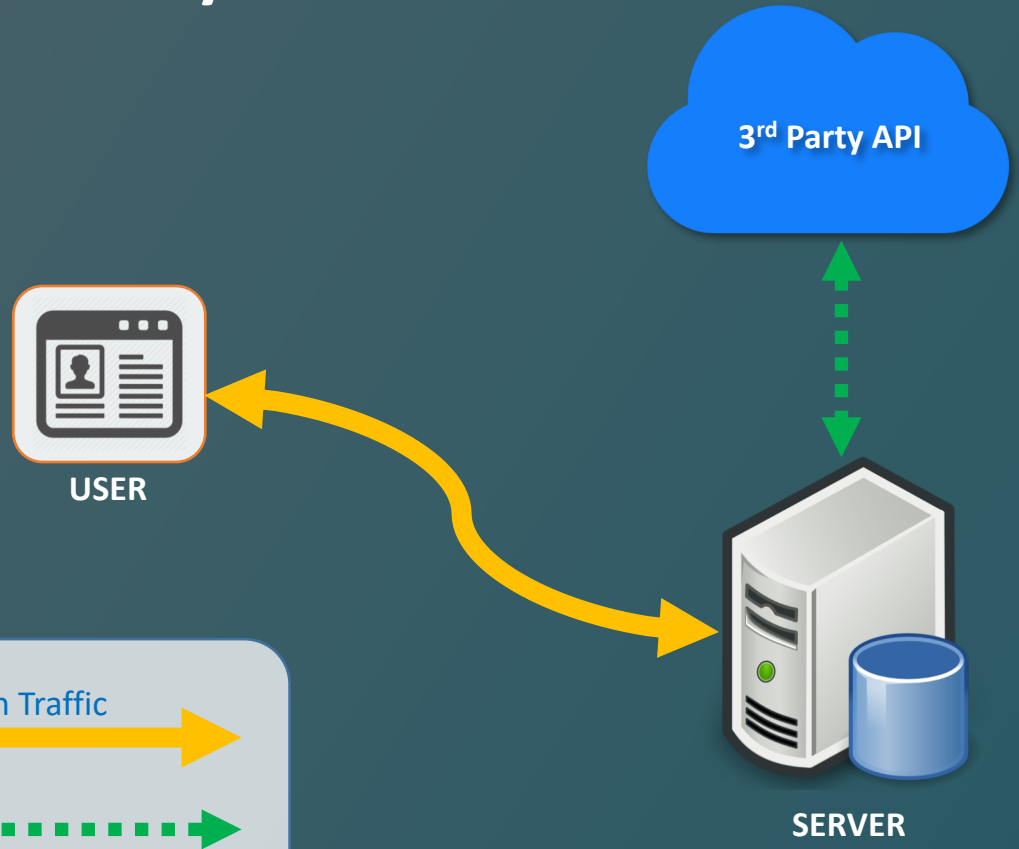
Synthetic Challenges

Synthetic monitoring requires **nothing** to be installed on your servers or included in webpages and user apps, so monitoring SaaS applications is a breeze!

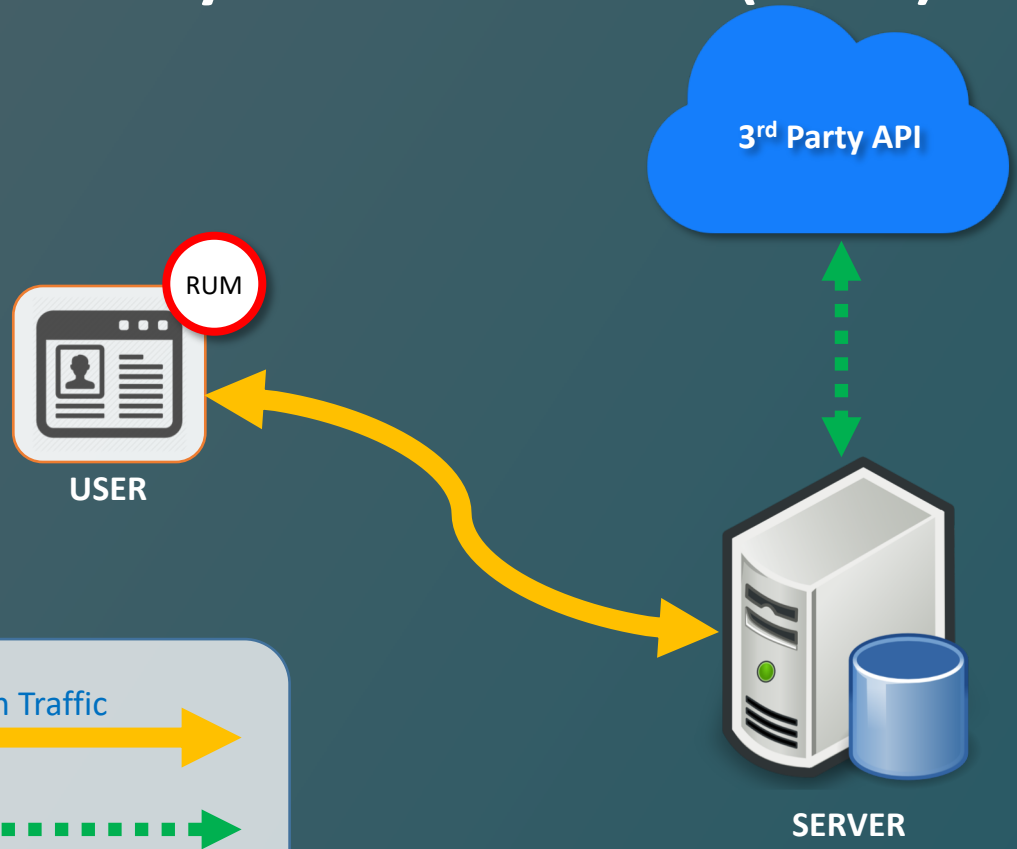
Example Challenge

- 3rd Party API -

3rd Party API – Back End

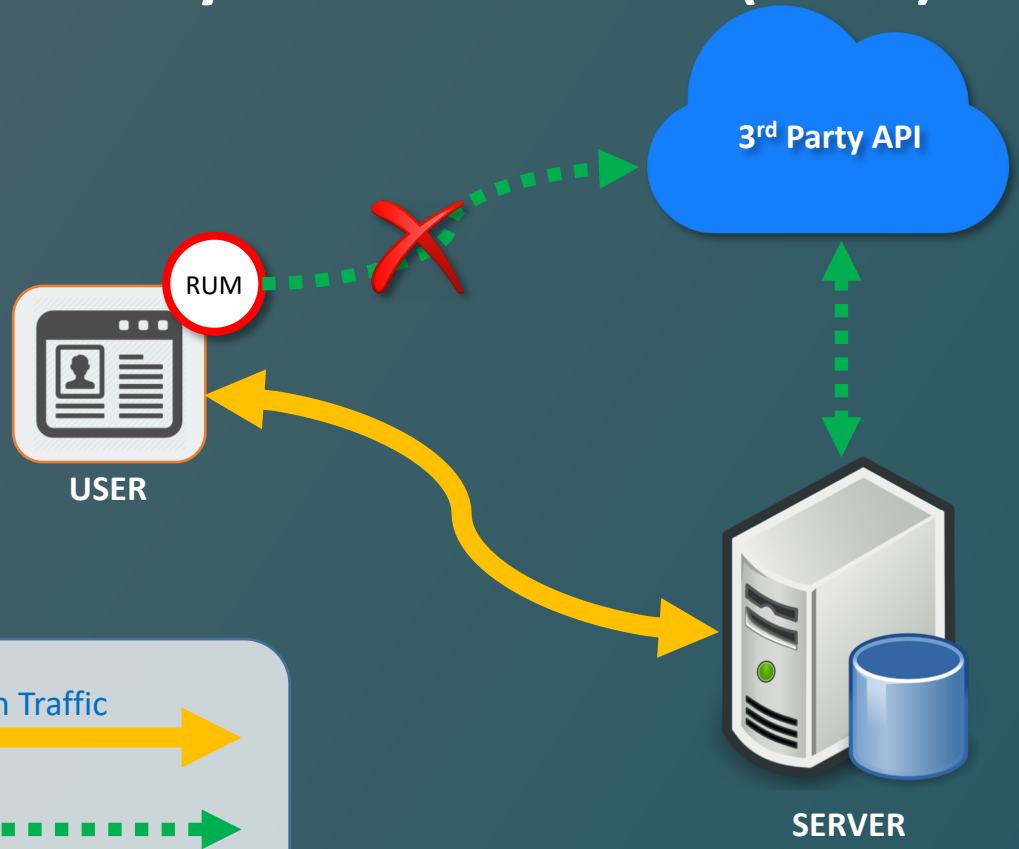


3rd Party API – Back End (RUM)



RUM Challenges

3rd Party API – Back End (RUM)

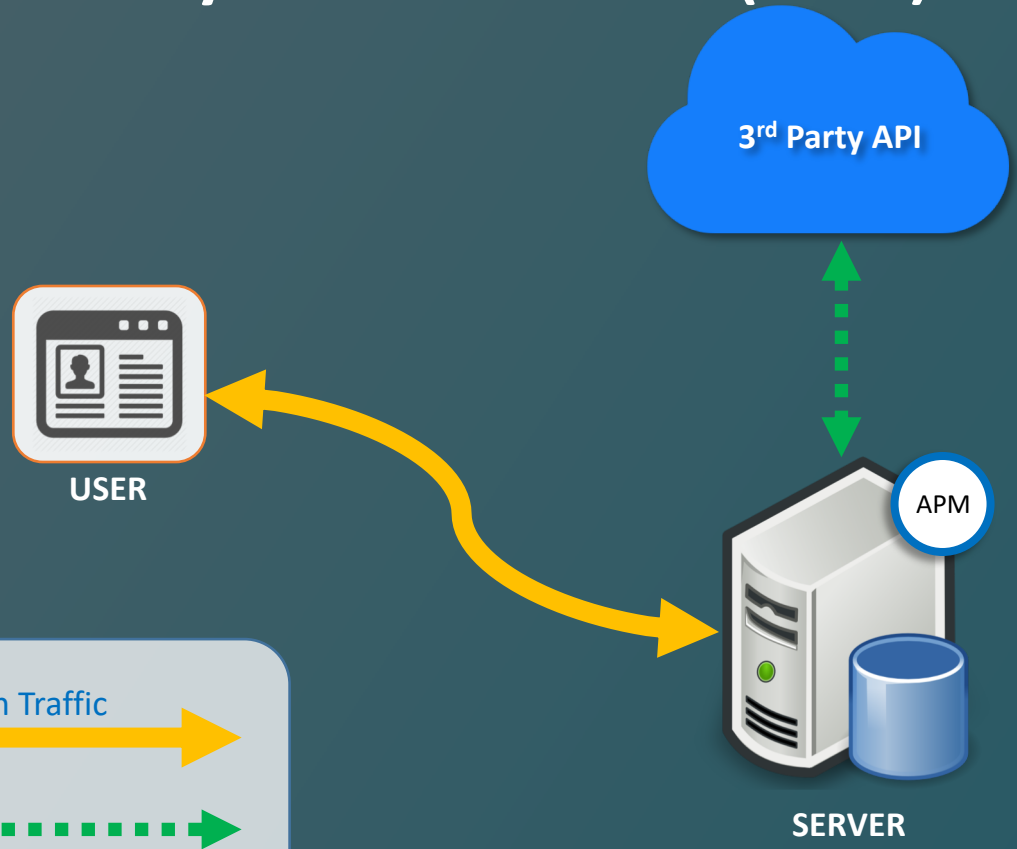


RUM Challenges

No visibility into back end API calls.

Application failure may be noted, but not the cause.

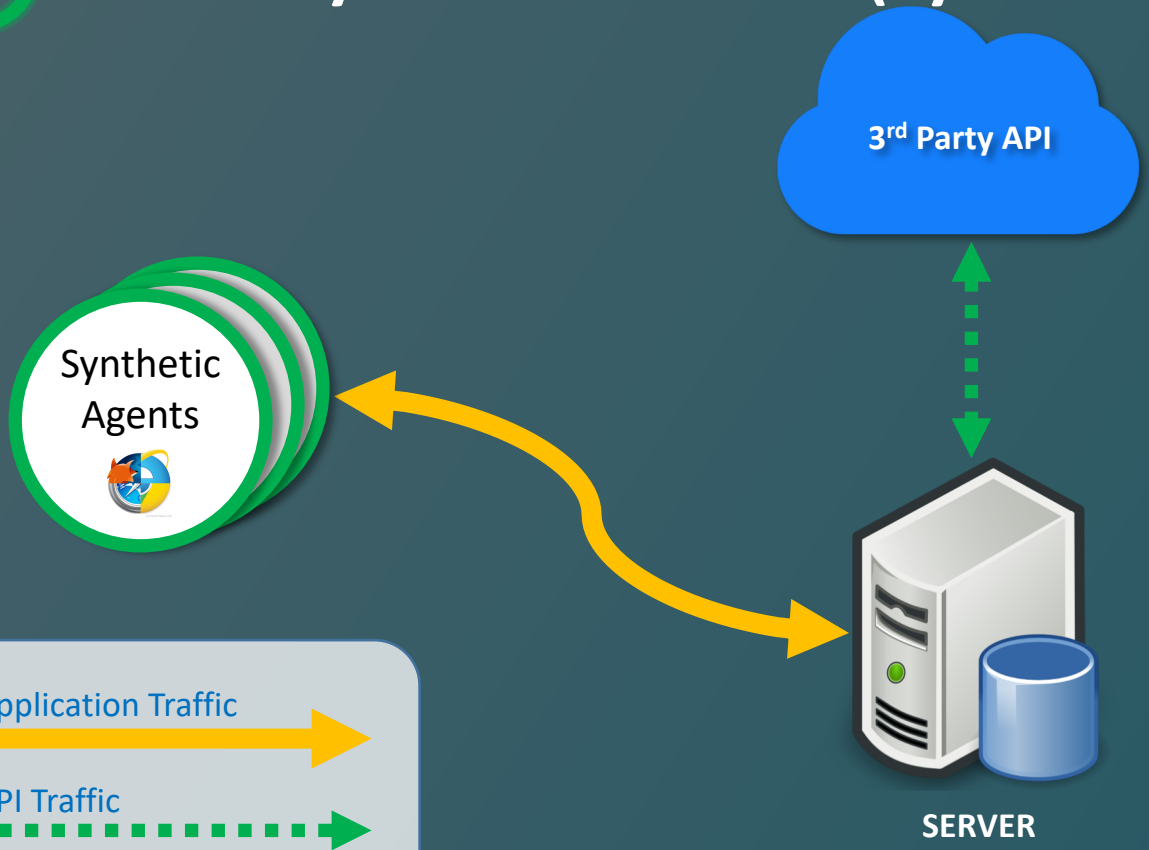
3rd Party API – Back End (APM)



APM Challenges

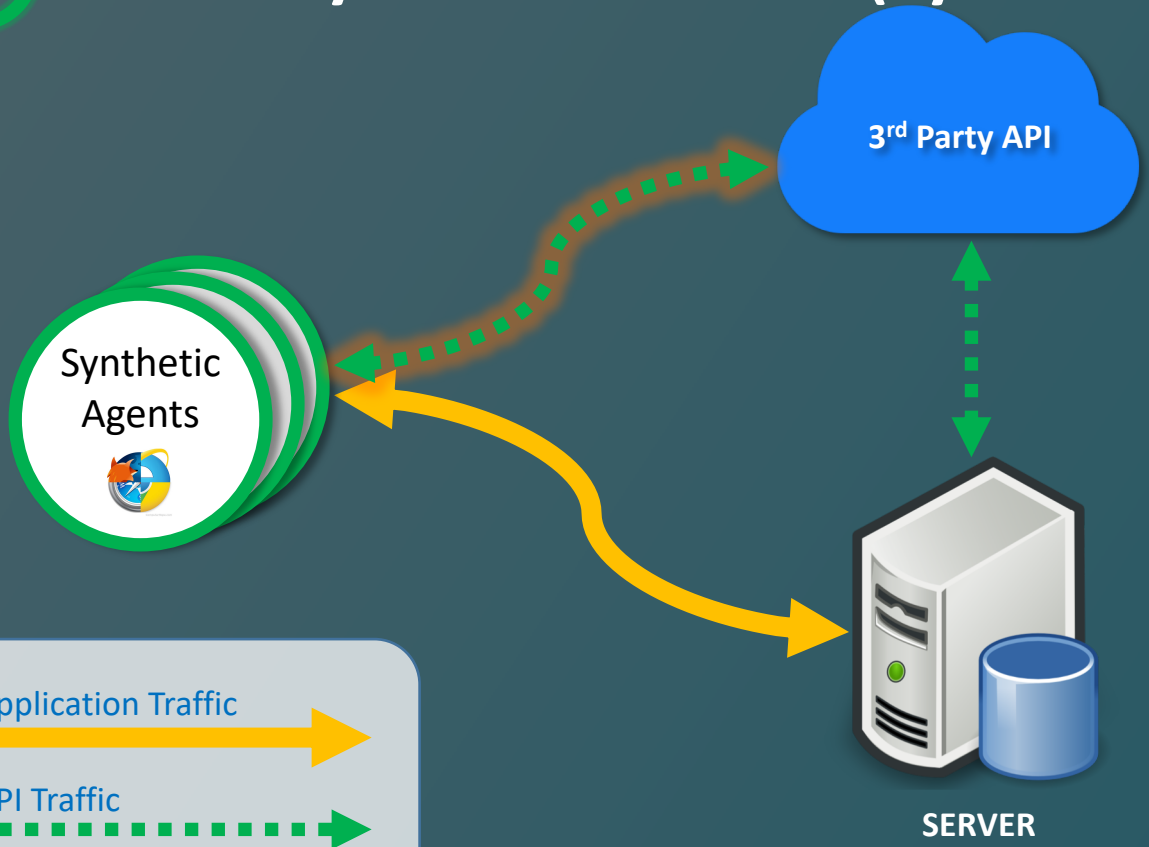
APM monitoring can tell you what DID happen, but not what WILL happen.

3rd Party API – Back End (Synthetic)



Synthetic Challenges

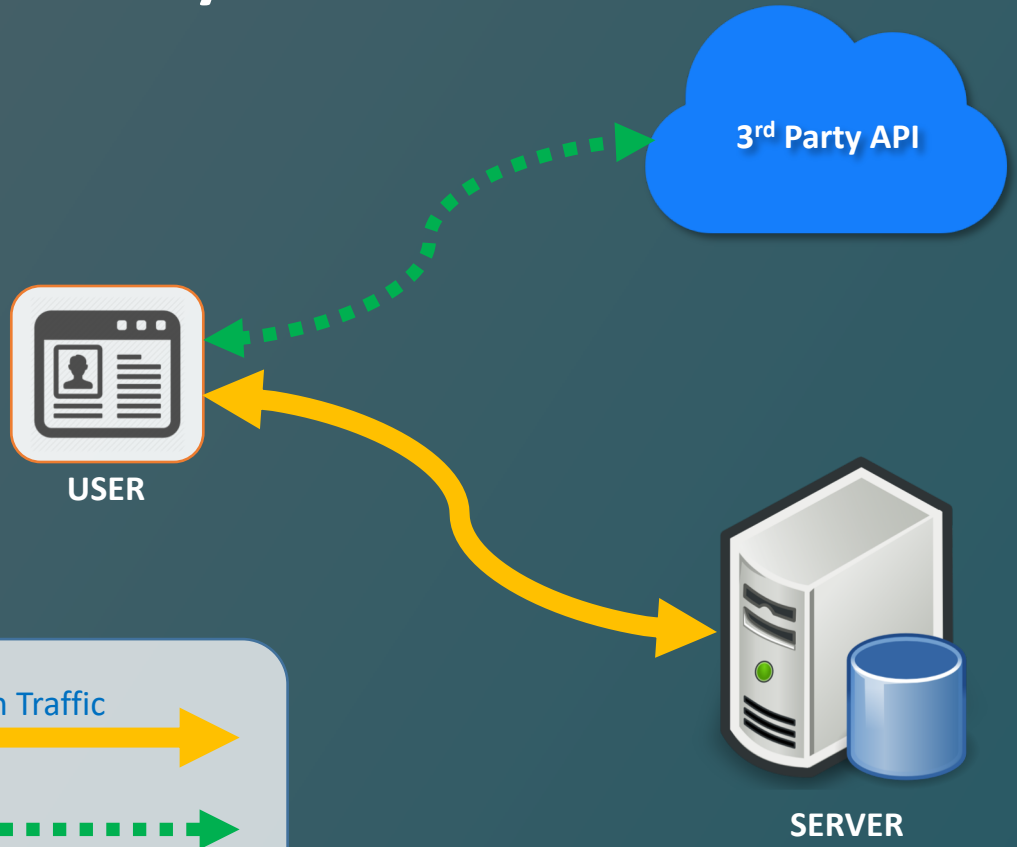
3rd Party API – Back End (Synthetic)



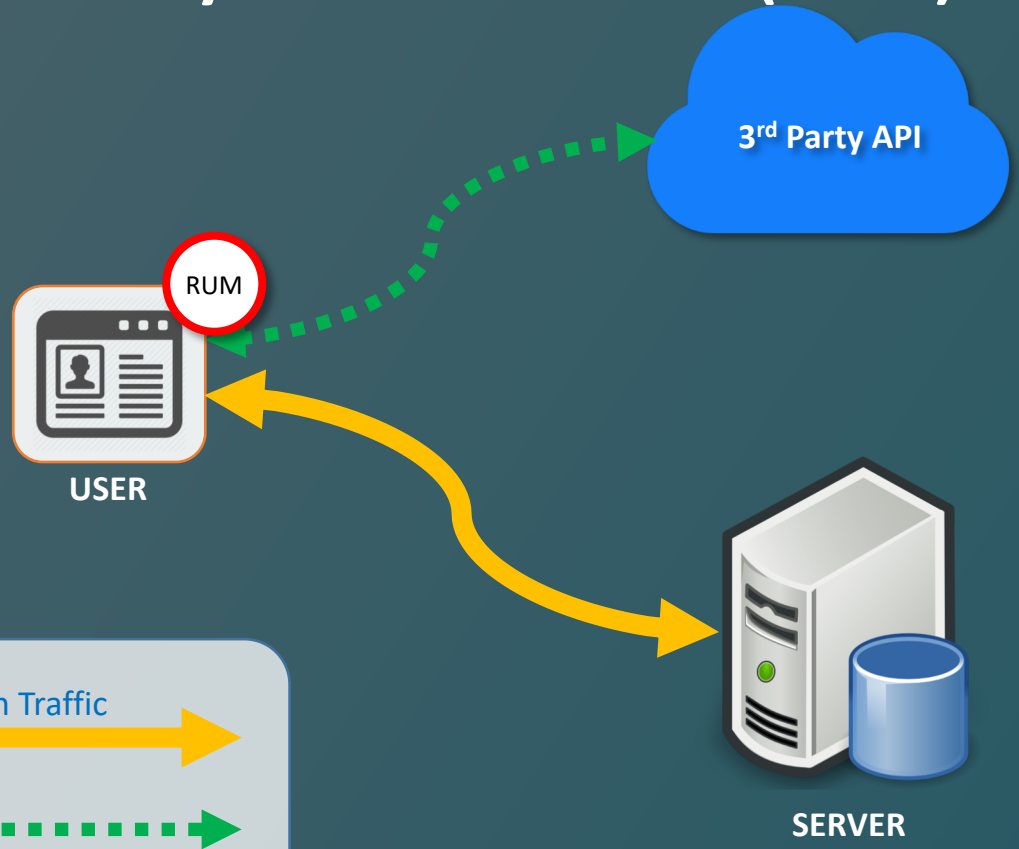
Synthetic Challenges

Synthetic monitoring can both **DRIVE** traffic through the application to cause 3rd party API's to be used AND can be scripted to access those API's **DIRECTLY**

3rd Party API – Front End



3rd Party API – Front End (RUM)

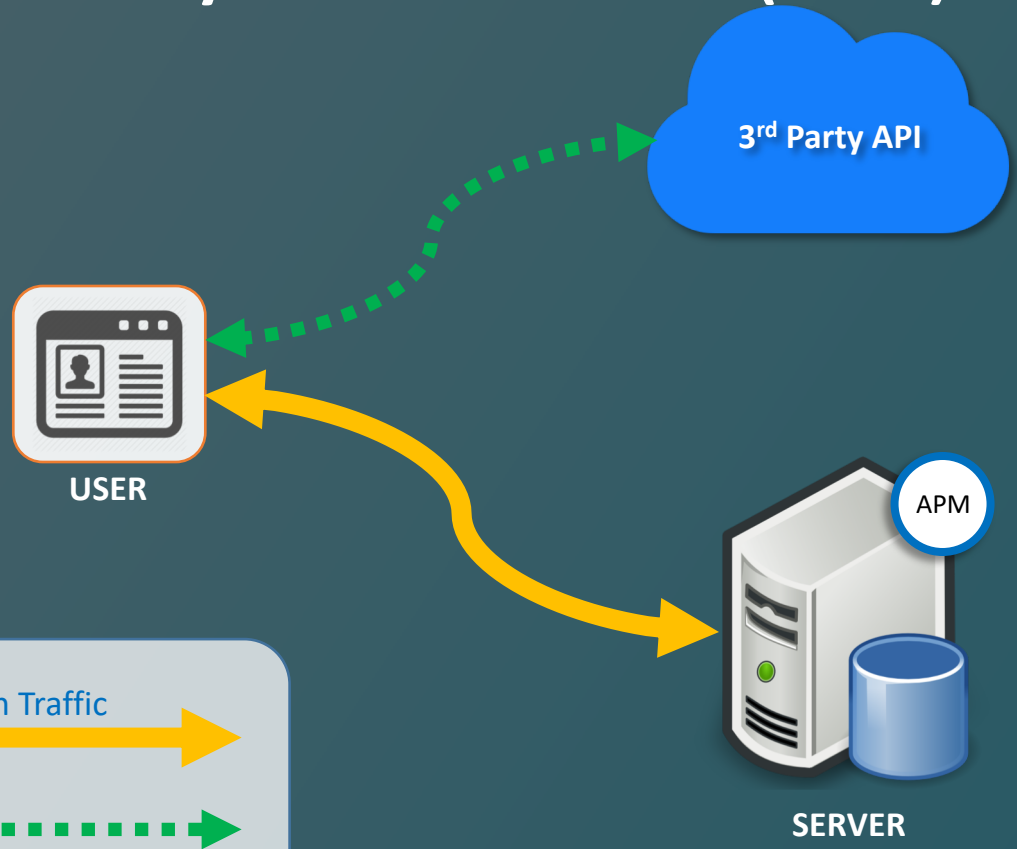


RUM Challenges

Most RUM solutions do not track external network traffic.

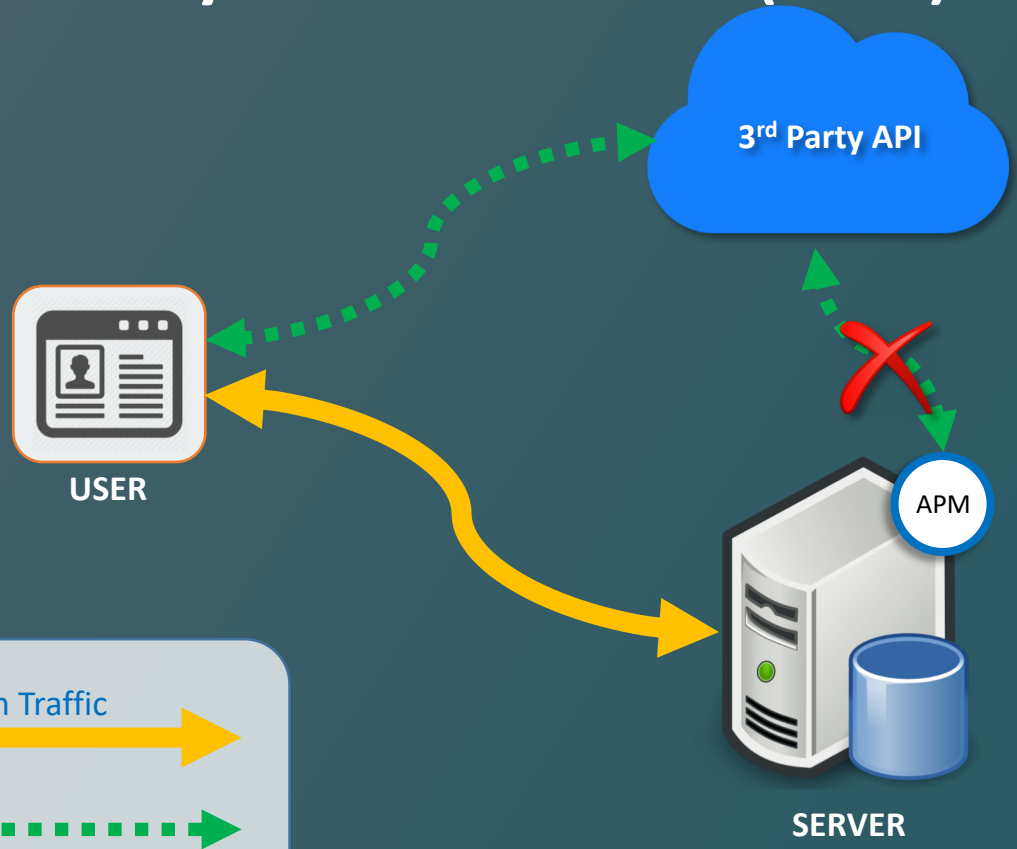
Those that do will only tell you what **DID** happen

3rd Party API – Front End (APM)



APM Challenges

3rd Party API – Front End (APM)

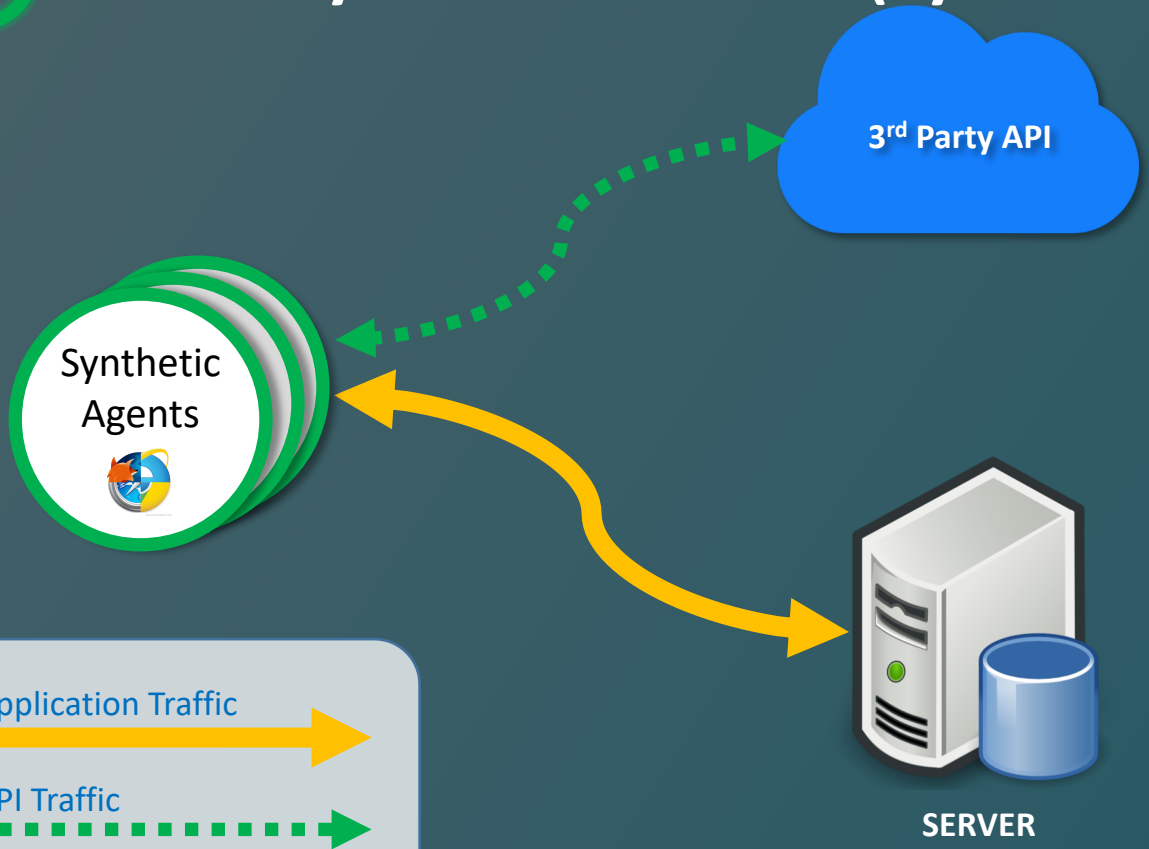


APM Challenges

APM solutions have no visibility into 3rd party API calls made directly from user applications

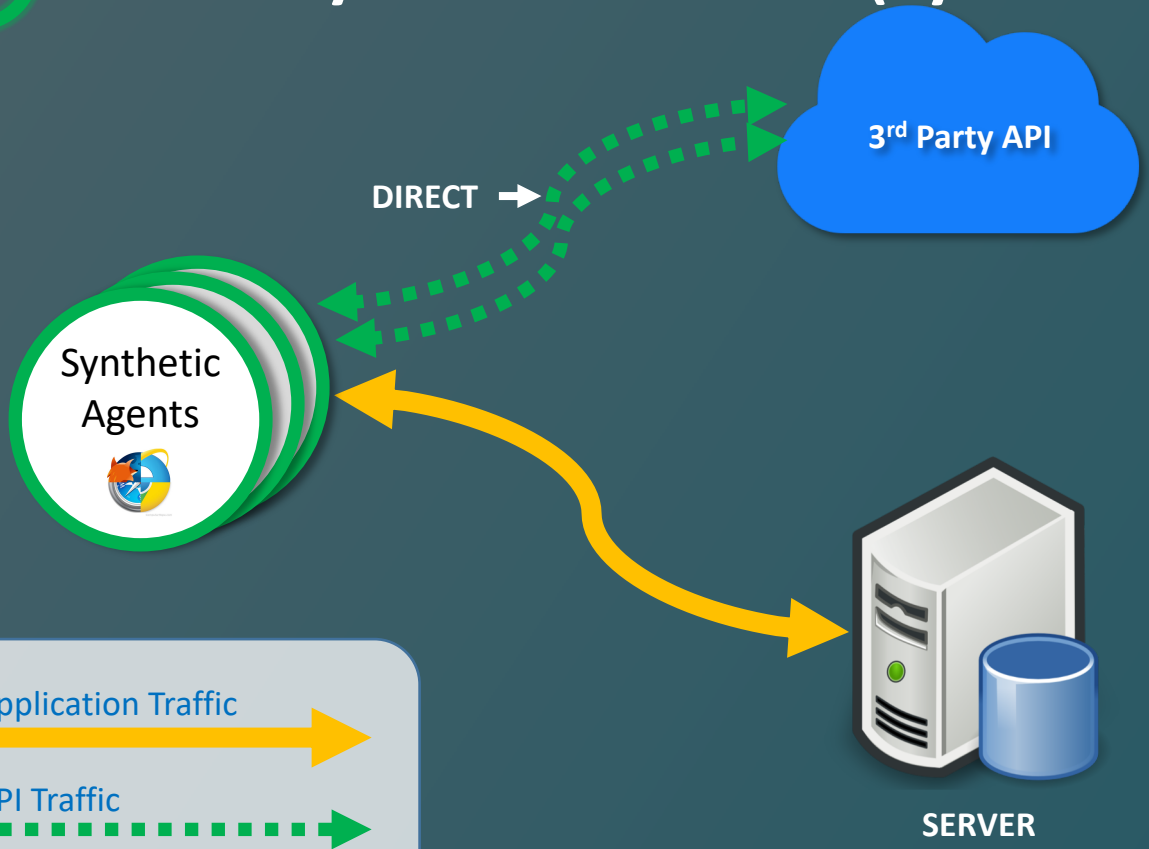
And since most 3rd party API's don't allow agent installation, there is no information collected on the back end either

3rd Party API – Back End (Synthetic)



Synthetic Challenges

3rd Party API – Back End (Synthetic)



Synthetic Challenges

Synthetic monitoring can either trigger 3rd party API's through normal use of the application, or access them directly

Summary

For many common enterprise application use cases Synthetic Monitoring offers insight where RUM and APM cannot

	SaaS Apps	3rd Party API's	Scheduled Apps
Synthetic			
APM			
RUM			

Thank You

My Email: troy.presley@apicasystems.com

Schedule a Demo: sales@apicasystems.com

Website: www.apicasystems.com