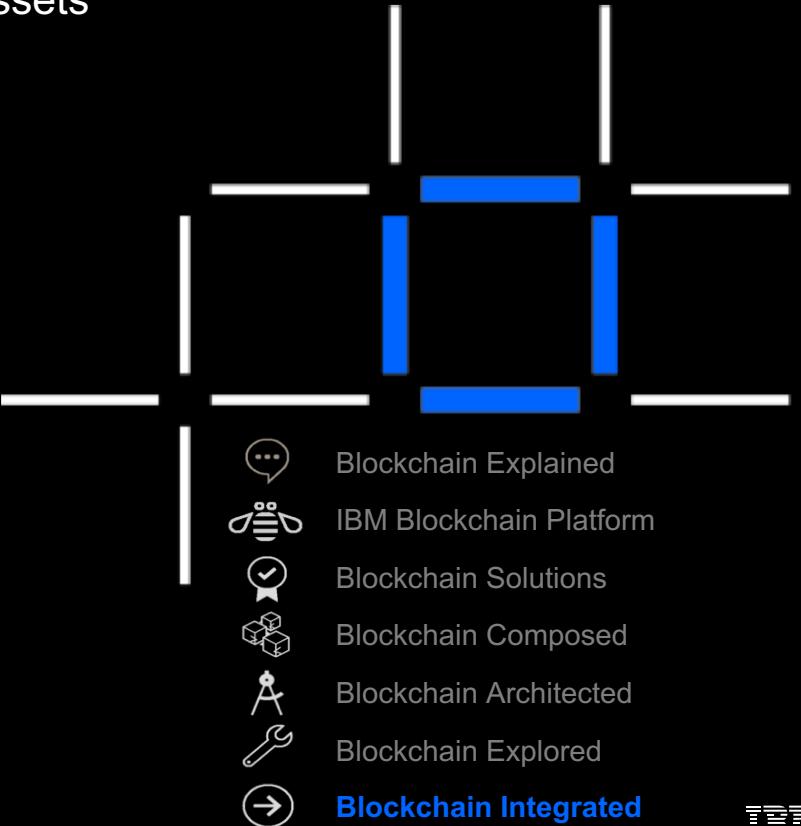


# Blockchain Integrated

An Introduction to Blockchain Integration with IBM Z assets

*Steven Bodie  
Senior IT Specialist  
IBM Hybrid Cloud Integration*





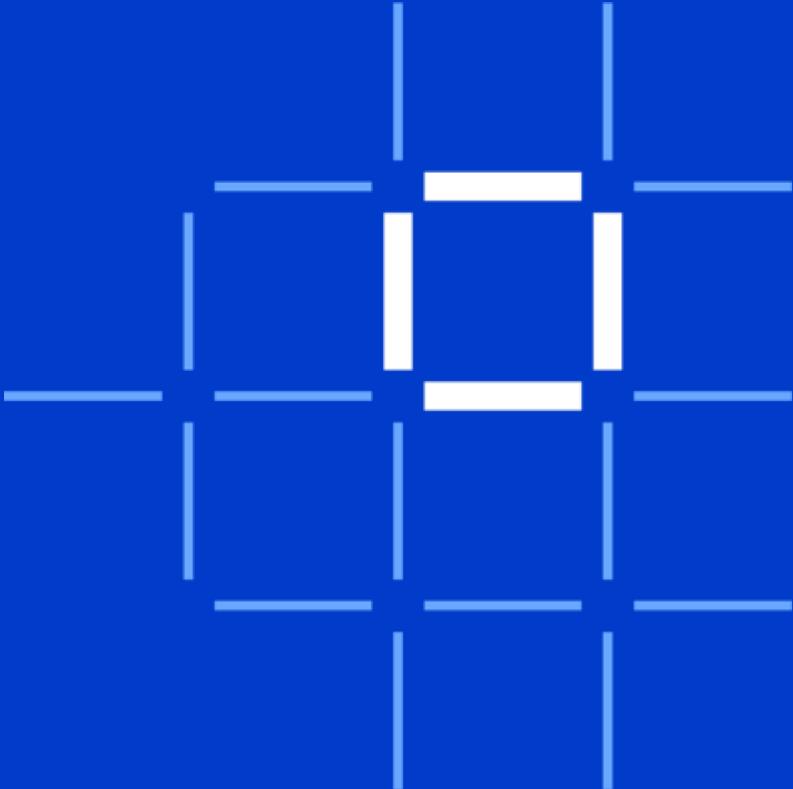
How do we integrate  
with Blockchains?



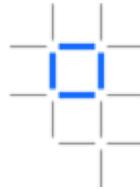
Mainframe REST APIs



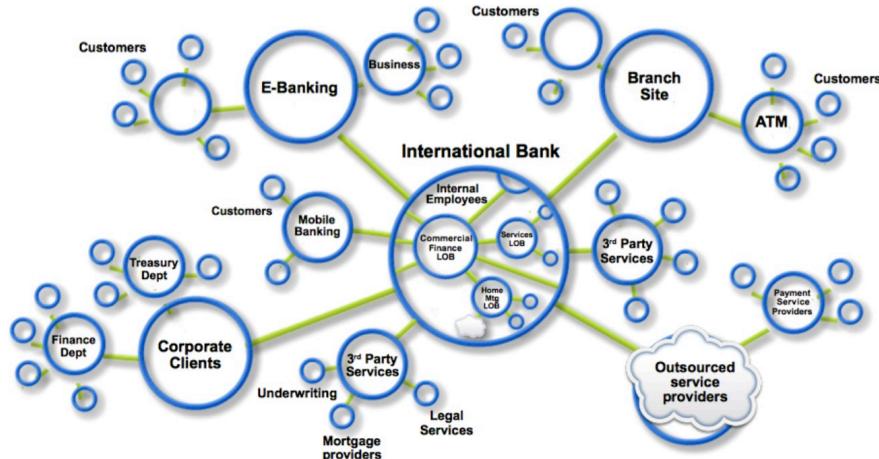
Publishing APIs to your  
Developers



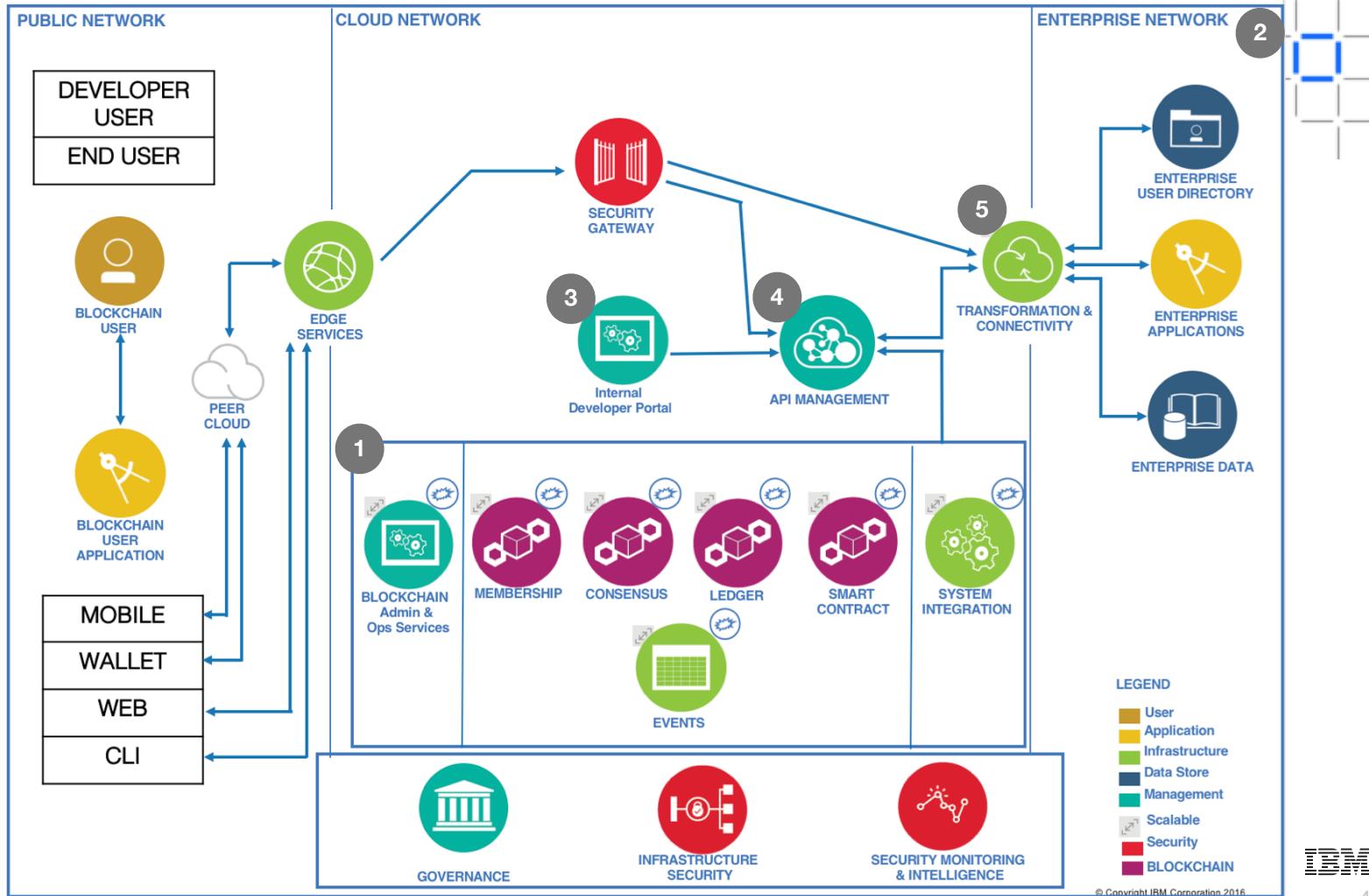
# Integration should start simple



- **Distributed Ledger Technology (DLT)**
  - Gives us the opportunity to re-architect entire industries
- **Keep It Simple**
  - Radical changes are coming
  - But first we have to integrate with DLT and build an ecosystem
- **Less Data Movement** is more secure:
  - By accessing data directly we eliminate potential security risks of moving data.
  - Standardized RESTful API access is what developers want



# Topology





How do we integrate  
with Blockchains?

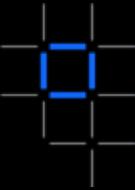


Mainframe REST APIs



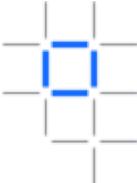
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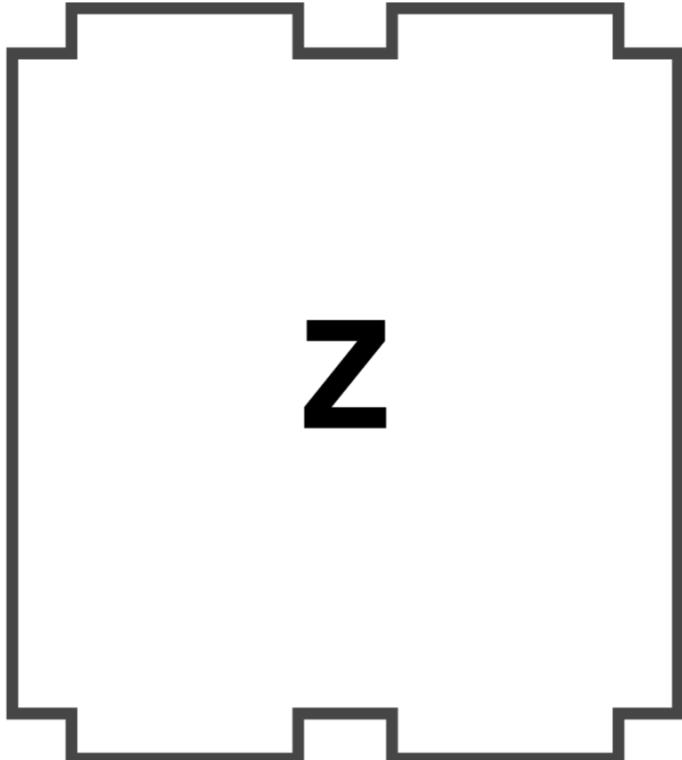


How IBM Z can give you the edge





# What makes a good API host?



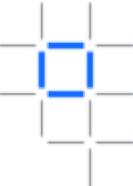
“Fast response time”.

“Extremely reliable”.

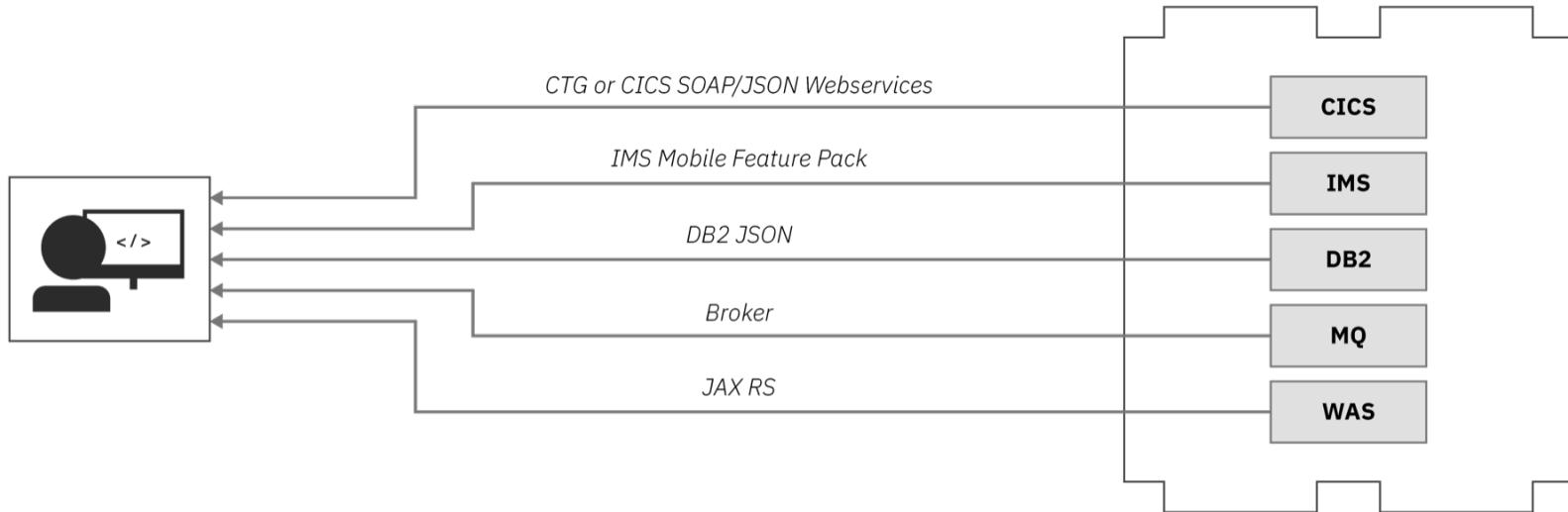
“Handles high workloads”.

“Highly available”.

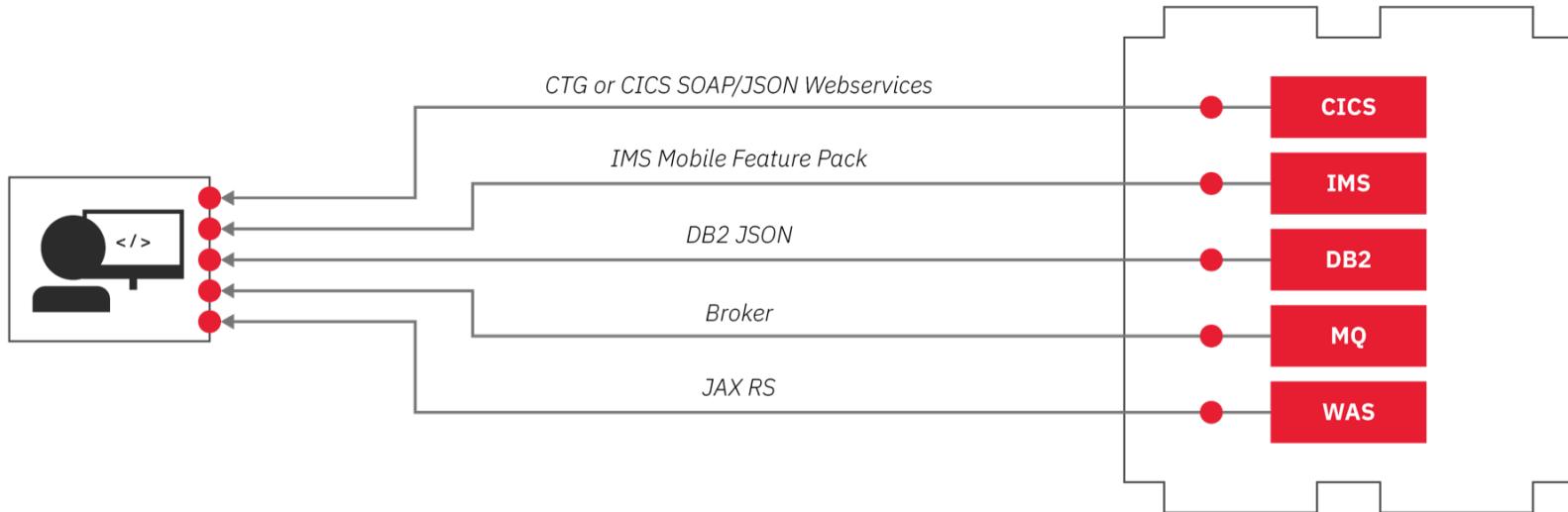
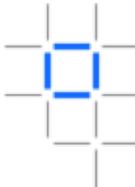
**Z has all of these attributes, and it's where your core assets are.**



# Can we do this natively?



# Can we do this natively?

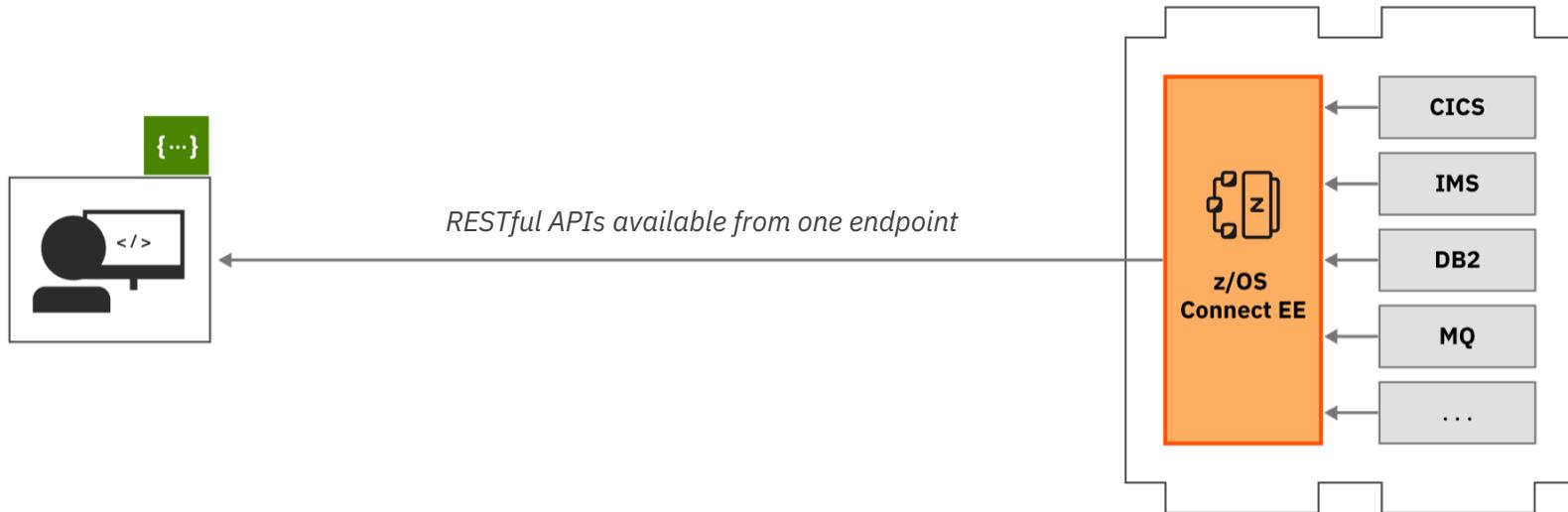
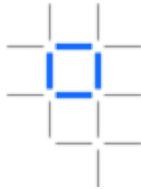


Completely different configuration and management.

Multiple endpoints for developers to call/maintain access to.

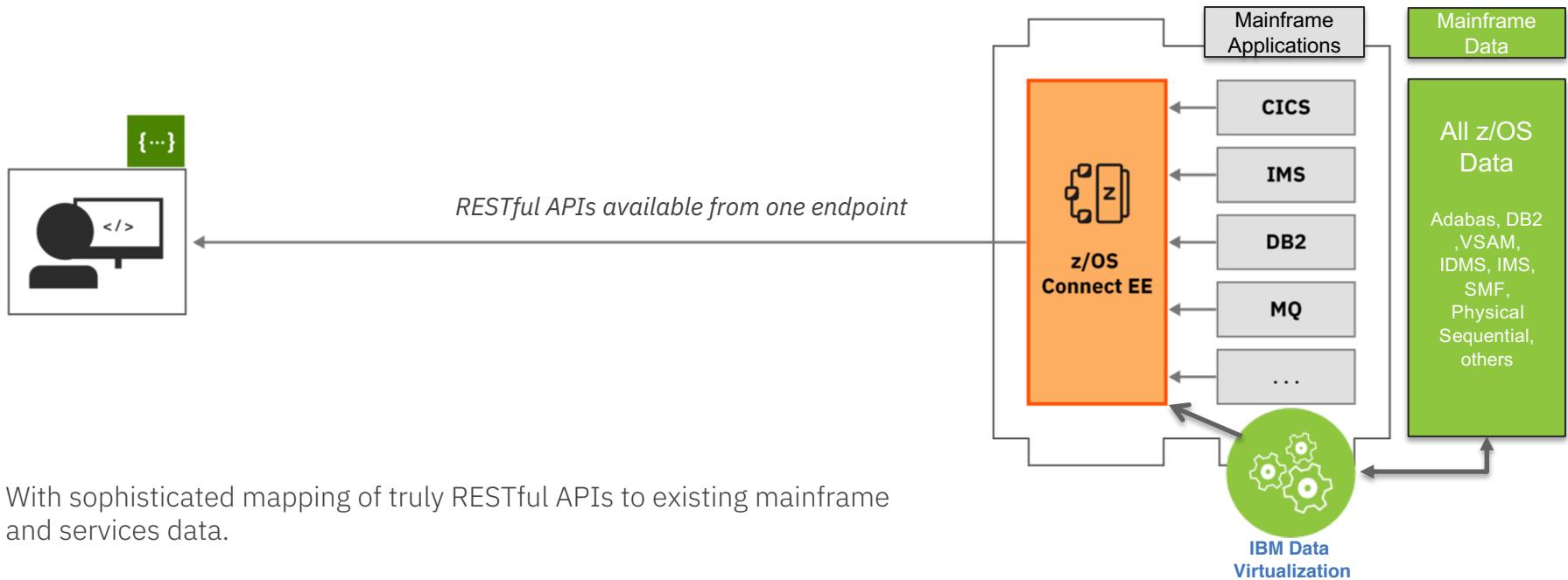
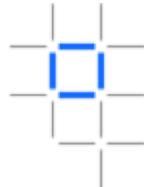
These are typically not RESTful!

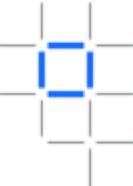
# You need a single point of entry



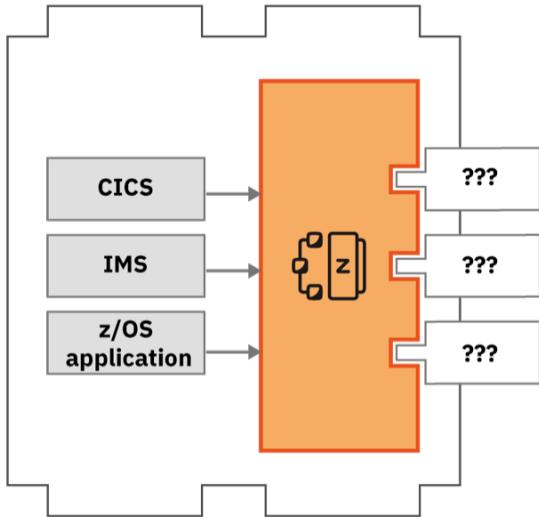
With sophisticated mapping of truly RESTful APIs to existing mainframe and services data.

# You need a single point of entry, including data.





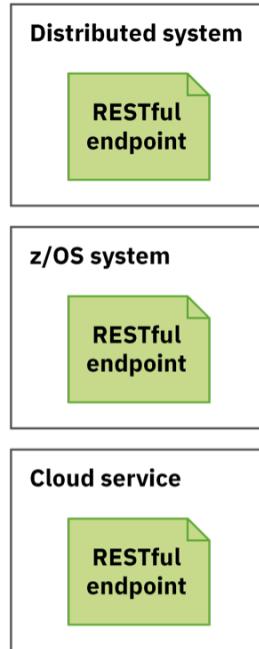
# What if I want to call APIs from z/OS assets?

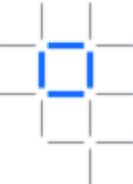


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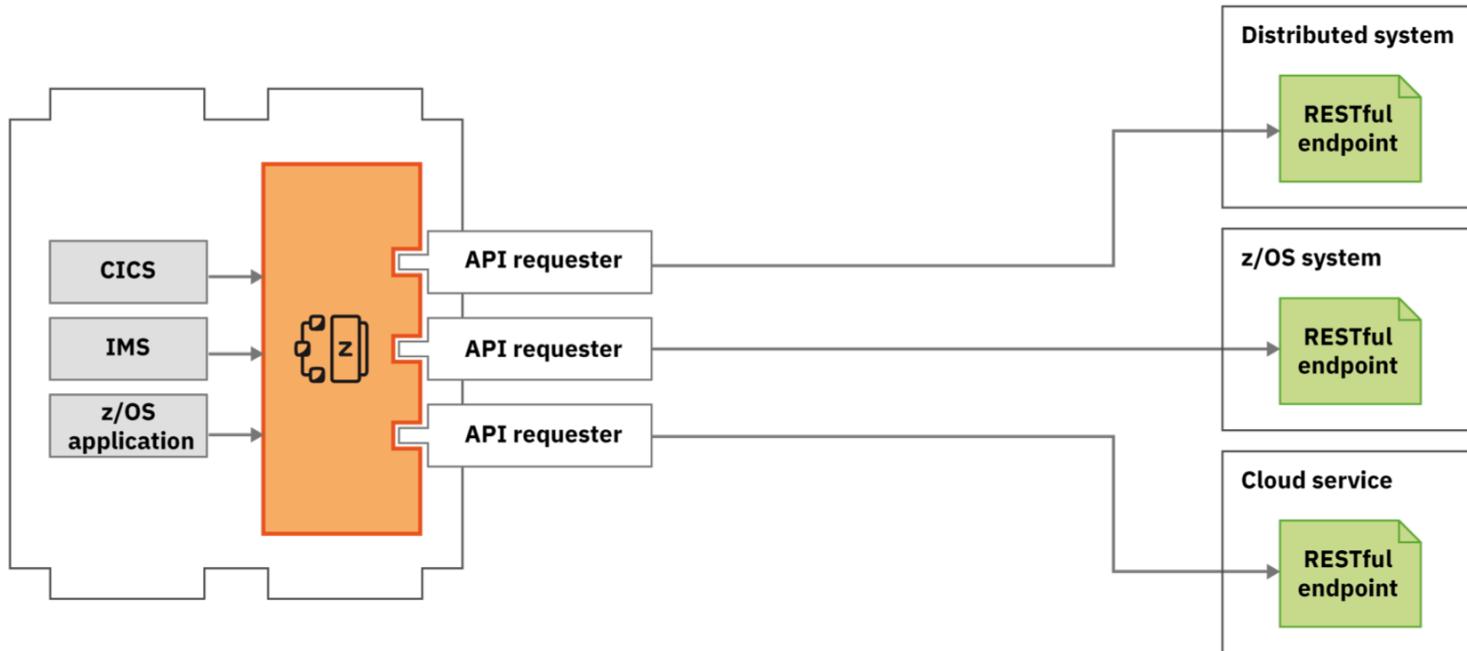
?

?





# Use API Requester to call external APIs from z/OS assets.





How do we integrate  
with Blockchains?



Mainframe REST APIs



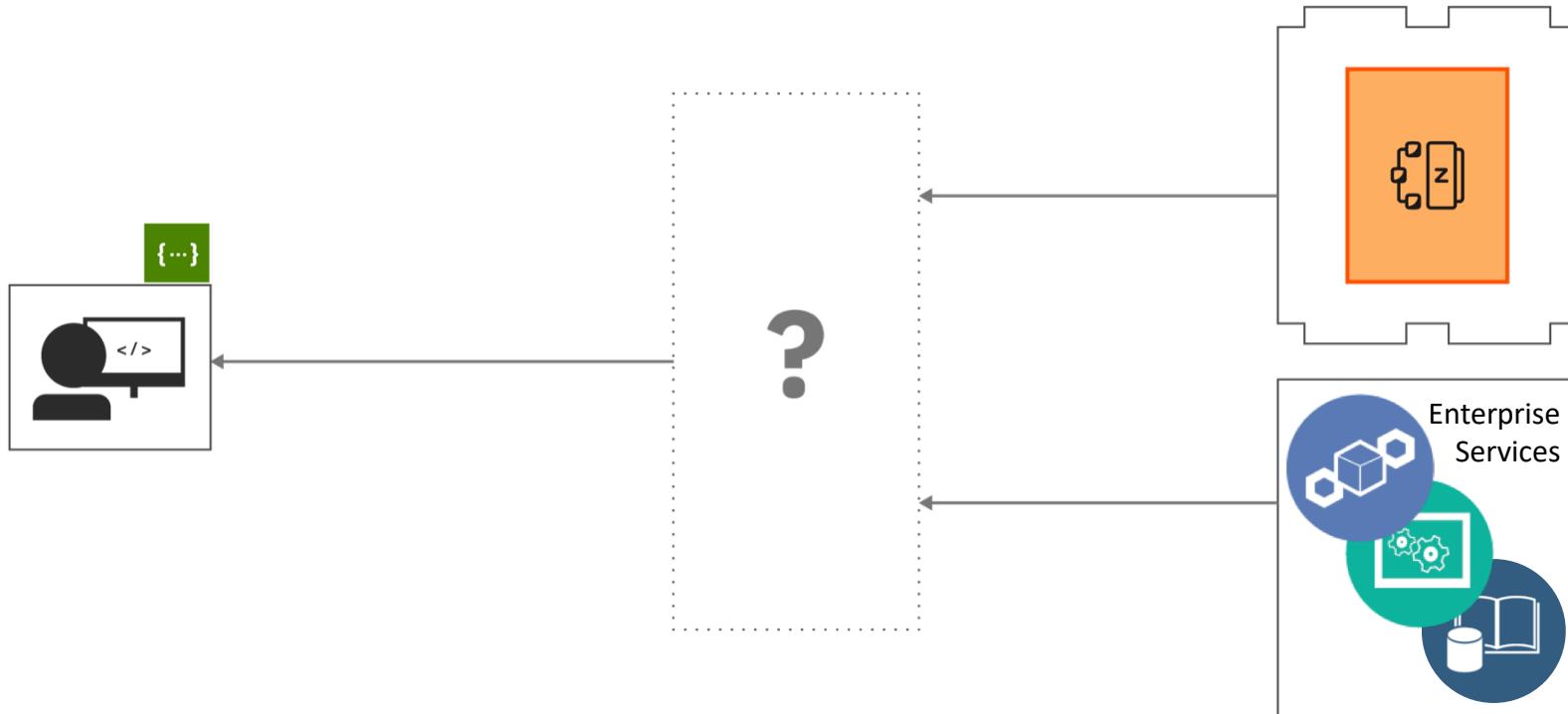
[ Publishing APIs to your  
Developers ]





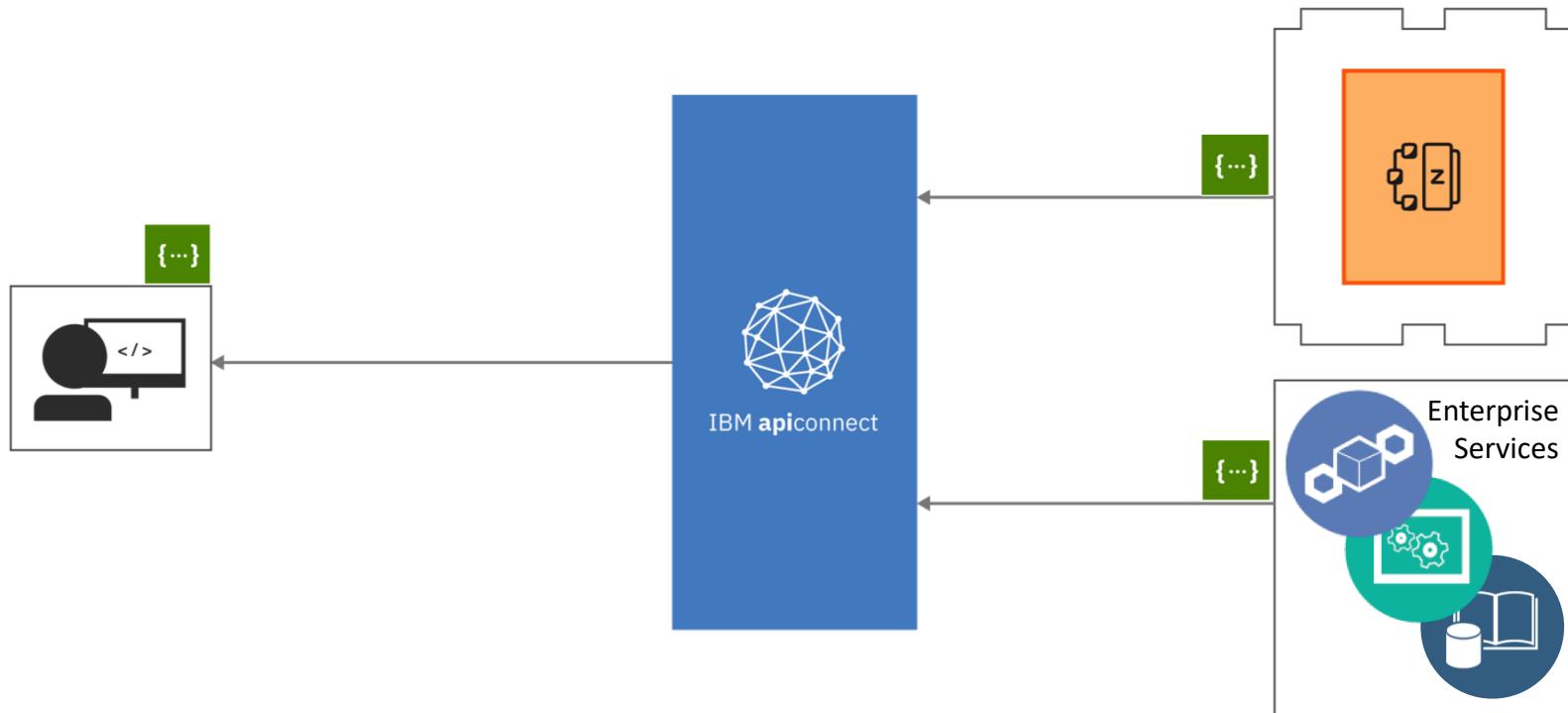
# Publishing APIs

How do you publish your APIs to developers?



# Publishing APIs

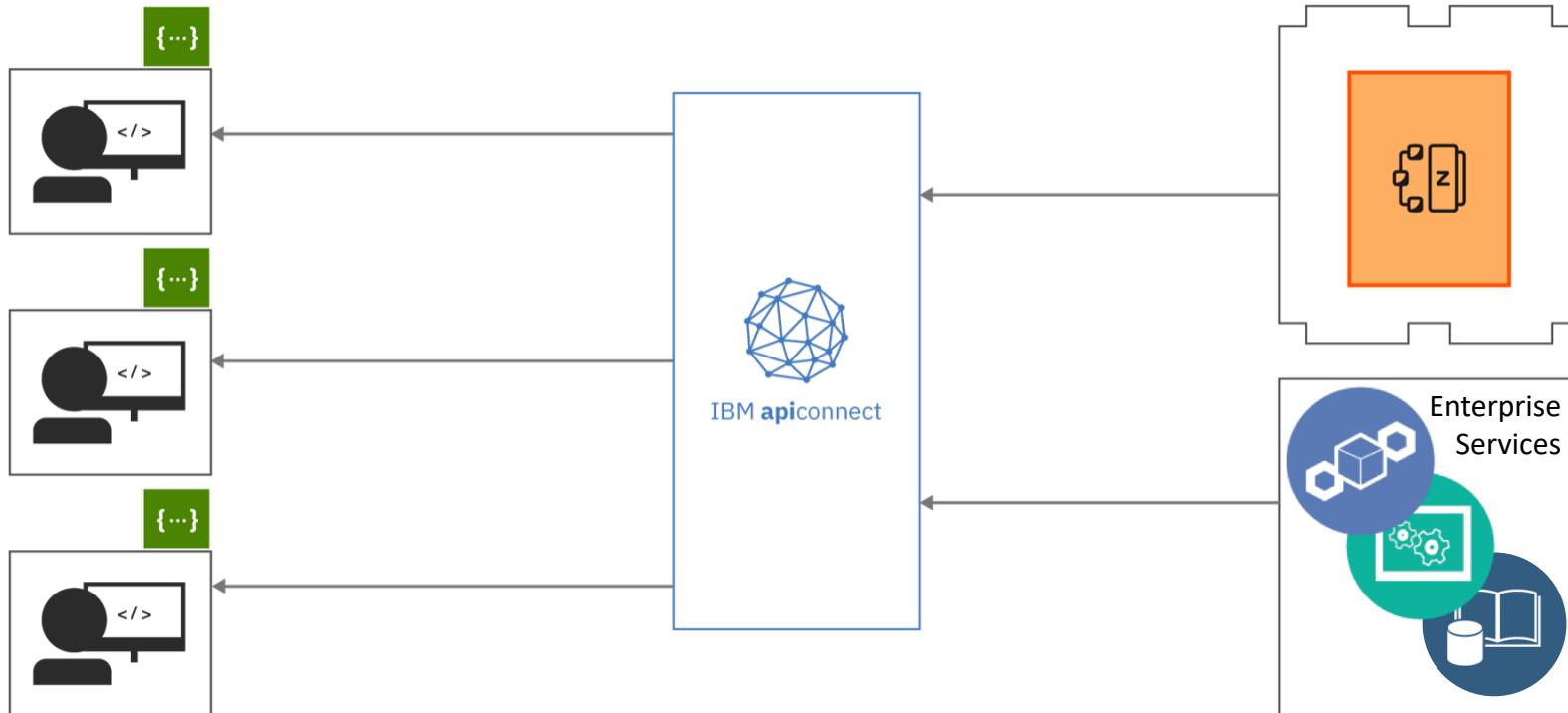
We need an API management gateway!





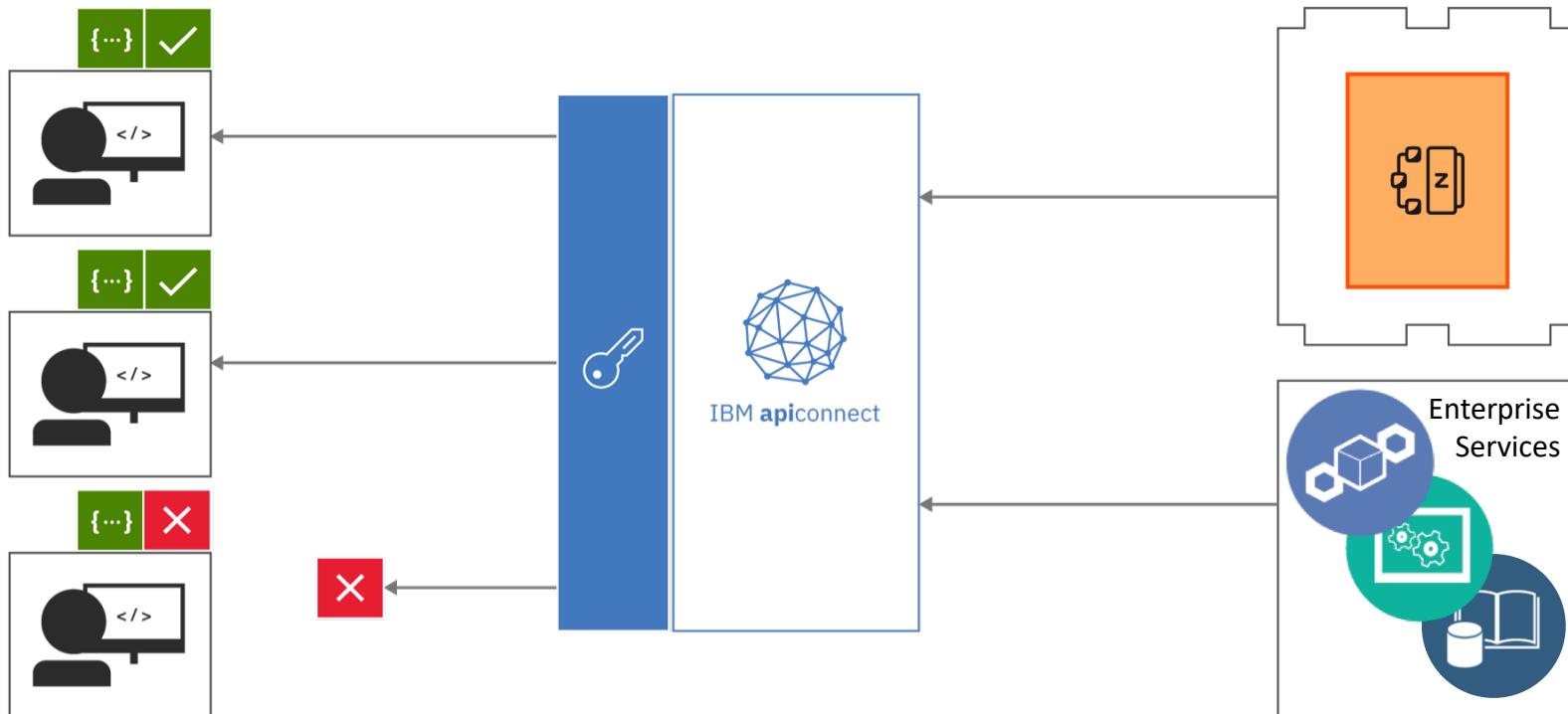
# API Entitlement

How do you control who has access to your APIs?



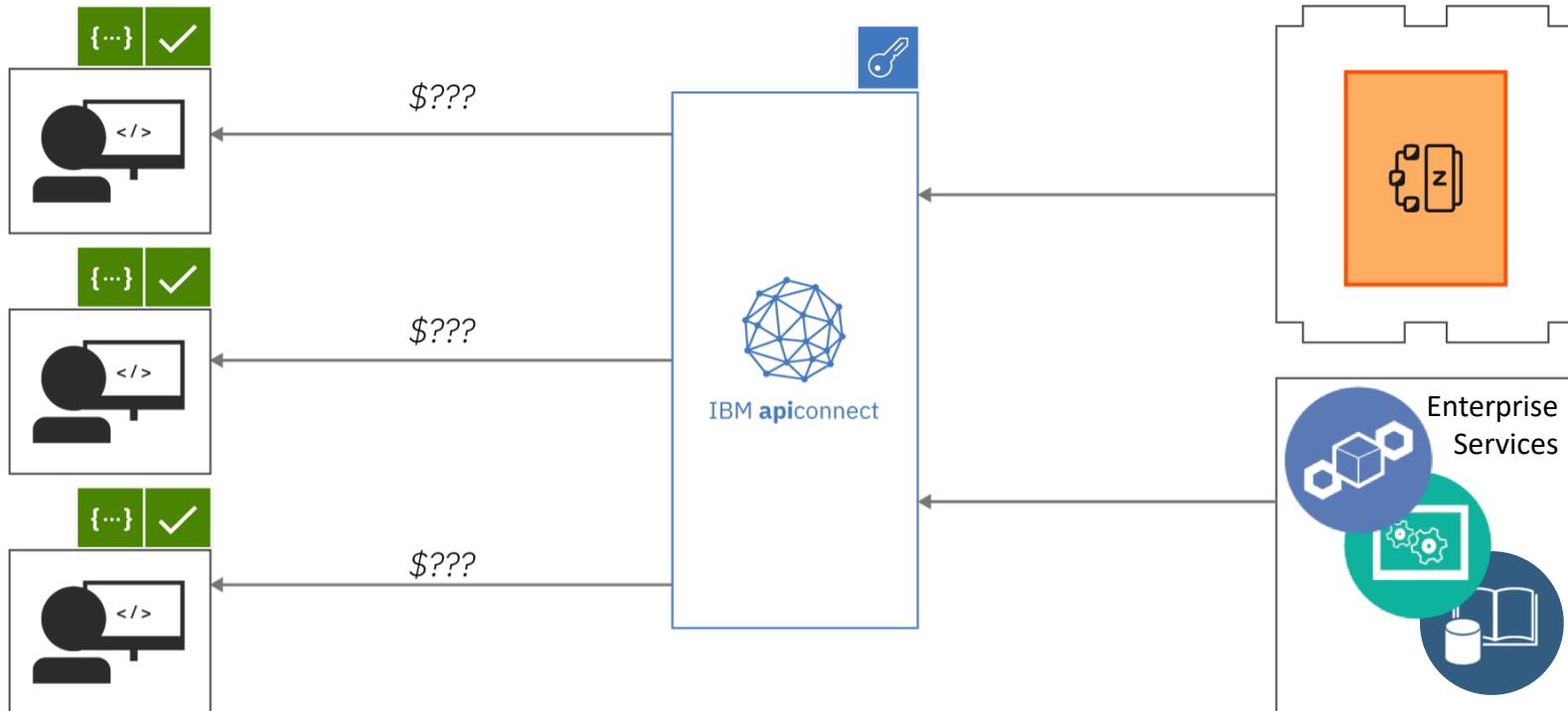
# API Entitlement

## API Keys!



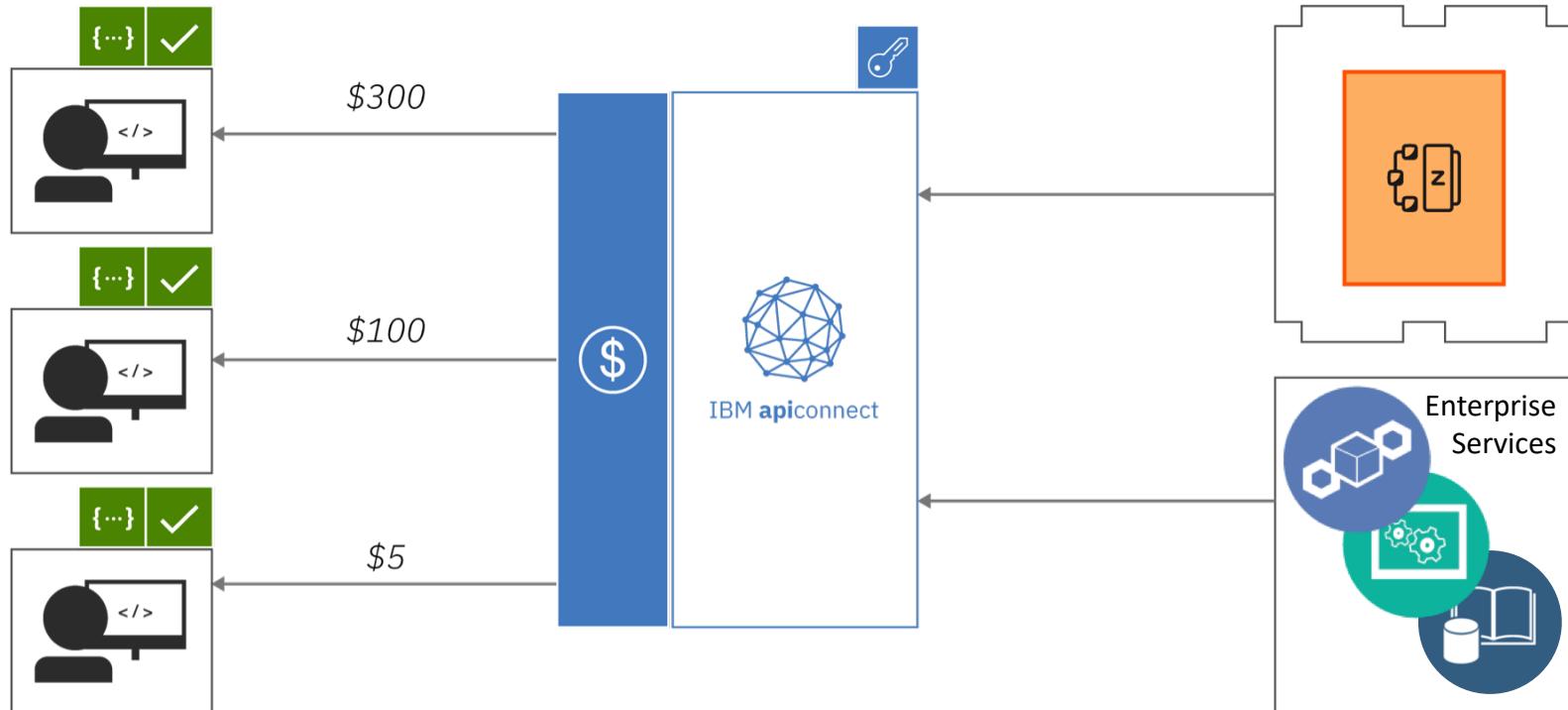
# Billing

What about chargeback?



# Billing

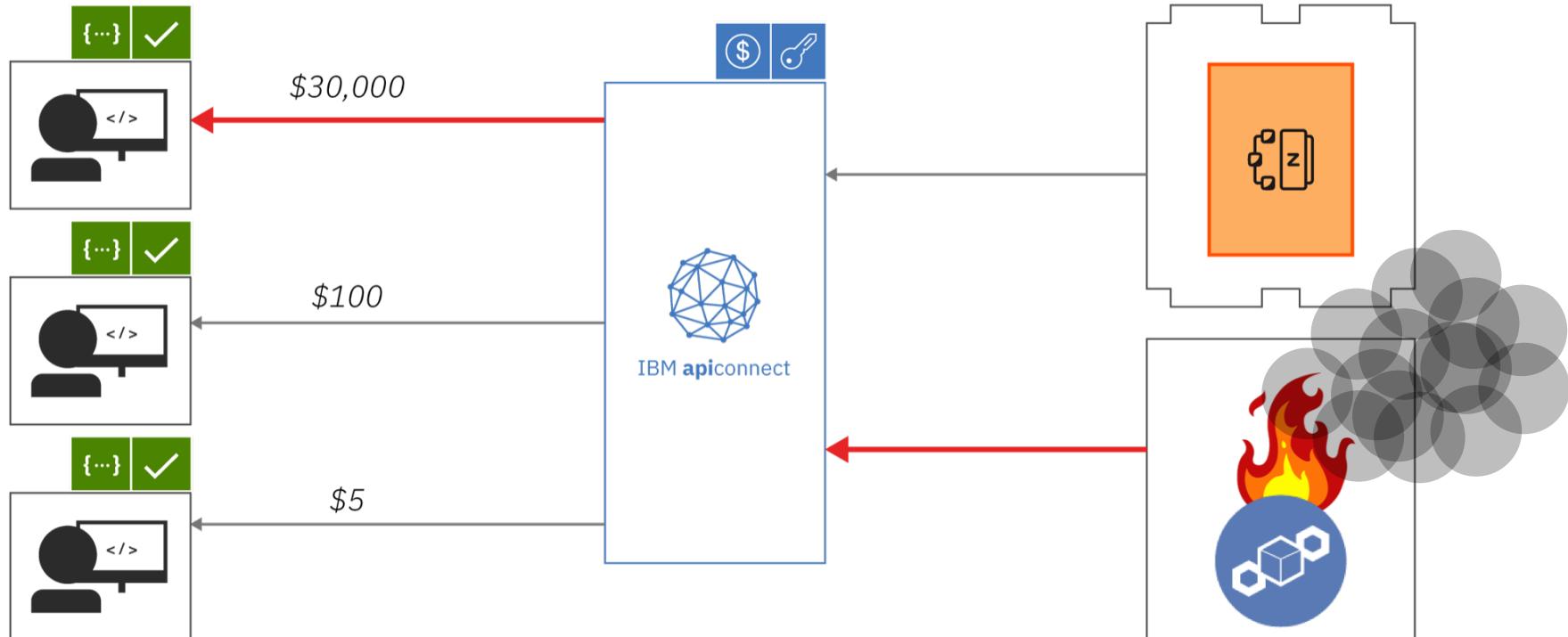
Your API management gateway should monitor usage so you can charge people pro-rata





# Traffic management

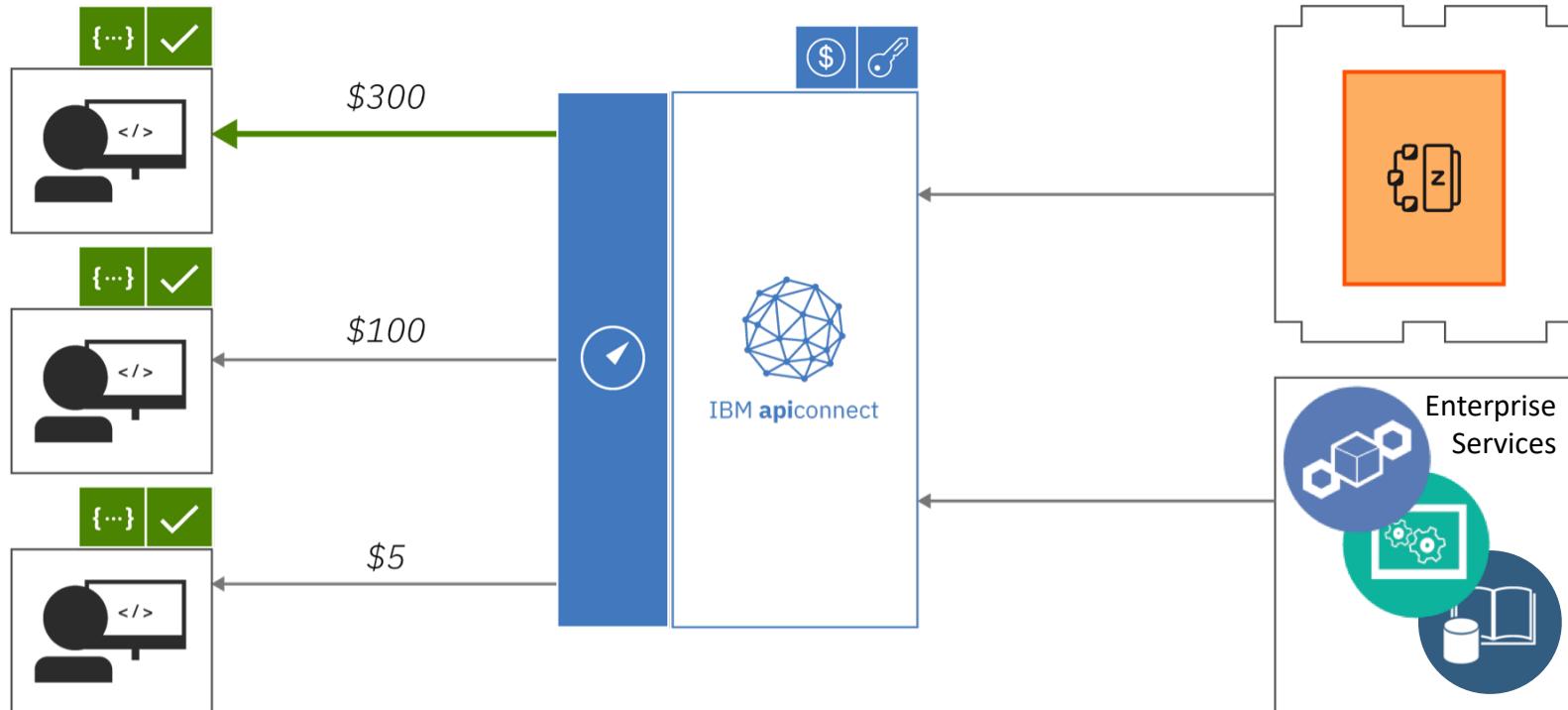
What about bad actors flooding your blockchain?





# Traffic management

Your API management gateway needs to throttle requests if people exceed their quota

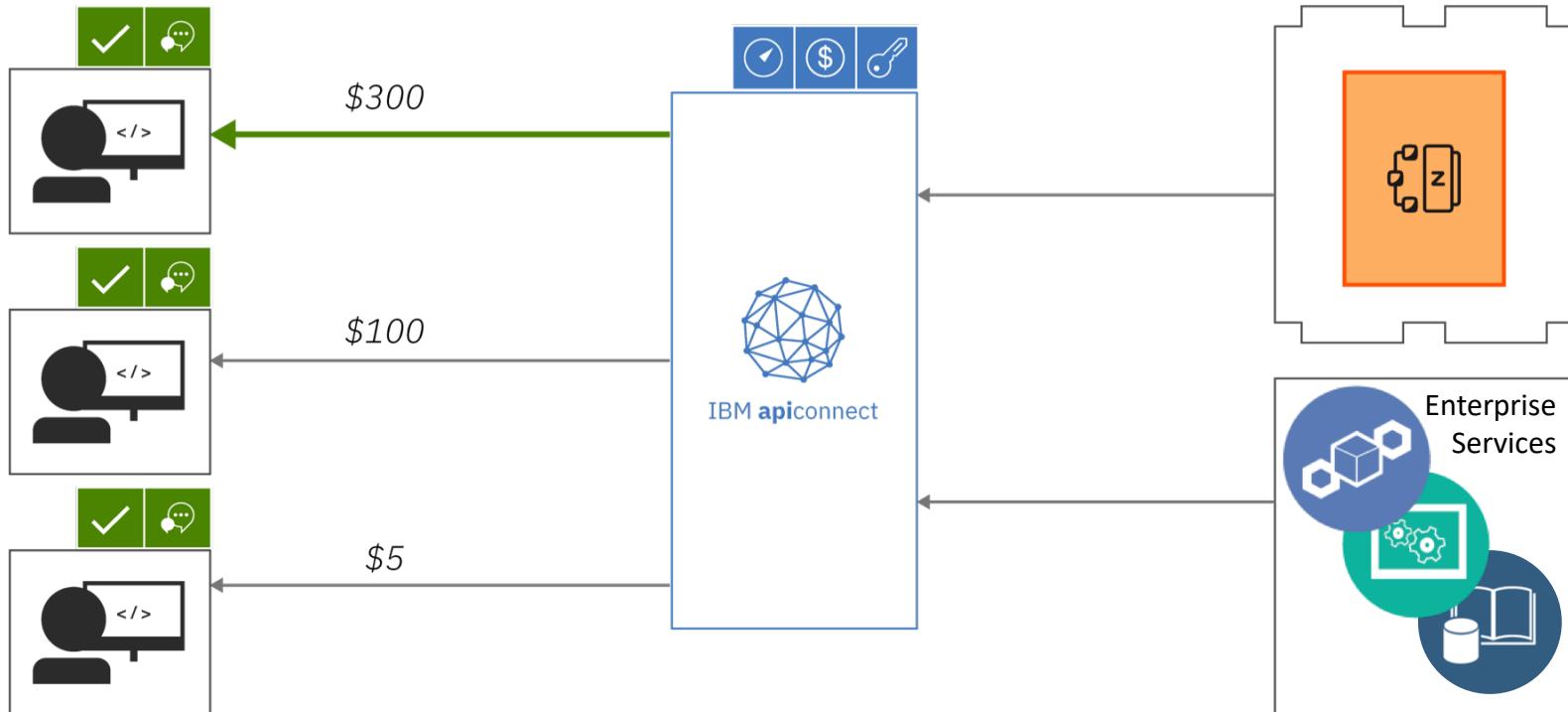


# Developer Community



z/OS Connect EE

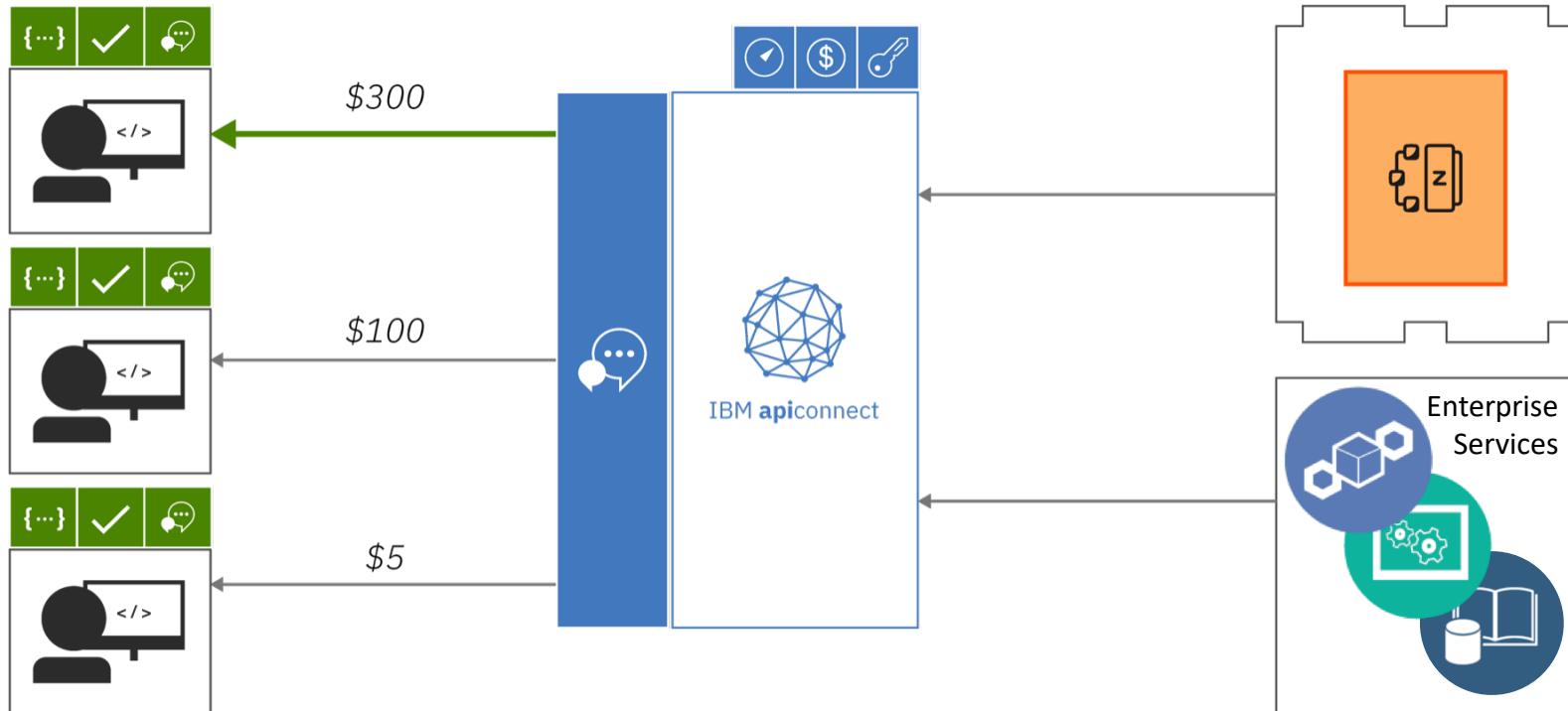
*“How do I find out about new versions and upcoming changes?”*





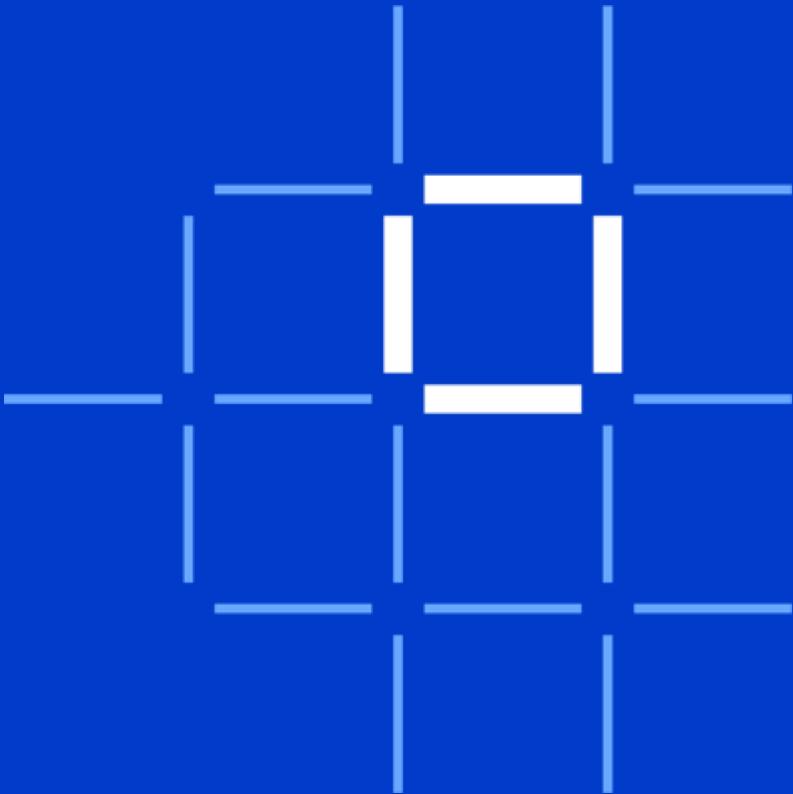
# Developer Community

Your API management gateway should allow you to engage with your dev community



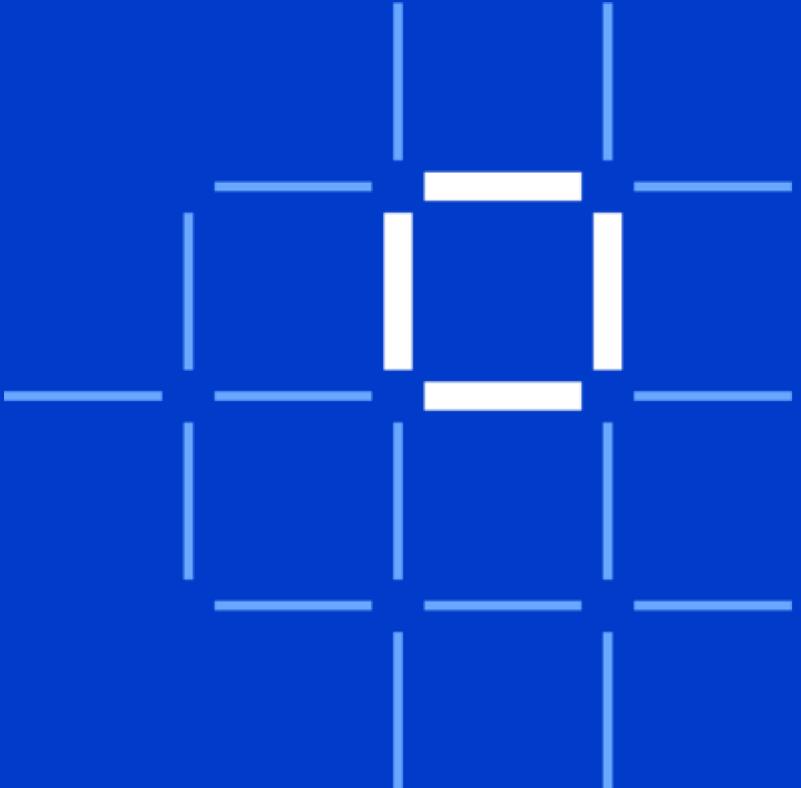
# Demo Time

Now let's see it  
in practice.



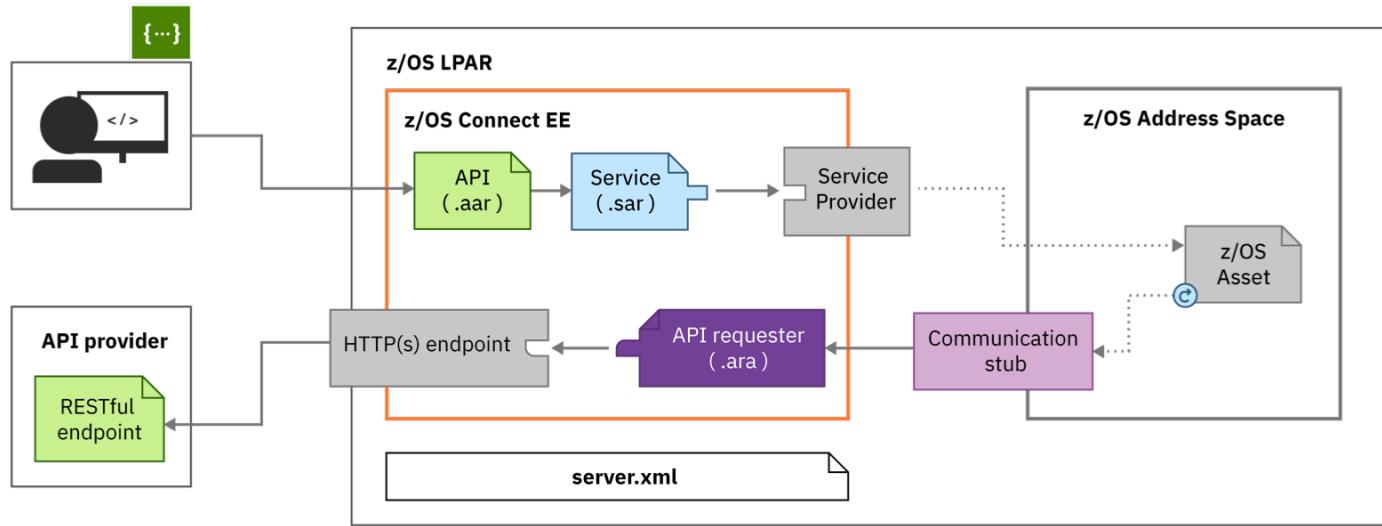
# Conclusion

- DLT is reshaping how we do business.
- We must unlock the value of the mainframe
- A well defined backend API strategy is the first step.





# Make IBM Z the heart of your API strategy with truly RESTful APIs to and from your mainframe



**i** Get started with the open beta today: [ibm.biz/zosconnectdc](http://ibm.biz/zosconnectdc)



## IBM z Systems Trial Program

Try the latest z/OS Connect EE capabilities today at zero cost, and with no installation required.



Find out more, and sign up now at [ibm.biz/ibmztrial](http://ibm.biz/ibmztrial)



# Upcoming Events

## IBM Dallas z Council

February 20<sup>th</sup> 2018 – IBM Coppell

<https://ibm-zcouncil.com/events/zcouncil-dallas-tx-1q18/>

## Application Discovery & Delivery Intelligence PoT

March 1<sup>st</sup> 2018 – IBM Coppell

[https://ibm-zcouncil.com/events/addi\\_dallas\\_1q18/](https://ibm-zcouncil.com/events/addi_dallas_1q18/)

## IBM THINK 2018

March 19<sup>th</sup>-23<sup>rd</sup> 2018

Las Vegas, Nevada

<https://www.ibm.com/events/think/>

# Thank you

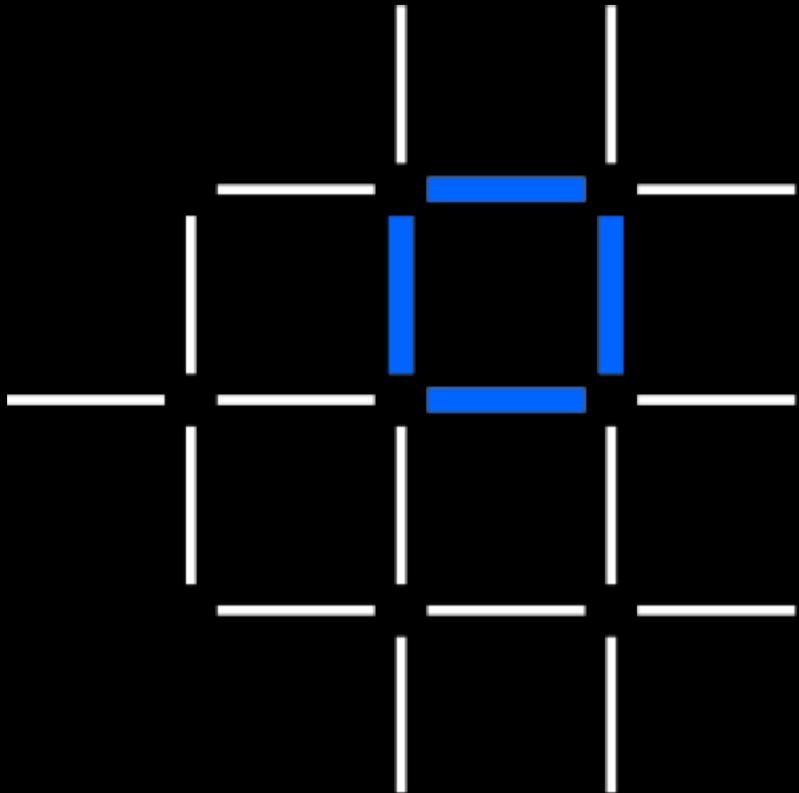
*Steven Bodie  
Senior IT Specialist  
IBM Hybrid Cloud Integration*

*Questions? Tweet us or  
go to [ibm.com/blockchain](http://ibm.com/blockchain)*

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# Security Design

