Meet

Eliza & Marvin

in action

@FOSDEM 2020
Once upon a time ... 

I met Eliza and took the chance to chat with her about our Enterprise Architecture.
Once upon a time ... 

Where is Marvin? 

I gave him just a few changes to increase efficiency ... 

— Eliza
Marvin's quest

Just a few changes ...

• move some processes to the cloud
Marvin's quest

Just a few changes ...

- move some processes to the cloud
Marvin's quest

Just a few changes ...

• move some processes to the cloud
• add digital twin sensor data

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Marvin's quest

Just a few changes ...

- move some processes to the cloud
- add digital twin sensor data
- add cloud analytics from a service provider
Marvin's quest

Just a few changes ...  

• move some processes to the cloud  
• add digital twin sensor data  
• add cloud analytics from a service provider  
• receive updates from the supply chain
Marvin's quest

Just a few changes ...

How long does it take him to apply Elizas changes?
Marvin's quest

Just a few changes ...

How long does it take him to apply Elizas changes?

• one week?
Marvin's quest

Just a few changes ...

How long does it take him to apply Elizas changes?

• one week?
• one month?
Marvin's quest

Just a few changes ...

How long does it take him to apply Elizas changes?

• one week?
• one month?
• one year?
Marvin's quest

Just a few changes ...

To ensure business agility:

• It should be only one week!
• data object interactions are the driving factor for future architectures
• switch to a different service provider should be easy

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Protect your data

New paradigms for IT architectures

- Trust perimeter has changed!
- Fragmented information (flow) needs protection
- Respect different data owners per device
- AuthN/AuthZ must be possible everywhere

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Protect your data

Zero Trust

• defines trust levels for data objects / smaller groups
• fine grained access to objects possible
• more insights means minimizing risk
• Never trust, always verify
Protect your data

Zero Trust

• Data objects governed by external/internal access policies (AP)
• It is possible to automate the enforcement of AP
• TLS is mandatory, but unsuited to express AP
Protect your data

Zero Trust

means: please avoid the security gateway

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Protect your data

Named Data Networks

- old "hourglass" model is IP based
- IP addresses used as an abstraction layer
- unsuited for today's content-centric world

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Named Data Networks

- new "hourglass" abstraction level: data (chunks)
- data chunks identified by resource name
- security becomes a first citizen membership
- ownership of data is always clearly

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Named Data Networks

- integrity is easy, but what about confidentiality?
- multi-party encryption mandatory?
- even more projects: COAST, XIA, MobilityFirst, ...
- a security comparison is available

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All lived happily after!

Eliza & Marvin

are still in action ... 

Thank you for your attention!

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