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#CiscoLive

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1. Find this session in the Cisco Live Mobile App
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https://ciscolive.ciscoevents.com/ciscolivebot/#BRKSEC-2074

Agenda

- Who Am I? (How do you really know?)
- What's Wrong With Identity?
- What Can We Do About it?
- How Does it Work?
- What Are the Challenges?
- Next Steps
- Conclusion

Who Am I?

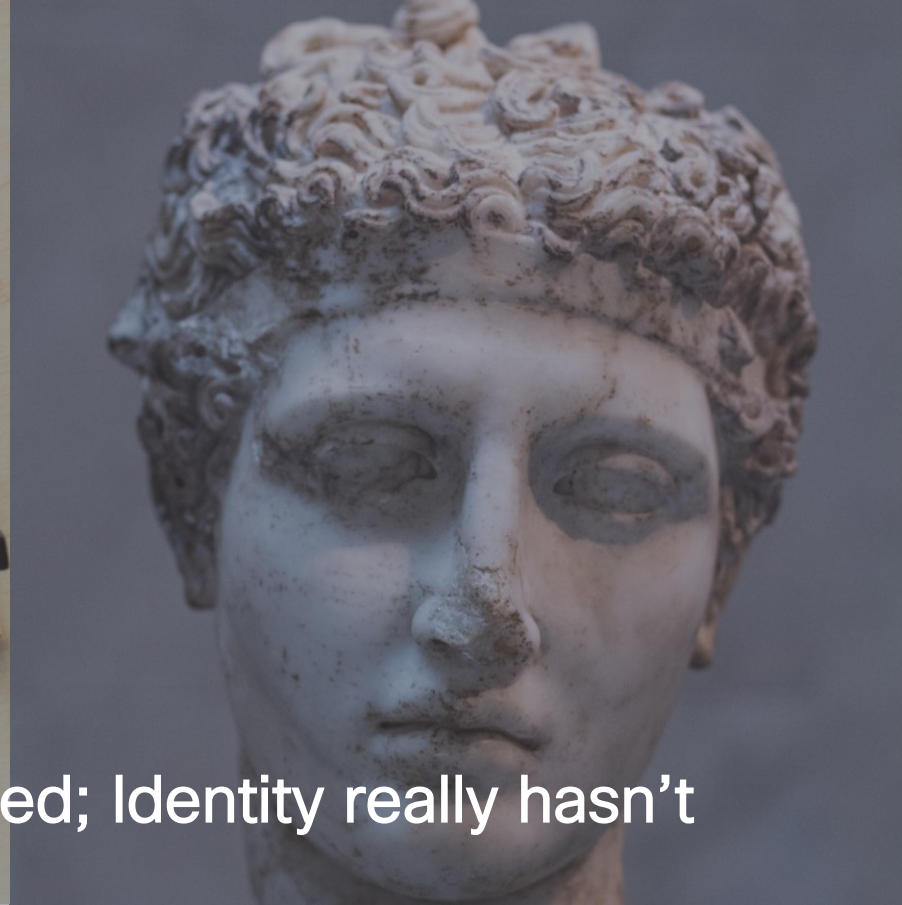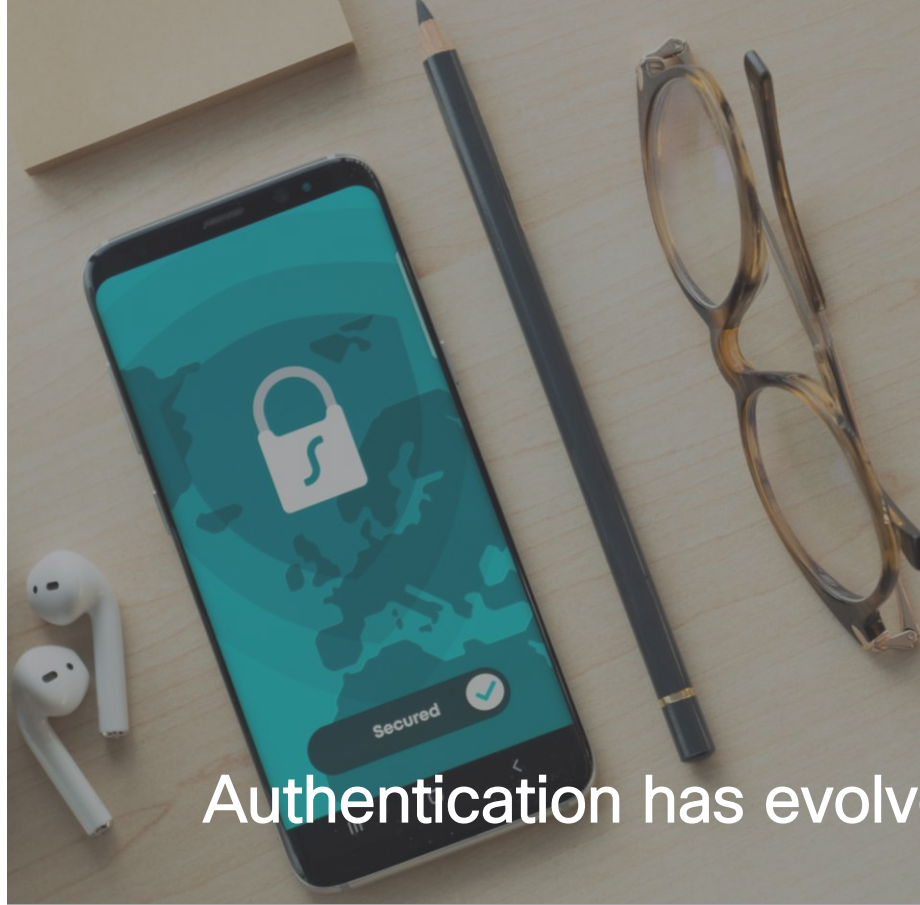# How Do You Know

My badge?

How did that get issued?

My documents?

What if they are fake?

You don't know. You can't independently verify. And if stolen, so hard to recover

What's Wrong with Identity?

Authentication has evolved; Identity really hasn't

● Difficult to Scale and Manage ● Not portable ● Heavy reliance on physical, government documents
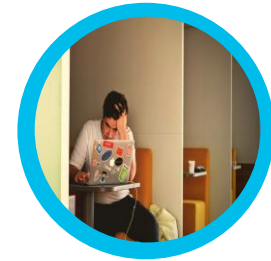
What are the consequences

Identity theft continues to be the #1 cause of breaches as users don't control their own data

Interfacing with passwords and Onboarding /offboarding users costs more & more time and money

Single points of failure in identity systems can cause productivity and sensitive data loss

What can we do about it?

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What can we do

Identity theft continues to be the #1 cause of breaches as users don't control their own data

Replace analogue identity docs with digital identities secured by biometrics and distributed ledgers

Interfacing with passwords and Onboarding /offboarding users costs more & more time and money

Eliminate usernames and passwords entirely. Use Verifiable Credentials tied to Digital Identities instead
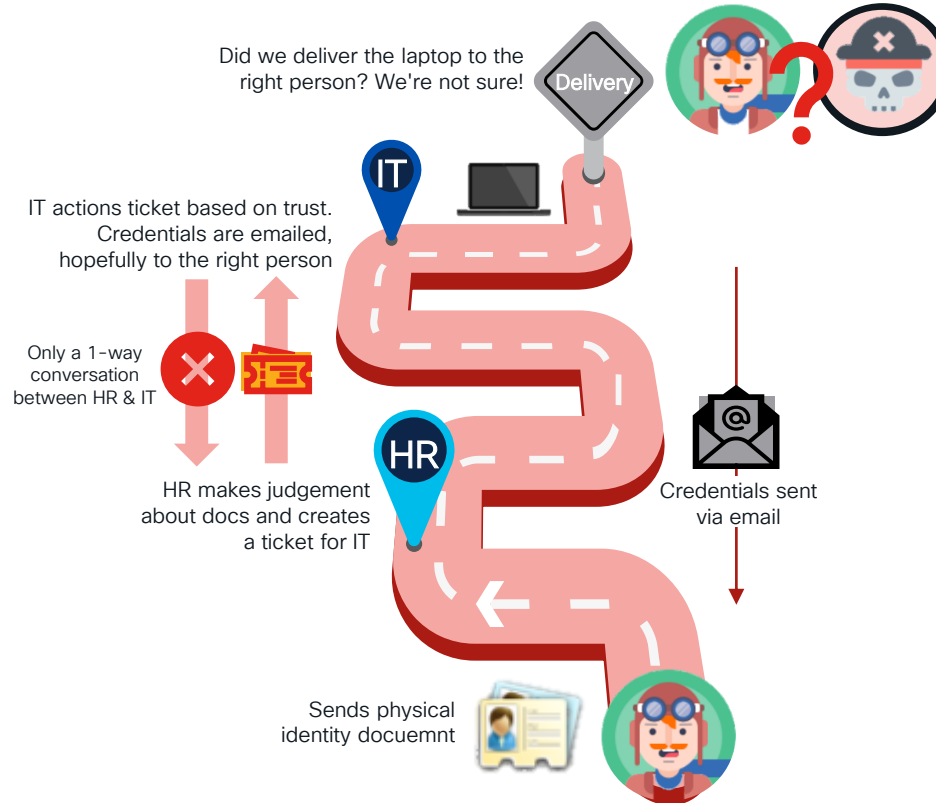

Single points of failure in identity systems can cause productivity and sensitive data loss

Decentralize infrastructure allowing for redundancy in accessing the most important business applications, and verifiying without direct connectivity

How Will Things Change?

Jill onboards at ACME- Today

Did we deliver the laptop to the right person? We're not sure!

Delivery

IT actions ticket based on trust. Credentials are emailed, hopefully to the right person

Only a 1-way conversation between HR & IT

IT

HR makes judgement about docs and creates a ticket for IT

HR

Credentials sent via email

Sends physical identity docuemnt

Jill onboards at ACME- Tomorrow
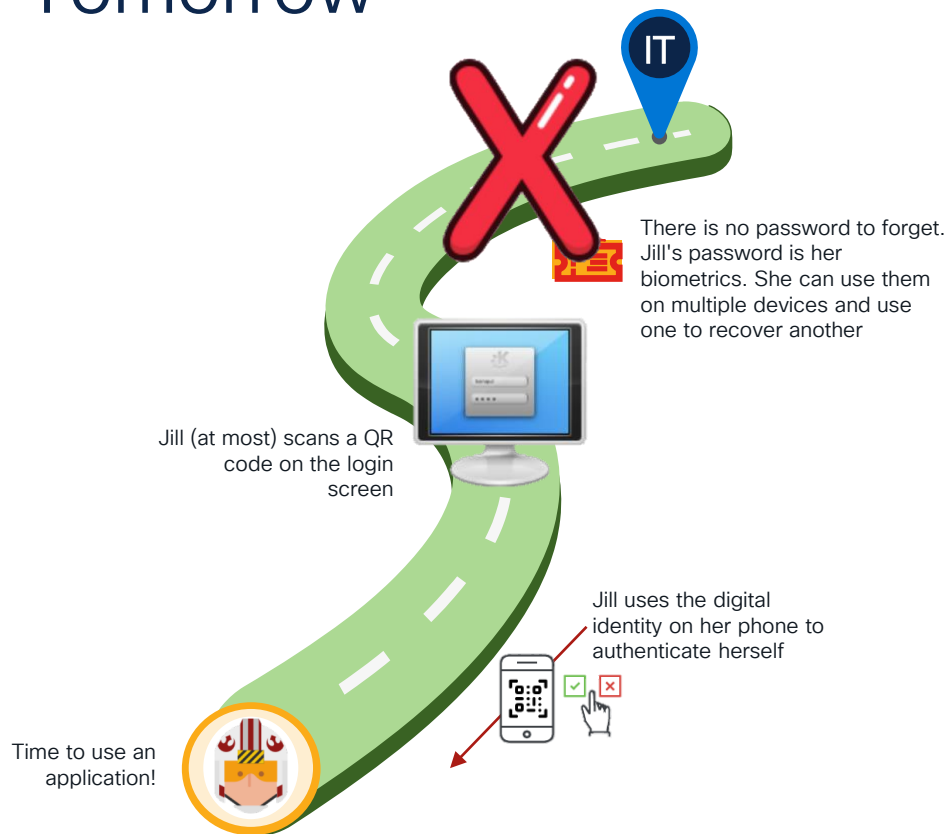
Did we deliver the laptop to the right person? YES!

Delivery

IT can cryptographically verify the user throughout the whole process

IT

HR verifies identity on a distributed ledger

HR

Credentials sent via push

Sends digital identity

Jill logs in-Today

If Jill forgets her password, IT must help her reset. This costs time and money

Jill must enter her username and password first

Passwords are vulnerable so MFA is a must!

Time to use an application!

Jill logs in-Tomorrow

IT

There is no password to forget. Jill's password is her biometrics. She can use them on multiple devices and use one to recover another

Jill (at most) scans a QR code on the login screen

Jill uses the digital identity on her phone to authenticate herself

Time to use an application!

How does it work?

Digital Identity Basics – The Old Way

Service provider must make a value judgement as to the authenticity of the ID based on appearance and on trust in the issuer

Service Provider

Physical Identity

Implicit trust in the issuing authority and underlying governance

Government Legislature

Licensing authority
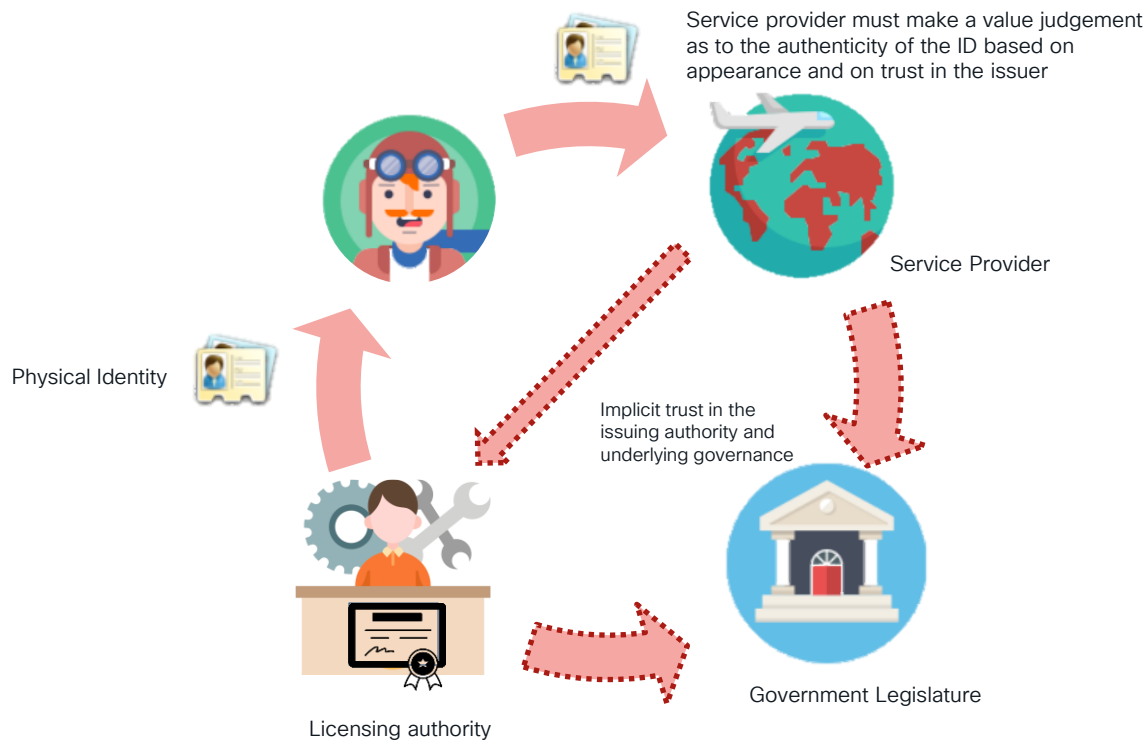
Digital Identity Basics – The New Way

Service provider can crytographically verify the identity and any other claims within

Service Provider

Digital Identity

Implicit trust
in the issuing authority &
underlying governance

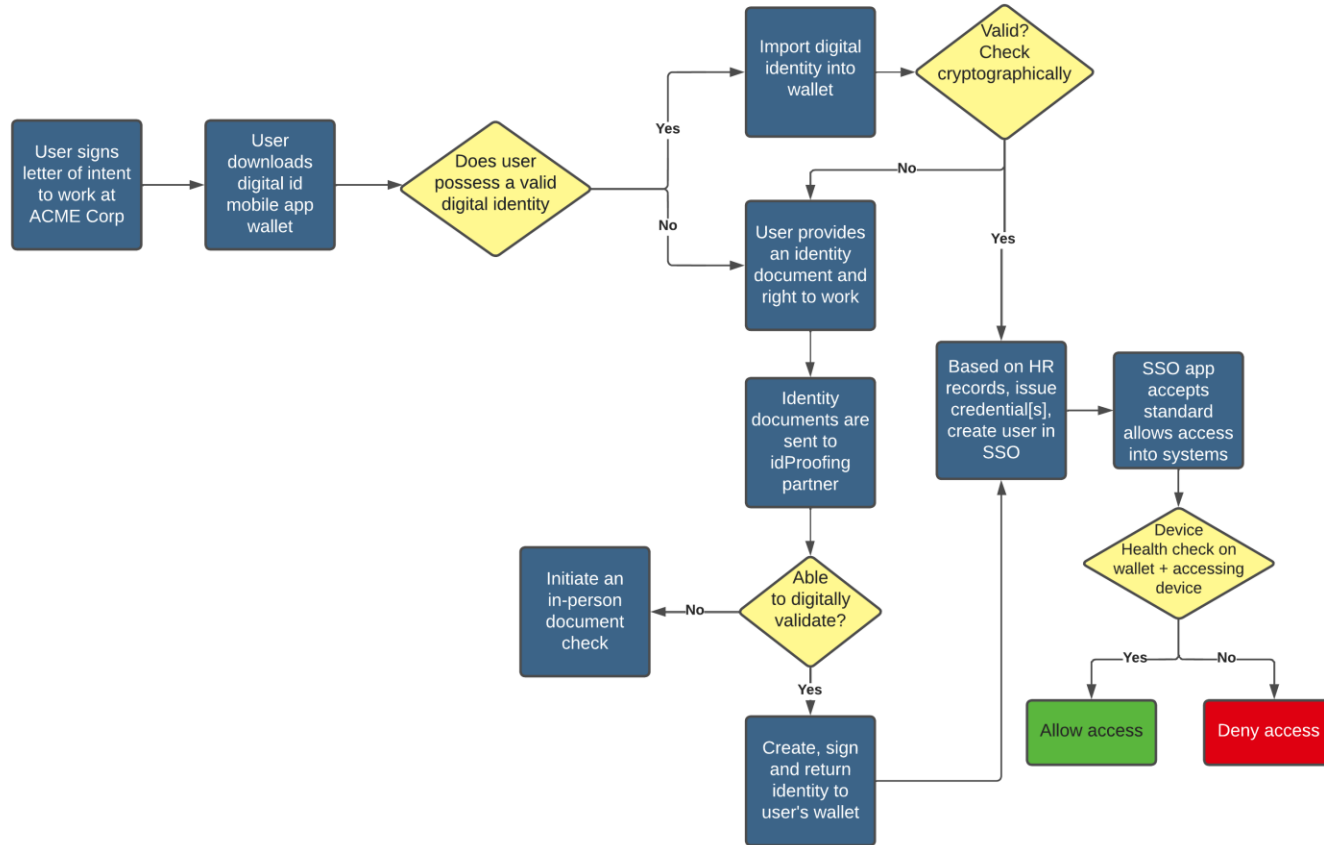Government Legislature

Licensing authority or
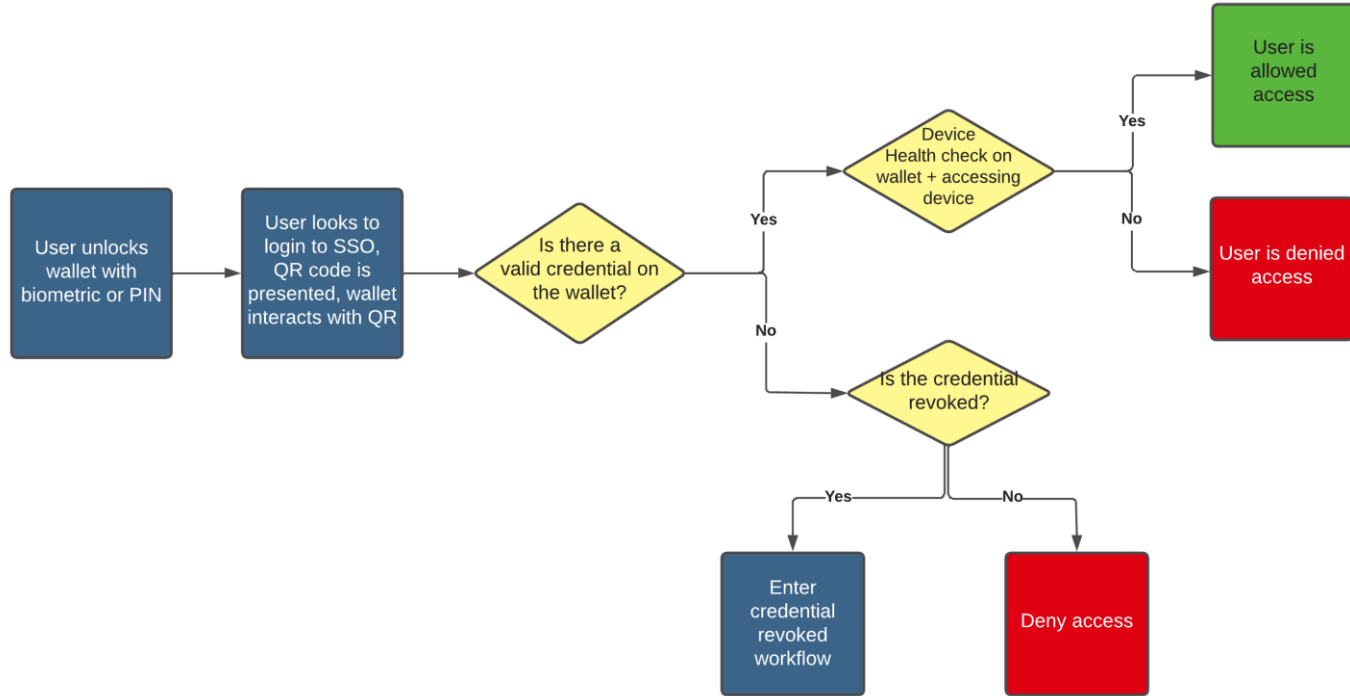other trusted issuer
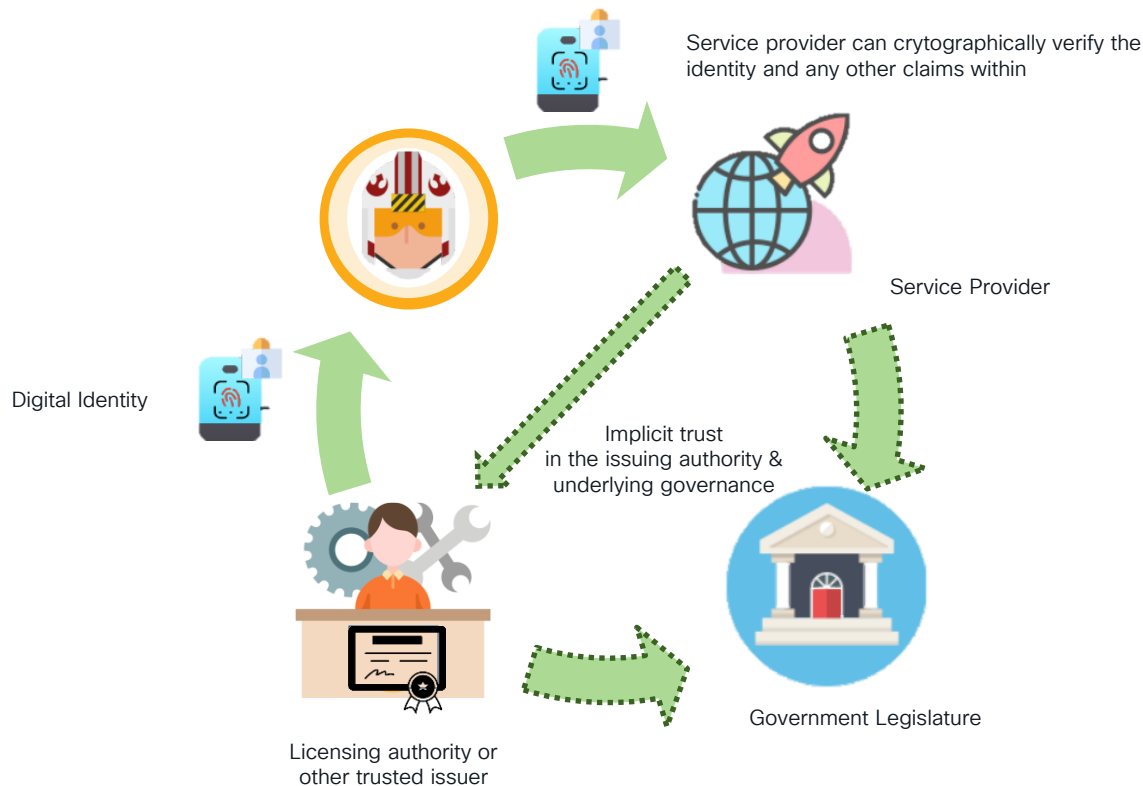
Digital Identity Basics – A Little Deeper
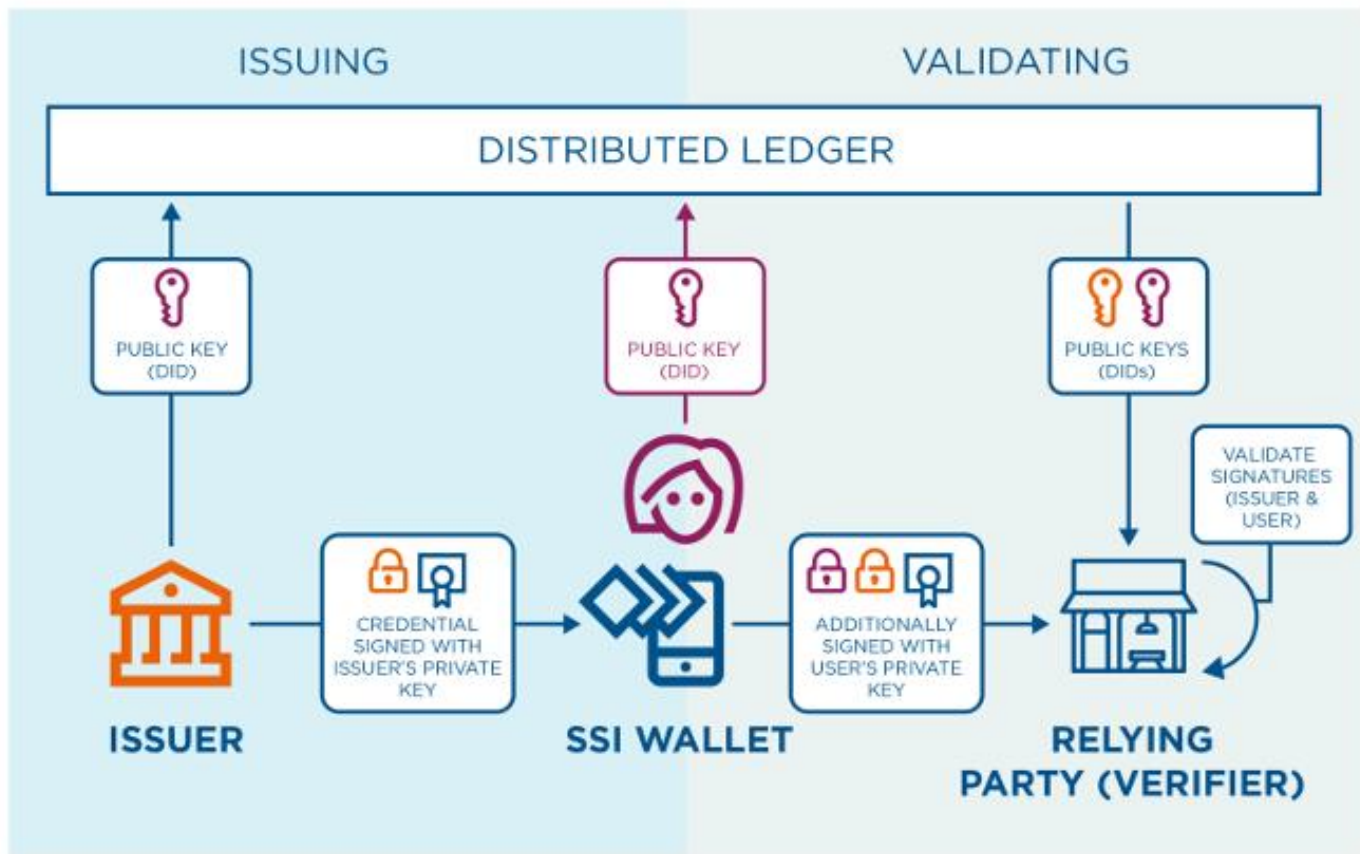
Onboarding Flow

Login Flow

The Challenges

The Challenges

Chicken and egg: widespread adoption vs interoperability

Government involvement: A trusted source without being a controlling force

Distributed Ledger: Scalability – Solve at Layer 1 or Layer 2?

Build public trust in the solutions

Public or private distributed ledger: If private, tokenomics of maintaining a network of sufficient size to prevent a 51% attack

Future proofing: Quantum safety on immutable ledgers

Next Steps

More on Digital Identity

- TrustOverIP – trustoverip.org

- Decentralised Identity Foundation (DIF)

- Interplanetary Filesystem– https://ipfs.io

Technical Session Surveys

- Attendees who fill out a minimum of four session surveys and the overall event survey will get Cisco Live branded socks!

- Attendees will also earn 100 points in the Cisco Live Game for every survey completed.

- These points help you get on the leaderboard and increase your chances of winning daily and grand prizes.

Security Reference Architecture

CISCO SECURE

TALOS — Threat Intelligence | Malware Analytics | Actionable Intelligence | Unmatched Visibility | Collective Responses

Security Operations

- ⚠️ Managed Detection and Response Services
- 🌐 Security, Orchestration, Automation and Response
- 🚑 Incident Response and Remediation Services

SECURE X (XDR)

- 🎯 Threat Visibility & Hunting
- Device Insights
- 🛡️ Kenna Vuln Mgmt
- ☁️ Secure Cloud Insights
- 🔄 3rd Party Integrations

User/Device Security

ZERO TRUST

Adaptive MFA | Passwordless | Trust

- Duo Secure Access
- Secure E-mail

SASE/REMOTE WORKER

Unified Client | EDR | Cloud Managed

Cisco Secure Client
- VPN
- Posture
- Telemetry
- Threat
- Query

ThousandEyes (Visibility)

Device Mgmt
Meraki SM OS, App Control

Network Security

Cloud Edge

SECURE ACCESS SERVICE EDGE (SASE)	ZERO TRUST	PRIVATE CLOUD EDGE (MSP or CUSTOMER)

Threat Protection | Secure Access Control | Managed Remote Access   Reliable | Scalable | Flexible

Umbrella/Duo
- ZTNA
- DNS-layer security
- Secure web gateway
- L7 firewall + IPS
- Cloud access security broker/ shadow IT
- RAaaS
- SSL decryption
- Remote browser Isolation
- Data loss prevention
- Cloud malware detection

SDWAN
- Cisco Meraki SDWAN
- SDWAN by Viptela
- Secure Firewall
- ThousandEyes
- Cloud DDoS,WAF

On-Premises

SASE/SDWAN	ZERO TRUST

Scalable | Flexible | Visibility | Comprehensive Security   Segmentation | Identity and Context | Profiling | Containment | Encrypted Visibility

- Network Edge
- Cisco Meraki SDWAN
- SDWAN by Viptela
- Secure Firewall
- ThousandEyes

Security Analytics and Logging — Secure Firewall — DuoCloud SSO+IDP — Network Gateway

Secure DDoS — Cisco Meraki Full Stack — Secure Network Analytics — ISE TrustSec — Cisco DNA Center
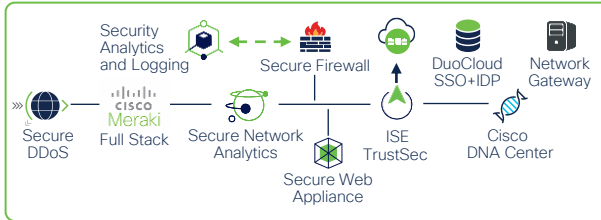
Secure Web Appliance

IoT/OT SECURITY
Secure Critical Infrastructure | Unified IT and OT
- Industrial Router
- Industrial Firewall
- Industrial Switch/AP
- Cyber Vision
- ISE TrustSec

Application Security

ZERO TRUST

Policy | API Security
Application Segmentation
Run-time Application Security

Application Security Stack
- SCN Cloud Native Security
- APIC
- Secure Workload
- Secure Application by AppDynamics

App Observability | Detection | Response

- Hybrid Private Cloud
- Public Cloud
- Secure Cloud Analytics
- Secure Firewall
- ThousandEyes
- Secure DDoS, WAF/Bot

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Intensive team & individual automation and technology training programs

Cisco Learning Partner Program
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Accelerated curriculum of product, technology, and certification courses

Certify

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Award-winning certification program empowers students and IT Professionals to advance their technical careers
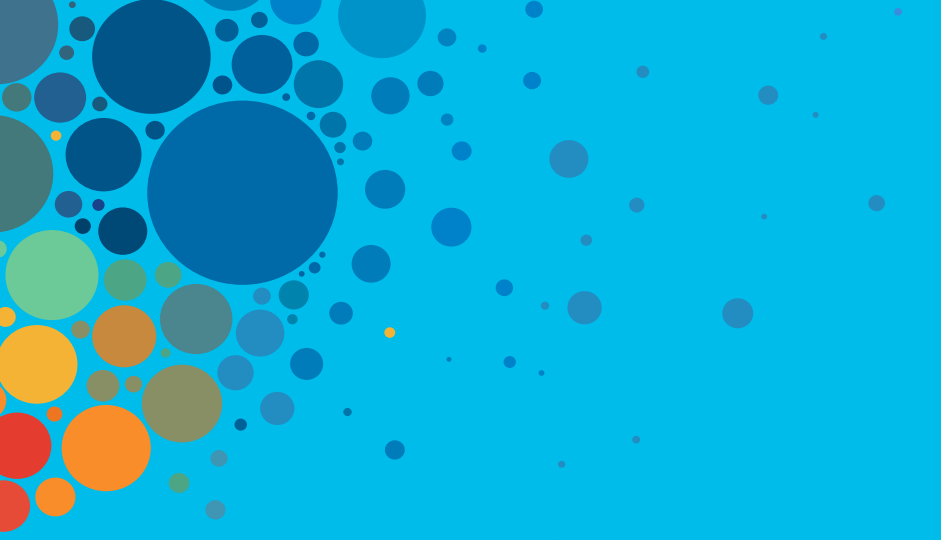
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Thank you

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