



KubeCon



CloudNativeCon

Europe 2022

SPIRE: Intro & Deep Dive Into Windows Support

Marcos Yacob, HPE

Agustín Martínez Fayó, HPE



Agenda

- Introduction to SPIRE
 - SPIFFE Overview
 - Architecture
 - Adoption
- Windows support
 - SPIRE on Windows, what's the difference?
 - Development experience
 - Demo!

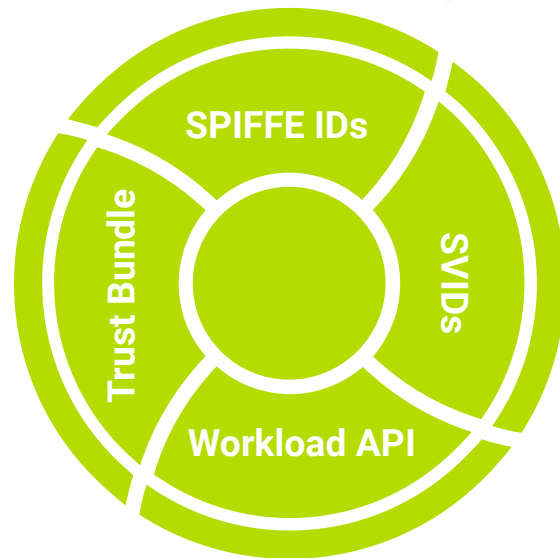


SPIFFE Overview

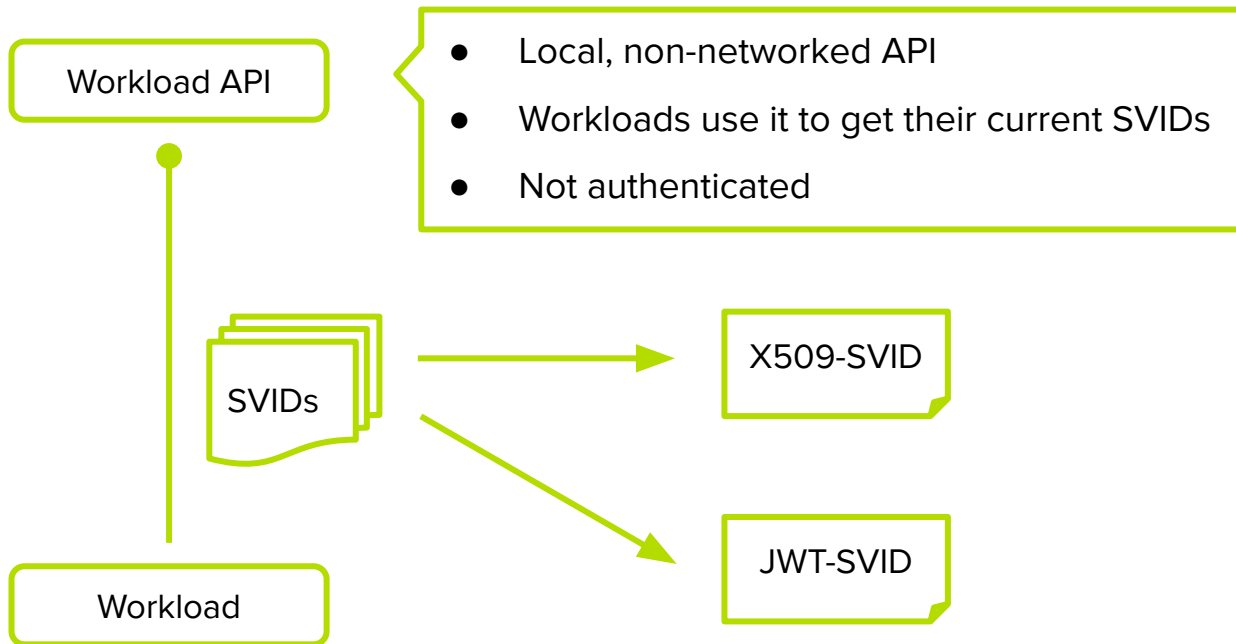
- Set of open-source standards
 - Securely identify workloads in dynamic and heterogeneous environments
- SPIFFE ID
 - How a software service's name (or identity) is represented

`spiffe://example.org/service`

scheme trust domain workload



SPIFFE Overview

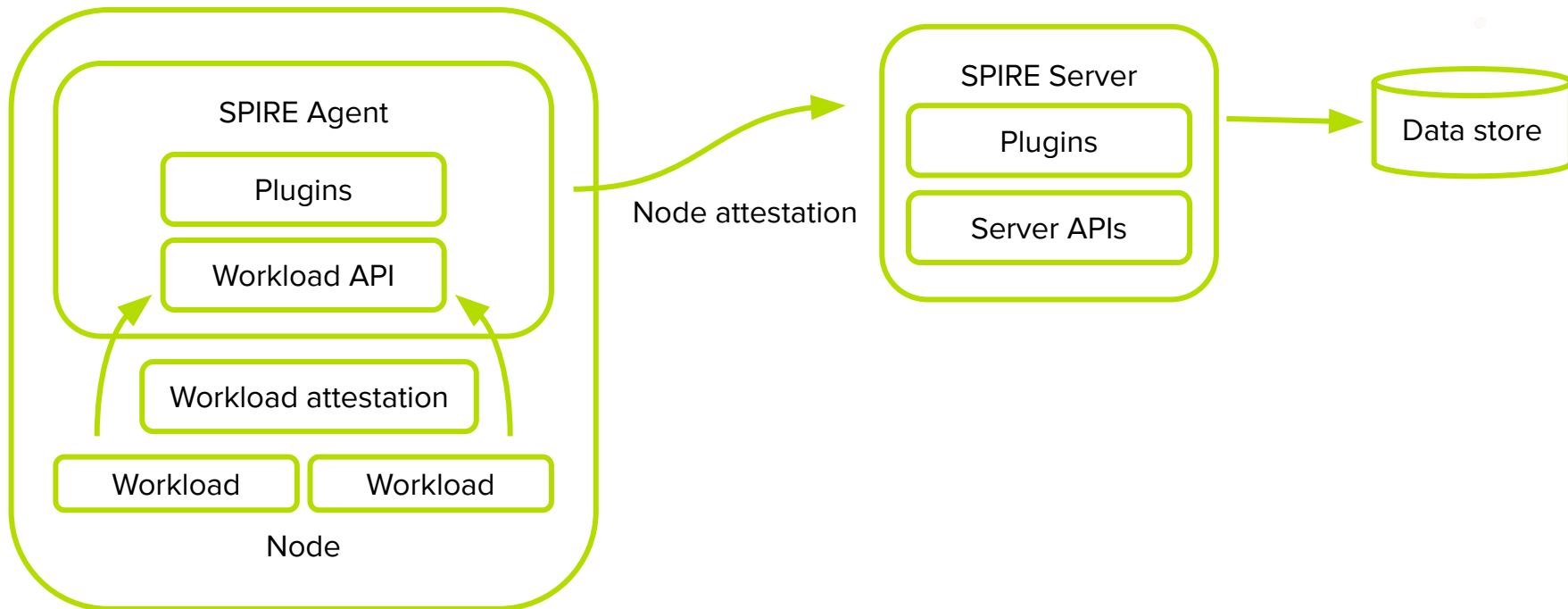


SPIRE

- Open-source implementation of the SPIFFE standards
- Issue SVIDs to the workloads
 - Node attestation
 - Workload attestation
- There are two main components
 - SPIRE Server
 - SPIRE Agent



SPIRE - Architecture



SPIRE - Adoption

- Issue platform-agnostic cryptographic identities in an automated way
- Establish trust between software systems across a wide variety of hosting platforms
- Manage platform and workload attestation
- Coordinate certificate issuance and rotation
- Adopters of SPIRE

<https://github.com/spiffe/spire/blob/main/ADOPTERS.md>



SPIRE on Windows

- Windows support is being introduced as an experimental feature
 - Expected changes impacting the user experience and functionality
- Both the server and the agent can now run on Windows
- Plugins adapted to work under Windows
 - New Windows workload attester to attest workloads with Windows-specific attributes
 - Updated Docker workload attester



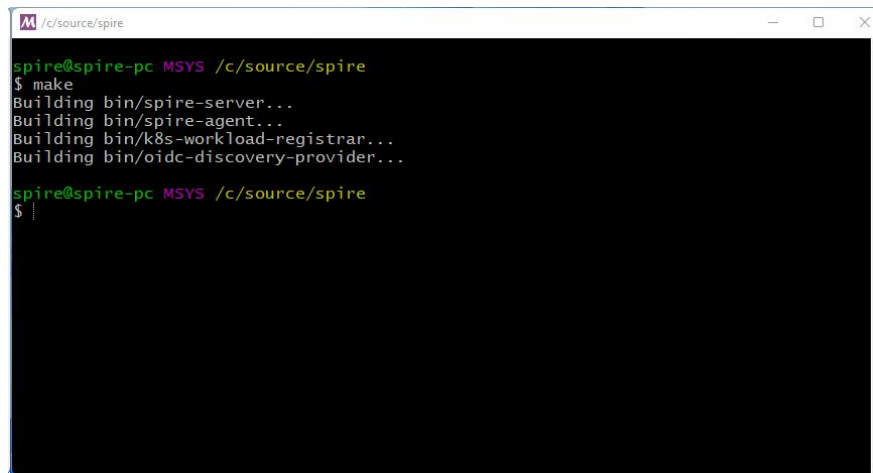
SPIRE on Windows

- Running SPIRE on Windows is very similar to run it on Linux
 - No configuration changes are needed, except for settings related with platform-specific features
- Use of named pipes instead of Unix Domain Sockets (UDS)



SPIRE on Windows - Development

- We recommend to use the MSYS2 building platform
- Building SPIRE on Windows has the same experience as Linux
 - Same Makefile is used, taking care of installing the required toolchain as needed



```
/c/source/spire
spire@spire-pc MSYS /c/source/spire
$ make
Building bin/spire-server...
Building bin/spire-agent...
Building bin/k8s-workload-registrar...
Building bin/oidc-discovery-provider...

spire@spire-pc MSYS /c/source/spire
$ |
```



SPIRE on Windows - Demo!

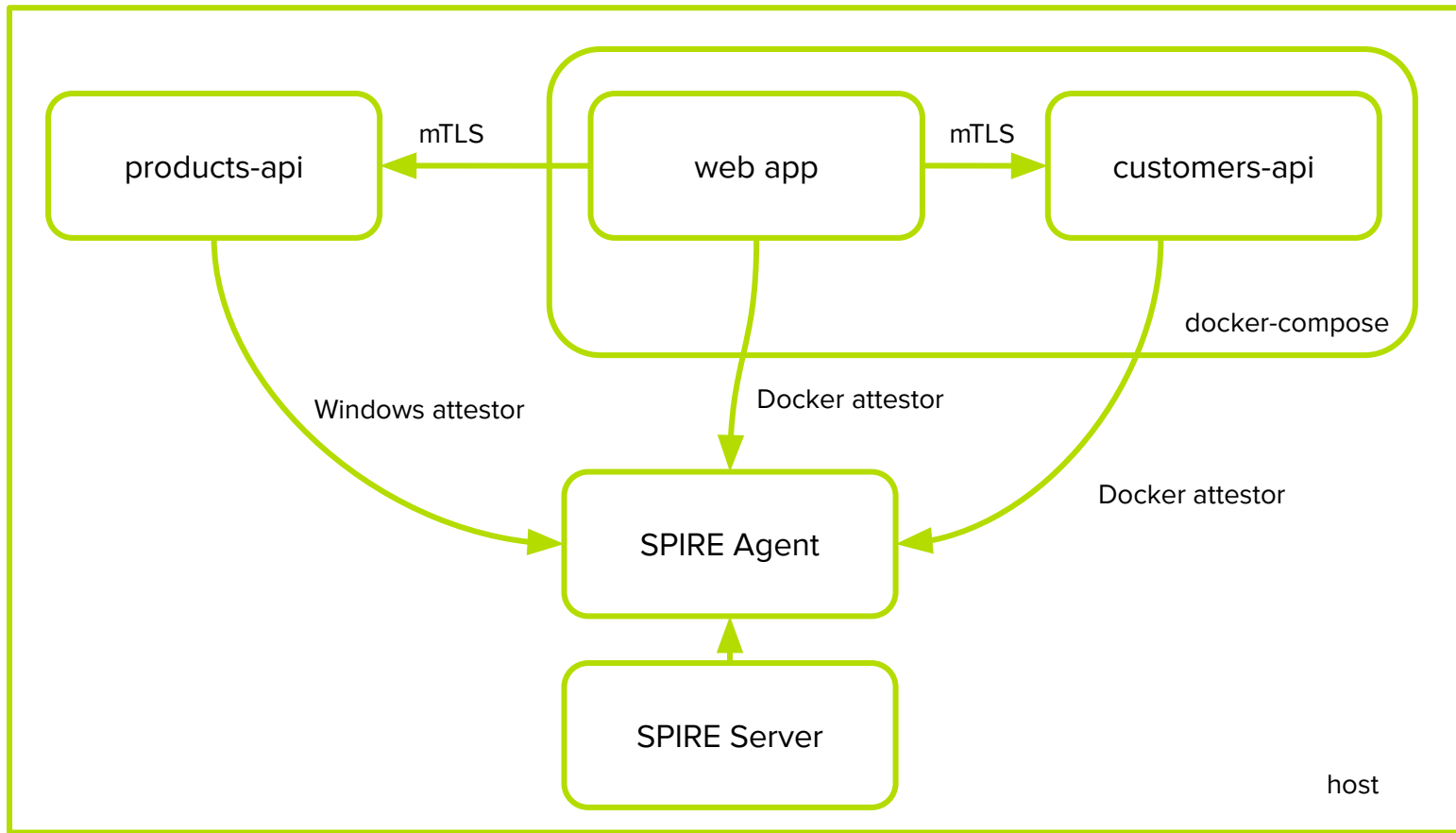


KubeCon



CloudNativeCon

Europe 2022



Join our community!

 spiffe.slack.com

@Marcos Yacob

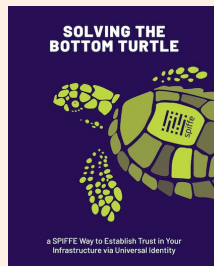
@agustin

 spiffe.io

 github.com/spiffe/spiffe

 github.com/spiffe/spire

 github.com/MarcosDY/windows-demo



spiffe.io/book





KubeCon



CloudNativeCon

Europe 2022

Thank you!

