

HYPERLEDGER AVALON 2020 ROADMAP

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HYPERLEDGER AVALON ROADMAP FOR 2020

Q1 2020

Q2 2020

Q3 2020

Q4 2020

Release 0.5 Finalize Developer Facing Baseline Functionality

- Improved direct model
- Proxy model: Ethereum integration
- Proxy model: Fabric integration
- App developer tutorial update
- Baseline external data access
- LibOS runtime evaluation
- K8S evaluation for orchestration
- Avalon Architecture update

Release 0.6 Basic Worker Pools

- Baseline worker pools
- Static worker allocation
- Key management isolation
- Single key manager per pool
- Reconcile DLT connectors
- Refactor and finalize the repo
- Expand usage examples
- LibOS runtime integration POC

Release 0.7 Scalable Worker Pools

- K8S orchestration engine integration
- Elastic workorder scheduling
- Scalable key management
- 3rd party attestation (DCAP)
- Multi-tenancy support
- External data source access
- Expand usage examples
- LibOS & other runtimes integration

Release 0.8 Performance & Robustness

- E2E performance tuning
- Flexible workorder scheduling
- Configurable policies
- Persistent state support
- Expanded test coverage, CI/CD
- Addressing corner cases
- Split SDK from the core repo
- Documentation clean up

Focus on the community ramp-up and enabling key use cases

Isolate Work Order Execution from Key Management

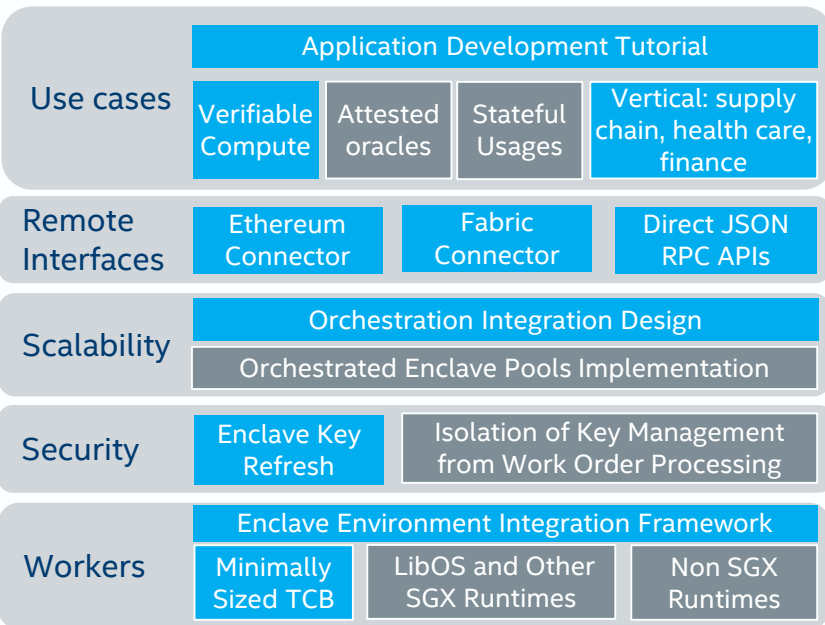
Deliver Elastic Scalability and a Broader Runtime Support

Focusing on product worthy state and Hyperledger Active status

Release 0.5 Core Objectives

- Get direct and proxy (Ethereum and Fabric) models functional
- Evaluate options for building up Avalon capabilities and update the architecture
- Present Avalon Workshop at HL Global Forum and build up Avalon community

Avalon Capability Stack



Release 0.5 contents

- Expand and improve Avalon application development tutorial
- Enhance verifiable compute use cases for HLGf (e.g. supply chain)
- Direct model finalized
- Integration with Ethereum and Fabric
- Kubernetes based work flow orchestration design
- Worker key refresh policy
- HL Avalon crypto protocols design
- Deliver framework for enclave environment integration
- Baseline external data access from the SGX TEE

Legend:

Intel contribution

Not in 0.5 scope

Release 0.6 Core Objectives

- Isolate worker key management from workorder execution
- Deliver initial scalable worker pool implementation (not including elastic compute)
- Consolidated DLT connectors and improve overall repository structure

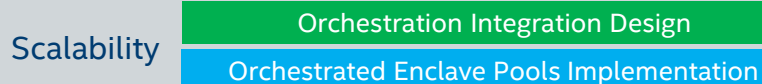
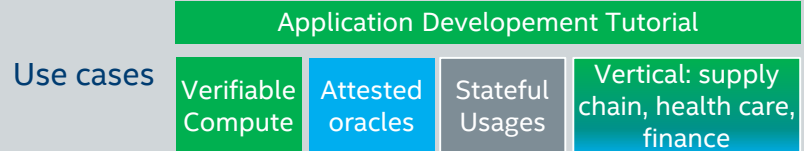
Legend:

Intel contribution

Previously Completed

Not in 0.6 scope

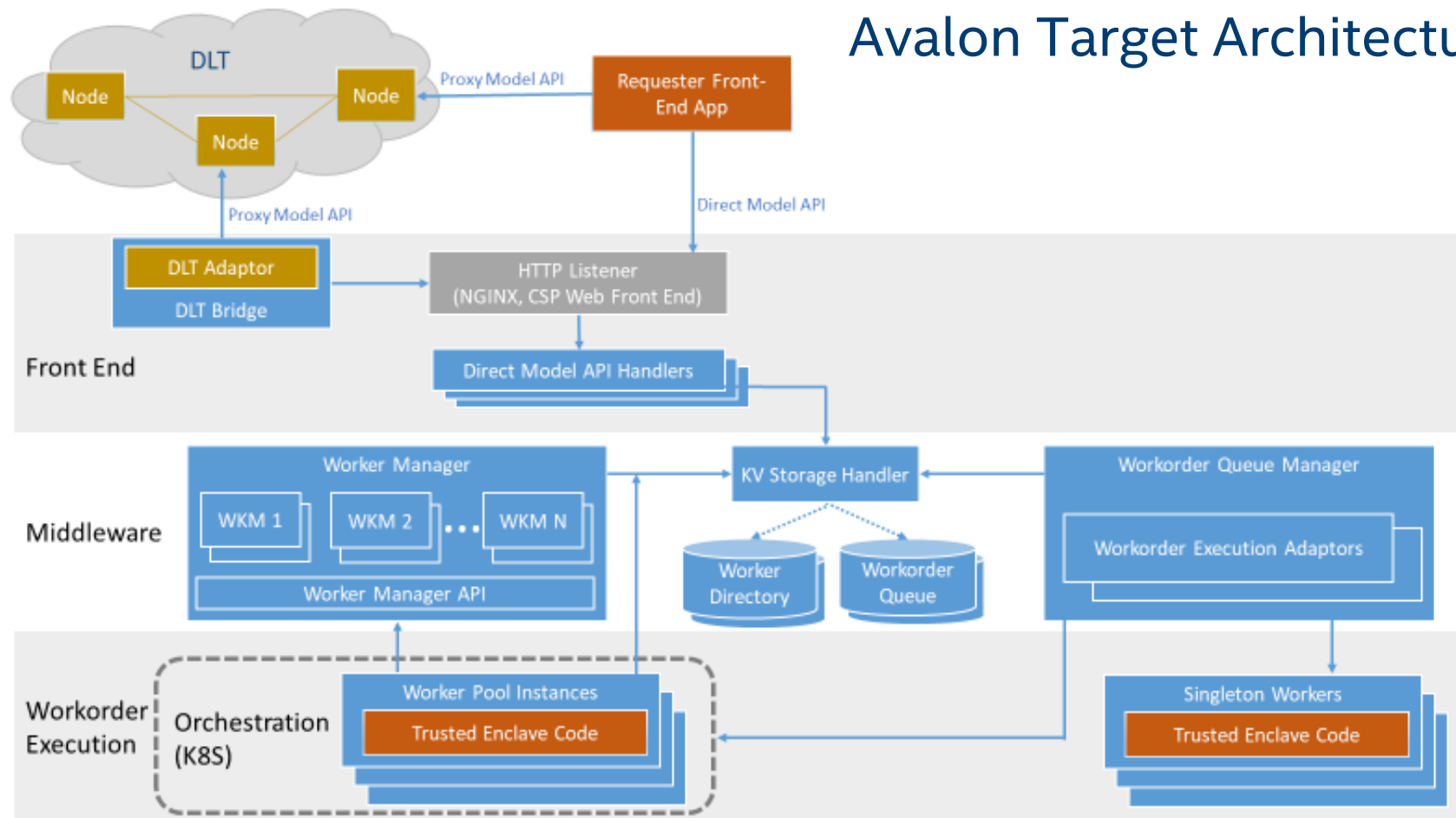
Avalon Capability Stack



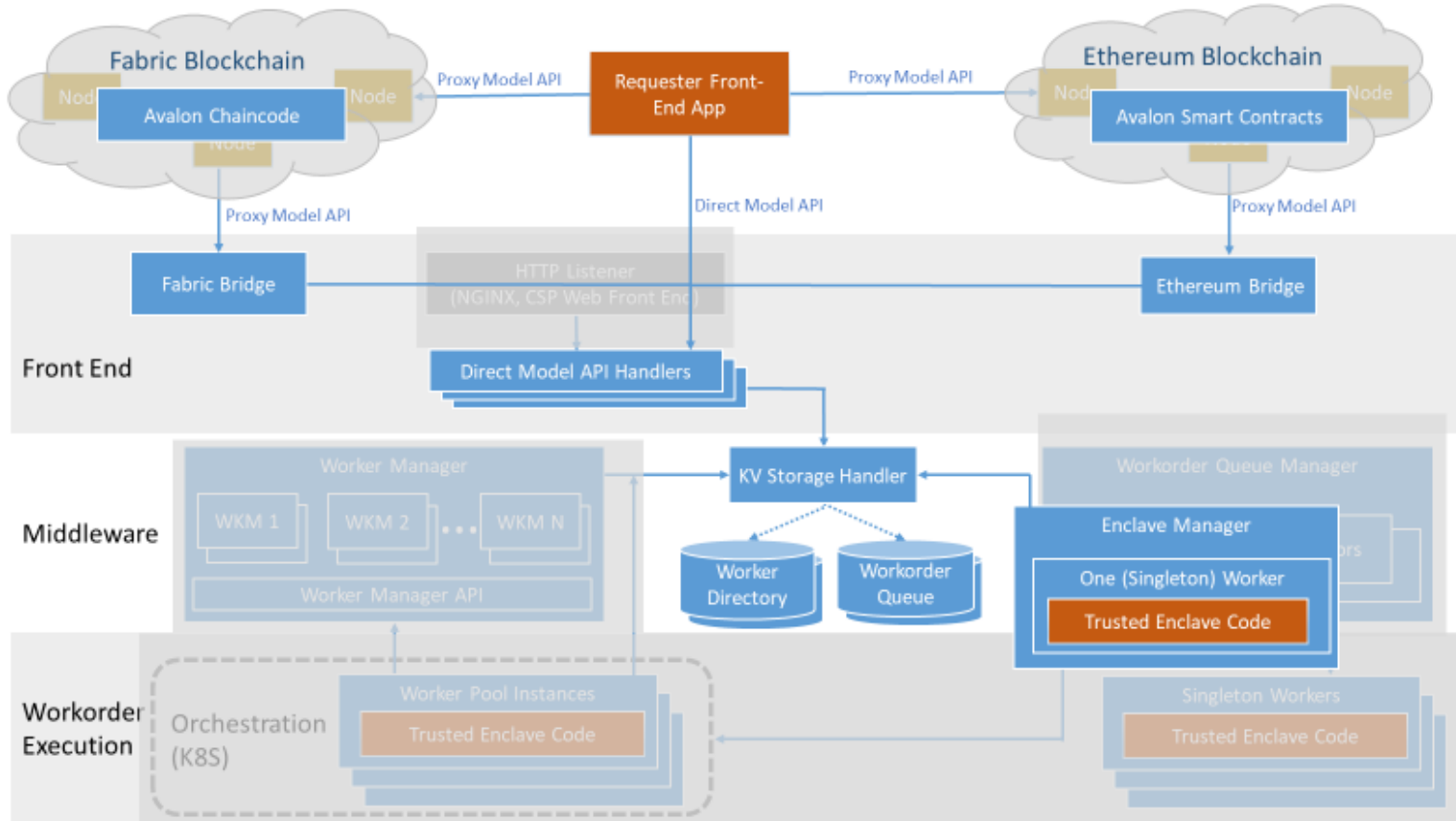
Release 0.6 contents

- Attested Oracle usage
- Blockchain connector code clean
- Complete K8S based work flow orchestration design
- Deliver initial worker pool implementation (without elastic scaling)
- Deliver Worker Pool Key separation (without KME replication)
- Prototype LibOS runtimes integration

Avalon Target Architecture



Avalon 0.5 Architecture



Avalon 0.6 Architecture

