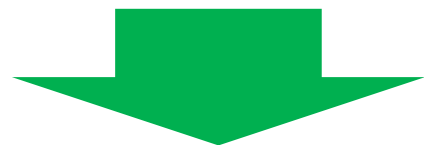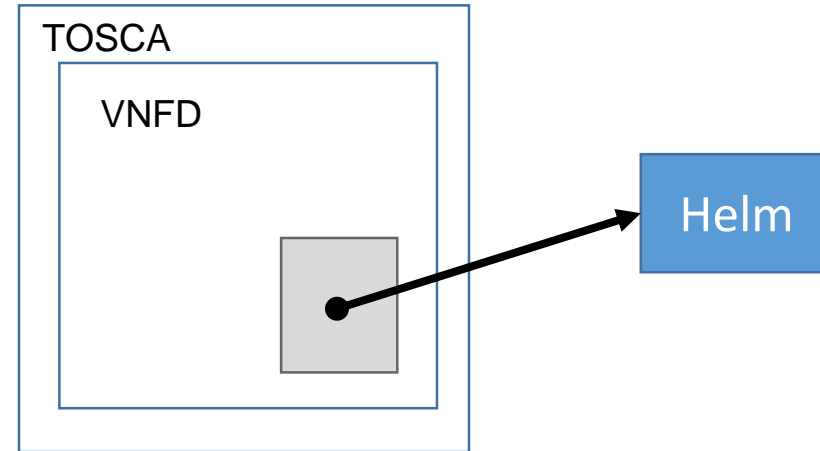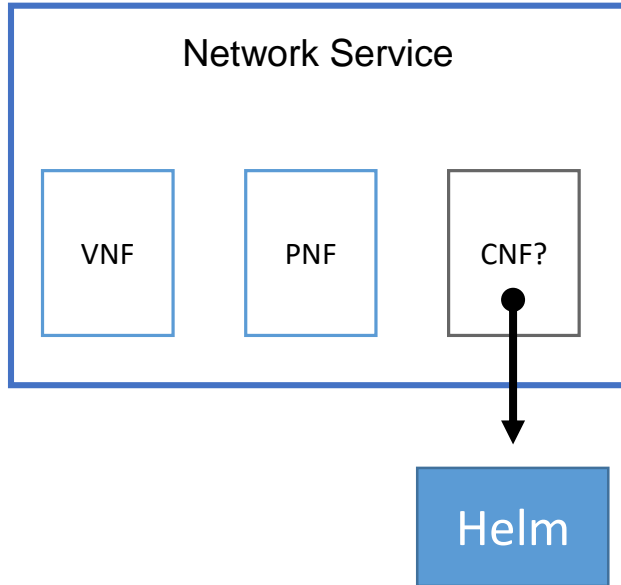# REQ-341 – CNFO – Next Steppingstones Towards CNF In Production Deployments

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Seshu Kumar M (Huawei)

14.10.2020

ONAP - ETSI CNF model Alignment

ONAP
OPEN NETWORK AUTOMATION PLATFORM

E2E Service

ETSI
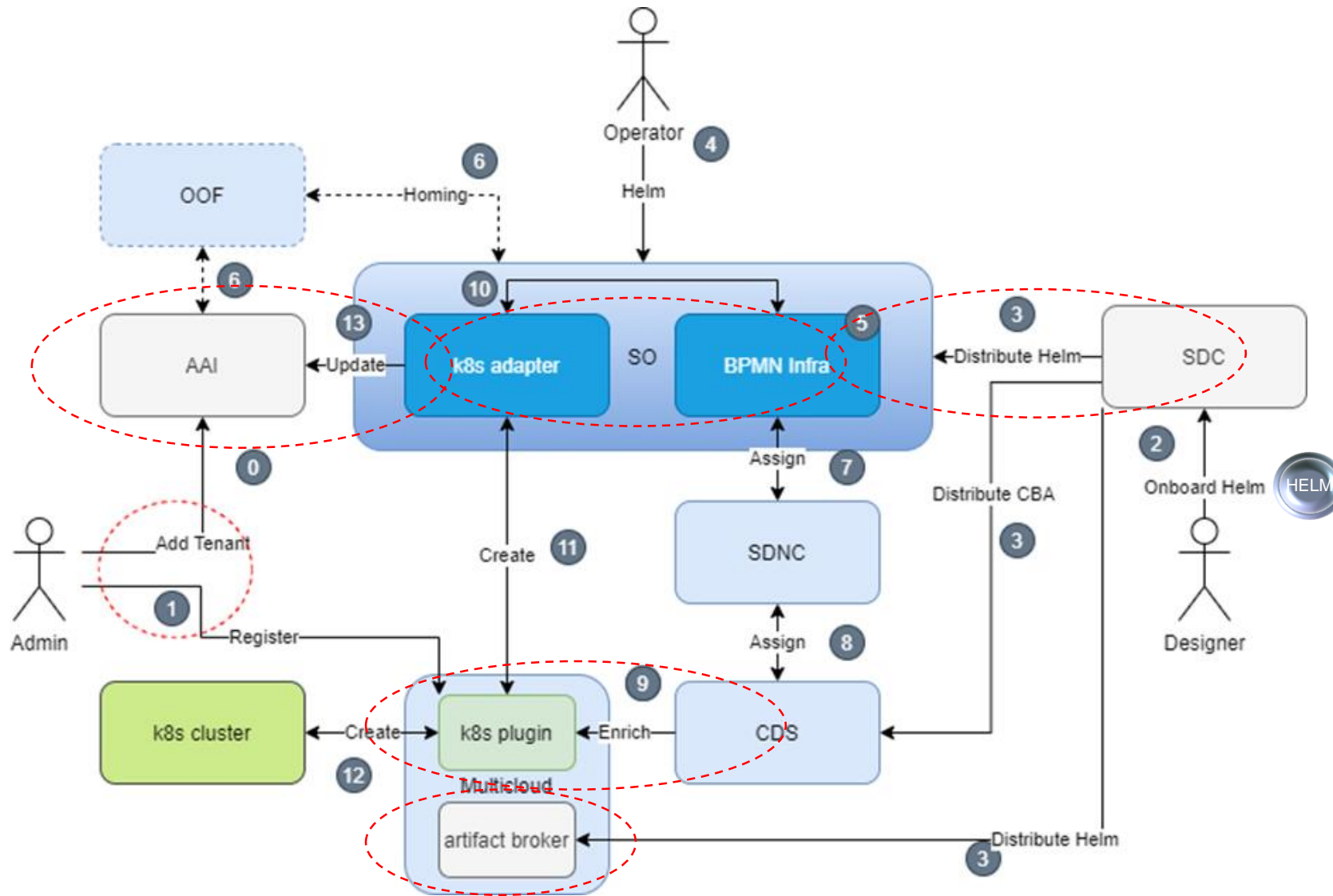
Network Service

VNF   PNF   CNF?

Helm

TOSCA

VNFD

Helm

Integration of Native (K8s Adapter) with
ETSi (SOL003 Adapter) paths in SO

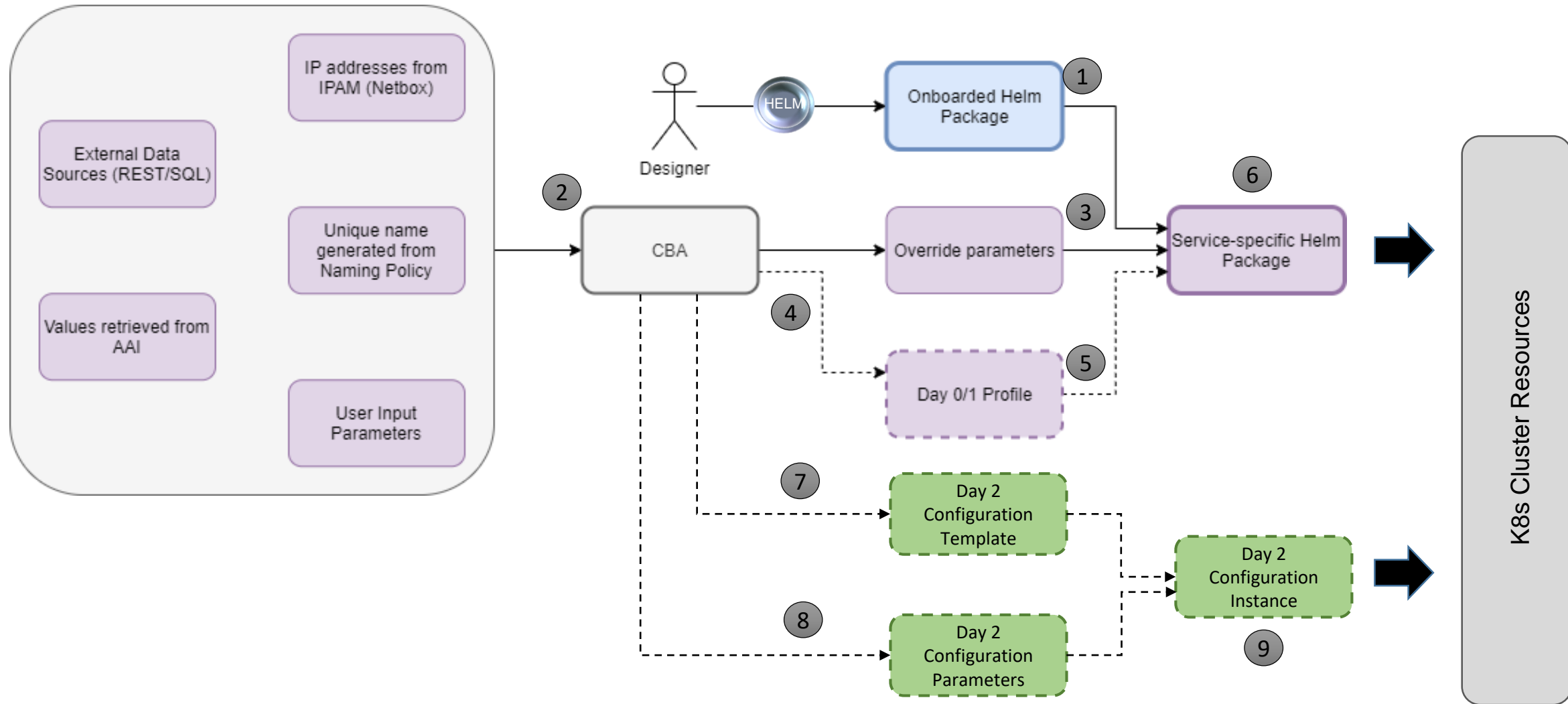Design/AAI CNF
Model

How the ETSI CNF
AAI model will look?

Focus on Native Day2 Operations

- AAI model changes
- SO AAI Data Update
- SO CNF Status
- SDC Distribution
- Helm Validation
- K8s Plugin – v2 APIs
- Native Day2 for CNF in CDS
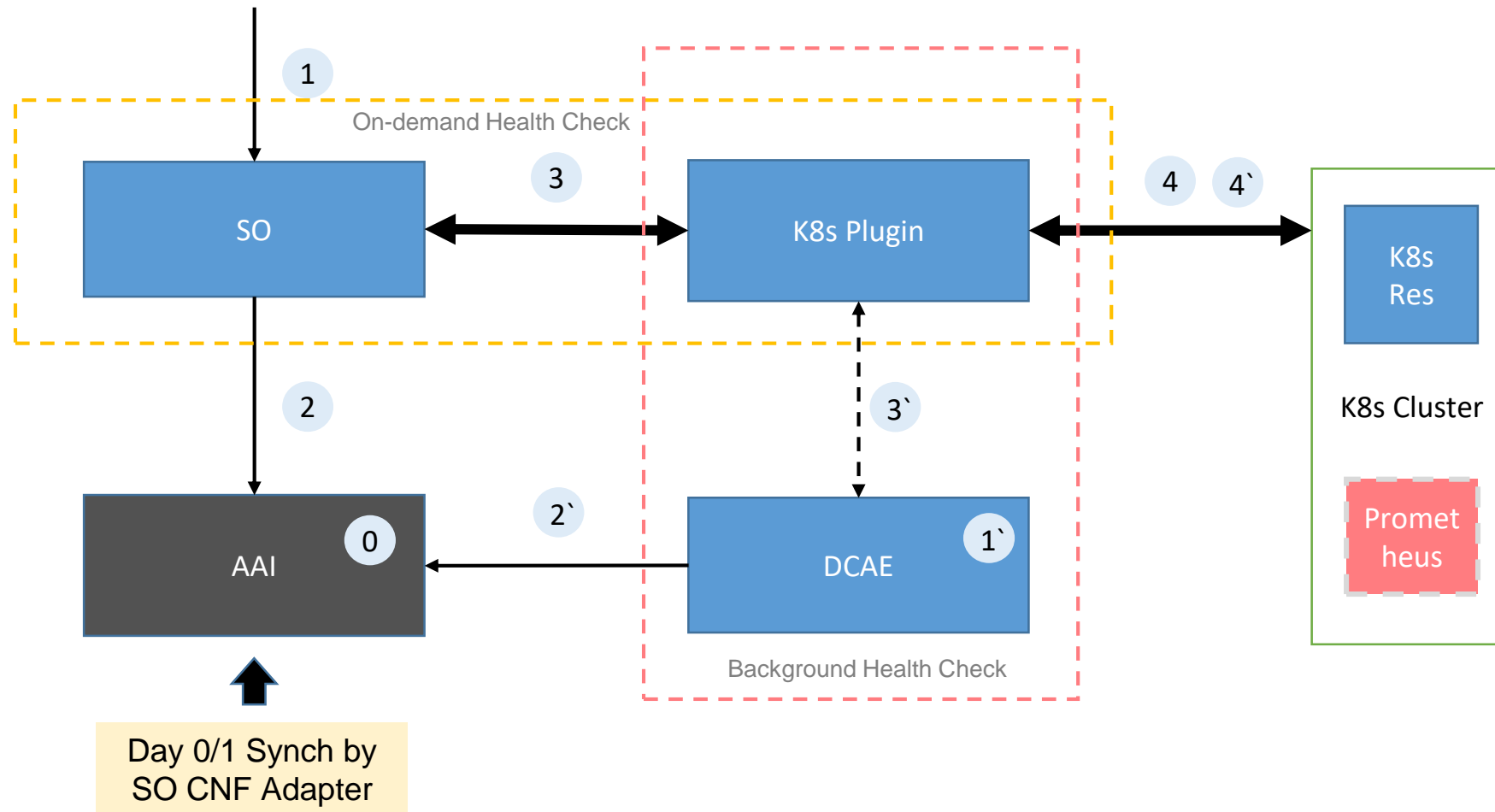
On-Demand CNF Health Check – Challenge

CNF Healtcheck Workflow in SO

CNF Status Check → CNF Health Check

?

K8s Cluster APP NS

K8S Resources

K8S Application (RB Instance)

K8s Cluster ONAP NS

Status Handler   **K8s Plugin**

K8s API
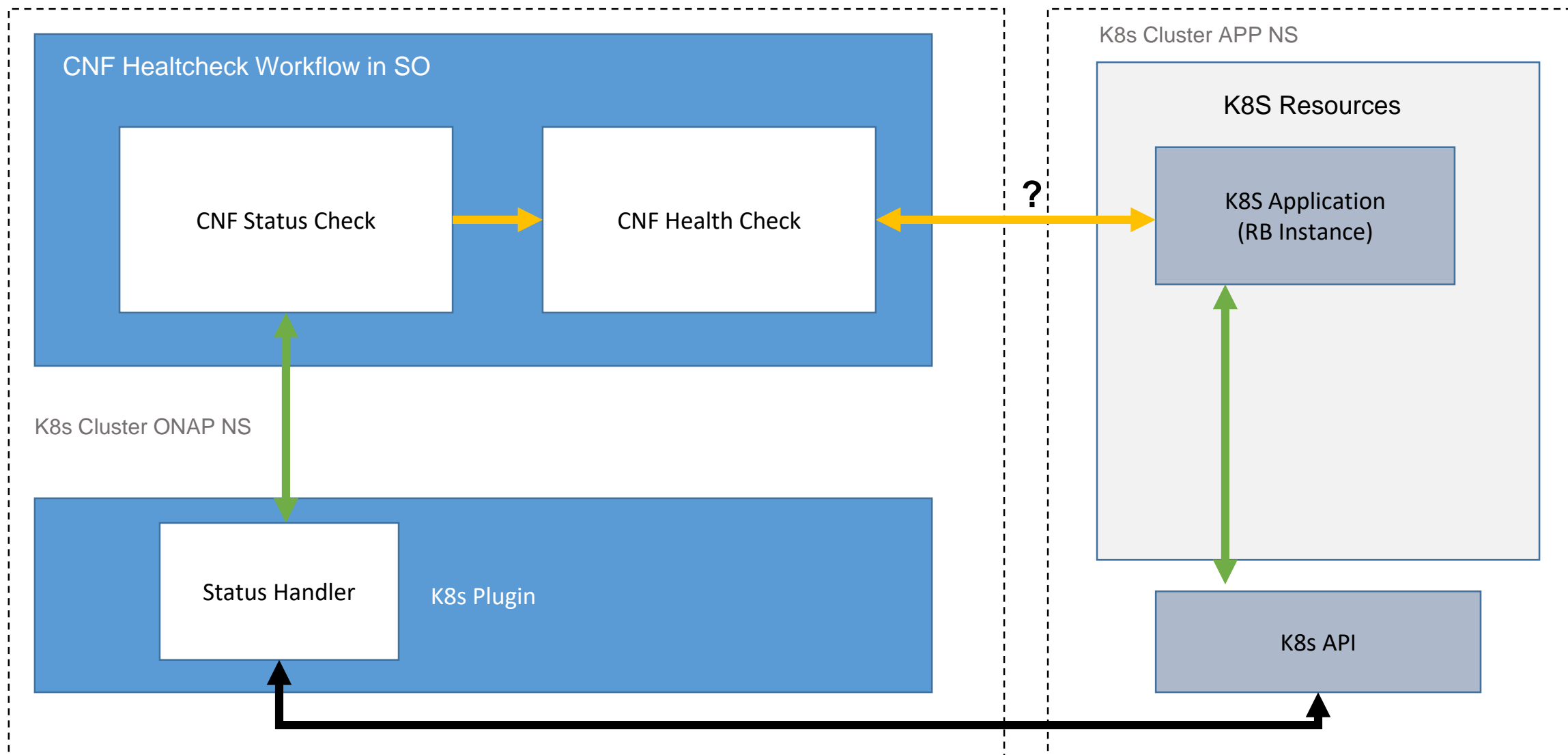
On-Demand CNF Health Check – Proposal

CNF Healtcheck Workflow in SO

CNF Status Check → CNF Health Check

K8s Cluster ONAP NS

Status Handler

K8s Plugin

Configuration Handler

K8s Cluster APP NS

K8S Resources

K8S Application (RB Instance)

Health Check Job

K8s API
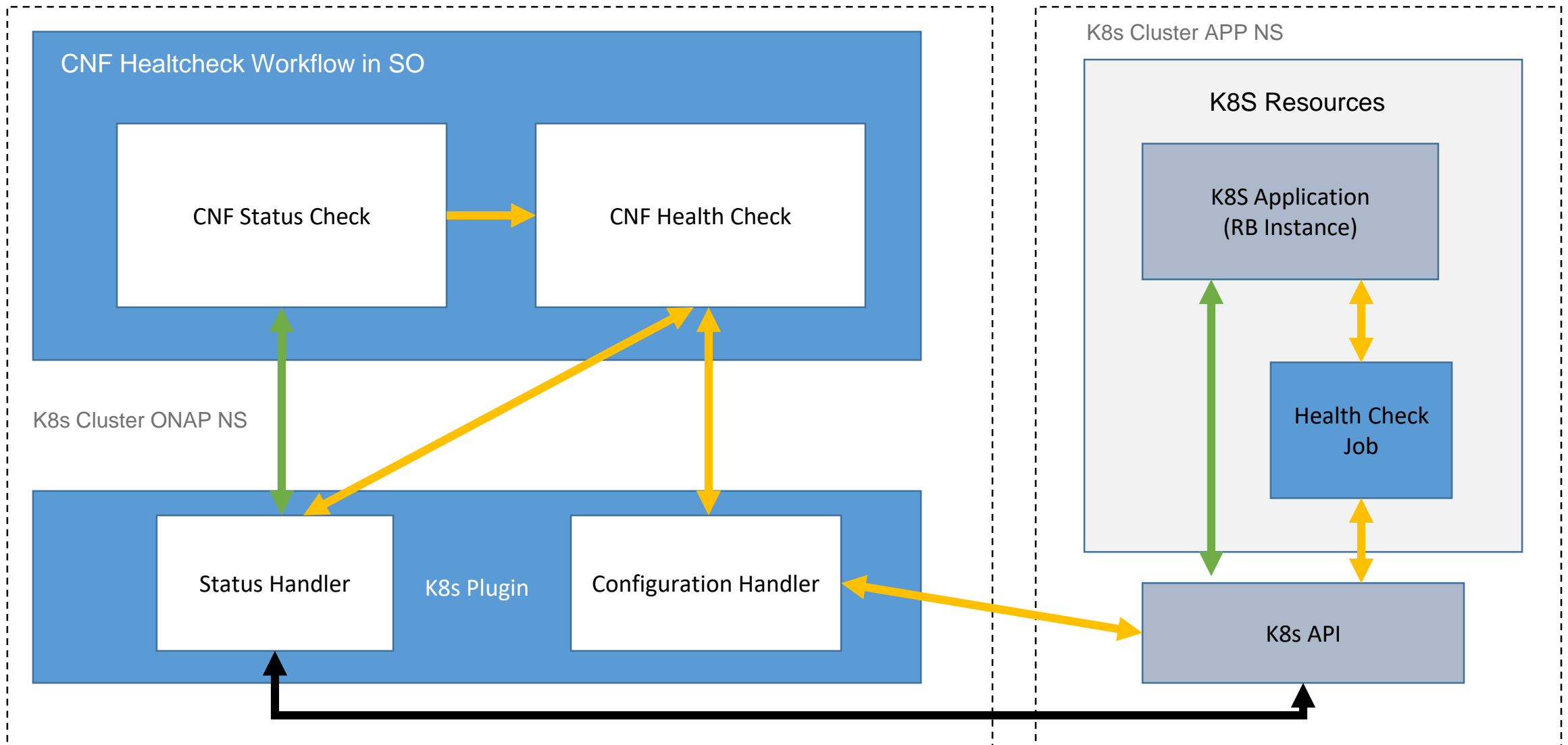
- SDC Enhancements

  - Continuation of native Helm support changes

  - Helm validation [stretch]

- AAI model changes

  - K8s resource type created from helm package -> similar role to vserver object

  - Snapshot of Status API result in AAI

- AAI API - Exposure of Status API result with conversion to JSON

- SO Changes

  - SO E2E API Improvements

  - SO CNF Adapter

    - Status API in CNF Adapter

    - AAI synchronization after each change -> Notification based

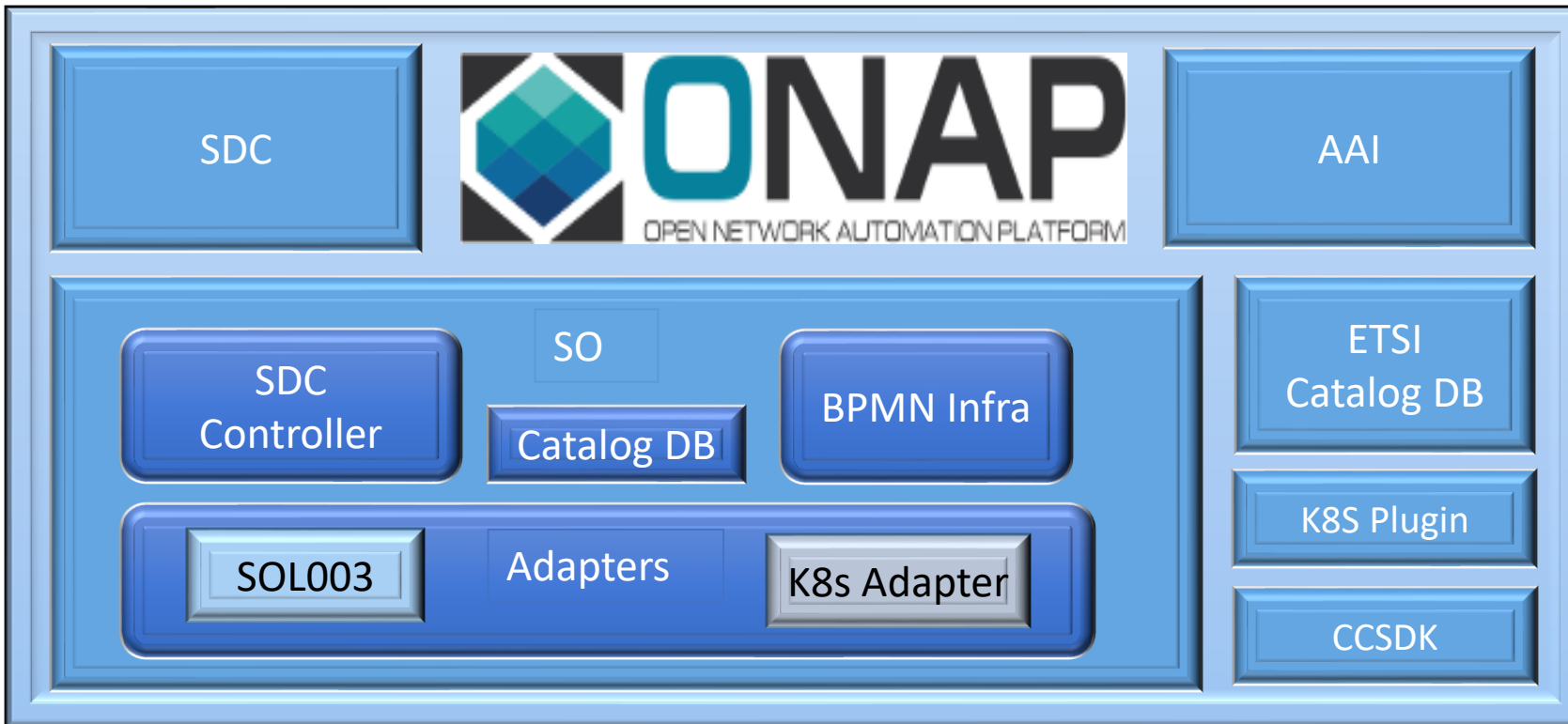 - SO Integration ETSI Flow <- We need to make sure the flow will coexist with REQ-334

REQ-341

ONAP
OPEN NETWORK AUTOMATION PLATFORM

- Integration of K8s API v2 -> Investment for the future development

  - Configuration API for v2

  - v2 in OOM + adaptation of existing helm charts for NFR

  - SO CNF adapter must be changed in SO

  - ArtifactBroker must be modified for v2 or replaced by CNF adapter distribution

  - Native Profile Handler in CDS must be switched into v2

  - v2 in ONAP python-sdk?

- CCSDK/CDS

  - Native Configuration API Handler for v1 or v2

  - Native Status API Handler for v1 or v2

- Dedicated CNF Health Check Workflow in SO

  - Status Check -> Status API result verification

  - CNF Health Check with Dedicated Health Check Job Execution

- **We may want to switch to another pure CNF use case**

  - CNF use case CBA + Integration scripts

  - Reference Health Check Job Implementation for selected CNF use case

  - **Prometheus for collection of metrics**

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ONAP CNF Orchestration – Honolulu Impact

Diagram boxes:

SDC

ONAP — OPEN NETWORK AUTOMATION PLATFORM

AAI

SO
- SDC Controller
- Catalog DB
- BPMN Infra
- Adapters
  - SOL003
  - K8s Adapter

ETSI Catalog DB

K8S Plugin

CCSDK

External (S)VNFM

Model to drive the flows:
- ✓ SDC to denote the flow of which VNFM should be used - similar to Orchestration Type
- ✓ Information model – optional
- ✓ Need to investigate the best place to have the meta data, we can perhaps use the existing fields

SDC:
On-board the helm and process it as an artifacts of the CSAR to be distributed
- ✓ On-board Helm Charts (Continuation)
- ✓ Helm Validation in SDC (Stretch)

SO:
Won't consume the Helm by itself but parse it and push it forward to other ONAP components
- ✓ Parse the CSAR, extract helm
- ✓ SOL003 adapter enhancements
- ✓ K8s Adapter – v2 + Status API
- ✓ Distribution of Helm from CNF adapter (Optional)

K8s Plugin:
- ✓ Configuration API in v2
- ✓ Artifact Broker supports v2
- ✓ v2 in OOM

AAI:
- ✓ Persist k8s instance identifier
- ✓ Persist k8s resources ID created from Helm
- ✓ Expose Status API result

CCSDK:
- ✓ Native suport of Configuration API
- ✓ Native Support of Status API
- ✓ Adaptation for v2

ETSI Catalog DB:
- ✓ Persist the ETSi VNFM data (IFA-29 and IFA-40)
- ✓ Persist Images

Thank You!

LF NETWORKING
Virtual Technical Meetings