Arista Professional Services - Universal Cloud Network (UCN) Deployment

This document forms the "Statement of Work" (SOW) for the Arista Professional Services "Universal Cloud Network (UCN) Deployment" service. It provides clear transparency of the scope of the service, the method of engagement. assumptions, conditions and exclusions.

The Arista Professional Services Universal Cloud Network (UCN) Deployment service is a deliverable-based service for the remote implementation and deployment of Arista next-generation data center networks, based on a new greenfield build requirement.

The service is based upon two fundamental DC design architectures, one of which must be chosen, with the addition of supporting "add-on" components as required by the customer. The mandatory services are either a "Layer 2 Leaf Spine" (**SVE-UCN-L2LS-R1**) or "Layer 3 Leaf Spine with EVPN" (**SVE-UCN-L3LS_EVPN-R1**). Expansion add-on switches must be added to the service offering of the same type (L2LS or L3LS_EVPN) as the base design architecture. Add-on switches can be used for either the base fabric or up to 4 can be used for an Out of Band (OOB) management network, which is also included in this service if required.

Migration and post-deployment "Day 2" support services are outside the scope of this SOW and can be additionally custom scoped as required.

1. Terms of Universal Cloud Network Deployment (UCN) Fixed Deliverable SOW

- The "**Universal Cloud Network (UCN) Deployment Fixed Deliverable**" is considered a Deliverable PS (under the terms of the MSA) and this document definition forms the Arista PS Statement of Work (SOW).
- The **Effective date** of this SOW is defined as the date of Arista's acceptance of the Purchase Order (PO) booking of the mandatory "Design & Implementation Service" (**SVE-UCN-L2LS-R1** or **SVE-UCN-L3LS_EVPN-R1**). After the **Effective date**, no more service add-ons or quantity changes will be allowed into this Arista PS engagement, except via a change request.
- The **Start date** of this SOW is the date agreed with all parties to initiate activities and the completion of the remote Project kick off meeting.
- The **Start date** is intended to be no later than eight (8) weeks from the **Effective date**, unless delayed at the customer's request, to allow for shipping of the required Hardware and Software. Customer requested delays are still restricted by the SOW termination periods described below.
- Unless otherwise terminated earlier in accordance with the terms of the Agreement, the Services described in this SOW ends **six (6) months** after the **Start date** or **twelve (12) months** after the **Effective Date**, whichever comes first, without refund. Extensions/changes to these dates are at the sole discretion of Arista PS, via the Project Change Process or via custom scoping (outside of this SOW).
- This SOW may only be terminated for material breach by either party upon thirty (30) days prior written notice. In the event the Customer terminates for Arista's material breach, Customer will be entitled to a prorated refund of unused pre-paid fees. If Arista terminates for Customer's material breach, Customer will not be entitled to a refund.

- The L2LS or L3LS_EVPN "Design Service" (**SVE-UCN-L2LS-R1** or **SVE-UCN-L3LS_EVPN-R1**) is mandatory for any Arista PS engagement. The "Design Service" must be expanded with additional switch add-ons of the same type (L2LS Design with L2LS switches only or L3LS Design with L3LS Switches only) as required by the "Design Service" selected.
- Multiple Network Fabrics can be supported within a single order and can be managed & monitored by a single CloudVision (CVaaS or CVP) and AVD instance (if AVD is selected as an add-on), subject to product scaling restrictions. Within this service, each Fabric must be supported by its own mandatory "Design Service" and can scale up to a maximum of fifty (50) switches per fabric.
- Upon PO booking, invoicing will be 100% for the mandatory "Design Service" (**SVE-UCN-L2LS-R1** or **SVE-UCN-L3LS_EVPN-R1**) with any remaining add-on service (SKU's) offerings (as stated in the UCN package service details) invoiced at 100% upon project completion & formal acceptance by the customer.
- Solution component sizing and validation is outside the scope of this service and should be confirmed with Arista sales before booking of these services.
- The Services stated in this document will be performed 100% remotely during normal Customer business hours. The Customer is expected to provide remote access to enable the delivery of these services, as well as perform all onsite activities (racking, power, cabling, smart hands, etc).
- Arista switches and CloudVision licenses must be purchased separately. All Arista switches in scope must be plugged in and reachable before service can start.

2. UCN package service details, SKU's and size/scale

The following mandatory and additional services (as purchased) are considered in scope for this engagement:

2.1. Universal Cloud Network Base Services - Mandatory (select one)

- (Mandatory) **Base Network service** (UCN) - **L2LS** - Remote UCN Design service for a layer two leaf spine Architecture, including CloudVision (CVaaS or CVP), with optional Studios, for up to two (2) spines.
  - **SVE-UCN-L2LS-R1** = UCN L2LS Design & Deploy Service & CV.
- (Mandatory) **Base Network service** (UCN) - **L3LS EVPN** - Remote UCN Design service for a layer three leaf spine Architecture, plus EVPN/VXLAN overlay, including CloudVision (CVaaS or CVP), with optional Studios.
  - **SVE-UCN-L3LS_EVPN-R1** = UCN L3LS EVPN Design & Deploy Service & CV.

2.2. Universal Cloud Network Add-On Switch Services - Mandatory (select at least one matched to base service)

- Add-on **L2LS Switch Service** (UCN) - Remote **One (1) Switch** add-on to a L2LS base DC Network Deployment.
  - **SVE-UCN-L2LS-SWITCH-R1** (QTY:X) = UCN One Switch Add-On Service (Max 50).
- Add-on **L3LS with EVPN Switch Service** (UCN) - Remote **One (1) Switch** add-on to a L3LS EVPN base DC Network Deployment.
  - **SVE-UCN-L3LS_EVPN-SWITCH-R1** (QTY:X) = UCN One Switch Add-On Service (Max 50).

2.3. Universal Cloud Network (DC Network) Add-On AVD Service (Ansible & Python AVD) - Optional

- (Optional) Add-on AVD Automate Service (UCN) - Remote additional inclusion of the Ansible & Python based Arista Validated Design automation solution.
    - **SVE-UCN-ADD-AVD-R1** = UCN Standard Ansible/Python AVD Add-On Service.

Migration activities are out of scope and are expected to be covered separately via custom scoping (FFP & T&M).

3. UCN package project summary

This packaged service provides for a new greenfield deployment of Arista's Data Center "Universal Cloud Network" architecture, based on a Leaf Spine Clos architecture.

Modern Data Center designs allow architects to eliminate the distribution/aggregation layer of legacy solutions into what is now called a Leaf Spine Clos architecture, optimizing increasing amounts of East West traffic as well as North South traffic.

Two UCN design models are provided in this package, as follows:

1. **UCN Layer 2 Leaf Spine (L2LS) design** - Within this architecture, the edge Leaf switches (client facing) typically perform a Layer 2/switching functionality for simplicity, uplinked via a number of multi-chassis link aggregation (MLAG) connections into the Spine Switch/routers, providing rapid resilience and dynamic load balancing for capacity optimisation. The Spine Switch/routers also typically provide all the required routing functionality. This solution is the choice of smaller and simpler data center requirements.

2. **UCN Layer 3 Leaf Spine with full EVPN (L3LS EVPN) design** - Within this architecture, the entire underlay (the connections between all switching devices) is enabled with routing of either an IGP (OSPF or ISIS) or EGP (eBGP) type. A routed underlay provides optimal path selection, load balancing and resilience. To enable client switch mobility, a dynamic VXLAN overlay service is provided between all edge leaf switches, with ARP & Broadcast optimisation. This solution, while more complex in its nature, is the choice of networks that either need to be or are larger, with more sophisticated scaling features.

When the base architecture is selected, in alignment with the customers requirements, "Add-On" Leaf Switches and a fully functional automation solution can be applied.

As a new Greenfield Build service, consideration of existing networks (audit, translation, or interworking/extensions) or migration requirements are out of scope of this service and can be custom scoped as required.

3.1. UCN Design service for a Layer 2 Leaf Spine (L2LS) Architecture, including CloudVision (CVaaS or CVP), with optional Studios.

- SVE-UCN-L2LS-R1

- The following tasks are applicable for the remote UCN Design & Implementation service for a Layer 2 leaf spine Architecture, including CloudVision (CVaaS or CVP), with optional Studios:
    - UCN L2LS, In Scope Components
        - One instance of CloudVision (CVaaS or On Prem CVP), with optional Studios.
        - A maximum of two spines only in this solution.
    - UCN L2LS Design:
        - Collection of Customer related requirements around the physical and logical aspects, solution scaling, edge port tenant configurations, external interconnections and operational, automation & support requirements.
        - Customer expected activities and project timelines (for the scheduling of resources).
        - Physical Network design supporting the number switches in a Clos architecture, with consideration for traffic volumes, in a single location.
        - Edge Leaf Switch & Port profile design (VLAN).
        - Spine core Switch/Routing design (VLAN, IGP/EGP, VRF).
        - Documentation of agreed Customer Requirements, High and Low Level solution details.
    - UCN L2LS Implementation:
        - Deployment/Implementation of the CloudVision platform, either CloudVision as a Service (CVaaS, customer to provide internet access to all devices) or “on premise” (customer to provide the hardware & OS if not the CloudVision Appliance).
        - Customer to perform all physical activities, such as racking, power, cabling and external access to the devices (CLI & VPN, as required).
        - Configuration of basic management features (Base IP, AAA, SNMP, logging, etc.)
        - Onboarding into CloudVision, implementation of CloudVision Studios (if required) and deployment of network solutions as per design.
        - Enablement of CloudVision “Network Ready For Use” (NRFU) dashboard and readiness testing.
        - Integration into existing network devices, between fabrics and DCI connections (including MACSec if required) , including up to **two “out of hours” remote change windows**, enabling up to **four external/DCI connections/devices, per fabric**.
        - A remotely provided, single informal half day of “Knowledge Transfer Workshop” (KTW) to provide a summary of what has been deployed and why, with a high level understanding of how to provision & maintain the network moving forwards.

3.2. UCN Design & Implementation service for a layer three leaf spine with EVPN Overlay (L3LS EVPN) Architecture, including CloudVision (CVaaS or CVP), with optional Studios.

- SVE-UCN-L3LS_EVPN-R1

- The following tasks are applicable for the remote UCN Design & Implementation service for a Layer 3 Leaf Spine Architecture, plus EVPN overlay, including CloudVision (CVaaS or CVP), with optional Studios:
    - UCN L3LS EVPN, In Scope Components
        - One instance of CloudVision (CVaaS or On Prem CVP), with optional Studios.
    - UCN L3LS EVPN Design:

        - Collection of Customer related requirements around the physical and logical aspects, solution scaling, underlay/overlay considerations, edge port tenant configurations, external interconnections and operational, automation & support requirements.
        - Customer expected activities and project timelines (for the scheduling of resources).
        - Physical Network design supporting the number switches in a Clos architecture, with consideration for traffic volumes, in a single location.
        - Edge Leaf/BorderLeaf Switching, Routing, VXLAN overlay & Port profile design (VLAN, IGP/EGP, VXLAN, VNI, VRF).
        - Spine and Leaf Routing underlay design (IGP/EGP).
        - Documentation of agreed Customer Requirements, High and Low Level solution details.
    - UCN L3LS EVPN Implementation:
        - Deployment/Implementation of the CloudVision platform, either CloudVision as a Service (CVaaS, customer to provide internet access to all devices) or “on premise” (customer to provide the hardware & OS if not the CloudVision Appliance).
        - Customer to perform all physical activities, such as racking, power, cabling and external access to the devices (CLI & VPN, as required).
        - Configuration of basic management features (Base IP, AAA, SNMP, logging, etc.)
        - Onboarding into CloudVision, implementation of CloudVision Studios (if required) and deployment of network solutions as per design.
        - Enablement of CloudVision “Network Ready For Use” (NRFU) dashboard and readiness testing.
        - Integration into existing network devices, between fabrics and DCI connections (including MACSec if required) , including up to **four “out of hours” remote change windows**, enabling up to **eight external/DCI connections/devices, per fabric**.
        - A remotely provided, single informal half day of “Knowledge Transfer Workshop” (KTW) to provide a summary of what has been deployed and why, with a high level understanding of how to provision & maintain the network moving forwards.

3.3. UCN Implementation Service for One (1) Switch add-on to a L2LS base DC Network Deployment

- SVE-UCN-L2LS-SWITCH-R1

- The following tasks are applicable for the remote Single Switch add-on to a L2LS base DC Network Deployment:
    - UCN L2LS Switch Addition, In Scope Components:
        - A single additional switch per unit, in a L2LS leaf spine Architecture Only.
        - Up to a maximum of Fifty (50) total switches in the Network solution, to be used in any combination of Leaf/Spine roles.
        - Add-on switches can be used for either the base fabric or up to 4 can be used for an Out of Band (OOB) management network.
    - Amendments to all the base services to include additional switches.

3.4. UCN Implementation Service for One (1) Switch add-on to a L3LS EVPN base DC Network Deployment

- SVE-UCN-L3LS_EVPN-SWITCH-R1

- The following tasks are applicable for the remote Single Switch add-on to a L3LS, plus EVPN overlay, base DC Network Deployment:
    - UCN L3LS EVPN Switch Addition, In Scope Components:
        - A single additional switch, in a Layer 3 leaf spine with EVPN Overlay (L3LS EVPN) Architecture Only.
        - Up to a maximum of Fifty (50) total switches in the Network solution, to be used in any combination of Leaf/Spine roles.
        - Add-on switches can be used for either the base fabric or up to 4 can be used for an Out of Band (OOB) management network.
    - Amendments to all the base services to include additional switches.

3.5. UCN Implementation Service, Add-on of an Ansible & Python based AVD solution.

- SVE-UCN-ADD-AVD-R1

- The UCN AVD addition applies to either L2LS or L3LS with EVPN, base service offerings/architecture, leaving in place a fully working AVD based solution for current and future expansion and provisioning.
- The following tasks are applicable for the remote inclusion of the Ansible & Python based Arista Validated Design AVD solution:
    - UCN AVD Addition, In Scope Components
        - One instance of Ansible & Python AVD to run the Arista Validated Design solution, which integrates into CloudVision (On Prem CVaaS or CVP).
        - Installing and managing the Ansible & Python infrastructure is the Customer's responsibility.
    - Amendments to all the base services to include additional AVD addition.
- An additional 4 hour KTW session to cover AVD as it applies to the customer network.

4. UCN Services Assumptions & Exclusions

The following statements are assumed as the basis of this project:

- This is a greenfield network build service only, without any migrations.
- Assumes a normal Clos (spine/leaf) architecture, with EVPN if selected.
- Inclusion and implementation/management via Cloudvision is mandatory to this service.
- Assumes the network will be deployed with ongoing provisioning via CloudVision, including either Studios or Arista AVD (if AVD is selected as an add-on), as a standalone provisioning system.
- Multiple Network Fabrics can be supported within a single order and can be managed & monitored by a single CloudVision (CVaaS or CVP) and AVD instance (if AVD is selected as an add-on), subject to product scaling restrictions.
- Each Fabric must be supported by its own mandatory "Design Service" and can scale up to a maximum of fifty (50) switches per fabric within this service.
- Each location is expected to have at least one fabric. Fabrics stretched across multiple locations and WAN/MAN interconnections are excluded from this service.
- Any required fabric or DC interconnections (DCI), possibly including MACSec encryption, can be accommodated within the included integration links.

- All activities are to be performed during normal working hours (8:00am to 6:00pm, Mon to Fri), in the Customer's local timezone (as agreed during the kickoff), except the included change windows.
- Arista PS can support additional maintenance windows, which can be quoted separately upon request.
- English speaking is expected, although other languages will be considered at the discretion of Arista PS.
- Customers are expected to provide any required smart remote hands activities.
- The Customer is responsible for any required internal approvals.
- Testing is restricted to only deployed Arista switch Network health & status, via the CloudVision Dashboard.
- If AVD is selected as an add-on:
    - As an Arista AVD based deployment, based on a YAML data model, the Customer is expected to have an understanding & familiarity of the benefits of Arista AVD automation and its ongoing provisioning.
    - The Customer is expected to have some awareness and operational experience of Ansible/YAML.
    - Public or private GIT repository(s) are the responsibility of the Customer, however recommendations and consultation will be provided in relation to interworking with these.

The following limitations and exclusions apply:

- These services are remote only, so on-site attendance is excluded.
- CloudVision Universal Network Observability (UNO) is excluded from this service.
- These services collectively have the following technical limitations, which if exceeded will require custom scoping:
    - Up to 10 virtual routing instances (VRFs) per fabric instance.
    - Up to 30 virtual local area networks (VLANs) per fabric instance.
    - Up to 50 switched virtual interfaces (SVIs) per fabric instance.
    - Up to 30 port profiles per fabric instance.
    - Up to 750 port configurations per fabric instance.
    - Quality of service (QoS) configurations (outside of the default) is excluded.
    - Multidomain/Macro-Segmentation Service (MSS) is excluded.
    - Any features requiring a custom TCAM profile are excluded.
- In relation to CloudVision & the AVD platform, where an on premise version is required (excluding CVA's and CVaaS), the Customer is expected to provide the host device and required operating environment (including full O/S). Therefore, these activities are excluded from this service.
- This service is not intended to provide Arista AVD or Ansible/YAML training, which is excluded from this service.
- Custom automation capabilities (except those within standard AVD) and/or external systems integration services are excluded from this service, and would need to be scoped as an additional service.
- Configuration and interworking with any 3rd party equipment is excluded. Arista PS may provide guidance on 3rd party equipment; however Arista will not be responsible. This does not preclude, at the discretion of Arista PS, from assisting with troubleshooting, using the Network, of any 3rd party devices attached to the Network or leveraging the services of the Network.
- Further/future optimisations after implementation of these services is excluded. However, optimisations can be custom scoped as a separate service if required.
- Creating and executing User Acceptance Test Plans & Design Validation testing, including flow, edge port and/or performance/capacity testing is excluded.
- Performing Customer specific security analysis on the Solution is excluded.

- All work related to Data Center facilities including, but not limited to, physical equipment installation (racking), power and cooling designs and all cabling work, is excluded.
- Validation of the operation of internal applications is excluded.
- Any additional software development/integration work on the tools and AVD platforms, outside of the standard product offering or that has not already been agreed upon, is excluded.
- Relocation of existing equipment is excluded.
- Deployment of AI fabrics is excluded.
- Re-configuration of the UCN after (out of scope) Acceptance testing is completed, is excluded.
- All work is during normal business hours in the Customer timezone, except as indicated otherwise.
- Knowledge transfer is high level awareness only. Formal training is excluded.
- Any documentation not specifically listed in this document is excluded.
- Deliverables must be performed in the order presented in the SOW, with confirmation of completion before moving onto the next. Any reworking or re-ordering of the deliverables is excluded and must be accommodated via the change request process.
- All/Any migration activities are excluded.
- EOS software version testing is excluded.
- Services/features/functions/devices not explicitly defined in this Task List are excluded from this service.

5. Project timeline & Deliverables Summary

For every project deliverable completed, a “Service Delivery Notice” will be provided, along with supporting evidence, if required. Shown are the expected stages, estimated timeline and deliverables, for guidance:

Deliverable Section	Section and Deliverable	Deliverable Acceptance Criteria	Timeline Expectations
	Order Validation	Validate order and assign Arista PS representative.	Receipt of Order
	Pre Service information	PS representative will provide details of the service, next steps and prerequisites. Agreed **Start Date** and scheduling of engineering resources.	Week 0-1 (from order)
	Formal **Start Date**	The formal **Start Date** of the project deployment when the prerequisites are completed and assigned resources detailed.	Week 0-8 (from order)
6.1	Project Kick-off and Customer Requirements Document ("CRD")	Formal **Start Date**, Project Kick-off completed and CRD document completed and accepted by Customer	Week 0-1 (from start)
6.2	Project Schedule Baseline	Project schedule baseline mutually reviewed and accepted by Customer.	Week 0-1 (from start)

6.3	High Level Design ("HLD") Documentation	HLD document completed and accepted by Customer	Week 1-3 (from start)
6.4	Draft Low Level Design ("LLD") Documentation	Draft LLD document completed and accepted by Customer	Week 3-6 (from start)
6.5	Production CloudVision and Arista AVD (if selected) Deployment	Production CloudVision & AVD (if selected) Deployment completed and accepted by Customer	Week 7 (from start)
6.6	Production DC Network Equipment Deployments	Production Equipment Deployment completed and accepted by Customer	Week 8-10 (from start)
6.7	Network Ready For Use ("NRFU") Testing	NRFU dashboard checks completed and accepted by Customer	Week 11 (from start)
6.8	Production Integration via change windows (two (2) for L2LS, four (4) for L3LS)	Production Integration changes completed and accepted by Customer	Week 12 (from start)
6.9	Knowledge Transfer Workshop ("KTW")	Knowledge Transfer Workshop session completed and Final LLD document provided to the customer	Week 12 (from start)

6. Project Milestones and Deliverables Details

All Universal Cloud Network (UCN) Deployment engagements involve Arista Professional Services (PS) Engineer(s) building the UCN solution based on the Customer's technical and business requirements and applying UCN recommended practices.

At the end of each deliverable, Arista will submit any relevant document(s) to the Customer for review and request deliverable acceptance. The Customer will have five (5) business days to review any document(s) and provide feedback to Arista of any desired changes. If the Customer does not provide feedback in the time frame requested, Arista will assume that the Customer has reviewed the document, that changes are not required and the deliverable is accepted.

6.1. Project Management, Kickoff & Customer Requirements

An Arista PS representative will contact the Customer to provide information (in PDF format) on the service ordered, the schedule of the project, customer prerequisites prior to the project start and requesting the proposed

data of the Project Kickoff & Customer Requirements meeting (which is the **Start Date** of the engagement), in which the prerequisites should have been completed. During this meeting, Arista will:

- Create a project schedule, including start and end dates, in agreement with the Customer.
- Identify all stakeholders and single points of contact at Arista and the Customer.
- Identify dependencies, risks, and issues associated with the successful completion of the project.

Arista will work with the Customer in order to collect and validate the Customer's business and technical requirements. The CRD will formalize such requirements and will serve as a baseline for building the subsequent Deliverables. The CRD will cover the following:

- Pull detailed requirements for the solution components listed below, including planning aspects related to non-Arista elements such as the integration connections.
- Review and detail the Customer's AVD automation requirements (if AVD is selected as an add-on).
- Review and understand the Customer's knowledge and use of GIT for version control and its branching capabilities to provide an isolated environment for every change (if AVD is selected as an add-on).
- Review the engagement goals and project completion criteria, aligned to the Task List.
- Provide a Customer Requirements Document (CRD) for review.

6.2. Project Schedule Baseline

Upon completion of the CRD, the Arista PDL will review and establish mutually agreed upon Milestone completion dates for the project deliverables. This will establish the project plan baseline which will be used to measure the schedule delivery. Variations to the project plan will be monitored and addressed in the status report. The Project Schedule Baseline, once agreed upon by the Customer and Arista will be shared as a separate project milestone requiring a signed completion certificate by the Customer.

6.3. High Level Design Document

Based on the CRD and detailed information collected through the requirements review process, Arista will produce and provide the Customer with a High Level Design ("HLD") document which includes the following:

- Agreed technical requirements.
- Layout of the proposed physical and logical network topology.
- Protocols and equipment to be used in the design.
- The process of AVD automation for implementation and ongoing provisioning (if AVD is selected as an add-on).
- Descriptions of the devices and connectivity.
- Other findings and recommendations if applicable.

Prerequisites, Assumptions and Exclusions

- A formally accepted CRD Deliverable is a requirement for the HLD start.
- The Customer to participate and provide input into the HLD.
- The HLD may contain architectural consideration of non-Arista devices.

6.4. Draft Low Level Design Document

Based on the CRD and HLD documents, Arista will create a draft Low Level Design ("LLD") document that will describe the intention of how the solution will be deployed, configured and interconnected. The LLD will provide detailed design and configuration templates to be applied to the Arista devices in the network, including the setup of Arista AVD if applicable. The LLD will provide a list of items including:

- Build address planning, ASN planning and port allocations.
- Baseline OOB management and security hardening, if present..
- Leading configuration practices and templates.
- Device Configuration Configlets support for CVP, if required.
- AVD YAML/folder structure, including inventories and variables, if the Ansible AVD add-on is purchased.
- Provide a LLD for review.

Note1: The LLD document presented at this stage is a working live document, which may require further amendments during the lifecycle of this project. The full and final version of the LLD document will be provided at the end of the project as part of the project close out, for acceptance, knowledge transfer and future reference.

Note2: AVD itself does provide ongoing current low level documentation, based on the deployed data model provisioned into the production network (via CloudVision), which will amend itself as the network evolves.

Prerequisites, Assumptions and Exclusions

- A formally accepted HLD Deliverable is a requirement for the LLD Services start.
- Customer to participate and provide input on the LLD.
- The LLD does not cover configurations for non-Arista devices.

6.5. CloudVision & AVD Deployment

CloudVision & AVD (if selected as an add-on) will be deployed on separate platforms, in order to facilitate the Day 1 rollout of the Arista devices, ongoing automated provisioning, as well as allowing for Day 2 telemetry and monitoring capabilities of the Arista devices to occur.

The CloudVision Deployment covers the following tasks:

- Initial setup of the CloudVision appliances/virtual machines.
- Basic configuration (DNS/NTP/AAA).

- ZTP process via OOB network, if present.
- Onboarding all devices into CloudVision, if required.
- Configlets will be built as templates for the services identified in the HLD/LLD.

The Arista AVD deployment (if the AVD add-on is selected) covers the following tasks:

- Interworking/access into the CloudVision platform(s).
- Shared/Common or private repository (possibly GIT if relevant).
- Verify Python 3 environment.
- Verify Ansible and all the other required software additions.
- Install the AVD collection (ansible-galaxy collection).
- Implement the AVD YAML/folder structure, including inventories and variables, as detailed.
- Implement the required playbooks and confirm interworking with CloudVision.

Prerequisites, Assumptions and Exclusions

- The CloudVision and AVD platforms must be provided with the required operating systems in place.
- The customer is responsible for the implementation of Python and Ansible based additions, as detailed in the design documentation.
- Basic configuration (DNS/NTP/AAA).
- All Hardware and Software elements are ready (racked, cabled and powered on), have established connectivity between them and Arista PS can access them remotely.
- Services associated with non-Arista vendor devices are excluded.

6.6. UCN DC Network Equipment Deployment

Arista PS will leverage Automation (via CloudVision and AVD if selected as an add-on) to deploy the Arista equipment in the UCN DC Networks at the location in scope for this project, following the parameters defined in the LLD:

- EOS Software Version Recommendation.
- Confirm that CloudVision and AVD (when selected as an add-on) are configured correctly to enable build and provisioning, ensuring communication with all devices.
- Stand up the UCN DC Network devices in accordance with the agreed network implementation plan.

Prerequisites, Assumptions and Exclusions

- A formally accepted CloudVision & AVD (when selected as an add-on) Deployment Deliverable is a requirement for the UCN DC Network Equipment Deployment Services start.

- All Hardware and Software elements are ready (racked, cabled and powered on), have established connectivity between them into CloudVision and Arista PS can access them remotely.
- Implementing or configuring non-Arista devices is excluded.
- EOS software version testing is excluded.

6.7. Network Ready For Use ("NRFU") dashboard and readiness testing

Arista PS will deploy the CloudVision dashboard, which provides near real-time status on both the Hardware and Software components of the UCN DC Network equipment in scope for this project. In accordance with the CRD, HLD and LLD:

- Confirm network healthy & fully operational results from the CloudVision dashboard, as completion of the NRFU.
- Share with the customer and gain acknowledgement of these results. These tests verify the functionality of all key features of all devices, resulting in the Network being fully supported by Arista and the Customer support teams, including failover testing.

Prerequisites, Assumptions and Exclusions

- A formally accepted UCN DC Network Equipment Deployment Deliverable is a requirement for the NRFU Services start.
- All Hardware and Software elements are ready (racked, cabled and powered on), have established connectivity between them and Arista PS can access them remotely.
- NRFU Services for non-Arista devices are excluded.
- Services associated with equipment scalability or performance testing are excluded.

6.8. UCN DC Network - Integration Plan and Execution Support

Arista PS will support the logical integration plan and execution activities. Support to include up to four (4) integration links & devices for L2LS or eight (8) integration links & devices for L3LS EVPN:

- Integration Plan:
    - Review the integration technical and business requirements with Customer, for the four (L2LS) or eight (L3LS) links & devices.
    - Generate an integration plan document to support the interconnection to the Customer's legacy network during the provided change sessions, as follows:
        - For a L2LS deployment, up to two (2) change sessions (up to eight hours each) for the execution activities, required to support up to four (4) integration links & devices.
        - For a L3LS EVPN deployment, up to four (4) change sessions (up to eight hours each) for the execution activities, required to support up to eight (8) integration links & devices.

- Integration Plan Execution:
    - Change execution support, as per the integration plan for:
        - For a L2LS deployment, up to two (2) change sessions (up to eight hours each) for the execution activities, required to support up to four (4) integration links & devices.
        - For a L3LS EVPN deployment, up to four (4) change sessions (up to eight hours each) for the execution activities, required to support up to eight (8) integration links & devices.

Prerequisites, Assumptions and Exclusions

- Configuring non-Arista devices such as routers, firewalls and load balancers required for the overall solution to work falls under Customer's responsibility.
- Customer is responsible for opening proactive TAC cases and for testing and verifying all and any client services before a maintenance window starts and before its completion.
- Support for additional maintenance windows can be quoted upon request.

6.9. Knowledge Transfer Workshop ("KTW") and Final LLD Handover

Arista PS will provide a remote single interactive session with an expected duration of up to four (4) hours, covering the following topics:

- Handover to the Customer the final Low Level Design (LLD) Document.
- Customer's network architecture as per PS engagement
- CloudVision topics:
    - Security/CVE Scans & Reporting Reviews Best Practices.
    - Configuration Standardization and Changes Best Practices.
    - Streaming Telemetry Best Practices.
    - Dashboards Best Practices.
    - EOS Upgrades through CVP Best Practices.
- Customer's network status and health testing (including AVD validation role if relevant).
- Ongoing operational best practices.
- Recommendations for additional formal training (Arista Cloud Engineering Certification Program).

If the Ansible AVD add-on is selected, an additional 4 (four) hour KTW session will cover the following topics:

- The use of a data model within AVD to automate provisioning.
- Ansible/AVD YAML/folder structure, including inventories and variables.
- AVD solution configuration and DC Network deployment/expansion.
- AVD Tenant service configuration & deployment.
- AVD interworking into CloudVision and deployment change process.

The successful completion of the KTW Session will deem this project complete.

Prerequisites, Assumptions and Exclusions

- If AVD is selected, the KTW attendees will have basic Ansible, YAML and networking knowledge, including GIT if applicable.
- The KTW contents will be focused on the project specifics, it won't cover an in-depth introduction to networking protocols, AVD, python or Ansible, etc.
- The KTW is not a replacement for formal Arista Training and does not provide training materials or certificates.
- The Customer provides any facilities required for the KTW session to take place.

7. Arista PS Engagement Responsibilities.

a) **Project communications** - An Arista Project Delivery Lead ("PDL") will be allocated to the project by Arista and the Customer will provide a single point of contact for all issues relating to the communications and performance by each party of its obligations under this SOW. The PDL shall be available during normal business hours excluding any vacation time planned and identified as such.

b) **Project meetings** - The Project Delivery Lead will set up meetings to keep a regular cadence of communications with the Customer for matters pertaining to the project. During these meetings the following items will be covered at a minimum:

- Project initiation meeting.
  - Introducing the Arista PS.
  - Review project scope, timeframes and acceptance criteria.
  - Key contact information at Arista, Customer and partner where applicable.
  - Determine dates for regular cadence meetings.
- Regular cadence meetings:
  - Review Service performance.
  - Keep an action register log to record, assign, track and drive to resolution any project related issues.

c) **Hours of working** - Arista PS Services will be remotely performed during regular business hours Monday - Friday, 8:00am – 6:00pm in the customer local time (eight (8) hours per day), excluding weekends, Company's / Customer's / statutory holidays.

8. Customer Engagement Responsibilities.

a) **Non-Arista -** Engage third party vendors as needed to troubleshoot, coordinate, configure, traffic route or validate feature configuration and capabilities, as required for the performance of the Services.

b) **Configure** - All non Arista routing capable equipment to ensure traffic is correctly routed to and from the Arista network, as required for the performance of the Services.

c) **Resourcing/Access -** Onboard the Arista PS, assign appropriate resources and manage appropriately skilled third party or partner resources. The customer shall provide all the required remote access (console/ssh/cli/https), as required for the performance of the Services.

d) **Information -** Provide existing network designs & configurations, detailing L1, L2 and L3 connectivity for all devices that will be connected to and/or replaced by the Arista network, such as:
   - Physical connectivity types, speeds, media, distances, cabling etc.
   - L2 information such as VLAN ranges, overlaps, reservations, limitations etc.
   - L3 information such as IP ranges, overlaps, reservations, routing, gateways etc.
   - For endpoint systems identify media, speed, link aggregation model, embedded switches/routers etc.
   - HLD, LLD, network flows, etc.

e) **Changes -** Collaborate with the Arista PS to develop and implement all change plans, providing all customer & third-party resourcing as required.

f) **Access** - Provide appropriate remote logical access to the Customer network or physical premises to the assigned Arista engineers, if required for the proper execution of the Services in this SOW.

g) **Physicals** - The furnishing of any hardware or software products required for the performance of the Services in this SOW. The furnishing of any hardware or software are not included in the scope of this SOW. Any rack, stack and cabling of physical hardware are Customer's responsibility.

9. Project Acceptance.

a. **Acceptance Criteria:**
   - All items will be delivered electronically.
   - Each Milestone as described in the project plan will be completed in sequence
   - A Milestone must be accepted as complete before commencing work on further milestones.
   - A Completion Certification in the form of a “Service Delivery Notice”, will be issued for each Milestone completed.

b. **Acceptance Procedure:**
   - Upon completion of any Services hereunder for which Arista has provided Deliverables, Arista shall promptly notify Customer via email or in writing of the delivery thereof (“Service Delivery Notice”). Customer shall have the right to inspect all Deliverables within five (5) Business Days after receipt of the Service Delivery Notice, and the Deliverables shall be conclusively deemed accepted by Customer unless a notice of rejection has been sent by Customer to Arista within such five (5) Business Day period.
   - Customer shall only have the right to reject a Deliverable if it reasonably believes that the Deliverable (a) does not conform to the applicable specifications set forth in this SOW; (b) would not be reasonably likely to satisfy the applicable Acceptance Criteria set forth in this SOW; or (c) is defective in material or workmanship.
   - Customer’s sole remedy shall be, at Arista’s discretion (a) for Arista to correct the deviation within a reasonable time following Customer’s written rejection notice, or (b) if Arista is

unable to correct the deviation, then, upon Customer's request, Arista shall refund any payments that Customer has made specifically for such non-compliant Deliverables.

10. Project Change Process.

The Customer may request a change to the project in writing, which will invoke a custom scoping activity. The Process Change Request format can be provided upon request. The change will be evaluated by Arista and any project impact will be identified.

A project change request should contain:

- A description of the change including:
  - The reason for the change
  - What changes in project scope and/or deliverables will be required to achieve the objectives
  - The impact if the change is not done
- The requester

As a result of the change request, Arista shall take the following actions:

- Setup a scoping call with the customer to understand the requirements of the change, if applicable.
- If the change is significant to the activities of this fixed service, the engagement will be suspended while this change is evaluated, agreed and formalized.
- Any resulting change to the project timeline will be documented and such documentation will be provided to the Customer.
- Additional cost due to the change will be provided to the customer and required before progressing.
- Any changes in scope and/or risks will be documented in a formal Change Request and will need to be executed by all parties before progressing.

If all changes are mutually agreed upon and supported by the required purchase order along with an executed Change Request detailing the agreement, the changes will be implemented as described.
An engagement pause of up to two (2) weeks will be provided to allow agreement of the changes and receipt of both a supporting order and the executed Change Request.
With respect to the Change Request, if no agreement can be reached, or the engagement pause period expires, then the SOW will remain unchanged and activities will commence as before the change request.

This change process is still restricted by the SOW termination periods described above (terms, section 1).

11. Project Delays, Cancellation and On Hold Policy.

11.1. Project Delay Policy

In case of any deviations from mutually agreed and Customer accepted Project Schedule Baseline, Company shall not be responsible for any delays, such as, but not limited to, due to lack of access to systems, facilities, cooperation, and information requested by the Company or changes to the approach or Services described in this SOW, caused by the Customer.

Customer acknowledges and agrees that in the delivery of this project, the Company must reserve and assign valuable resources and personnel. In the event that Customer causes rework, schedule delays, unplanned idle time, and other deviations from the Project Schedule Baseline, Company reserves the right to initiate a billable Change Request process to recover costs associated with the delays.

11.2. Scheduled Project Activity Cancellation Policy

The cancellation of any scheduled activities will be subject to the following:

- If the cancellation is within five (5) business days of the scheduled activity, Company reserves the right to initiate a billable Change Request process to recover costs associated with any assigned resource time that cannot be rescheduled for alternate activities, or any required rescheduling activities.
- It may take up to 30 days to have a resource(s) re-scheduled for the activity, although every effort will be made to re-engage as soon as possible.
- There is no guarantee the same resource(s) will be rescheduled for the activity. If they are deemed required, it will be contingent on their first availability to accommodate.

11.3. Project On Hold Policy

During the project, it may become necessary to place the project on hold which impacts the Project Schedule Baseline mutually reviewed and accepted by Customer, due to one or more of the following reasons:

- The Customer team has not responded to the Company project team for more than five (5) consecutive business days, which is preventing the project from moving forward as planned.
- There is a delay in any Customer provided hardware/software readiness, facilities, and access to systems longer than five (5) business days and no other project activities can be completed as agreed to between the Company and the Customer.
- Other Customer prerequisite activities that are preventing the project from moving forward.
- Any other situations that are agreed to by the Company and the Customer.

If any of the above qualifying items occur, the project will be placed on hold using the below process.

- The Company Project Delivery Lead will send a formal communication (email to the Customer's point of contact shall suffice) indicating the project is being placed on hold, effective as of the date of the communication ("Suspension Date").
- By placing a project on hold, the current resources assigned will be released the following business day after the date of communication, and there is no guarantee that the same resources will be re-engaged

when the project is ready to resume. It may take up to 30 days to re-engage all resources and resume project activities. During this period, no status calls or updates will be provided.

- When the Customer is ready to resume the project, the Customer must send a formal email request to the Company Project Delivery Lead requesting a resumption date that is within 90 days of the project Suspension Date. Company will work to schedule the resources as soon as possible.
- If the project has been on hold for longer than ninety (90) calendar days from the Suspension Date with no committed date to resume, the project will be considered canceled and the Company will invoice the Customer for any costs incurred even if the Milestone has not been fully met. Any work completed up to the Suspension Date will be billed, any incomplete work will be removed from the scope, and the Company will be released from the remaining SOW obligations.

*** End of Document ***