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HPE Aruba Networking Private 5G Voice Services QuickSpecs

Do you need to easily deploy and scale voice and video services over private mobile networks?

HPE Aruba Networking Private 5G Voice Services is a market proven, simple, intuitive, robust, compact and comprehensive solution that unites the power of VoLTE and VoNR high quality voice and video services to provide feature-packed private 4G EPC and 5G Core cellular networks. By enabling various types of multimedia services for end-users using common Internet-based protocols, HPE Aruba Networking Private 5G Voice Services deploys a fully-local IMS to address the increasing demand in voice and communications services.

Overview

The key differentiators of HPE Aruba Networking Private 5G Voice Services are:

- Private networks market presence
- Easy to adopt voice solutions
- Automation for fast deployment
- Excellent usability with intuitive operations for daily operations
- 5G ready
- Compact with small footprint suitable for private networks

From HPE market perception voice and communication services demand is increasing in several vertical segment (public safety, mining and oil&gas, manufacturing, transport, utilities). IMS adoption for Mobile Private Networks is motivated by the following key drivers:

- Reduce TCO: while VoNR is still at early stage, IMS architecture can be leveraged to provide voice services,
- Improve terminals battery life with a better usage of radio resources, VoLTE and VoNR,
- Interconnection and roaming with Public Networks
- Higher voice quality thanks to wide band codecs offered with both VoLTE and VoNR.

Standard Features

Effective Communication Services

- Voice and Video over 4G and 5G (**VoLTE, ViLTE and VoNR, ViNR)**
- 5G NSA and 5GSA options
- Quality of Service
- Emergency Calls

Secure Communication

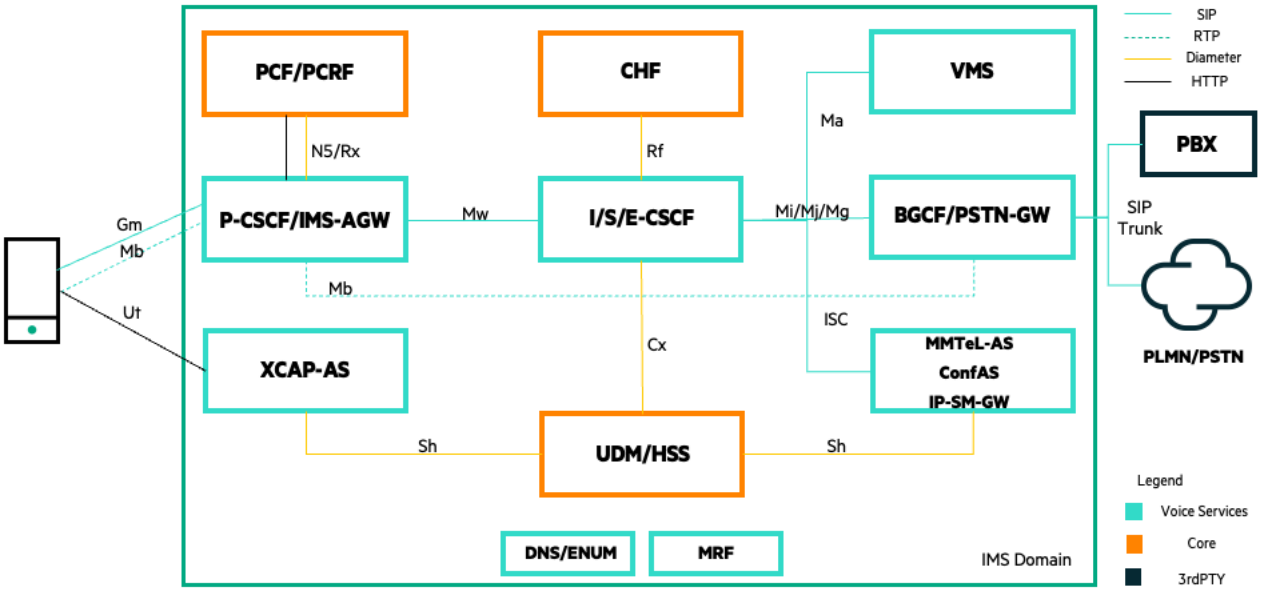
- IMS AKA Authentication
- Topology Hiding
- Media Encryption

Supplementary Services and SMS over IP

- Call Diversions
- Barring
- Call Hold/Waiting
- Ad Hoc Conference
- SMS over IP
- VoiceMail
- Self-Management

VoLTE Interconnection & Roaming

- S8HR Roaming capabilities
- Emergency Local BreakOut
- PSTN/PLMN Interconnection
- PBX Interconnection



Standard Features

Efficient Operations and Maintenance

HPE Aruba Networking Private 5G Voice Services is a fully containerized environment for private networks based on 4G and 5G with needs of voice, video, supplementary services, sms, interconnection and roaming services. A simple Web GUI is available to perform operations. Onboarding and Configuration are automated via HTTP API with metrics available via Prometheus and events and logs available via fluentbit.

Key Capabilities of the platform includes (but not limited to):

- High-availability
  - Based on active/active multi-site redundancy with registration on different systems
  - A priority list of P-CSCF is shared with UE during discovery so that UE can select another P-CSCF in case of failure.
  - Active/Active redundancy is available at HSS to keep the subscribers's database synchronized.
- Scalability
- Main IMS features
  - Registration and authentication with Digest and IMS AKA mechanisms
  - P-CSCF discovery
  - Routing based on DNS and SIP headers
  - Service Invocation to invoke the provisioned service based on the trigger set in the user profile from HSS
  - Mobile Access Policy Control: control the resources assigned during the session establishment
  - Emergency calls with UE location transferred to PSAP and callback support. SIMLess emergency call support. Emergency Local breakout solution to support roamers under private network coverage
  - Supplementary services, ad Hoc Conference andVoiceMail
  - Topology hiding
  - N5 support: allows IMS network to be integrated to the PCF of HPE Aruba Networking Private 5G Core
  - VoLTE/ViLTE and VoNR/ViNR support
  - PSTN/PLMN interconnection
  - QoS support: allows configuring HPE Aruba Networking Private 5G Voice Services to use the Rx/N5 interface, in order to instruct the PCRF/PCF to establish a network initiated dedicated bearer
  - SMS support: SMS over IP solution with IP-SM-GW and Short Message Service Center via SGd diameter interface. Text, binary and mission critical SMS are available
- Multilevel precedence and preemption (MLPP)
- Provisioning: XCAP, http API and GUI available to provision both static (e.g. subscriber identity) and dynamic data (e.g. supplementary services)
- Charging: Rf for offline charging
- Operations and Maintenance thanks to the Element Management System:
  - Configuration management: IMS domain, routing and protocols parameters with pre-defined default configuration with basic parameters
  - Fault management: alarms generation based on thresholds
  - Performance management: KPI and counters collection and exposure
  - Logs management: logs based on signaling events and system logs
  - Back-up and restore: configuration and roles/users

Standard Features

Security by design

HPE Aruba Networking Private 5G Voice Services is developed with adoption of Security by Design principles to fulfill key security objectives such as:

- Protecting sensitive data and processing it to preserve data availability, integrity, and confidentiality.
- Complying with the security architecture and measures defined by 3GPP for the IMS.
- Segregating functionalities to improve detectability and remediation of security weaknesses, and to increase efficiency of software maintenance and updates.
- Using security functions and libraries provided by standard operating systems and open-source projects where possible to reduce the risk of security defects from proprietary software and the cost of ownership of a deployed HPE Aruba Networking Private 5G Voice Services solution.

Key security features include:

- Built-in network isolation
- Support of HTTP Secure (HTTPS) for GUI and API access, based on TLS 1.2 or higher
- Data at rest protection with AES 256 encryption
  Role based access: web GUI provides a set of roles from which new user accounts can be created. RESTful API relies on the same set of roles as the web GUI
- IMS Network: HPE Aruba Networking Private 5G Voice Services implements the IMS Access Security as specified by 3GPP in TS 33.203 and Subscriber Authentication, Confidentiality Protection, Integrity Protection as specified by IETF RFC (SIP).

Hardware Requirements

HPE Aruba Networking Private 5G Hardware is a set of qualified HPE hardware and networking configurations aimed to be used to run HPE Aruba Networking Private 5G Core in redundant production environments.

The HPE Aruba Networking Private 5G Hardware aims to be easily replicable, reproducible, and configurable, having at the same time the configuration best practices, scalability and security requirements needed for an Enterprise or Mission Critical network.

The HPE Aruba Networking Private 5G Hardware is built with redundancy in mind. Redundancy is approached at multiple layers, avoiding any possible Single-Point-Of-Failure:

- Infrastructure Redundancy: the different physical components are fully redundant (servers, switches, connectivity), and the networking interconnections are designed for that.
- Application Redundancy: the different Network Functions (LTE, 5G, IMS) are configured with standard 3GPP redundancy capabilities, or with clustering models.

When needed, HPE Aruba Networking Private 5G Voice Services can also be deployed on different HPE HW and in cloud environments.

Configuration Information

Licensing Options

HPE Aruba Networking Private 5G Voice Services is mainly offered as perpetual licenses with yearly support fees but also available as a yearly or 3-years subscription with 24x7 Business Critical support.

When purchasing perpetual licenses, the customer will need to choose from the following attributes:

- Baseline
- Capacity: 5 bands
- High availability level: none, local or geo-redundancy
- Support level

Perpetual licensing

Up to version 1.24.3

It is necessary to purchase one baseline for Voice Services and to dimension the capacity license according to the customer desired number of Provisioned Devices filling in the capacity bands (first 300, from 301 to 5000, from 5001 to 10000, from 10001 to 25000, more than 25000).

In case of local HA you need to add High Availability (HA) license.

In case a Geo-Redundant solution is needed, the baseline license and the HA license are doubled.
Services are quoted separately.

From version 1.25.1

It is necessary to purchase one baseline for Voice Services and to dimension the capacity license according to the customer desired number of Provisioned Devices filling in the capacity bands (Tier1-first 100, Tier2-from 101 to 1000, Tier3-from 1001 to 10000, Tier4-from 10001 to 100000, Tier5-more than 100000).

In case of local HA you need to add High Availability (HA) license.

In case a Geo-Redundant solution is needed, the baseline license and the HA license are doubled.
Services are quoted separately.

Subscription licensing

The subscription selection is driven firstly by local High Availability and the service level desired by the customer and the services are included in the subscription; the second selection driver is the duration of the subscription.

Up to version 1.24.3

Select the subscription tier based on duration (that can be either one year or three years) and service level that covers the maximum number of devices the customer plans to use. In case more devices need to be licensed, an increment to the next tier can be purchased.

Options are available for Geo-Redundancy and Node Extension (extra user plane).

From version 1.25.1

The new subscription model requires:
A baseline license defining the redundancy and support model

Configuration Information

The related capacity license, according to the customer desired number of Provisioned Devices filling in the capacity bands (Tier1-first 100, Tier2-from 101 to 1000, Tier3-from 1001 to 10000, Tier4-from 10001 to 100000, Tier5-more than 100000).
Options are available for Geo-Redundancy and Node Extension (extra user plane).

Customers can purchase and use HPE Aruba Networking Private 5G Voice Services with existing qualifying HPE servers they may already own, or purchase and use with a new qualifying server purchase through HPE or through an authorized HPE Partner.

For evaluation purposes, HPE Aruba Networking Private 5G Voice Services solution is available as a 12-month subscription with 9x5 support.

Communications Software

Description	SKU
HPE Aruba Networking Private 5G Voice Services Baseline E-LTU	R7Z00AAE
HPE Aruba Networking Private 5G Voice Services 1-100 Provisioned Devices (Unit of 1 Device) E-LTU	R7Z01AAE
HPE Aruba Networking Private 5G Voice Services 101-1K Provisioned Devices (Unit of 1 Device) E-LTU	R7Z02AAE
HPE Aruba Networking Private 5G Voice Services 1001-10K Provisioned Devices (Unit of 1 Device) E-LTU	R7Z03AAE
HPE Aruba Networking Private 5G Voice Services 10001-100K Provisioned Devices (Unit of 1 Dev) E-LTU	R7Z04AAE
HPE Aruba Networking Private 5G Voice Services above 100K Provisioned Devices(Unit of 1 Dev) E-LTU	R7Z05AAE
HPE Aruba Networking Private 5G Voice Services Baseline 1yr including 9x5 Support E-LTU	R7Z26AAE
HPE Aruba Networking Private 5G Voice Services 1-100 Prov Dev (Unit of 1 Dev) 1yr 9x5 Support E-LTU	R7Z27AAE
HPE Aruba Networking Private 5G Voice Services 101-1K Prov Dev (Unit of 1 Dev) 1yr 9x5 Sup E-LTU	R7Z28AAE
HPE Aruba Networking Private 5G Voice Services 1001-10K Prov Dev (Unit of 1 Dev) 1yr 9x5 Sup E-LTU	R7Z29AAE
HPE Aruba Networking Private 5G Voice Services 10001-100K Prov Dev (Unit of 1 Dev) 1yr 9x5 Sup E-LTU	R7Z30AAE
HPE Aruba Networking Private 5G Voice Services above 100K Prov Dev (Unit of 1 Dev) 1yr 9x5 Sup E-LTU	R7Z31AAE
HPE Aruba Networking Private 5G Voice Services Baseline Local Redundancy 1yr 24x7 BC Support E-LTU	R7Z32AAE
HPE ANW Private 5G Voice Services LR 1-100 Prov Dev (Unit of 1 Dev) 1yr 24x7 BC Sup E-LTU	R7Z33AAE
HPE ANW Private 5G Voice Services LR 101-1K Prov Dev (Unit of 1 Dev) 1yr 24x7 BC Sup E-LTU	R7Z34AAE
HPE ANW Private 5G Voice Services LR 1001-10K Prov Dev (Unit of 1 Dev) 1yr 24x7 BC Sup E-LTU	R7Z35AAE
HPE ANW Private 5G Voice Services LR 10001-100K Prov Dev (Unit of 1 Dev) 1yr 24x7 BC Sup E-LTU	R7Z36AAE
HPE ANW Private 5G Voice Services LR above 100K Prov Dev (Unit of 1 Dev) 1yr 24x7 BC Sup E-LTU	R7Z37AAE
HPE Aruba Networking Private 5G Voice Services Geo Redundancy 1yr 24x7 Business Critical Sup E-LTU	R7Z38AAE
HPE Aruba Networking Private 5G Voice Services Baseline 3yr including 9x5 Support E-LTU	R7Z59AAE
HPE Aruba Networking Private 5G Voice Services 1-100 Prov Dev (Unit of 1 Dev) 3yr 9x5 Support E-LTU	R7Z60AAE
HPE Aruba Networking Private 5G Voice Services 101-1K Prov Dev (Unit of 1 Dev) 3yr 9x5 Support E-LTU	R7Z61AAE
HPE Aruba Networking Private 5G Voice Services 1001-10K Prov Dev (Unit of 1 Dev) 3yr 9x5 Sup E-LTU	R7Z62AAE

Configuration Information

HPE Aruba Networking Private 5G Voice Services 10001-100K Prov Dev (Unit of 1 Dev) 3yr 9x5 Sup E-LTU	R7Z63AAE
HPE Aruba Networking Private 5G Voice Services above 100K Prov Dev (Unit of 1 Dev) 3yr 9x5 Sup E-LTU	R7Z64AAE
HPE Aruba Networking Private 5G Voice Services Baseline Local Redundancy 3yr 24x7 BC Support E-LTU	R7Z65AAE
HPE ANW Private 5G Voice Services LR 1-100 Prov Dev (Unit of 1 Dev) 3yr 24x7 BC Sup E-LTU	R7Z66AAE
HPE ANW Private 5G Voice Services LR 101-1K Prov Dev (Unit of 1 Dev) 3yr 24x7 BC Sup E-LTU	R7Z67AAE
HPE ANW Private 5G Voice Services LR 1001-10K Prov Dev (Unit of 1 Dev) 3yr 24x7 BC Sup E-LTU	R7Z68AAE
HPE ANW Private 5G Voice Services LR 10001-100K Prov Dev (Unit of 1 Dev) 3yr 24x7 BC Sup E-LTU	R7Z69AAE
HPE ANW Private 5G Voice Services LR above 100K Prov Dev (Unit of 1 Dev) 3yr 24x7 BC Sup E-LTU	R7Z70AAE
HPE Aruba Networking Private 5G Voice Services Geo Redundancy 3yr 24x7 Business Critical Sup E-LTU	R7Z71AAE
HPE Aruba Networking Private 5G Voice Services Baseline 5yr including 9x5 Support E-LTU	R7Z92AAE
HPE Aruba Networking Private 5G Voice Services 1-100 Prov Dev (Unit of 1 Dev) 5yr 9x5 Support E-LTU	R7Z93AAE
HPE Aruba Networking Private 5G Voice Services 101-1K Prov Dev (Unit of 1 Dev) 5yr 9x5 Support E-LTU	R7Z94AAE
HPE Aruba Networking Private 5G Voice Services 1001-10K Prov Dev (Unit of 1 Dev) 5yr 9x5 Sup E-LTU	R7Z95AAE
HPE Aruba Networking Private 5G Voice Services 10001-100K Prov Dev (Unit of 1 Dev) 5yr 9x5 Sup E-LTU	R7Z96AAE
HPE Aruba Networking Private 5G Voice Services above 100K Prov Dev (Unit of 1 Dev) 5yr 9x5 Sup E-LTU	R7Z97AAE
HPE Aruba Networking Private 5G Voice Services Baseline Local Redundancy 5yr 24x7 BC Support E-LTU	R7Z98AAE
HPE ANW Private 5G Voice Services LR 1-100 Prov Dev (Unit of 1 Dev) 5yr 24x7 BC Sup E-LTU	R7Z99AAE
HPE ANW Private 5G Voice Services LR 101-1K Prov Dev (Unit of 1 Dev) 5yr 24x7 BC Sup E-LTU	R8A00AAE
HPE ANW Private 5G Voice Services LR 1001-10K Prov Dev (Unit of 1 Dev) 5yr 24x7 BC Sup E-LTU	R8A01AAE
HPE ANW Private 5G Voice Services LR 10001-100K Prov Dev (Unit of 1 Dev) 5yr 24x7 BC Sup E-LTU	R8A02AAE
HPE ANW Private 5G Voice Services LR above 100K Prov Dev (Unit of 1 Dev) 5yr 24x7 BC Sup E-LTU	R8A03AAE
HPE Aruba Networking Private 5G Voice Services Geo Redundancy 5yr 24x7 BU Critical Support E-LTU	R8A04AAE
HPE ANW Private 5G Voice Services Evaluation max 5 Simultaneous Calls 1-year 9x5 Support E-LTU	R7X71AAE
HPE Aruba Networking Private 5G Voice Services 25 Provisioned Devices 1yr BU Critical Support E-LTU	R7X95AAE
HPE Aruba Networking Private 5G Voice Services 100 Provisioned Devices 1yr BU Critical Support E-LTU	R7X96AAE
HPE Aruba Networking Private 5G Voice Services 1K Provisioned Devices 1yr BU Critical Support E-LTU	R7X97AAE
HPE Aruba Networking Private 5G Voice Services 10K Provisioned Devices 1yr BU Critical Support E-LTU	R7X98AAE
HPE ANW Private 5G Voice Services max 25 Provisioned Devices 3yr 24x7 BU Critical Sup E-LTU	R7Y74AAE
HPE ANW Private 5G Voice Services max 100 Provisioned Devices 3yr 24x7 BU Critical Sup E-LTU	R7Y75AAE
HPE ANW Private 5G Voice Services max 1000 Provisioned Devices 3yr 24x7 BU Critical Sup E-LTU	R7Y76AAE
HPE ANW Private 5G Voice Services max of 10000 Provisioned Devices 3yr 24x7 BU Critical Sup E-LTU	R7Y77AAE
HPE Aruba Networking Private 5G Voice Services 1.25.1 E-Media	R7Y83AAE

Deployment Model

HPE Aruba Networking Private 5G Voice Services can be deployed on-premises. The network functions are fully containerized in a VM can be deployed on top of a Hypervisor (eg Proxmox or VMware).

HPE Aruba Networking Private 5G Voice Services is deployed as Compact (all-in-one) model in which all containerized NFs are hosted in a single VM. HPE Aruba Networking Private 5G Voice Services contains an Element Management System to perform FCAPS (Fault, Configuration, Accounting, Performance and Security) management.

Main HPE Aruba Networking Private 5G Voice Services key factors are the following:

- Hardware agnostic, HPE Aruba Networking Private 5G Voice Services is a COTS ready product.
- Support for Compact (all-in-one) to breck down complexity and simplify the OAM.
- Vertical and horizontal scaling based on customer requirements.
- Automation for onboarding, configuration, provisioning, and licensing.

Summary of Changes

Date	Version History	Action	Description of Change
06-Jul-2026	Version 11	Changed	Internal QS Updates: Survey Text link and portrait brand format update.
27-Feb-2026	Version 10	Changed	Rebranding applied to QuickSpecs
28-Jul-2025	Version 9	Changed	Update survey link.
23-Jun-2025	Version 8	Added	This SKU was added in Configuration Information section R7Y83AAE
05-May-2025	Version 7	Changed	Overview, Standard Features and Configuration information sections were updated
13-Jan-2025	Version 6	Changed	Overview, Standard Features, Configuration information and Technical Specifications sections were updated Key capabilities and picture updates, added new SKUs, deployment model changes
01-Oct-2024	Version 5	Changed	Product rebranding. Standard Features and Configuration information sections were updated.
03-Sep-2024	Version 4	Changed	Added MLPP service, reference capacity deletion, editorial correction
06-May-2024	Version 3	Changed	Overview, Standard Features, Configuration information sections were updated. Update for Services and Security, excluding SKUs.
18-Dec-2023	Version 2	Changed	HPE Services Rebranding
05-Sep-2023	Version 1	New	New QuickSpecs

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