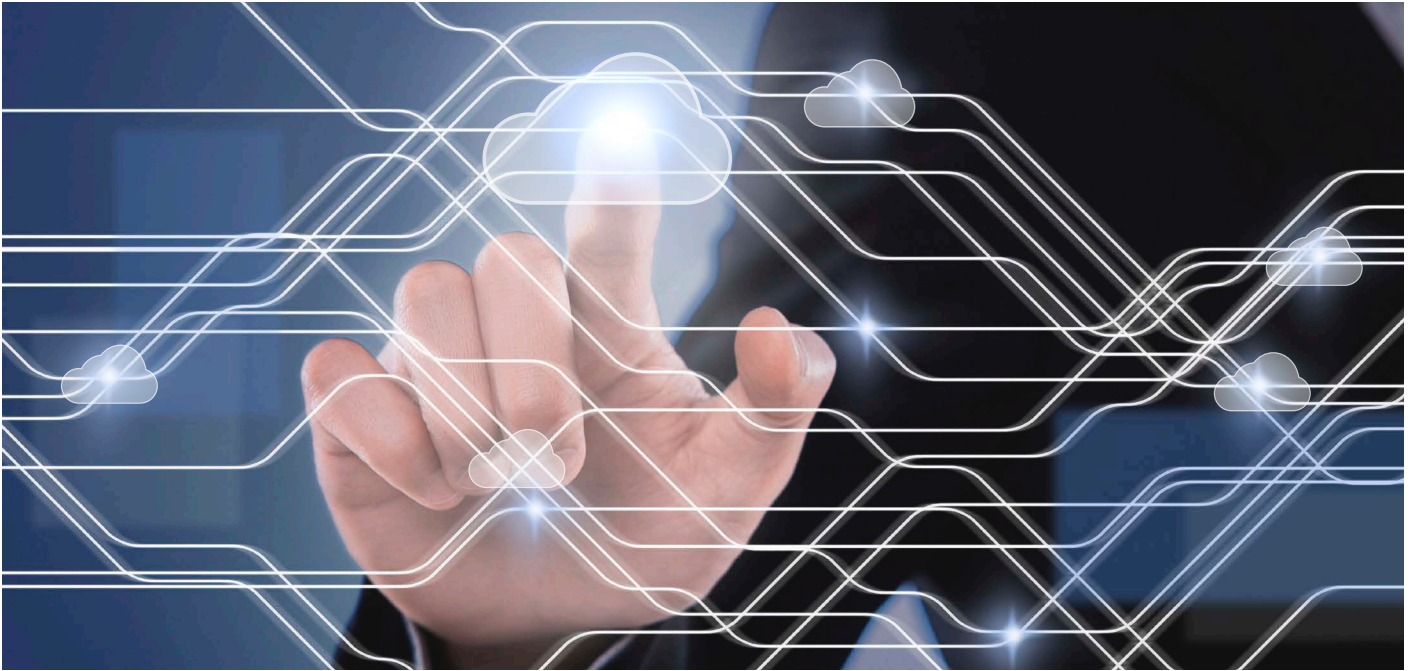


# AUDIOCODES APPLICATION NOTE

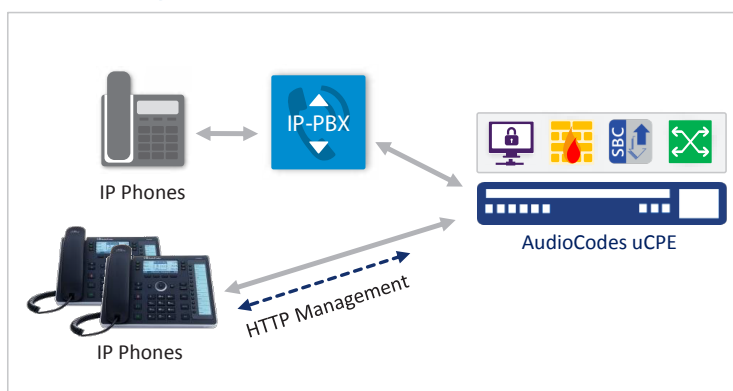
## Network Function Virtualization (NFV) and the Virtualization of the Edge



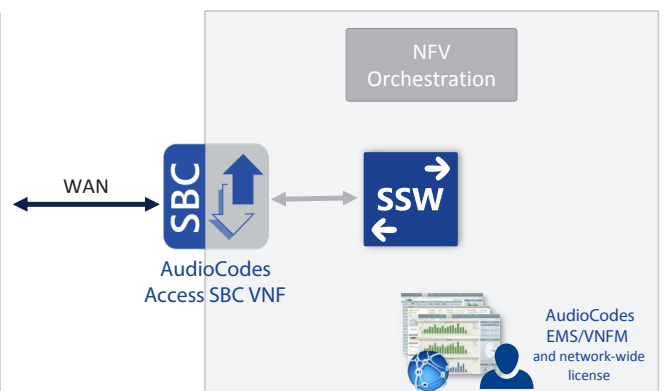
The adoption by service providers of Network Function Virtualization (NFV) and virtualization of the edge enables them to quickly introduce new innovative communication services to their customers without the overhead typically associated with hardware-based solution deployments. Realizing this opportunity requires flexible Virtual Network Function (VNF) session border controllers (SBCs) capable of running both as service provider access and peering SBCs as well as VNFs on Universal Customer Premises Equipment devices (uCPE).

AudioCodes offers a comprehensive and flexible set of solutions, from uCPE devices that can host third-party VNFs to a scalable virtual SBC. AudioCodes' virtual SBC runs on any uCPE device as well as in the service provider's NFV cloud, functioning as an access or peering SBC. By offering a single scalable product, covering all capacity needs with one unified control and management interface, service providers can leverage its deployment and maintenance simplicity to introduce new communications services rapidly and cost-effectively.

### SMB / Enterprise



### Service Provider



## SBC VNF for uCPE

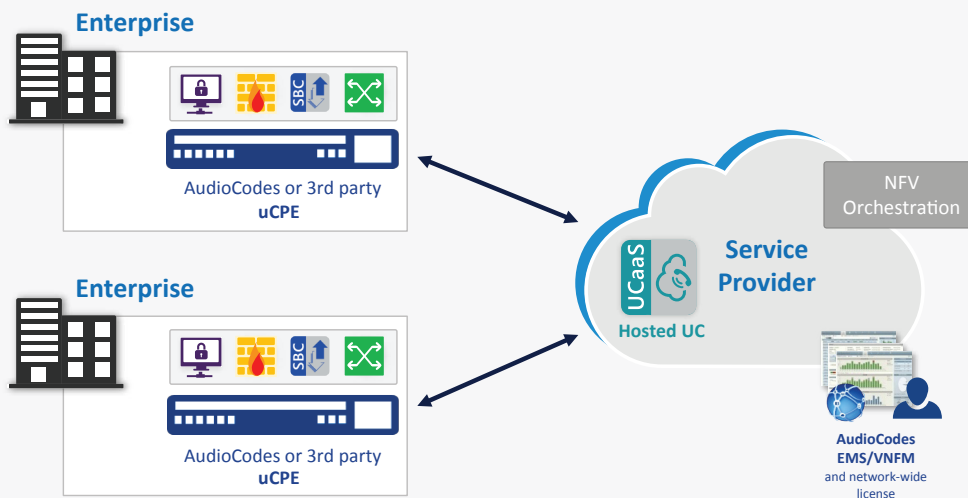
AudioCodes' SBC VNF has the lowest hardware footprint in the industry, enabling service providers to deploy a cost-effective uCPE device at customer premises. The SBC VNF supports cloud automation and provisioning mechanisms to assist service providers in reducing OPEX and time to service by automating the entire SBC VNF lifecycle.

*The SBC VNF supports cloud automation and provisioning mechanisms to assist service providers in reducing OPEX and time to service by automating the entire SBC VNF lifecycle.*

Service providers have the flexibility to deploy the SBC VNF on any leading hypervisor platform while preserving the same rich functionality as on the proprietary hardware SBCs.

AudioCodes offers network-wide pool licensing for effective deployment within distributed architectures, enabling service providers to automate the process of launching new SBC VNFs and to scale them up and down according to customer demand.

## Managed On-Premises uCPE



ON-PREMISES

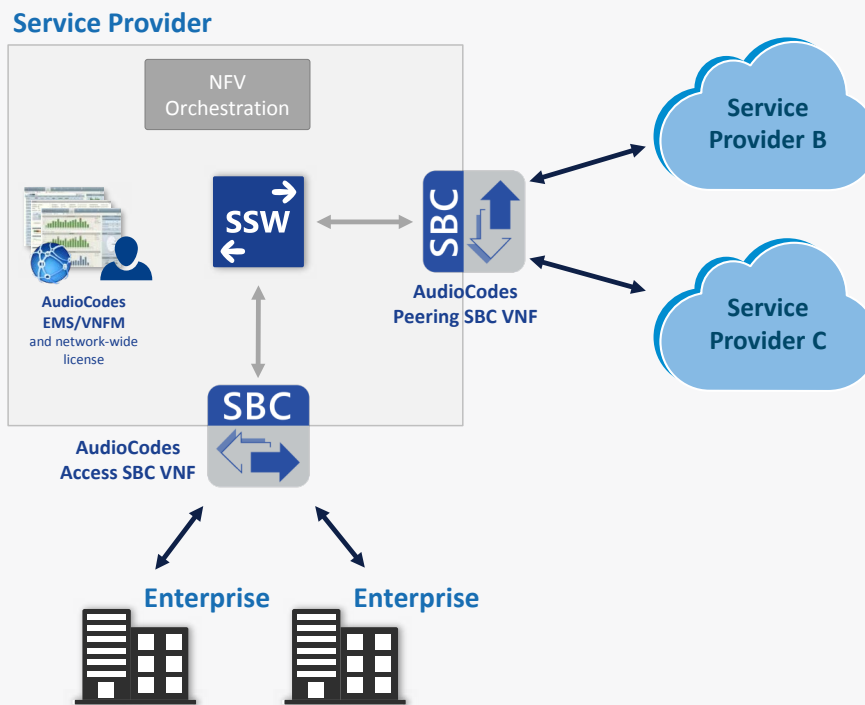
## SBC VNF for Access and Peering

AudioCodes' **SBC VNF** is a highly scalable SBC suitable for service provider datacenters supporting access and peering functionality. It supports SIP interoperability, media handling including transcoding, and VoIP security. AudioCodes' SBC VNF was certified by Miercom, a third-party test lab, for its high performance and scalability under security attacks such as Distributed Denial of Service (DDoS), malformed SIP messages and rogue RTP packets.

*AudioCodes' SBC VNF was certified by Miercom, a third-party test lab, for its high performance and scalability under security attacks such as Distributed Denial of Service (DDoS).*

The SBC VNF fully integrates with all major public and private cloud environments, reducing operational costs with automation and efficient utilization of cloud resources.

AudioCodes' network-wide pool licensing offers flexible deployment isolation between tenants.



# Universal Customer Premises Equipment (uCPE)

Universal Customer Premises Equipment (uCPE) represents one of the strongest use cases of Network Function Virtualization (NFV) currently attracting the interest of hosted service providers. uCPE provides a remotely manageable platform on which hosted service providers can easily deploy, modify or delete VNFs over Wide Area Networks (WAN).

While traditional white box solutions are good at handling compute platform requirements such as CPU, memory and storage, it can sometimes be challenging to add different WAN interfaces to the white box. Service providers want to use the same CPE regardless of whether their access type is legacy T1, Ethernet, xDSL, fiber or even LTE.

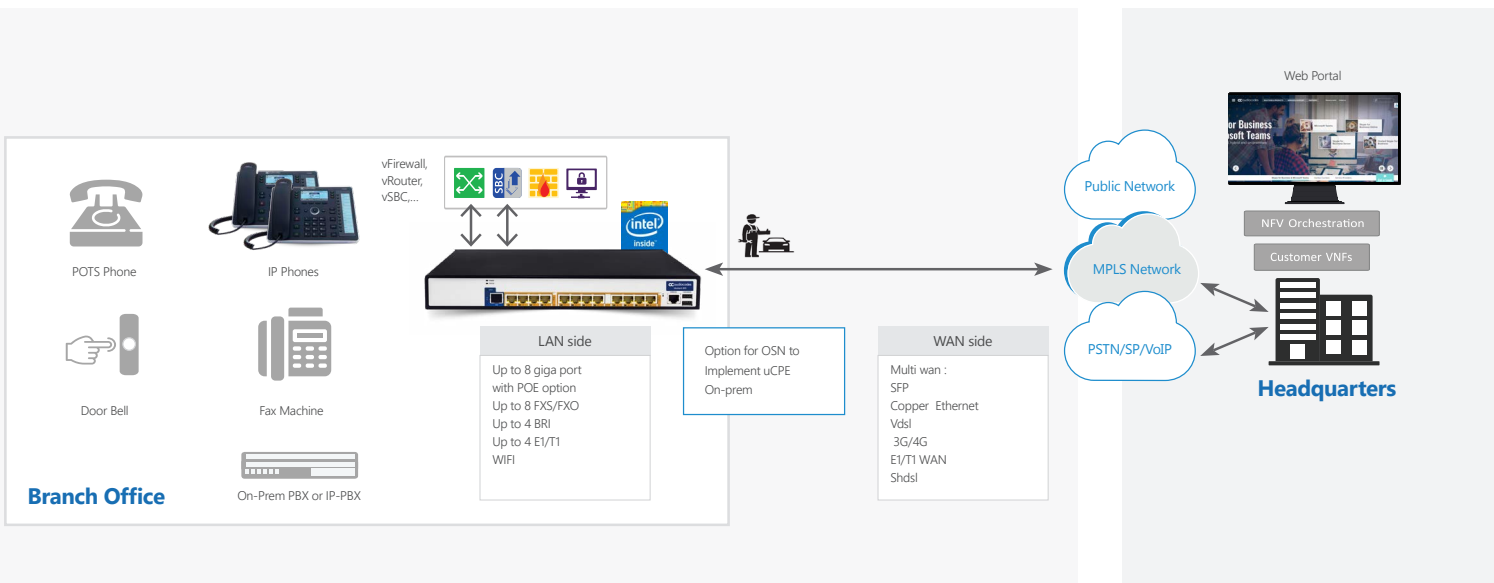
The issue of single box solutions becomes even more challenging when it comes to legacy voice interfaces like FXS, BRI and PRI. In this situation, customer premises include devices such as phones, fax machines or even local PBXs which may require additional boxes and wiring to support them.

AudioCodes' [uCPE solution](#), based on its Mediant 800 platform, directly addresses this problem – and solves it. The solution integrates a state of the art, x86 based server with flexible compute power (2 to 16 cores) based on the required application, as well as various WAN interfaces and multiple flexible PSTN interfaces on the LAN side. This facilitates flexible usage in different customer premises.

The AudioCodes uCPE solution is a single, flexible unit for hosting multiple VNFs. It also provides:

- Remote management for simplified operations and reduced OPEX
- Compatibility with OpenStack and major third-party orchestrators
- Real zero touch installation
- Embedded support for data routing, SBCs and media gateways

## uCPE Use Cases



# AudioCodes Virtualized Session Border Controllers

AudioCodes offers two options for taking advantage of Network Function Virtualization.

These are the **Mediant Virtual Edition (VE)** and the **Mediant Cloud Edition (CE)** session border controllers.



**Mediant Virtual Edition (VE)**



**Mediant Cloud Edition (CE)**

The AudioCodes Mediant Virtual Edition (VE) SBC is ideal for enterprises and service providers looking to virtualize their infrastructure and harmonize their datacenters on commodity server hardware. Designed to meet ETSI NFV ISG requirements, the Mediant VE runs on leading NFV platforms and uCPE devices, as well as native servers. It is compatible with leading hypervisors and orchestration solutions.

The AudioCodes Mediant Cloud Edition (CE) SBC leverages the benefits of cloud agility to allow enterprises and service providers to fully realize the potential of virtual environments by offering full cloud elasticity that automatically adjusts rapidly to changing needs. Its microservices architecture and scalable media cluster enable new revenue-generating communications services to be introduced simply and with minimal capital outlay.

Both the Mediant VE and the Mediant CE support broad SIP interoperability and provide powerful media handling capabilities (including transcoding) and robust security mechanisms.

## About AudioCodes

AudioCodes Ltd. (NASDAQ, TASE: AUDC) is a leading vendor of advanced voice networking and media processing solutions for the digital workplace. AudioCodes enables enterprises and service providers to build and operate all-IP voice networks for unified communications, contact centers, and hosted business services. AudioCodes offers a broad range of innovative products, solutions and services that are used by large multi-national enterprises and leading tier-1 operators around the world.

For more information on AudioCodes, visit <https://www.audiocodes.com>.

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