

# Telco Systems uCPE Quick Deploy Ecosystem

*Transforming network services virtualization with a comprehensive, plug-and-play, open uCPE ecosystem*

*In association with*

**MPLS+SDN+NF**WORLD ★ PARIS 2019

**ADVANTECH**

## **Advancing NFV deployment with uCPE**

**FORTINET**®

NFV/SDN is allowing proven technologies, such as SD-WAN and virtual Firewalls, to be seamlessly deployed and managed. As a result, scaling these solutions is much easier, eliminating the need for customers to retain expensive and dedicated engineers to maintain internally. Choosing the right partner to accelerate networks function virtualization (NFV) deployment makes a world of difference and is key for the success of your overall NFV/SDN strategy. NFV services and solutions continue to evolve, making it crucial to build infrastructure that is open, flexible and agile in order to easily enable the adoption of new innovations, new hardware and additional virtual network services (VNF) or applications.

Universal Customer Premise Equipment, or uCPE, is an essential building block for your NFV/SDN deployment strategy. The uCPE is more than just a white-box. When accompanied by the right software suite, uCPE constitutes an open ecosystem platform for hosting VNFs on a virtualized OS that allows for the true separation of hardware, software, and services. In this broader constellation, the open uCPE enables providers to offer on-demand services, instant software deployments, and shared resources when and where they are needed, while decreasing CAPEX and OPEX, eliminating vendor lock-in with open architecture, and increasing revenue by selling and spinning up new services on demand.

# Open uCPE Ecosystem Accelerates Deployment

Telco Systems NFVTime™ comprises an open uCPE software suite solution to power the delivery of on-demand NFV services with zero-touch provisioning and full life cycle management. With Telco Systems, service providers and integrators can leverage the NFVTime™ Partner Ecosystem, which provides a pre-integrated one-stop-shop for all the components needed to speed up uCPE deployment and on-demand service ordering/provisioning/activation, while eliminating dependence on proprietary equipment, avoiding vendor lock-in, and saving on costly truck rolls and onsite engineers.

## uCPE Quick Deploy Ecosystem in Action

Let's take a closer look at how Telco Systems NFVTime uCPE software suite and Partner Ecosystem lets service providers select and combine components to deploy and activate a custom-built uCPE solution quickly and easily. In this example, the service provider has selected components from the following vendors:

- Telco Systems: NFV orchestration (deployment/provisioning/management) of VNFs
- Advantech: uCPE Intel-based white box
- Fortinet: Security VNFs (SD-WAN and vNGFW)

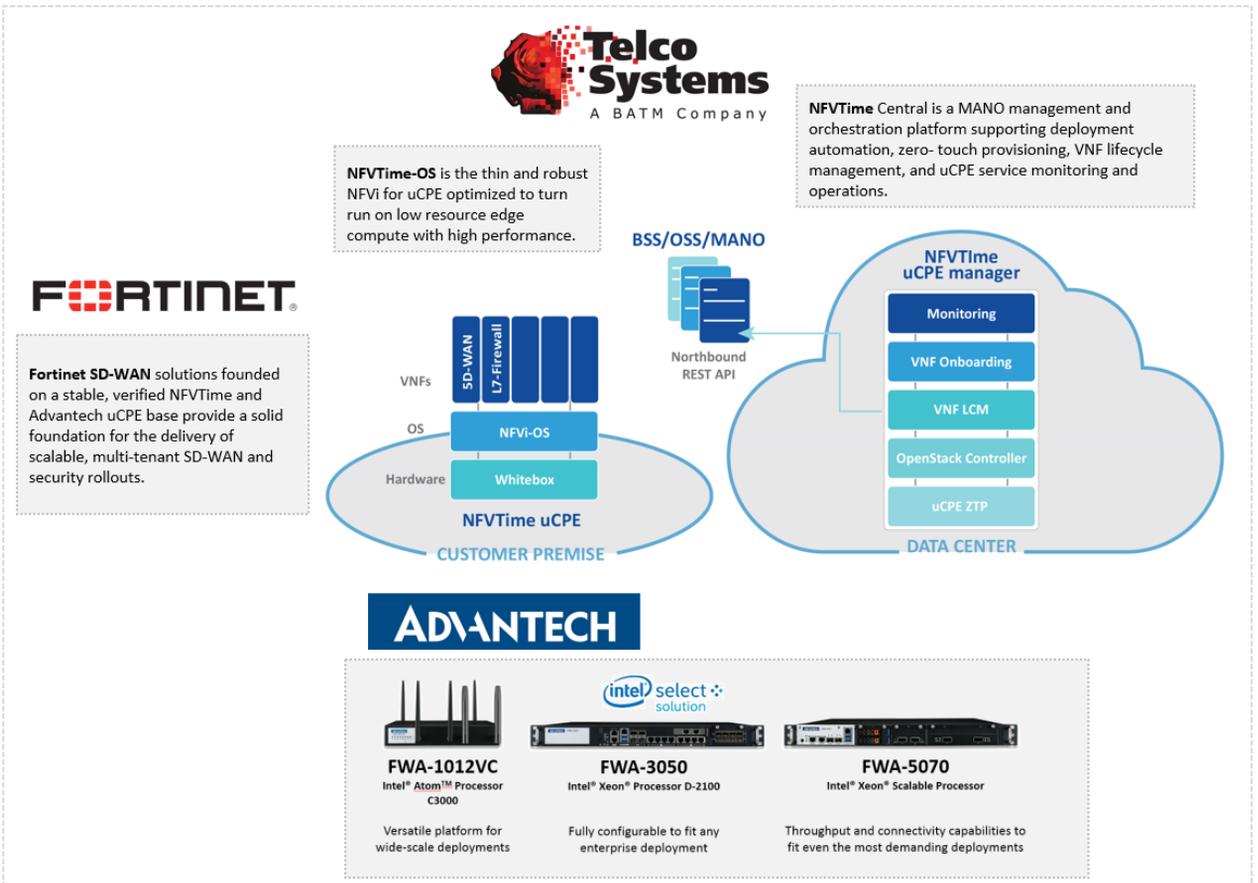


Figure 1. uCPE Quick Deploy Architecture



## Telco Systems NFVTime

Telco Systems NFVTime is a complete open uCPE software suite enabling the delivery of on-demand NFV services with zero-touch provisioning. NFVTime is revolutionizing the way CSPs, MSPs and enterprises package and deploy services to customers, allowing for custom network solutions that can be tuned precisely to end-customer and enterprise needs.

**NFVTime Central** is a MANO management and orchestration platform supporting deployment automation, zero-touch provisioning, VNF lifecycle management, and uCPE service monitoring and operations. NFVTime Central simplifies, accelerates, and automates the lifecycle procedures with Home Calling, Remote Backup and Restore, Remote Upgrade, and Customer Service management features.

**NFVTime-OS** allow service providers and enterprise to run any VNF on any white box hardware with complete agility and scalability. NFVTime’s OpenStack Based Architecture enables fully automated, Zero-Touch Provisioning - with full lifecycle management. Flexible deployment models and seamless integration support both local and centralized controller configurations with a standard, open northbound interface and broad support for diverse VNFs and white boxes.

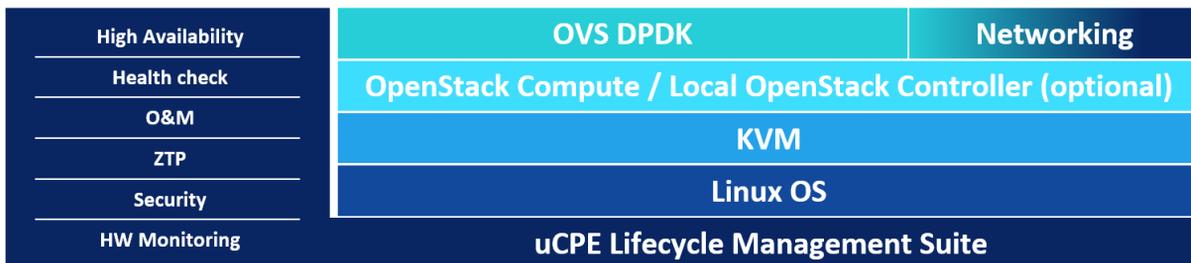


Figure 2. NFVTime OS Architecture



## Advantech uCPE white boxes

Advantech’s white-box uCPE portfolio brings scalable processing performance, outstanding network throughput and flexible connectivity options to NFV rollouts. Optimized for uCPE and SD-WAN, the white boxes are powered by processors based on Intel® architecture and are scalable from 2-16 cores using Intel-based SoCs, and up to 28-cores using a single socket Intel® Xeon® Scalable processor. Advantech commercial-off-the-shelf uCPEs are readily available and come with a choice of hybrid LTE, WiFi, xDSL, G.fast & SFP+ configurations, depending on the selected platform.

<p><b>Optimize Your Infrastructure</b></p> <p>With white boxes based on Intel architecture and tailored to uCPE use cases</p>	<p><b>Minimize Risks</b></p> <p>Get on a faster, more efficient deployment using pre-integrated and tested platforms</p>	<p><b>Build-in Reliability</b></p> <p>Leverage significant security enhancements over pure IT solutions</p>	<p><b>Stay Flexible</b></p> <p>With fully configurable platforms to fit any enterprise deployment</p>
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## Advantech Remote Evaluation Services

Advantech Remote Evaluation Services (RES) provides a framework that brings together members of Telco Systems NFVTime Partner Ecosystem in the design of next generation networking architectures based on white box servers. Within the RES framework, developers openly collaborate using a range of platforms scaling from several to several hundred cores. As a result, integrators and service providers can get ahead of the curve and begin to test different NFVI configurations on platforms destined for different deployment options from cloud-based to headquarters.



### Fortinet Security VNFs (SD-WAN and vFirewall)

The FortiGate VNF offers protection from a broad array of threats, with support for all of the security and networking services offered by the FortiOS operating system. The VNF comprises a truly consolidated platform with one OS for all security and networking virtualized services, so businesses can:

- Leverage industry-leading protection: NSS Labs Recommended, VB100, AV Comparatives, and ICSA validated security and performance.
- Control thousands of applications, block the latest exploits, and filter web traffic based on millions of real-time URL ratings.
- Prevent, detect, and mitigate advanced attacks automatically in minutes with integrated advanced threat protection.
- Fulfill any networking needs with extensive routing, switching, and SD-WAN capabilities

The FortiGate VNF also offers: Increased visibility within virtualized infrastructure; Rapid deployment capability; Ability to manage virtual appliances and physical appliances from a single pane of glass management platform; Simple licensing; Support for multiple virtualization and Cloud platforms; VDOM-enabled for multi-tenant environments. With Telco Systems NFVTime management and network orchestration (MANO), on-demand spin up FortiGate vFirewall and SD-WAN functions on any uCPE is easier and faster than ever.

## ABOUT ADVANTECH

Advantech Networks & Communications Group helps service providers and enterprises extend NFV from the core to the edge by providing scalable compute platforms that reliably execute virtual network functions anywhere in the network. Our innovative white-box uCPEs for software-defined WAN and white-box servers based on Intel architecture are supported by a vibrant software ecosystem and supply chain, offering key foundational building blocks that accelerate network transformation

To learn more, visit <http://www.advantech.com/nc>

## ABOUT TELCO SYSTEMS

Telco Systems delivers a portfolio of carrier Ethernet and MPLS-based demarcation, aggregation, and uCPE solutions that enables service providers to create intelligent, service-assured, CE 2.0-compliant networks for mobile backhaul, business services, and cloud networking. Telco Systems' end-to-end Ethernet, SDN/NFV-ready product portfolio delivers significant advantages to service providers, utilities, and city carriers competing in a rapidly evolving telecommunications market. Telco Systems is a wholly owned subsidiary of BATM Advanced Communications.

To learn more, visit Telco Systems at <http://www.telco.com>

