FUJITSU

Solution Brief
Virtual Access Network

Low-cost expansion to new service areas, combined with potential for innovating new service offerings

The Fujitsu Virtual Access Network (vAN) solution is a flexible and cost-effective approach to delivering small-to-medium business access services. With the vAN solution, it is now possible to deliver more types of services to more customers that were previously not cost-effective to reach, especially in rural areas. vAN enables you to deploy services:

- Without any manual provisioning
- Without regard to the underlying technology
- Without truck rolls

The Challenges of a Costly, Inflexible Access Network
Existing access networks and technologies are too inflexible and costly to deliver small-to-medium business services efficiently. Currently, it is necessary to deploy expensive routing devices that require manual provisioning. This can be especially burdensome when customers are located in rural areas, due to the need for expensive truck rolls. The technology-specific nature of these services also limits the types of offerings available to customers. For example, small-to-medium business services could previously only be delivered via Ethernet.

Solution Highlights

- **Access-agnostic**
  Services can be delivered over any access technology (including fiber, copper, Hybrid Fiber/Coax (HFC), Wi-Fi, and LTE)

- **Highly automated and flexible**
  Incorporates highly configurable "white box" customer premises devices that self-install, connect and configure with minimal end-user or technician interaction.

- **Service-chainable**
  Virtual Network Function (VNF) flexibility enables multiple services to be linked together and deployed as a group over a given connection with little manual intervention and allowing for centralization of compute resources.

- **Scalable**
  The vAN solution offers a solution that can grow cost-effectively and enables speedy, low-cost expansion to new service areas and innovative new types of service offerings.

- **Secure**
  Security is provided using IPSec and by isolating each service to a single VNF instance.

- **Reconfigurable**
  Individual customer premises devices can be reconfigured automatically to suit specific use cases.

- **Cost-effective**
  Because this solution eliminates purpose-built routers and costly truck rolls, it reduces both initial cost and ongoing cost, in addition to broadening the addressable customer base.

Accelerate Delivery with a Simple, Flexible, Automated Solution
vAN increases both flexibility and automation, efficiently accelerating delivery of services to your customers. With vAN, you can:

- Deploy new services in a matter of days without truck rolls
- Enable seamless access regardless of underlying transport technology
- Reduce the cost of delivering services
- Support migration away from legacy services and operations
- Optimize efficient use of resources across your entire organization

Replace Costly Hardware and Cut Long Provisioning Times

Virtualized Network Functions, Simplified Customer Equipment

vAN virtualizes network functions within centralized compute resources, increasing performance and reducing the cost and time to deploy. This virtualization, combined with low-cost, customizable white-box customer premises equipment and planning software, enables you to deliver access services wherever customers need them. As a whole, the solution is based on an open-source SDN/NFV solution and consists of the following components:

- Fujitsu Services Gateway Unit (SGU), a low-cost white box customer premises device supporting services across any access medium
- Fujitsu Plan & Provision, a software tool that delivers zero-touch plug-and-play provisioning of the end-to-end service, not just the edge device
- Fujitsu Virtual Private Service, a Virtual Network Function (VNF) that replaces traditional "big iron" routers
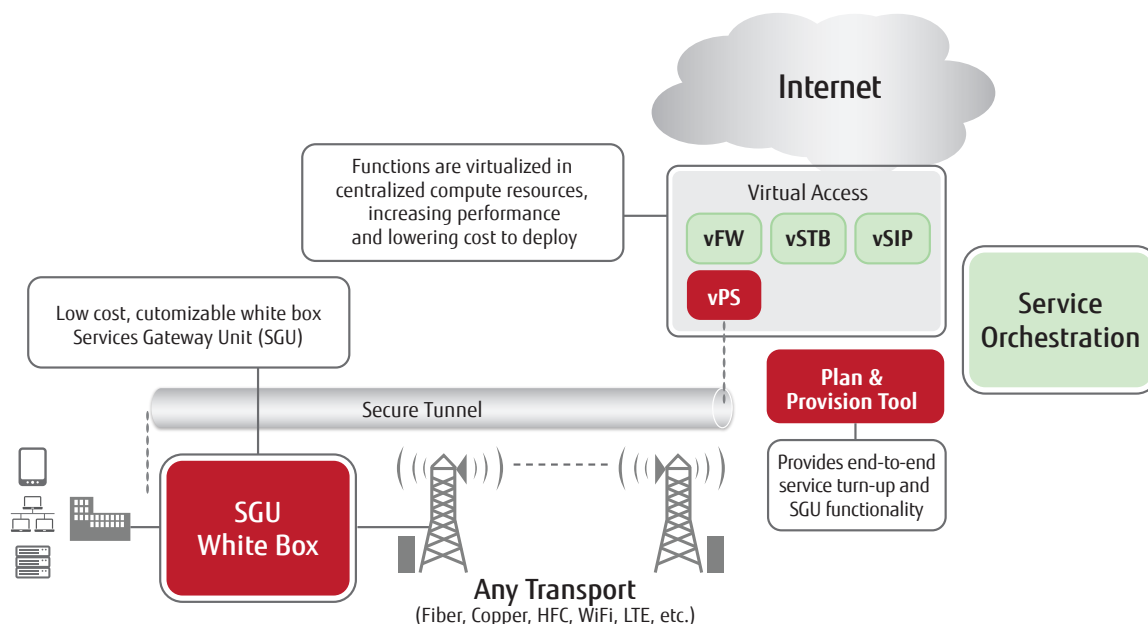
Delivering Long-Term Value and Revenue Potential

Today, vAN delivers services to an expanded range of customers at low cost, but its value potential extends well into the future. Locating functions and intelligence within centralized compute resources opens up possibilities for many new types of service offerings, while simplifying technology migration and evolution.

Develop Innovative New Service Offerings
Profitable future applications for the Virtual Access Network solution include service offerings like these:

- Virtual SIP (VOIP) service
- Virtual firewall
- Virtual adware/malware blocking
- Virtual set-top box
- Virtual gaming console

Fujitsu Network Communications, Inc.
2801 Telecom Parkway, Richardson, TX 75082
Tel: 888.362.7763
us.fujitsu.com/telecom

Walker and Associates, Inc.
PO Box 1029, 7129 Old Hwy 52
Welcome, NC 27374
Tel: 800.925.5371
www.walkerfirst.com

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