

Solution Brief

Virtual Access Network

Low-cost expansion to new service areas, combined with potential for innovative new small-to-medium business 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.

New Opportunities to Reach Underserved Business Customers

Small-to-medium businesses represent over 90% of all companies in North America. But operators don't have the tools they need to reach the majority of smaller organizations. Today's complex installation procedures take too long and can be error-prone. At the same time truck rolls, manual provisioning, CPE and leased access lines are costly. As a result, it's often not profitable to deliver services these customers want, and their sites may be outside the current network footprint.

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
- Deploy new services regardless of the underlying access technology and without manual provisioning

- 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

Solution Highlights

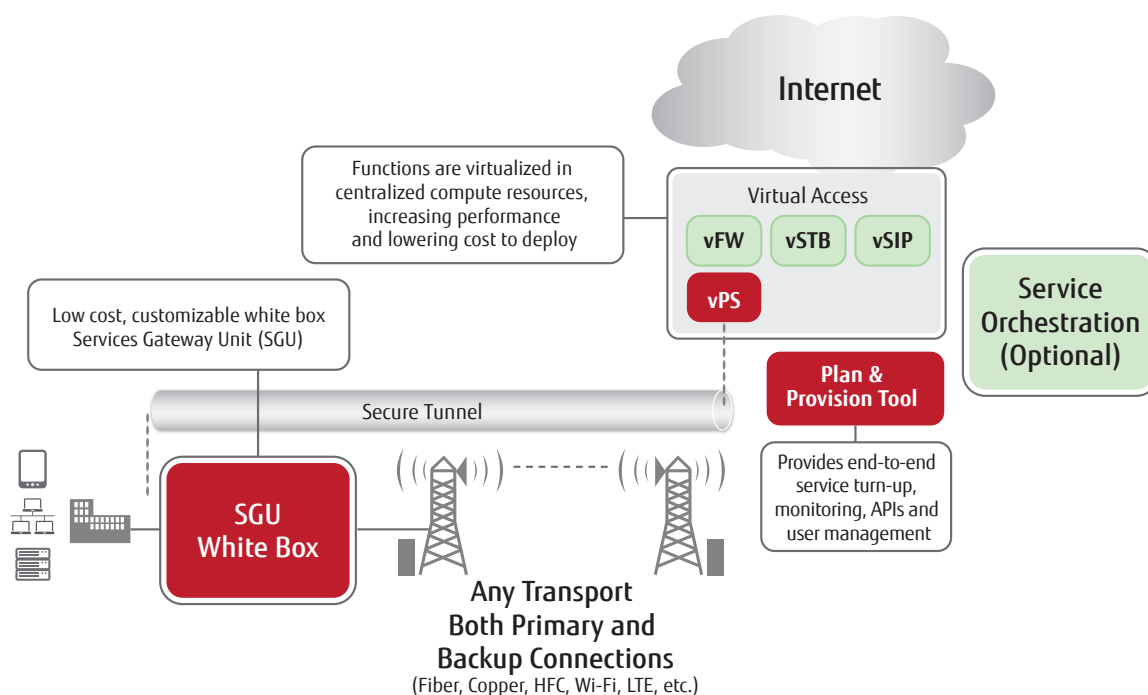
- **Access-agnostic**
Services can be delivered over any access technology (including fiber, copper, Hybrid Fiber/Coax (HFC), Wi-Fi, and LTE)
- **Highly automated and flexible**
Incorporates highly configurable "white box" customer premises devices that self-install, connect and configure with minimal 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 and Reliable**
Security is provided using IPSec and by isolating services in the data center. Multiple access connections can be used to provide an active/back-up configuration.
- **Reconfigurable and Open**
Individual customer premises devices can be reconfigured automatically to suit specific use cases. vAN CPE software can be ported to any suitable Linux device.
- **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.

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. 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 with Linux software that can be ported to any access device and supports services across any access medium
- Fujitsu Plan & Provision, a software tool that delivers zero-touch plug-and-play provisioning and monitoring of the end-to-end service, as well as the edge device
- Fujitsu Virtual Private Service, a Virtual Network Function (VNF) or standalone software application 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

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