Dell Networking Small Business Reference Architecture 1.0

Today's small businesses are challenged to keep pace with the changing networking landscape. With limited resources, they must support a variety of devices that support key business functions, deliver IT services that are reliable and flexible, and provide demonstrable cost savings. The Dell Networking Small Business Reference Architecture (SBRA) uses proven network design principles and best practices to create a framework for stable performance.

The Small Business Reference Architecture (SBRA) focuses on the smaller branch office, small office home office (SoHo), and remote office portion of the Dell solutions portfolio. Along with limited IT budgets, support resources at these offices are often restricted to a single IT person who must support all infrastructure aspects of the office (servers, networks, backup, desktop, applications etc.). With this in mind, the SBRA provides straightforward configuration and management that can be implemented by all levels of network administrators.

The SBRA is designed to scale around the number and type of users, as well as the device types being used. The network is built around 50 users in a modern office setting who connect using both wired and wireless devices. This solution will readily scale from 25 to 75 users or more.

Fast, secure and easy

The ease of use and scalability of the Dell Networking X-Series switches is featured in this reference architecture. These smart managed GUI-based switches in conjunction with Dell's W-Series Instant Access Points (W-IAPs), and the SonicWALL TZ series firewalls bring a level of access and security that, until now, has not been easily achievable by a small business with limited IT resources. The compute resources showcased in this reference architecture are hosted in a Dell PowerEdge VRTX chassis, which integrates servers, storage, networking and management together in a single, compact chassis with office-optimized dimensions, acoustics and security.

The Dell Networking Small Business Reference Architecture delivers the following value oriented design paradigms:

- Simplify complex provisioning tasks with smart managed graphical user interfaces (GUI)

- Deliver a value based technology offering that will be able to grow with a business's networking needs

- Enable users to access their network resources in a protected firewalled environment

While this topology is considered a best-in-class usage case of Dell products, Dell's portfolio of server, networking and storage offerings allows multiple design configurations to meet the demands of a small business.

Built for today and tomorrow

The SBRA network topology is built using a 10GbE X4012 switch as the distribution layer and three 1/10GbE X1052P switches for the access layer. The mobility and security aspects of the design are addressed using a W-IAP205 and a SonicWALL TZ-215. The compute resources in this design are a M630 blade server in a Dell PowerEdge VRTX shared infrastructure chassis with the R1-2210 10GbE switch module as the networking connectivity component.

The SBRA is designed to provide network bandwidth and reliability necessary for high quality Voice over IP (VoIP), instant messaging, streaming video, and large file movement, with security and ease of management that fits the needs and resources of today's small business networks.
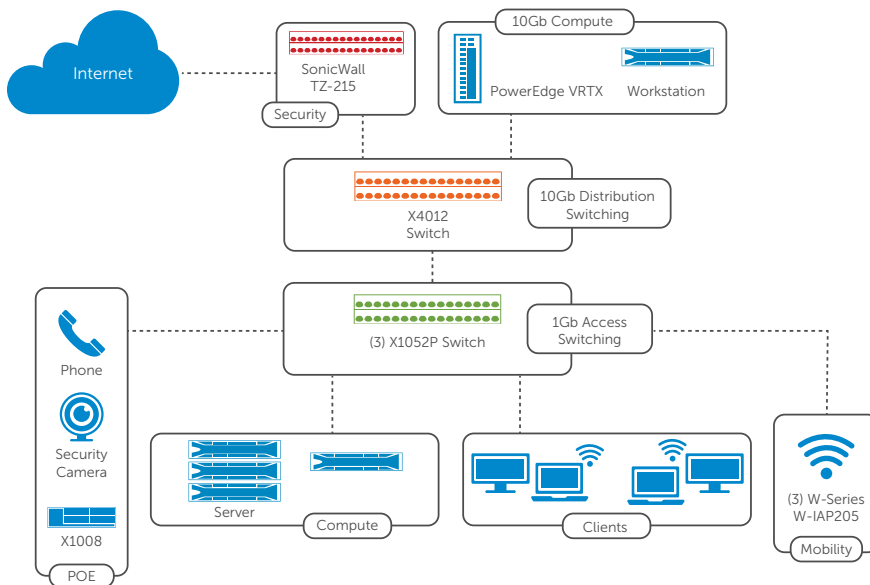
Dell Networking X4012
- 12 port 10GbE all fiber switch

Dell Networking X1052P
- 52 port 1GbE PoE/PoE+ switch with 10GbE uplinks

Dell Networking W-IAP205
- 802.11ac PoE powered wireless access points

Dell SonicWall TZ-215
- unified threat management firewall

Dell PowerEdge VRTX
- converged chassis with server, storage and networking

For more information on the Dell Networking Small Business Reference Architecture, download the full document at en.community.dell.com/techcenter/networking/m/networking_files/20441101

For larger managed networks, check out the Dell Networking Campus Switching and Mobility Reference Architecture. Download the full document at en.community.dell.com/techcenter/extras/m/white_papers/20439122