Why Network Documentation is Essential

What this document is about?

This document describes why every business should have good network documentation.

The document is designed to be short and sharp and to elicit further discussion.

What is Network Documentation

Every computer network consists of various network devices and elements that are interconnected to provide basic business functions such as network printing, storage of files and data, communications, internet access, accounting functions, business applications and much more.

Often, no attention is spent documenting how the network is designed, how the devices are interconnected, how critical business systems function or how network traffic is expected to flow across the infrastructure.

Network documentation refers to the process of documenting using diagrams and words how the network is designed and operates, how the elements are interconnected, and how traffic flows over the network. As the network evolves and changes, the network documentation should be updated to reflect these changes. Network documentation should be a living document.

Business documentation, not covered here but of equal importance, documents the various business functions, tasks and services necessary to operate and support the business.

So why it is so important to have good network documentation?

The Benefits of Network Documentation

The benefits of network documentation can be summarised by the familiar saying 'you don't know what you have until it is gone'.

When a business is operating smoothly and the IT department are reporting no real networking issues, network documentation tends to take a back seat.

But consider for a moment a new staff member that has just started in the IT department or the problem that the IT staff are currently reporting with a branch office. Or maybe the organisation is about to undergo an internal PCI DSS compliance audit (note: PCI = Payment Card Industry).

Let's consider each case in point.

When a new IT staff member joins the organisation they may be provided some documentation and told to get familiar with the environment. Usually the documentation consists of a simple 'big picture' overview of the network, an incomplete IP address spreadsheet, and an outdated firewall configuration. Depending on network size, the task of getting 'up to speed' with the network can take a few days if not weeks. During this orientation period the staff member is not yet adding value to the

organisation. Providing a new staff member with a detailed network diagram(s) can significantly reduce the time (and cost) it take for the member to be an active and productive member of the team.

Troubleshooting a network device is extremely difficult without context. If for instance network traffic is unable to flow from source to destination it is important to understand all the elements in the path between source and destination. A network diagram provides this information and context. A good network diagram can easily illustrate all the devices that exist on the network, how the devices are interconnected and how the network traffic is expected to flow across the links. Detailed network diagrams significantly reduce network troubleshooting times, improve network uptime and reduce support costs.

The Payment Card Industry Data Security Standard (PCI DSS) is a set of requirements designed to ensure that all companies that process, store or transmit credit card data maintain a secure environment (see www.pcisecuritystandards.org for more information). There are many onerous requirements that relate to PCI DSS but the first undertaking is to define the cardholder environment (CDE). To achieve this requires detailed and current network diagrams that not only indicate all devices that are exposed to credit card data but also need to define the actual card data flows. PCI DSS compliance enforces organisations to have clear and current network documentation. By having a clear understanding of the network and the in scope elements can significantly reduce the overall PCI DSS scope and also reduce PCI compliance costs.

The three scenarios above explain the importance and benefits of good network documentation.

Here are additional reasons why organisations should invest in good network documentation:

1. Provides an excellent baseline for new information technology initiatives.
2. Can be used to facilitate and create a hardware and software inventory.
3. Reduce overall IT costs by providing third parties or external consultants ready access to network infrastructure for project-based work.
4. Reduce network troubleshooting time, cost and effort by offering clear network visibility and context to identify and isolate problems.
5. Help new IT staff to become productive sooner by enabling a faster understanding of the environment.
6. Facilitate a process to simplify and optimise firewall policies.
7. Reduce the overall risk exposure of an organisation by promoting network clarity and secure design.
8. PCI DSS compliance requires detailed network documentation.

Summary

This document discussed why every business should have good network documentation and the associated benefits.

About the Author

Sydney-based IT consultant Mike Kleviansky has charted his own career path as an independent professional, for over 17 years. See http://blog.nvoi.com.au/blog/mike-kleviansky-inc

More Information

For more information on how good network documentation can assist your organisation (or other related services), please refer to:

www.m-net.com.au, or contact Mike Kleviansky on 0414 3030 72.