Toranet Service Brief

Wireless Networking

✔ Fit-For-Purpose — **We establish the purpose and tailor the WLAN solution to meet it**

✔ Accurate — **Our implementation will minimise risk and maximise value**

✔ Secure & Mobile — **Boost employee productivity without jeopardising security**

✔ Trust Toranet — **The best advice, the right solution and totally reliable support**

Wireless networks have been around for many years. Technology advances rapidly and wireless networks are no exception. Security has now been solid since 802.11i was introduced in 2004 and bandwidth at the last revision of the 802.11 standard increased to 300 Mbps with the introduction of 802.11n.

Wireless networks can now be centrally administered on a global scale with fault tolerance if the business requires it. When designed and configured correctly, wireless networks provide a significant boost to productivity. Wireless networks are vital for mobility with the growth of tablets and smartphones.

Who, What & When? – The key to getting the design right is to first understand who will be using the WLAN, what they will be using it for with consideration for how its use may change in the future. Will the business be reliant on it or is it just a nice-to-have?

Coverage & Density – There needs to be the right number of wireless access points of the right type positioned in the right places.

Capacity Planning – Consideration at the start for how the WLAN might evolve in terms of its use model and scale, will ensure capacity is planned appropriately.

Security – Some wireless users will require access to more systems and information than others. It is important for everyone's access-rights to be set appropriately and properly governed. There are options for how this is achieved.

Administration and Management – A wireless network from Toranet will be easy to administer with a minimal management overhead. Detailed reports are available and can be used to identify trends and user behaviour.

Support – In most cases, a new wireless network quickly becomes relied upon by network users that previously plugged into the LAN. Support must be effective and the resources and processes planned correctly to meet recovery time objectives. Toranet provides support that goes well beyond hardware and software issues. We also provide configuration assistance.

Monitoring & Reporting – Toranet can include the wireless system within the scope of a real-time monitoring service that notifies administrators and the service desk of issues and other events. Bob (Business Observer) is Toranet's monitoring platform and is also used to extract management information that Toranet incorporates into monthly health and security reports that we deliver to our customers.

Mobility

It is the personal relationships between colleagues, with customers as well as between partners and suppliers that truly underpin business. Effective communication relies on the sharing of information and it is well known a picture is worth a thousand words.

Mobility not only allows us to do our jobs when away from our desks, it means we can access the same information when in a meeting that we would traditionally have to sit at our desks to get at. This allows for greater collaboration and more effective communication.

It is no surprise that the uptake of tablets and smartphones has happened so quickly and on such a big scale. Of course this trend has become a reality because of wireless networks and 3G broadband. As the pendulum continues to swing from mobility being the exception to becoming the rule, the infrastructure that enables mobility becomes ever more critical to us, and our businesses.

The Business of Wireless

Business processes frequently rely on the availability of wireless networks. Examples include stock management, asset tracking and increasingly to augment the sales process in shops and showrooms where customers can browse using portable devices connected wirelessly.

In education students are benefitting from new collaborative learning methods that use portable devices to access and create rich and varied content stored remotely.

Considerations and Options

Performance, availability, security and scale are key considerations. The underlying network will need to provide power for the APs and have sufficient capacity. Modern APs are capable of off-loading data directly onto the LAN so whilst the wireless controller shouldn't become a bottleneck, it still needs to be sized correctly for the number of APs required.

Object attenuation, the number of network users and the nature of the applications and data will dictate the number of APs required and the best locations for them.

The tolerance or lack of tolerance for planned and unplanned downtime will determine if clustering of wireless controllers is needed and if they should be located in different data-centres. It is now possible for hitless failover following a controller failure when two or more controllers are clustered together. This means no dropped packets and even when delivering voice over wireless the parties having the conversation will be completely unaware.

Wireless networks can be used to augment remote access and access control facilities. Temporary staff and visitors can be given the access they need to the internet without letting them anywhere near sensitive systems and data.

A wireless network can be configured so that user access rights can be set appropriately for different groups of users. This means each person gets access to the IT services applicable for them.

Living With a Wireless Network

Once installed and configured, a wireless network should be relatively maintenance free. The configuration data resides in the controller(s) and not the access points so there is no administration overhead for individual access points.

Policies can be set to ensure that access to the available bandwidth can be protected from high-bandwidth users that might otherwise jeopardise key services.

The best wireless networks can automatically load-balance across multiple access points to optimise the available bandwidth. This prevents a disproportionate number of wireless users from connecting to the same access point.

Please contact your Toranet account manager for further details

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