Selecting the right WAN solution for your Hospitality business

Key considerations for IT Professionals

wanstor

Contents

+ Understanding common WAN challenges
+ Common WAN Concerns for IT Professionals
+ Considerations for WAN design
+ Understanding WAN for Hospitality
+ Key considerations for selecting your WAN provider
+ How Wanstor can help you overcome your networking challenges
+ Final thoughts

wanstor

Introduction

Cloud, mobile, social and analytics technologies are all being demanded by organisations and end users in their daily working lives. To be successful with the deployment and management of these technologies means the WAN must be fit for purpose today and be able to scale for tomorrow's IT requirements.

In light of these *'megatrends'*, many IT departments have started to deploy and scale them without considering the impact they will have on the network.

To gain the most value of out of Cloud, Social, Mobile and Analytics platforms, IT departments must examine the state of the WAN.

At Wanstor, we believe there has never been a better time for business, charity and not for profit organisations to re-evaluate their Wide Area Networks. Not only are technology demands growing on WAN requirements, but the market has more to offer in terms of services and importance than ever before.

As the WAN moves back up the IT agenda, IT professionals need to explore disaggregation and aggregation of virtualized network functions, managed services, product bundles, and the value of existing WAN suppliers. This means businesses need to take an objective view of existing WAN solutions and ask themselves key questions, including:

What WAN solution do we need in place for business success now?

How can it support digital transformation?

Will the WAN solution satisfy user and business bandwidth demands in the future?

In this white paper, Wanstor's WAN experts outline the impact business activities are having on the WAN. They also identify key areas of evaluation for choosing and managing a WAN service with the right supplier, and showcase examples of where we have made a real difference to customers with our WAN services.

wanstor

Understanding Common WAN challenges

Applications are driving your organisation

Business, charity and not for profit organisations recognise that to grow revenue, they need to expand their customer base.

As staff, customers and stakeholders need access to an organisation 24/7, many are turning to different applications if their traditional ways of accessing email and data are challenged or blocked.

It is no secret that as IT and the wider business environment has matured, application technology has been at the forefront of forcing change. Today there are a wealth of applications on the market that promise organisations and the individuals that use them more effective and efficient ways of working from a consistent and coordinated data set.

These new applications have at their core an ability to deliver seamless communications. New online applications representing critical business processes are now enabled for the web, while many existing applications need to be extended consistently on a global basis.

These applications include:

- Financial and business applications, such as enterprise resource planning (ERP) and customer relationship management (CRM)
- Web applications such as voice over IP (VoIP) and videoconferencing
- Content management for product life-cycle management or content
- Cloud strategies and offerings to introduce new functionality to the organisation

In summary, IT wants to realise the benefits of these new applications without the downside of slow, unreliable, and unpredictable application response times, which could slow user adoption and reduce user satisfaction and productivity.

Furthermore, the exchange of information between partners and suppliers must be enabled. For example, it is critical that a partner know the timelines for delivery of products or services. With a wave of new content types on the business network (email, file and print data, backup data, and Web servers) the need for improved WAN capabilities and the ability to better manage the bandwidth available is clear.

The rise of the Mobile Worker

Over the past ten or more years, it is obvious that users of IT have become more mobile. Today's worker wants the ability to work at flexible times and locations, without a rigid 9 to 5 working day. This growth is being fuelled by the following trends:

Changing social dynamics: As a result of changing social dynamics, end users who are used to universal connectivity of consumer applications demand flexibility in accessing corporate applications anywhere, anytime.

Competition is now Global: To compete in a global economy, organisations want the ability to leverage skill sets independent of the primary location of their HQ. This means businesses are no longer exploring local markets for talent but looking globally as well.

The environmental agenda: By encouraging employees to work from home, organisations can significantly reduce their carbon footprint, and employees benefit from the time and energy savings associated with commuting to an office location. Additionally, conditions beyond the control of a single organisation, such as weather, mass illness or other unexpected events, can be minimised with a *work-at-home* policy.

Cost efficiencies: Business, charity and not-for-profit organisations are all investigating ways to extract greater value from their investments. One area constantly under the microscope is office space. By encouraging mobile working, less office space is usually required and employees can benefit from lower travel costs to work locations. Mobile working has obvious headline benefits to senior business decision makers, but as remote worker numbers continue to grow, IT teams are troubled with supporting those workers and face the challenges such as:

Quality: Remote and mobile employees need access to the same tools and data available to employees located at company headquarters.

Security: Mobile workers create a security challenge for organisations of all sizes. As users access email, data and information from a variety of locations (hotels, airports, railway stations, customer, supplier premises). Mobile working, if not secured correctly, has the ability to corrupt even the most secure network architectures. A globally coordinated strategy is the only way to address security challenges.

Compliance: Ensuring that legal and regulatory compliance requirements are met remains a major concern for most IT teams when staff are dealing with sensitive data and information away from company sites. When sensitive corporate data can easily be accessed on individual laptops, IT must have a process that prevents data from going missing.

Application performance: Challenges within application performance involve applications originally designed to work over LAN providing a similar experience over the WAN. IT needs to enhance user productivity and ensure fast, predictable response times for enterprise applications.

Network complexity: Handling a wide range of connection types for end users on a global scale represents a significant challenge for any IT team.

Given that the demand for mobile working is growing and that challenges around this facing organisations are real, IT must invest in WAN design and optimisation to ensure that the communication flow between employees, partners, suppliers, and customers is seamless.

Common WAN Concerns for IT professionals

+ Cost
+ Uptime
+ Latency
+ Circuit implementation lead time
+ Security
+ Existing circuit capacity increase lead times
+ Packet loss
+ Jitter
+ Traffic prioritisation

Factors driving WAN change

+ Improving application performance
+ Reducing operating costs
+ Increasing uptime
+ Reducing design complexity
+ Providing access to public cloud computing services
+ Improving support for real time applications (voice, video calls)
+ Reducing time taken to implement new network services
+ Increasing IT team agility required in terms of supporting different types of offices, shops, buildings and support for traffic growth at existing sites

wanstor

Data and Asset Consolidation

IT asset consolidation is a key strategy for most organisations. For most IT teams, the deployment of servers and storage systems at numerous remote sites is both an administrative nightmare and a security challenge.

Key challenges posed by these distributed systems include:

- Deploying, maintaining, managing backup software and systems (tape drives, tape media) in widely dispersed locations
- Implementing media management policies for onsite, offsite storage of backup tapes often requiring the use of third-party transportation and vaulting companies, increasing the risk of lost or misused data
- Monitoring and improving success and failure rates on remote backup processes and undertaking complex data or application recovery procedures, where local IT expertise is limited or non-existent
- Supporting business continuity plans with data centre replication, where bandwidth may be limited or cost prohibitive
- Ensuring protection and retention of data for eDiscovery proceedings

In summary, organisations have two options:

- They can centralise business applications and storage back to a primary data centre
- They can deploy advanced data replication services that reduce cost and complexity around backing up remote servers

Both options offer major improvements in data protection and disaster recovery. At Wanstor, we often find that consolidation goals conflict with existing data protection solutions and processes.

> ### Growing organisations must respond to changing expectations around availability and security

As organisations continue to expand, they must respond to changing expectations around application availability and information security. They require solutions that better help to meet these challenges.

At the most basic level, such a solution must:

+ Leverage existing systems and facilities such as WAN links without requiring major redesign or upgrades to installed systems
+ Reduce time and resources required for local or remote backup and replication whilst eliminating backup windows and reducing the volume of failed backups and recoveries
+ Support installed server environments (Windows, VMware, Linux, Unix) and application types (files, email, databases) that business typically deploys on departmental systems or in remote offices
+ Support replication from branch office to data centre and between data centres for disaster recovery

Beyond these basics, WAN solutions need to meet the evolving regulatory and governance needs and must:

+ Scale to meet the expanding number of systems, applications and sites whilst actually reducing backup and recovery times across all locations
+ Ensure the integrity and security of backed-up data while in transit and at any central data storage facility
+ Provide a centralised system around setting policies for backups, transfers and recoveries as well as implementing systems to monitor compliance with these policies
+ Improve recovery point and recovery time objectives
+ Improve robustness and reliability of data protection
+ Reduce costs for hardware, network and administration

Today, many IT teams recognise the most efficient approach to protection of branch office data and implementation of disaster recovery is WAN-based backup and data replication.

The single most challenging aspect of centralized backups or replications for extended enterprise is bandwidth limitation (cost and throughput) on each individual remote office.

Changing Branch Office IT expectations

It is the wish of the business within the remote branch to be closest to its customers. As a result, IT teams must be able to deliver services that meet those needs of the organisation everywhere. As organisations recognise how improvements in customer service by increasing touch points result in revenue growth, there is a corresponding growth in the number of remote and branch locations. To effectively leverage investment in branch locations, IT must maintain the following goals:

+ Reduce and contain bandwidth costs
+ Reduce and contain IT and support costs
+ Facilitate and support revenue-generating activities
+ Secure corporate data either for regulatory purposes or simply to stay out of the headlines
+ More reliable and efficient data protection
+ Single consistent set of business analytics

To achieve these goals, the IT team must investigate centralisation strategies across the following elements of IT infrastructure:

Servers: Removing or consolidating servers that exist in remote branch and departmental locations

Storage: To have a more coordinated and cohesive data protection plan, IT is creating centralised pools of network storage in the data centre

Desktops: The rise of applications and devices is creating a management headache for IT organisations. To simplify the installation and ongoing administration costs associated with desktop applications, IT needs to centralise this functionality in the data centre and provide virtualized desktop and application images to remote locations

If business complexities limit the ability of IT to centralise, there should be demand for centralised, data centre-based management of distributed IT infrastructure in the remote branch.

WAN Design Considerations

Business Critical Applications: When and how do they need to be accessed, and by whom?

Internet Access: Different sites require different connectivity options. Do you know your site mix and connectivity options for each type?

Remote Working: What percentage of workers are remote or require remote access? Is your WAN set up to allow them access to the network safely and securely?

Guest Working: Suppliers, customers, interested stakeholders all want access to a reliable internet connection whenever they visit your office or one of your organisations locations. Does your WAN solution allow guest users to safely and securely have guest access via Wi-Fi? Do you have the WAN solution in place to enable fluctuating numbers of users to access at different times of the day?

Branch Offices: No longer does a one size fits all solve the branch office bandwidth conundrum. As workstyles have evolved, so has the role of the branch office or site. WAN designs should accommodate the changing dynamics of branch office users

Public Cloud Computing: All organisations want access to the agility and speed of public cloud computing. Your WAN needs to give the IT and DevOps team access to the public cloud services they need, when they need them in a safe, secure manner

Traffic Prioritisation: Who says voice traffic is the most important? Customer transactions and interactions are frequently online away from sites. You should be asking about minimum bandwidths for different apps and comms tools the building your network accordingly

Voice and Video: Customers, Employees and Senior Exec's expect voice and video technologies to *just work* as soon as they switch them on. It's no longer good enough to restrict bandwidth to prevent users from accessing the comms channels they want or need

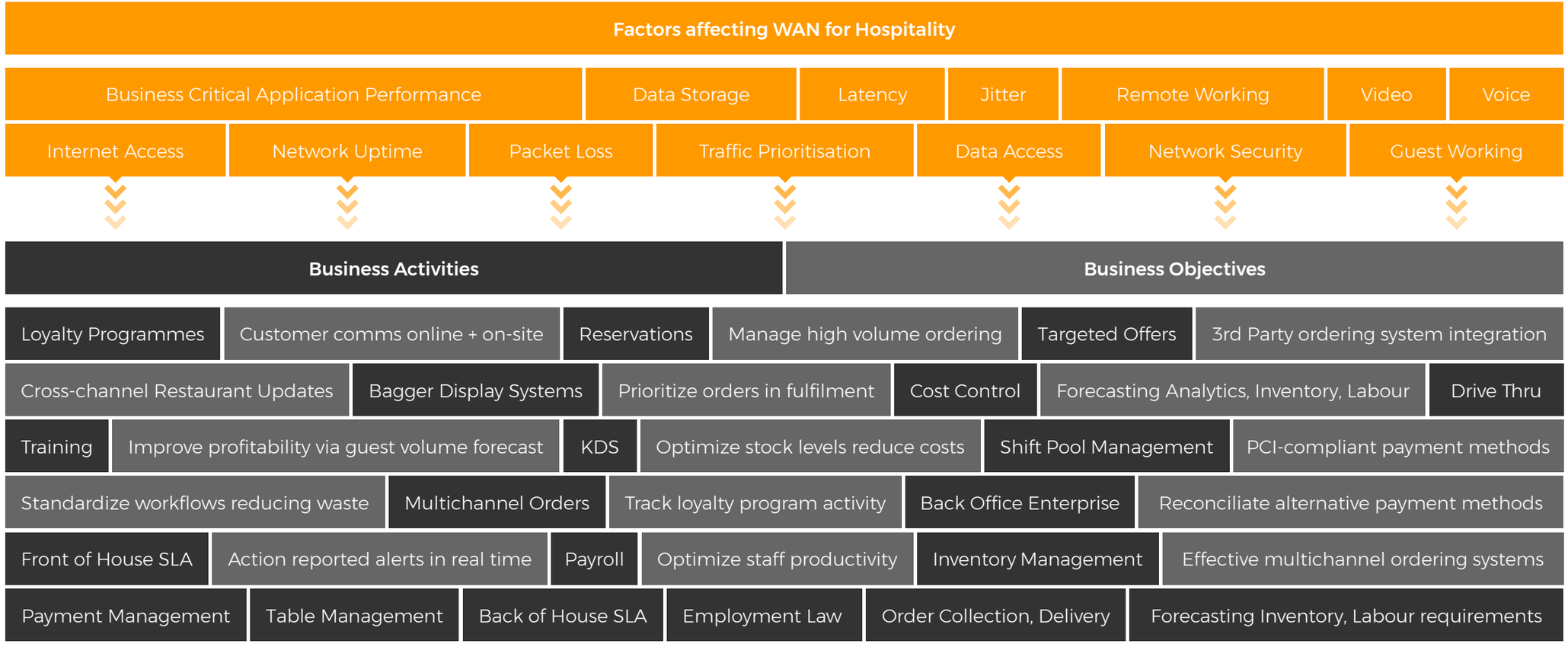
Data Centre: How is the WAN connected to your Data Centre? Is it a clear design? Is the connection secure? Can users access data and information where and when they need it?

Network Traffic Visibility: Do you know what is taking up all the bandwidth on your network? Is it non corporate traffic e.g. facebook, youtube... Also are you aware of the security risks by different types or patterns of traffic?

Industry Compliance and Regulation: Do you know your responsibilities for keeping data safe throughout it's journey in your organisation? Most industries now have specific regulations relating to data and how it is captured, transferred and stored. Do you know what is required for your organisation to become and remain compliant?

Understanding WAN for Hospitality

Hospitality businesses and IT professionals must realise factors impacting the WAN originate not only from within the dining environment - they occur before the customer has even visited your site. Wanstor's hospitality experts have outlined some of these factors below:



Key areas to consider before selecting your WAN provider

As we have already identified earlier in this document, traditional WAN solutions rely on an on-premises, hardware-centric infrastructure approach. In many business, charity and not-for-profit organisations, the WAN design has become confused and unfit for purpose.

The reason why WAN design has been abstracted and affects performance is because more applications and technologies have been added to the network with an expectation that the WAN would *'just work'*.

At the present time, many organisations are facing a perfect storm in being told to reduce WAN and connectivity costs as well as improve application performance along with a network which is ready for the demands of cloud computing.

In today's '*always on*' world, it is not just the IT team demanding better network performance, but business leaders as well, who demand access to the best possible network speeds at the right price point so they can enhance performance through improved employee productivity and the automation of many manual processes found across businesses.

Alongside the in-company pressures to deliver a WAN which truly enables rather than inhibits organisational performance are the external promises from a range of WAN providers promising '*best in class*' service against impossibly low price points.

Unfortunately, many IT professionals are enticed by these false promises and non-existent pricing offers. They face future consequences when the CEO finally runs out of patience as his skype continually fails or he cannot access his documents in a timely manner away from head office.

Or, they discover a retail or restaurant site that has lost a day's trading because of a non-existent internet connection.

In this part of the document, Wanstor's WAN experts have identified several key areas that you as an IT professional responsible for the purchase, design and management of the WAN should consider.

Key areas to consider include elements listed in our diagram below:

How Wanstor can help you overcome networking challenges

Solutions

WAN	LAN	Wi-Fi	SECURITY	UNIFIED COMMS
ADSL 2+, unlimited	Core Networking	Planning, Design	Firewalls	IP Comms
FTTC	Virtual Private Networks	Security	Authentication	Video Comms
GEA, EoFTTC	Data Centre Networking	Site Surveys	End Point, Patching	Digital Media
EFM	Wi-Fi	Guest Access	Data Loss Prevention	Voice, Telephony
Fibre	Structured Cabling	Structured Cabling	Network Access Control	Email, Messaging

Capabilities

End-to-end Services

GEA, EoFTTC	Design	Test	Implement	Support + Manage
+ Strategic updates + Assessments + Transformative networking	+ Architectural roadmap + Advanced consultancy + ROI / TCO	+ Solution testing + Proof of concept + Benefits realisation	+ Procurement + Staging + Deployment + Transformation	+ Operational support + Asset disposal + Field engineering + Maintenance

Industry Technologies

Routing & Switching	SDN	Intrusion Prevention (IPS)	Payments	Firewalls	Network Virtualisation
NAC	Storage Networking	IPv6	Mobility	BYOD	Authentication	Unified Communications

Strategic Partners

Gold Microsoft Partner · Trend Micro Gold Partner · ManageEngine · Cisco Meraki · PRTG Network Monitor · vodafone · colt · purplewifi authorised reseller · aruba a Hewlett Packard Enterprise company · Virgin media · openreach BT Group business · BT wholesale

Flexible Commercials: Fixed Outcomes Resources on Demand Pay-per-Use Financing or Leasing Projects or Programmes

Final Thoughts

As demonstrated throughout this white paper, Wanstor helps hospitality, retail, financial services and charity organisations to plan, design, deploy and optimise their Wide Area Networks.

Our WAN solutions enable organisations across the UK to reduce WAN operating costs, increase network agility through automation, and provide superior broadband performance for business critical applications.

We understand that many organisations are experiencing Wide Area Network challenges across operational costs, supplier management, flexibility of services, and general network performance.

By partnering with Wanstor for their WAN requirements, businesses across the UK are able to effectively support more applications, users, data, and devices.

These organisations will benefit from reduced business risk caused by IT change, IT infrastructure decisions made with long-term WAN and application architecture demands in mind, and an improved understanding of how WAN performance may be improved based on deep insight into application and network environments.

For more information about Wanstor's Wide Area Networking services and solutions, please contact us on **0333 123 0360**, email us on **info@wanstor.com** or visit us at **www.wanstor.com**.