

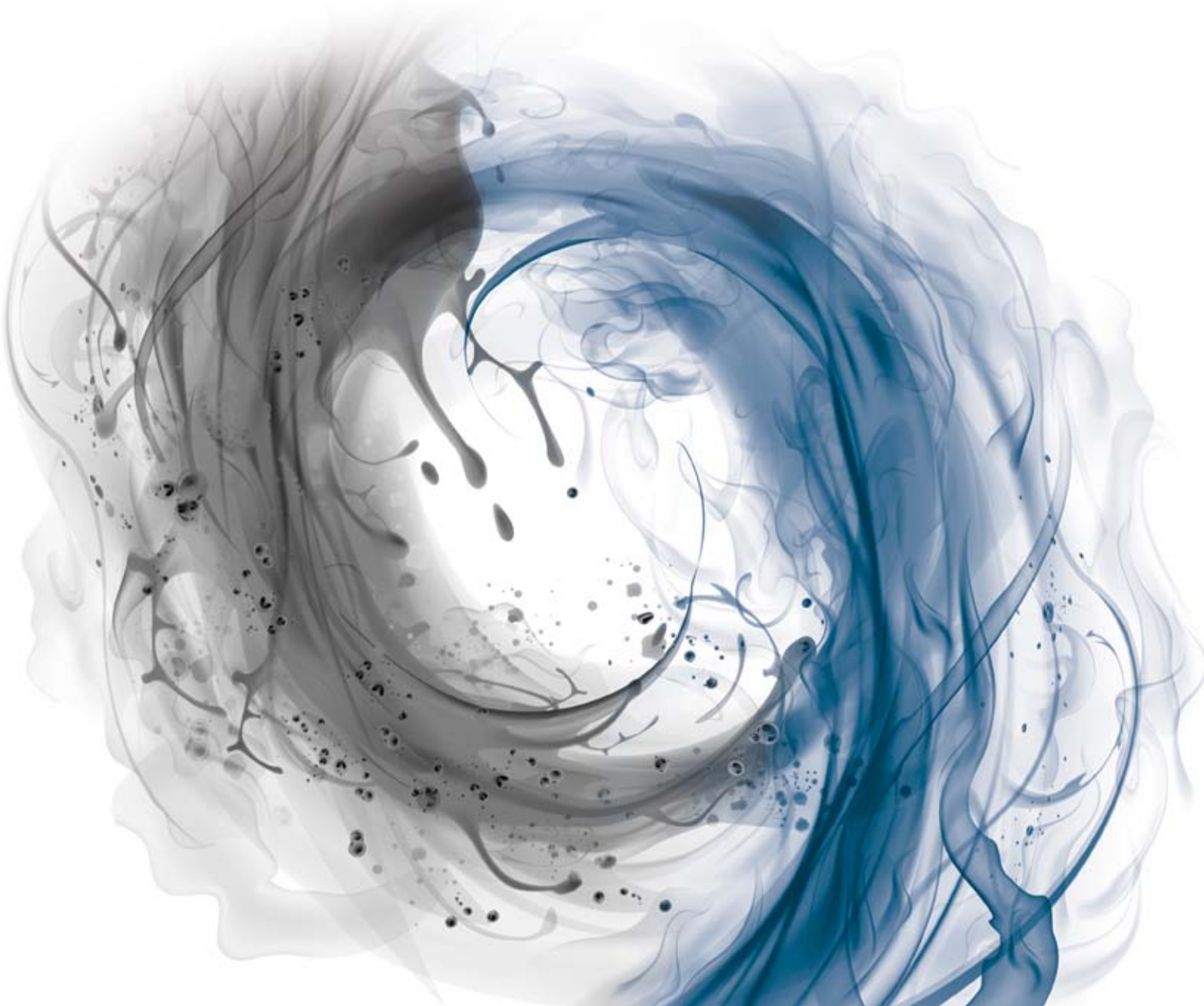


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**EDGE Suite**

White Paper

## **The Assurance Checklist for Branch Networks**

A pragmatic guide for building high performance branch office networks.



## Executive Summary

The era of mobility and consumerization has fundamentally altered the distributed enterprise in terms of its IT and business priorities. The CIO agenda is now largely driven by the organization's strategic dependency on remote offices and mobile employees who are closest to the customer and as a result the modern organization is quickly evolving into an extended enterprise. The need for performance at the edge of the enterprise is now driving the IT priority list according to Aberdeen Group. Recent research indicates that "assuring application user experience" is at the top of virtually every CIO task list for 2012, a result of the growing need for productivity and agility on the customer front lines. This deep dependency on collaboration efficiency and application performance outside of headquarters has created huge pressure for IT organizations to provide performance assurance for branch office applications, independent of where they are located and how users connect to them.

This white paper examines the growing performance gap that has emerged between the priorities and SLAs of distributed businesses and the ability of branch networks to support them. Specifically the paper investigates:

**1. The Branch Assurance Gap.**

Five critical challenges faced by branch networks in 2012.

**2. The Inadequacy of WAN Optimization 1.0.**

Where acceleration, expansion and QoS fall short.

**3. The Assurance Checklist.**

Seven must have capabilities to deliver branch network assurance.

**4. A 360 Approach to Branch Network Assurance.**

A unique approach to assuring branch networks

**Expert Insight:**

*"Emerging technologies such as the cloud, mobile devices, and unified communications will continue to put pressure on company networks. Users will expect to continue receiving the highest levels of performance and application experience."*

*– 2012, Aberdeen Group*



## The Branch Assurance Gap

Historically, organizations have underinvested in branch office IT infrastructure and staff and have viewed the branch as an expensive necessity. But in 2012 as companies begin to embrace the extended enterprise reality, the branch has leapt up the list in terms of strategic importance which has created a significant gap in the ability to deliver performance assurance across the branch application estate. In the current enterprise landscape up to 90% of employees work in remote offices and skeleton branch IT staff has to make the best of limited resources, insufficient network bandwidth, and unpredictable application performance over the WAN and internet. With more resources working in branch offices, businesses are increasing their consumption of cloud services as well as VoIP and Video communication methods which compounds the performance challenge.

The growing strategic need for branch network productivity has created a significant performance gap between branch infrastructural readiness and business demands. The gap is manifested in five critical challenges:

### **1. Collaboration: Delivering reliable voice, video and collaboration.**

Collaboration is on the top of every CIO's priority list in 2012, driven in large part by the need to be closer to customers and partners. The distance of branch networks from the IT center makes adoption of collaboration technology particularly challenging. Yet it's vital for connecting with customers and partners, increasing productivity and boosting customer satisfaction. For the most part, branch networks cannot effectively prioritize VoIP and video traffic with other network traffic sources and therefore are unable to guarantee collaboration quality on the customer front lines.

### **2. Business Alignment: Meet and manage corporate SLAs for IT.**

IT management must demonstrate the branch office network is delivering the application performance that CIOs expect. Whether the issue is how well the branch network supports personal and recreational traffic or the availability of critical business applications hosted by a cloud computing provider, a Branch SLA Dashboard is necessary to provide the answers. Conventional approaches to WAN optimization do not effectively connect WAN performance with business performance which presents a strategic gap for IT who is driven more now than ever by business SLAs.

### **3. Consumerization: Create policies to manage a wider set of users, devices and applications.**

Consumer technology is outpacing business technology, and CIOs are realizing employees are often more productive using their preferred devices and applications. This is particularly relevant to branch networks, which tend to be on the front line of consumerization. For better IT management, enterprises need to put policies and a governance structure in place, clearly defining the devices and applications that will be supported. Typical WAN optimization will either accelerate all traffic or contain all traffic. A richer profiling capability is required to selectively embrace consumer devices and applications to create harmony in the branch network.

#### **4. User Experience: Assure consistent access to corporate applications and data.**

Application performance for branch networks is a top pressure driving the CIO agenda in 2012, according to Aberdeen Group. Enterprises must be able to balance backups and file transfers over the same link that simultaneously handles VoIP calls. And enterprises looking to centralize services such as branch office file servers back to the DC, VoIP and videoconferencing need to know the delivery of these files and services consistently fall within acceptable SLA times. Conventional WAN optimization solutions focus on binary traffic acceleration or containment and do not provide the level of user experience monitoring required to guarantee a level of performance required to drive higher productivity in the branch.

#### **5. Cloud: Assess and implement technologies to capitalize on private and public cloud computing.**

While most enterprises are in the early adoption phase of cloud computing, exploration of private and public cloud technology is universally at the top of the CIO priority list. However, providing branch office networks with direct access to cloud computing providers implies moving functionality from the corporate data center back to the branch office as well as into the cloud provider's facilities. The ability to deliver reliable cloud services across the WAN and Internet will be a determining factor in the success (or failure) of cloud initiatives in 2012. Many WAN optimization solutions depend on multi sided appliance deployments for acceleration. In the direct-to-internet scenario they fall short as appliances cannot typically be deployed on cloud provider premises.



# The Inadequacy of Conventional Approaches

The current branch office landscape characterized by its increasingly strategic importance to the enterprise and the convergence of consumerization, cloud computing and collaboration requires a different approach to application delivery and network optimization. Historically organizations would apply data compression or expand bandwidth capacity to increase the network’s ability to deliver applications and services with reliable performance. The reality however is that traffic optimization and bandwidth expansion cannot deliver the performance assurance enterprises require for strategic branch network assets.

## Expansion Approach

In markets where bandwidth is readily available and inexpensive, organizations sometimes opt for an expansion based policy to deliver performance assurance. While over provisioning bandwidth capacity can deliver assurance at some level it falls short of meeting the driving requirement for performance assurance in the extended enterprise environment. Expansion alone does not provide the visibility and insight organizations are demanding to create a tighter connection between business priorities and network performance. Moreover it takes a “trust everyone” approach to assurance which makes a fundamentally flawed assumption that all traffic is good traffic and ignores prioritization, containment and prevention which are cornerstones to true performance assurance.

## Acceleration Approach

Many IT organizations apply acceleration technologies to create a “faster pipe” in an effort to deliver applications more rapidly to branch networks. Acceleration however only goes part of the way towards performance assurance. The acceleration only approach assumes fundamentally that all WAN traffic is inherently good traffic and does not apply any intelligence to prioritize or profile it based on application type, user, group, or usage context. In a business environment where recreational traffic and consumer devices are exploding and users are connecting from a wider variety of locations and contexts, the enterprise requires a more intelligent approach to deliver true performance assurance.

## Quality of Service (QoS) Approach

Some IT organizations apply QoS technologies to allocate network resources based on defined levels of performance. While certainly necessary, QoS goes only part of the way towards delivering true performance assurance. The QoS approach does not apply context or conditional usage profiles to optimize application performance and tend to focus on bandwidth allocation with limited or no ability to accelerate priority traffic. The result is a passive approach to performance assurance that falls short of the needs of the modern branch office.



## The Assurance Checklist for Branch Networks

Assuring business critical applications and services are delivered to branch offices with good user performance is the key to productivity for distributed organizations. Here is a checklist you can use to evaluate your branch network readiness to deliver performance assurance.

### **Inventory of Strategic Application Signatures**

It is vital to be able to automate the discovery, audit and configuration of strategic application signatures in order to apply intelligent optimization policies for the applications that are most important to your business. Organizations must be able to clearly define and profile both business critical applications and recreational applications to strike the correct performance balance in the network.

### **Accurate User, Group and Application Profiles**

An assured branch network requires deep profiling of users, groups, applications, locations and usage contexts to guarantee performance in the extended enterprise. Rich integration with directories like Active Directory is required to leverage the strategic profile hierarchy as the intelligence platform for network optimization. Rather than optimize or contain traffic based on protocols like CIFS, MAPI or HTTP, IT organizations must be able to apply user roles, application types, usage context and a combination of these attributes to build and execute optimization policies.

### **Conditional Network Policies**

At the core of a performance assurance network is the ability to create conditional policies that combine user, group, usage and application attributes to drive optimization. A direct link between the key profiles in your business and your network optimization technology is mandatory to create an "intelligent pipe". For example if the CEO connects to the network in Kuala Lumpur to deliver a customer webinar, he requires guaranteed performance based on his Role as CEO, his location in Malaysia and his application type of WebEx.

### **Audit of Recreational Traffic and Social Applications**

With branch personnel having many different devices and applications at their fingertips; the reality is that consumer technology is outpacing business technology, and that employees tend to be more productive using their preferred devices and applications. When users are bringing their own devices into the branch, the challenge is to put in place policies and a governance structure that clearly defines which devices and applications are supported and which need to be contained or prevented. An assurance network must be able to identify social or recreational application traffic and apply specific policies to contain or prevent that traffic based on a variety of usage contexts. Moreover as social applications are increasingly used for strategic purposes, the assurance network must be able to differentiate an employee downloading a YouTube video for fun and the Marketing organization using YouTube to deliver a strategic campaign.

## **Continuous VoIP and Video Performance Monitoring**

Collaboration quality is critical at the edge of the enterprise but can be compromised by competing traffic across the same network. The enterprise must often balance backups and file transfers over the same link that must accommodate concurrent VoIP calls which means visibility into both bandwidth availability and traffic profiles is vital to assure performance. Enterprises looking to centralize services such as branch office file servers communicating with the Data Center, and VoIP and Video conferencing, need to know that the delivery of these files and services consistently fall within acceptable SLA times.

## **Business Level Reports Based on SLAs**

For the branch network, pragmatic reporting and actionable intelligence are cornerstones for connecting the network back to business priorities. Endless tables of IP addresses, protocols and hostnames are not useful in the branch scenario where pragmatism and execution are king. An assurance network must be able to deliver meaningful and actionable reports based on user profiles, applications, usage contexts and performance thresholds. A full circle feedback loop linking the priorities of the business and the network that supports it is a must have for branch office environments.

## **Branch Side Caching for Cloud Applications**

70 percent of branch networks backhaul internet traffic to a central data center and then forward the traffic onward to the cloud provider which presents application delay and additional traffic to the company's private WAN. The branch office network must be capable of connecting directly to cloud computing providers in order to keep performance levels high and costs low. To connect to directly to these providers, the branch office must be capable of providing all the security related functions (e.g. firewall, IDS/IPS, SIEM, URL blocking, anti-virus, content filtering, etc.) and WAN optimization functions (e.g. caching, WCCP, data compression, etc.) locally that were formerly performed at the central corporate data center.

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## Conclusion: A 360 Approach to Branch Network Assurance

Enterprises and institutions are realizing the strategic importance of their branch offices and are architecting the network to assure the performance of applications at the customer front lines. A 360 approach to performance assurance is required to connect the network and business more tightly together and move away from expansion, acceleration and quality of service approaches for performance assurance. It is no longer enough to compress or accelerate all traffic on the network because it fails to account for the priority of applications, the role of users and the context of connection. Additionally as compression factors get outpaced by content volume, acceleration alone will cease to be a feasible solution on its own. Similarly focusing only on allocation and containment provides an incomplete solution to the high performance user experience organizations need on the edge of the extended enterprise. Organizations require a 360 approach to branch network assurance designed to leverage strategic business, user and application profiles as the platform for driving compression, containment and caching of network traffic.

Following the Assurance Checklist for Branch Network Assurance is the first step on the path towards a 360 branch network.

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## 10 Reasons to Embrace Exinda Edge

Exinda Edge is the market's first assurance-centric WAN optimization solution architected for branch networks. It applies over 2,500 unique application and user profiles to directly connect WAN optimization policies with the actual priorities of the business.

By intelligently applying its patented three-point WAN optimization technology, Exinda Edge delivers the right mix of acceleration, caching and containment for the optimal branch user experience for voice, video, cloud applications and web content. Plus, a full-circle feedback loop ensures performance aligns with business SLAs. Exinda Edge is packaged and priced to deliver the unique functionality required by branch networks within a branch-level budget. Here are ten reasons to embrace Exinda Edge for branch office assurance.

- 1 Agile **Application Packs****  
Targeted layer 7 application packs precision-architected for specific industries, focusing your branch network resources where you need them most.
- 2 Precision **User Profiling****  
The only WAN optimization solution with active directory integration, which means optimization is driven by meaningful user profiles rather than meaningless IP addresses.
- 3 Cloud **Edge Caching****  
Rapidly delivers private and public cloud applications, dramatically improving end-user productivity in the cloud.
- 4 SLA **Performance Dashboard****  
Provides real-time application and user performance metrics, giving you actionable intelligence to assure network performance.
- 5 Zero-Footprint **Virtual Appliance****  
Software appliance that integrates into your existing virtual infrastructure and flexibly scales to meet business demands.
- 6 3-Point **Traffic Optimization****  
Applies precise user and application profiles and policies with the industry's most accurate optimization engine for an optimal mix of acceleration, caching and containment.
- 7 Lunch-Break **Implementation****  
The only WAN optimization on the market that installs in just minutes for easy setup and instant performance improvement.
- 8 Branch Value **Packaging****  
Competitively priced branch network solution, delivering the capability and affordability that distributed organizations need.
- 9 Collaboration **Quality Sensors****  
Proactively monitors VoIP calls, guaranteeing conversation and collaboration quality in your branch network.
- 10 Logical **Application Containment****  
Identifies recreational applications, protecting network resource availability by containing unwanted application traffic based on business objectives.

## About Exinda

Exinda is a proven global supplier of next-generation WAN optimization and application acceleration products. The company has helped over 2,500 organizations in over 80 countries improve the end-user experience, manage application performance, manage congestion over the WAN and reduce network operating costs for the IT executive.

[www.exinda.com](http://www.exinda.com)

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