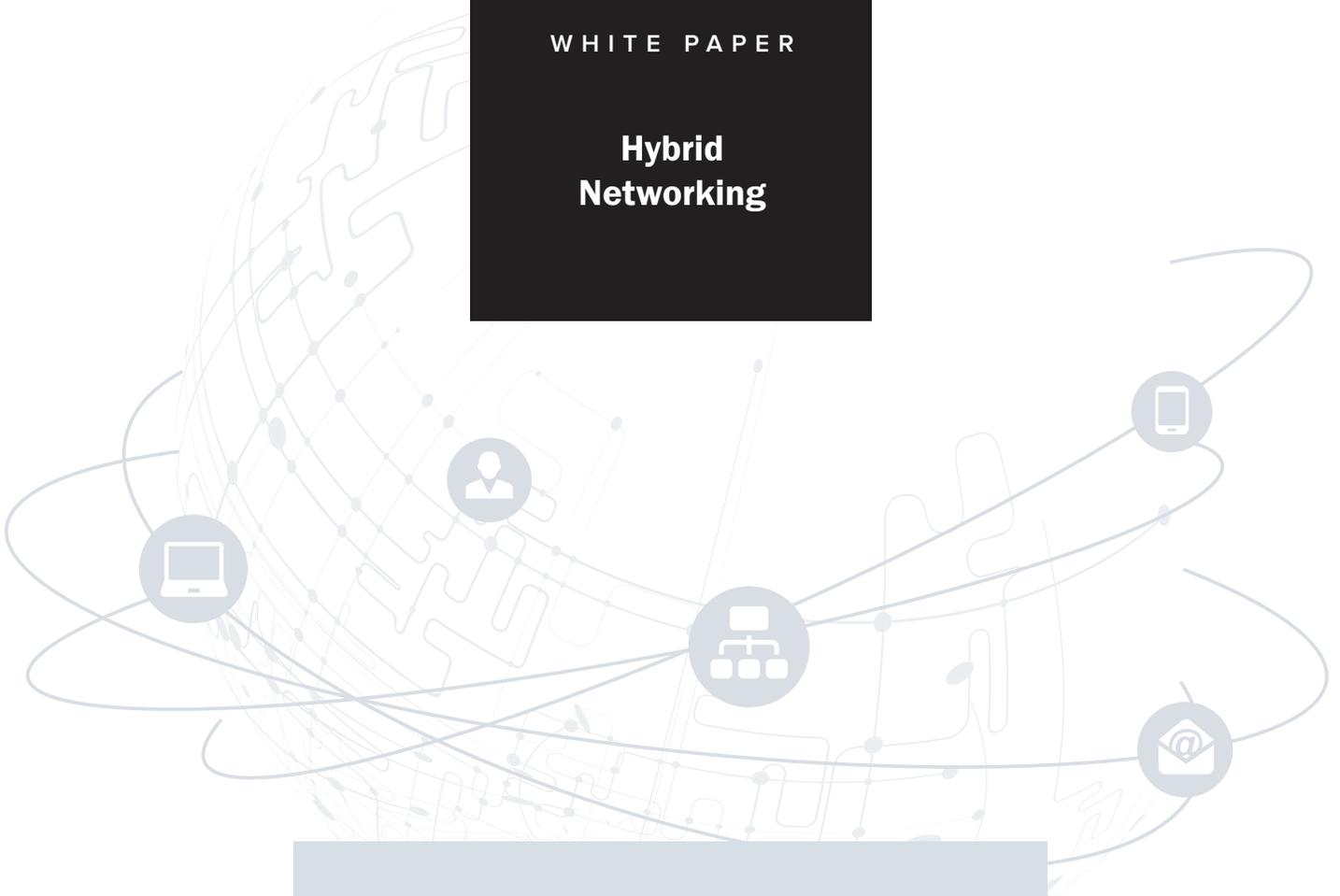


WHITE PAPER

## Hybrid Networking



**MASERGY**  
Performance Beyond Expectations

# Managed Network Services Buyers Guide

A global network is a company's central nervous system that influences the overall health and performance of a business and its critical systems.

A global wide-area network should guarantee your company a consistently high-quality user experience anywhere in the world. The success of your business – and your business applications – depends on it. Productive business users are paramount.

A global wide area network is a corporate asset, one that needs to be under the IT department's complete control. You should be able to burst when bursting is needed. You should be able assign services classes that meet your application performance requirements. And you should also be able to deploy multiple virtual networks without service provider intervention if you so desire.

All that requires a WAN supplier that excels at network design and service delivery. How can you ensure this? In part, by asking the right questions.

Here are five areas of technical leadership you'll want your WAN supplier to possess – and questions you should ask to determine whether they have it.

### **Application User Experience**

When it comes to a global network, the Application User Experience (AUX) rules. This has little to do with bandwidth and far more with jitter. Your service level agreement (SLA) should contain a global jitter value of less than 1 millisecond. And your provider should be able to provide you with an AUX guarantee. To ensure that's the case, pose these two important questions to prospective suppliers:

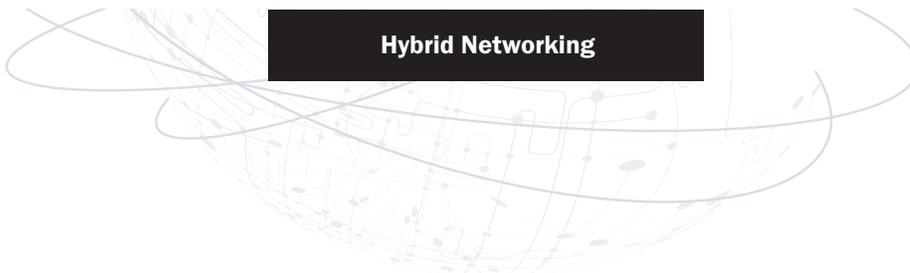
- Can you provide me with a consistent user experience anywhere in the world? If so, how do you guarantee that?
- Can I check on a daily basis what you are providing my company? If so, how?

### **Technology provisioning**

Many carriers and telecommunications companies have grown through acquisitions, and they own some parts of the fiber transmission networks, switching assets and legacy systems of the companies they've acquired. Before you sign a contract, make sure you understand the impact of their infrastructure on your global WAN. Here are some questions to ask:

- Can you provide insight into the architecture that you'll be provisioning for our network?
- Can you deliver Ethernet everywhere?
- Will you provide us with guaranteed clear channel, without any oversubscribing?



A graphic showing a globe with a network of nodes and lines overlaid on it, representing a hybrid network. A black rectangular box with the text "Hybrid Networking" is centered over the globe.

## Hybrid Networking

- Can you specify where Multiprotocol Label Switching Network-to-Network Interconnects (MPLS NNI) are being used in your network?
- How will you ensure seamless product and service delivery?
- Does your network support fast rerouting?
- Does your network allow me to implement Multicast?
- For my voice and video, can you guarantee global in-sequence packet delivery?

## Software Defined Network

Within a supplier's monthly fee, changes and change requests are often separate costs. These can be substantial. Since the network is your asset, you want to be in control of it at all times. Today, a mature service should let you use Software Defined Networking principles. In essence, these let you manage a WAN as if it were a LAN. You can make changes immediately for user experience, bandwidth, quality of service (QoS), VPN, and more. Can a prospective supplier offer this? To find out, ask these questions:

- Which Software Defined Network tools, portal and applications do you provide? What functionalities do they enable?
- Can I see all of my sites by location name?
- Can I see all traffic per site? Will I be able to differentiate traffic and determine who's using the bandwidth and capacity?
- Will you let me change QoS and service classes?
- Can I deploy multiple virtual private environments myself? Can I manage these as separate connections with QoS per virtual routing and forwarding (VRF)?
- Can I change and configure bandwidth when I see need for that? Can I schedule bandwidth changes for our weekly data-center synchronization?
- Does your solution let us have layer 2, layer 3 and public and private IP on one port? And can we use it at our own discretion for layer 2 or Layer 3 without any additional costs?

## Last Mile

The last mile is an important consideration when drawing up the service level agreement (SLA). Its impact on changes, tickets, and mean time to repair (MTTR) can be significant. Questions to ask prospective suppliers:

- For your last mile, are you provider-independent?
- Will your SLA include the last mile?
- For any of our connections, can you guarantee a maximum of two last mile providers in any single connection?



- Do you guarantee a clear channel on a point-to-point basis?
- Does your service provide a business-continuity solution, using the Internet as a backup solution?

### Cloud Connectivity

Cloud-based IT applications and services are becoming increasingly important so cloud connectivity should be part of your strategy and connectivity. Here are some questions to ask:

- Do you provide cloud connectivity to the major vendors, such as Amazon Web Services, Microsoft Azure and IBM SoftLayer?
- Can I manage these connections as extensions of my WAN?
- Will I be able to install multiple VRFs?
- Will I be able to have QoS, and if so, which service classes will I be able to implement on these VRFs? Also, I want to do all this without provider interference. Is that supported? Will your portal let me do that?
- I certainly don't want a "dumb pipe" to the cloud. What do you provide to manage this connectivity?

Technological leadership is a key trait for any WAN supplier. So make sure yours is on the cutting edge. Ask these questions before you sign that contract.

### Business Considerations

You should own the WAN. But you also want to work with a company that values you as a customer and provides a professional partnership. You should also expect a predictable cost model. That will let you manage your IT functions in keeping with company requirements and budgets.

Above all, your WAN should keep your customers and end users happy, too. How to get it all? Here are five factors to consider, as well as questions to ask prospective suppliers, when selecting a global WAN:

### Customer Satisfaction

You're buying a managed service, so you'll want a provider known for high-quality service. One way to determine customer satisfaction is to ask a reference customer, "How likely are you to recommend your current provider?"

Of course, this rating needs to come from an independent researcher. Most service providers use the Net Promoter Score (NPS), which correlates highly with both customer loyalty and turnover. Customers answer this question on a scale of 0 to 10, with 0 meaning not at all likely to recommend and 10 meaning extremely likely to recommend. A



company's total NPS is then calculated by subtracting the percentage of Detractors (those who gave a score of 0 to 6) from the percentage of Promoters (those who gave a score of 9 or 10). IT service providers are often in the range of just 10 to 20 points; some telecommunications companies score even lower.

Here are five customer-satisfaction questions to ask your prospective WAN suppliers:

- How do you measure customer satisfaction?
- Who conducted the research for this study?
- What is your annual customer-churn rate?
- What are you doing now to improve customer satisfaction?
- What is your Net Promoter Score?

### **Client Support**

The managed network service provider you choose should be able to tell you what level of support you'll be getting. You also need to know who you will turn to if and when issues arise. Here are some questions to ask prospective WAN suppliers:

- Where, physically, is your help desk – the one I'll be working with?
- When I call your help desk, what level of staff will I be speaking with?
- In case of an event, will I be proactively notified?
- Will I have my own tier 1 or dedicated network operations center (NOC) contact person?
- Can I monitor anything from my premises? If so, how?
- What's your process for issue escalation?
- Will you supply me with your NOC escalation contact list?
- If need be, can I escalate all the way up to your CEO?

### **Service Level Agreement**

The SLA should actually be called the Experience Level Agreement, or XLA. Essentially, it describes the kind of experience you'll have when doing business with a WAN supplier.



But in my experience, the longer the SLA, the more “cover” your provider is seeking. Is the SLA telling you what your provider is not doing, or is not responsible for? To find out, ask these questions of your prospective WAN suppliers:

- Do you have unique SLAs for each connection/circuit type?
- Do you provide the same SLA around the world? Or do you have separate SLA conditions for different regions?
- Can you provide latency tables? Can you guarantee jitter values globally?
- Will you provide tools to let me check actuals and historic data per location?
- Does the SLA include the last mile? If not, where do you draw the line?
- Will I be able to check and monitor service delivery, uptimes, latency/jitter values, tickets, issues and usage in real time? If so, how?

Cost Perspective, Total Cost of Ownership, Invoicing: While price per GB is the metric most often used, by itself it’s meaningless. Instead, TCO should take into account secondary damage from a network malfunction, which can be significant. If your voice or Unified Communications solution doesn’t work flawlessly, it won’t be used. In turn, your ERP or CRM might not provide the desired user experience; that could jeopardize your manufacturing processes, delivery issues, marketing initiatives, order handling or order booking, resulting in frustrated sales and business staff.

Providers are keen to sell you additional services, including VPNs, multicast, quality of service (QoS), visibility tools, and more. There are also application performance management tools that are implemented to improve unpredictable performance, leading to additional costs, investments and complexity. You should understand all this up front. To ensure that you’re getting the best possible deal, ask potential suppliers these questions:

- Are you providing me with a full OpEx service? Or will I also incur capital expenses?
- If I want to change services from Layer 2 to Layer 3, will I have to pay any additional costs? How about for implementing additional Virtual Private Connections, WANs or multicasts?
- Will you supply one clear and transparent invoice each month, without any unforeseen costs?



### Conclusion

It's not uncommon for a provider to promise all sorts of capabilities during the sales process, only to have those capabilities disappear from the final contract. Alternatively, timelines can all of a sudden have dependencies said to be beyond the supplier's control. You might find that subcontractors won't respond to your queries, or that project managers are unexpectedly on vacation. None of that is acceptable. You must hold your suppliers to agreed-upon performance metrics, timelines and costs. To help ensure that happens, ask these four questions before you sign that contract:

- Can you complete this project globally within six (or however many) months?
- What added benefits can you deliver to us?
- What would be your company's explicit responsibility to us?
- If we do business with you, what kind of performance improvements and cost savings can we expect?

Negotiating a contract for a global WAN is a major undertaking. By asking the right questions, you can make an informed and positive choice.

Contact Masergy for a free consultation +1 (866) 588-5885

