

+ BIG DATA



## Big Data Connectivity Buyer's Guide

## HOW TO USE THIS GUIDE

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As the pace of technology advances speeds up, players throughout the organization are impacted. You play an important role in ensuring your organization is prepared to take advantage of the opportunities created by emerging technology and market trends.

The influx of “Big Data,” cloud computing, worker mobility and other industry trends are creating new demands on businesses, requiring you to evaluate what network infrastructure you’ll need to analyze, process, and store vast volumes of data moving between a variety of sources and locations. Among the most important considerations is your network provider’s ability to meet your rapidly changing needs with flexible, scalable solutions.

You need the right information to make the best decisions—for your company, your employees and your customers. This buyer’s guide was created to help you sort through the complexity by giving you a broad overview of market drivers, their impact on your network, and the best technologies to meet your connectivity goals. We will provide you with some key considerations for ensuring that your network infrastructure can meet the needs of the expanding business application landscape, now and in the years to come, and arm you with a comprehensive set of questions and answers that will help you evaluate prospective service providers.

### NOTES FOR YOUR DISCUSSION

## THE BIG DATA PARADIGM SHIFT

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One of the key market drivers you'll need to consider when designing your network is the massive growth in data. To illustrate the Big Data challenge, consider that a total of only five exabytes of data were produced from the beginning of time through 2003.<sup>1</sup> Today, that same amount of data is produced every two days, generating new requirements for your business.

Businesses create about a third of the world's data; but business data growth is outpacing that of consumer data, doubling every 1.2 years,<sup>2</sup> as opposed to every 2.<sup>3</sup> Furthermore, they have the responsibility of storing, protecting and managing about 80% of the world's data—making companies, like yours, the true owners of the Big Data opportunity.

By 2020, an estimated 33% of data will have analytic value, compared to 25% today—yet only 3% of current data has been tagged and analyzed,<sup>3</sup> creating a substantial opportunity for organizations prepared to tackle the challenges. The benefits of wisely leveraging Big Data include more efficient operations, stronger sales, greater agility and better customer retention. Businesses already capturing Big Data opportunities are experiencing higher revenues and profits, higher stock values and are better equipped to **make smart decisions, faster.**

### NOTES FOR YOUR DISCUSSION

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<sup>1</sup> Siegler, M.G. "Eric Schmidt: Every 2 Days We Create As Much Information As We Did Up to 2003." TechCrunch. August 4, 2010. <http://techcrunch.com/2010/08/04/schmidt-data/>

<sup>2</sup> eBay Study: How to Build Trust and Improve the Shopping Experience." Knowwpcarey.com. 2013-10-17. Retrieved

<sup>3</sup> Gantz, John; Reinsel, David. (Dec 2012) "THE DIGITAL UNIVERSE IN 2020: Big Data, Bigger Digital Shadows, and Biggest Growth in the Far East" EMC

## PREPARING YOUR NETWORK FOR BIG DATA

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So how can you prepare your business, and your network, to capitalize on Big Data? The first step is defining a Big Data business model that moves beyond mere consumption, management and storage—delving into analysis, the extraction of insights and the production of new Business Intelligence. You must be able to efficiently retrieve, replicate and mine Big Data and turn it into actionable information, which can be used to better compete, improve processes, boost productivity and make smarter business decisions.

That means your network has to be optimized for both information production and consumption. The second step in your preparation is establishing a network connectivity solution that enables downloading and uploading data in huge volumes in both directions, with speedy, fully-symmetrical access between peers, the cloud, and the servers on which the data is stored.

You face choices in network access methods, including fiber versus copper and access technologies that include Ethernet, TDM, SONET and Wavelength services—determining which will best meet your requirements requires some analysis.

### NOTES FOR YOUR DISCUSSION

## THE ADVANTAGES OF ETHERNET ACCESS

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While there are pros and cons of each network technology, Ethernet offers several key advantages—including fully-symmetrical bandwidth, ideal for Big Data use cases. But its advantages don't stop there; with Ethernet, you get the scalable, reliable, low-latency bandwidth you need to drive capacity for video, speed for responsive cloud services, and reliability for your knowledge workers.

That's why Integra is investing in network technologies designed to help you capture the benefits of being an "Ethernet Powered Business."

- + Connect all of your locations, eliminating the need to coordinate with third party vendors.
- + Simplify your network by converging multiple protocols and traffic types onto a single network.
- + Escalate key applications by assigning priority levels for different types of traffic.
- + Transfer large amounts of data at symmetrical speeds while supporting multiple applications.
- + Experience fast, reliable service over Integra's state-of-the-art backbone.
- + Ensure network resiliency with geographically-distributed peering to other backbone providers.
- + Customize your bandwidth to meet your needs, with scalable solutions.
- + Secure data transfer over Integra's private IP/MPLS backbone, instead of the public Internet.

These are important considerations to keep in mind as you plan for the future of not only your network, but your business. Ensuring that your technology solution and provider are prepared to meet emerging challenges and positioning your business to capture new opportunities is critical to your business success.

### NOTES FOR YOUR DISCUSSION

## QUESTIONS TO ASK A SERVICE PROVIDER

As you research connectivity solutions, you will encounter a wide range of service providers with their own portfolio of options. Choosing a provider that understands your business challenges, working with you to design and implement the right connectivity solution for your data needs, is essential to a successful migration. Below are some questions to ask potential service providers—and the answers they should be able to provide.

| YOUR QUESTION   | YOUR REASONING  | THE RIGHT ANSWER  |
|---|---|---|
| Does your network deliver connectivity to my locations? | Solutions vary between carriers, but they are only worth considering if they can be delivered to your building. You need a carrier that is actively investing in their network and can easily connect to your all of locations. | Our Ethernet-enabled footprint has a geographically vast presence, and is delivered to your door via either fiber (up to 10 Gbps) or copper (up to 60 Mbps).<br><br>As you expand your business to new locations, we'll build our network to grow with you, making us a true long-term partner.   |
| What products and services do you provide?              | Selecting a provider with a wide array of offerings allows you to more easily manage your communications, while reducing vendor requirements.   | We offer a multitude of options for your data networking & Internet, voice communications, and security needs.<br><br>We continuously evolve our portfolio to match the changing needs of our customers.<br><br>Our many options provide varied levels of network management and oversight, so you can architect your ideal infrastructure. |

### NOTES FOR YOUR DISCUSSION

## QUESTIONS TO ASK A SERVICE PROVIDER

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| YOUR QUESTION                           | YOUR REASONING  | THE RIGHT ANSWER   |
|---|---|--|
| How elastic are your services?          | The ability to scale your network either up or down will allow you to build a more efficient configuration, increasing or decreasing capacity as your needs change. | Our Ethernet-based solutions provide the utmost in elasticity. Not only are they more cost-effective compared to traditional TDM-based services, but they can be modified much more quickly as well.   |
| How quickly can you change my services? | The ability to change a service is perhaps more important than install time. You need flexible, responsive support.   | Our Enterprise customers are supported by a dedicated Account Consultant. Your Consultant doesn't just execute Moves, Adds, Changes, and Disconnects (MACD) orders quickly, they help identify the changes you need proactively.   |
| What type of SLAs do you offer?         | SLAs are very much like insurance. You don't really want to ever use them, but you're happy to have them around if you need them.                                   | Our SLAs guarantee the highest reliability standards and provide 99.99% availability. Not just a sales tactic, they're an example of the quality commitment made in the network we've built. Unlike consumer-grade networks, our network is built with 24/7 operation in mind. |

### NOTES FOR YOUR DISCUSSION

## QUESTIONS TO ASK A SERVICE PROVIDER

| YOUR QUESTION  | YOUR REASONING  | THE RIGHT ANSWER   |
|--|---|--|
| What range of bandwidth speeds do you offer?                 | Understanding the granularity of your bandwidth options will provide you the flexibility to build the right sized network for your business.                                | We can meet all your bandwidth requirements. Our Ethernet services start out at 5 Mbps, and can be provisioned up to 10 Gbps in over 35 discrete speeds. Combined with the ability to specify specific Committed Information Rates (CIR), organizations can easily tailor our services to their exact needs. |
| What tools can you provide me in order to manage my network? | Understanding how your network is running will give insight into its efficiencies, or lack thereof; and provide opportunities to improve data flow, and cost effectiveness. | Our performance monitoring portal provides surveillance of key indicators on network traffic patterns, and reporting is available via a number of historical options.  |

### NOTES FOR YOUR DISCUSSION

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Contact Integra today to learn how you can capture the benefits of being an “Ethernet Powered Business.” Our Account Consultants are prepared to answer your critical questions, and work with you to design a custom solution to make your business more competitive, more agile, and more profitable.

[www.IntegraTelecom.com/BigData](http://www.IntegraTelecom.com/BigData)