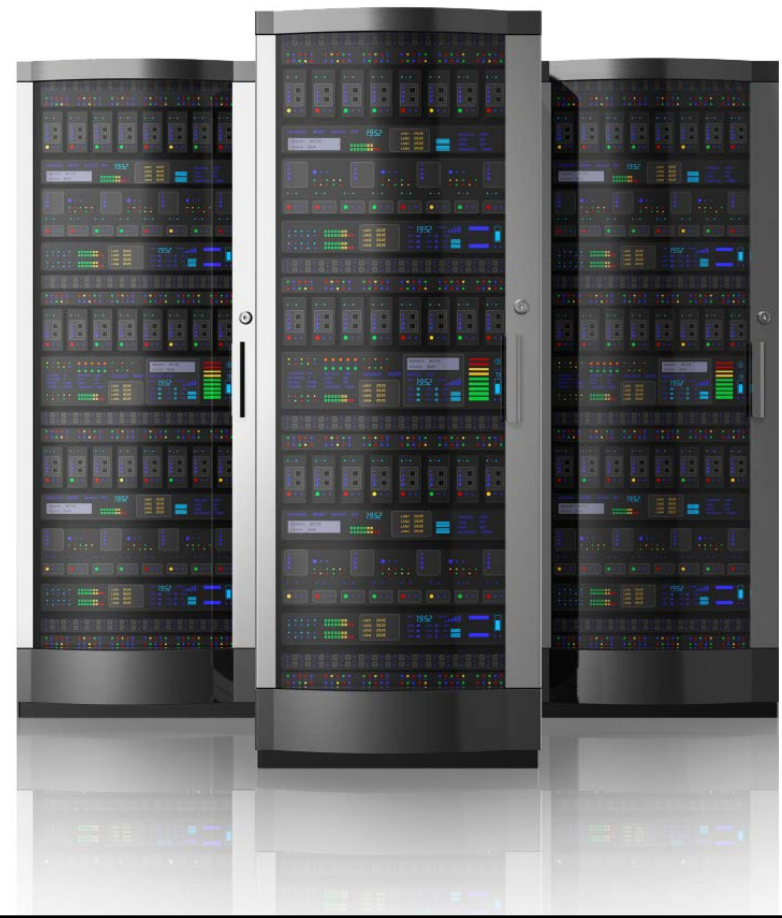


# Why connectivity counts for your data centre.

A practical guide to making decisions.

**Bell**



# What's inside?

This guide will help you find the data centre connectivity solutions best suited for your business, identify questions you can use to help evaluate potential providers, and ensure you're getting an accurate, long-term picture of your connectivity costs. It also illustrates how data centre capabilities and connectivity go hand-in-hand, providing the end-to-end performance your business requires – and why it is important to consider both when choosing a provider.

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# Connectivity is critical to data centre performance

Data centre performance depends on more than just the hardware and software inside a facility. Connectivity is a major component as well. It's how the information, applications and services hosted in the data centre are accessed, and it has a profound impact on their performance, security and reliability.

Connectivity also has bottom-line implications that are sometimes easy to overlook when considering the upfront price of a data centre solution. Factors such as latency, bandwidth and management capabilities are all determined by your connectivity choices, and these factors can have a dramatic impact on your budget.



# Defining your data centre deal breakers

When organizations are identifying their data centre connectivity requirements, they need to take into account three factors that affect overall business performance:

**Bandwidth** – the speed and volume of data between the data centre and users

**Latency** – the lag that data experiences while travelling through the network

**Management** – how much control can be exerted over data travelling through the network

Consider the following use cases:

- If you routinely run backups of large volumes of data, ensuring you have sufficient bandwidth will be key.
- If your data centre serves up applications like video, minimizing latency is essential as few users will accept slow, jittery performance.
- If you use your data centre to run mission-critical applications, management may be your top priority to ensure you're able to control and fine-tune those applications in real time.

Typical events that can trigger data centre connectivity decisions:

- Consolidating data centres
- Adopting new, mission-critical applications
- Scaling bandwidth swiftly
- Ensuring business continuity
- Moving to cloud-based services
- Reducing costs

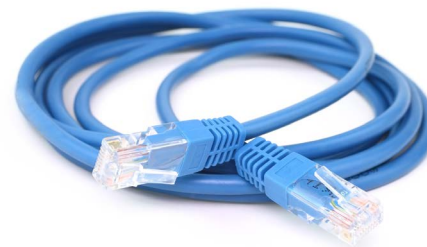
# Connectivity types

Depending on your needs, you may require one or more different types of connectivity. Below is a high level description of some key connectivity offerings:



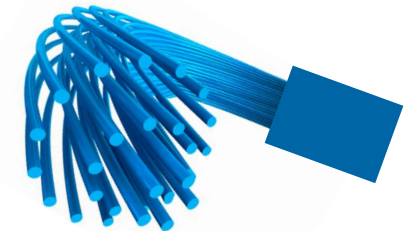
## IP VPN

IP VPN is a fully managed wide area network (WAN) solution that allows you to share voice, data and video among employees, suppliers and partners.



## Ethernet

Ethernet provides efficient, economical, high-bandwidth connectivity between locations allowing organizations to meet current business needs and adapt to future demands. At the same time, it allows you retain control of critical functions like IP addressing and firewall management, enabling you to customize your network topology and control costs.



## Wavelength

Wavelength provides organizations with ultra high bandwidth connectivity supporting latency-sensitive applications, mass data transfers and a range of Local Area (LAN), Storage Area (SAN), and Wide Area (WAN) networking applications.

Many organizations' requirements are not so cut-and-dried. It is essential to consider your deal breakers in the areas of bandwidth, latency and management when evaluating the right connectivity for each situation. For example, to meet your specific requirements, you may need wavelength connectivity to support your video network and IP VPN connectivity to serve your branch locations.

A final consideration is what happens if your needs change over time. Will your provider be able to support your needs now and into the future?

“Choose a provider that offers a wide range of connectivity options and can adapt as your needs change.”

# When you think connectivity, think ahead

The best way to future-proof your data centre investment is to choose a provider that offers a wide range of connectivity options and can adapt as your needs change. That kind of offering requires a flexible network: a single, cloud-based network that supports a wide range of connectivity options including IP VPN, Ethernet and wavelength.

With a flexible network, connectivity is application-specific, rather than one-size-fits-all. If your organization relies heavily on e-commerce, you might have your transactional apps delivered via Ethernet. But if you also host video calls with suppliers, you may specify wavelength to deliver those services. And as your needs evolve, a flexible network has the capacity and versatility to accommodate them.



# Seven tough questions you need to ask

When weighing your connectivity options and considering a data centre service provider, the most important thing to do is ask a lot of questions. Finding out the answers to the following questions will give you a true picture of a service provider's data centre connectivity offerings – and uncover any gaps that could cost your business time, money or customer satisfaction down the road.

Ask the following:

## 1. How will your data be transported?

Ensure the provider gives a full outline of how your data will get from the data centre to its destination. Some data centre providers outsource all or part of the network connected to their facilities. What happens if there's an issue with their service? Who's accountable for performance – and for resolving issues when they arise?

## 2. What happens if the network fails?

You'll need to know exactly what redundancies and security measures are in place, and what happens when the systems go down. Are you responsible for any troubleshooting, such as identifying the source of a problem? If different companies are providing your data centre and connectivity services, being in the middle may mean a certain amount of diagnosis is up to you.

## 3. Is the provider's connectivity solution certified?

Does it comply with industry and global standards? For example, if you've selected an Ethernet connectivity solution that links the data centre to your endpoints, ask if your provider's technology is Metro Ethernet Forum (MEF)-certified. Find out which certifications apply to your specific connection type – and if your provider holds them.

## 4. How easily can the provider scale your service?

What happens if your bandwidth needs change suddenly? Is extra capacity available? Ensure the provider has the means and capacity so you can scale up quickly when required.

# Seven tough questions you need to ask

## 5. How secure is your data in transit?

How much control does the service provider have over the network from end to end – and therefore, to what degree can the security of your data be guaranteed once it leaves the data centre?

## 6. What types of SLAs are provided?

You'll want to take a close look at the service level agreements your provider offers. Are there financial penalties attached? Do separate SLAs cover the data centre and its connectivity to you? If so, make sure they're properly harmonized – ensuring the same level of performance and responsiveness, especially if they're offered by different providers.

## 7. Is the provider's network adaptive?

Can the provider accommodate you as your connectivity needs change over time, or are you locked into a single type of connectivity once you commit?

Answering these questions will ensure you're well equipped to choose the right connectivity for your data centre – with a clear grasp on all the implications of your decision in terms of performance, cost and long-term flexibility.



# The flexible and robust Bell network

Businesses that demand secure, scalable, reliable data centre connectivity choose Bell. Our flexible and robust network gives us the ability to manage, secure, and provide performance assurances on your data centre connectivity from end to end – whatever connectivity you choose.

We have the infrastructure and experience to help you cost-effectively host, manage and protect your data and mission-critical applications. Hundreds of business customers, representing almost every industry, rely on Bell's ability to deliver uncompromising data centre services. Our service-level agreements cover data delivery and performance both within the data centre and over the network, backed by 24/7 support.

Operating Canada's largest voice, data and wireless network, we support 80 percent of all network traffic in the country, reaching 99 percent of businesses and people in Canada. Every year we invest more than \$3 billion in our network to make it even better, offering unparalleled performance, security and reliability from coast to coast to keep your business connected and communicating. Bell's team of certified professionals works with your organization to design, build and implement your data centre solution.

If you'd like to learn more about data centre connectivity solutions from Bell, contact your Bell representative or request that a Bell representative contact you.

## Other resources that might interest you

- [Take an online virtual tour of a Bell data centre](#)
- [Read our Data Centre Buyer's Guide](#)
- [Request an in-person tour of a Bell data centre near you](#)

