

MODULE TWO

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Title Slide

Business Technology Simplified

Module 2: Running Your Business on Your Own Terms

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Business Technology Simplified: Module II

Running Your Business on Your Own Terms

Welcome to “Business Technology Simplified – Running Your Business on Your Own Terms.”

This is the second of three modules in the *Business Technology Simplified* eLearning series. In this module, we will cover more advanced technology tools that can enhance and expand how you conduct business.

The *Business Technology Simplified* eLearning series is based on the book written in conjunction by Microsoft and the US Small Business Administration. To download the free eBook, click the link provided.

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Module Outline

This module consists of seven main sections:

- Using Web-Based Services to Get Advanced Capabilities without the Cost and Complexity
- Storing and Protecting Your Information
- Reducing Server Hardware with Virtualization
- Managing Your Systems More Efficiently

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Module Outline (continued)

The seven main sections of this module (continued):

- Working Together More Effectively with Anyone Using Collaborative Technology
- Working from Anywhere
- Making Smarter Decisions by Quickly Getting Key Insights into Your Business

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Using Web-Based Services to Get Advanced Capabilities without the Cost and Complexity

Do you want to take advantage of current business software but don't have the money or skills to manage it? Have you heard about "cloud" computing and you're wondering what all the buzz is about?

Commonly referred to as "software as a service" (SaaS) or "online services," Web-based services are a form of "cloud" computing. That is, they are services that run over the Internet.

In this section, we will discuss the benefits that Web-based tools can provide for your business.

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Choosing Web-Based Services over Traditional Software

Rather than purchasing software from a store and installing it on your computer, with Web-based software services, you subscribe to a service that delivers software capabilities to your computer over the Internet.

There is typically no installation required. Instead, you have a user account that gives you access to all of the features over the Internet. With Web-based software services, as long as you have an Internet connection and your user ID and password, it doesn't matter what computer you are using. You can access the software services from anywhere.

If you've ever used a Web-based e-mail account (such as Microsoft® Windows Live® Hotmail® and Google Gmail), you've used Web-based services.

Web-based services offer smaller businesses an affordable, easy way to get more advanced IT capabilities without having to buy additional hardware (such as a server) or hire someone with the IT skills to manage it. In fact, your service provider takes care of all maintenance and upgrades, so you can just use the software.

Some common Web-based services are for communications (such as e-mail, contacts, and instant messaging [IM]), collaboration (such as for online meetings and shared, central file storage), and office productivity tools (such as for creating and editing documents, presentations, and spreadsheets).

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Gain Efficiency with Web-Based Tools

Using Web-based tools can empower you to work more efficiently than with traditional software tools. Because they Web-based services work entirely over the Internet, they simplify many business and administrative functions. For running your business, this translates to:

Easy access to company files. One popular Web-based service is online file storage. With this type of service, you can store shared files—such as standard operating procedures (SOPs), forms, reports, and marketing documents—in a central place. A major benefit is that your employees will always know where to go to find company documents without having to search through file directories on individual PCs. Plus, since they will access the files over the Internet, your employees won't even need to connect to your network to get to the files they need.

The same experience no matter what computer you use. If you ever use more than one computer to do your work, you know how frustrating it can be if you don't have all of the same software or files on each computer. With Web-based services, you can get the same experience from any Internet-connected computer with a browser, without having to worry about compatibility issues or accessing locally stored files.

Because Web-based services let you access files and software wherever you have an Internet connection, they are also a great solution for anyone who regularly works offsite. Likewise, since Web-based services make it easy for people to share files, they are useful for helping people work together, particularly people in different locations.

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Storing and Protecting Your Information

Are you tired of the hassle of trying to back up your data when it's spread across several computers? Or worse, are you worried because you don't even have a backup strategy? If you were to lose the data on your hard drives due to a power surge or computer virus, what would it cost your business? Time? Money? Credibility with customers?

In this section, we will discuss systems that you can implement to store and protect your information effectively. We will also look at steps you can take and tools you can use to ensure reliability and security.

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Bring Your Data Together with a Server

Although using a server may sound daunting, it doesn't need to be. A server is just a computer that runs a specialized operating system. Using a server is pretty straightforward: by connecting it to the other computers in your business (either with a cable or wirelessly), you form a network, called a local area network or LAN. The server computer acts as a central hub, sharing data and resources across the network.

A server has a number of potential uses. For example, you can use a server:

- To **share** printers and other devices across multiple computers.
- To **connect** computers on the network to the Internet.
- As a **central place** to store files that other computers can access, as well as to store and manage your e-mail.
- To **share central software programs**, such as an accounting program or other business database, that more than one person needs to use.
- To provide **access to company files** over the Internet for people outside of the office.

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Using a Server to Back Up Your Data

A server is essentially a sharing tool that makes it easier to find information. It can also simplify how you back up your data. If you use a server as a central place to store your business files, then you only need to back up one computer to protect your critical business information: the server.

(A word of caution: With this system, any information stored on your employees' computers won't get backed up.)

If you choose to centralize your business's information using a server, you will need to have another form of media to hold the actual backup. This might be a recordable CD or DVD, an external hard drive, or even a tape backup system. The benefit of backing up your data to some form of external media is that you can then store the backup outside of the building—protecting your data from not only a disk failure, but also theft or a disaster (such as a flood or fire).

Some servers come with a data protection tool (or you can add one) that will automatically back up computers connected to the network on a backup schedule that you set. This is a simple way to protect critical information that your employees store on their own computers. Also, with a backup schedule, you'll no longer need to remember to perform backups.

Ideally, your server software will also have a data recovery tool that will help you restore data should the worst happen and it gets lost, whether you accidentally delete it or something more serious happens to your computer.

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Using Web-Based Services for Secure, Lower-Cost Data Storage

Servers can be a cost-effective choice in the long run, but when using a server, you need to pay for the hardware and software up front. You may also need to consider the cost of hiring an IT consultant to help you set it up and maintain it.

The alternative is using a Web-based service for data storage. A Web-based service offers you the benefits of a centralized server, without the up-front costs of hardware and software licensing. All you pay are the subscriber fees for the service.

A major benefit of Web-based services is that the service provider takes care of your data protection for you. Of course, it's important that you trust the level of protection and are aware of how any problems will be handled. If one of the reasons you are choosing Web-based services is for the inherent data protection, you should read the fine print on your service contract carefully to understand exactly what the service provider promises.

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Key Features of Web-Based Data Storage

The Web-based services that offer the best data protection will typically:

- Keep at least one real-time copy of your information with “failover” capabilities. This essentially means that there is always a mirror copy of your data on a separate hard

drive; when you make a change, the change is made in the other copy at the same time. If the server fails, the service would then automatically switch over to this real-time copy.

- Perform regular backups on a specified schedule (at least daily) and keep those backups for a specified period (for example, two weeks).

- Keep a copy of the backup in a separate geographical area. This ensures that if a disaster affects the data center (a facility that holds your service provider's servers) storing your data, the backup will still be available.

- Have comprehensive, documented security policies, covering physical security, network connections, virus and spam filtering, and user authentication.

- Certify the service through regular third-party testing (common certifications include SAS 70 Type I and Type II and ISO/IEC 27001:2005). This means that the services meet accepted standards for security.

- Commit to at least 99.9 percent availability for your service with a financial guarantee. This means that your data will be available at least 99.9 percent of the time or you will get some money back.

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Choosing Between a Server and Web-Based Services

If you want to gain better data access and protection by centralizing your file storage, which option should you choose—Web-based services or a server?

The answer depends on your business's needs:

- In general, Web-based services will help you save money, at least initially, by eliminating the need to buy the server hardware and software. They also enable you to get the most current technology without having to worry about upgrading your software or having the IT skill to manage it, since your service provider takes care of this for you. However, with most Web-based services, you have limited (if any) options for customizing the service, so it needs to fit your needs as is. In addition, if you are in an industry with strict regulations about how you store your data, you may find that not all Web-based services will fulfill those requirements. Finally, you typically need a broadband Internet connection to use Web-based services, so if you're currently relying on a dial-up connection, you will need to upgrade.

- On the other hand, having a server solution gives you unlimited control and the ability to customize your solution to fit your business's needs or meet regulatory requirements. It's also ideal if you want your software to stay the same or only change when you choose to upgrade it. (In contrast, with Web-based services, the service provider will generally update the service as new and improved features become available.) A server offers the additional advantage of enabling you to share resources (such as printers, fax services, and an Internet connection) across the computers in your business. Finally, any

content stored on a server is available to any computer on the network regardless of an Internet connection.

Whichever method you choose, for a backup strategy to work well, you need to back up your data often, ideally at least once a day. For Web-based services, this should be part of your service contract, but if you will store any information on your computer as well, you will need to back that up yourself.

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Planning for Comprehensive Data Security

If you want to protect your data from loss, backups are obviously critical. However, they're not the end of the story. In addition to having a sound backup strategy, you should take the following four things into account to protect your data:

- Firewall.** Use a firewall on every computer to prevent hackers from getting into your system. A software firewall should be available and turned on by default in your desktop operating system.
- Antivirus/antimalware.** Make sure that every computer in your business has up-to-date protection from viruses and other malicious software (sometimes called "malware").
- Patch management.** Ensure that every computer on your network has the latest updates for your operating system and any other software installed.
- Good passwords.** Use passwords that are hard to guess. For example, don't use obvious words, such as your pet's name, and choose combinations that an electronic dictionary wouldn't be able to pick up (such as by joining two words into one and combining upper and lower case letters, numbers, and symbols).

[no audio --- Data Security planning points recommended by Michael Santarcangelo, security expert and author of the book *Into the Breach*.]

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Reducing Server Hardware with Virtualization

Are you tired of investing in servers that aren't working anywhere close to capacity and are taking up too much of your time to maintain? Are the incidental costs of maintaining your servers (such as electricity and office space) creeping up every year?

If you are using, or plan to use, servers for your business data, this section is very important. Here we will discuss server virtualization and how it can boost your IT efficiency and lower costs for your business.

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Virtualizing Servers to Reduce Server Sprawl

The term “server virtualization” sounds complex, but the concept is actually quite simple. With virtualization software, you can essentially create several separate “virtual” servers (called virtual machines) that are all stored on a single physical computer (called the host server). Each virtual machine has its own operating system and is completely isolated from the other virtual machines running on the host server.

Server virtualization is a bit like an office building for servers. Each business (virtual machine) is separate from the other businesses in the building. Just as one business might publish medical journals while another might provide accounting services, each virtual machine can run its own workload independently of the others. And just as each business can grow (or shrink) by leasing additional office space (or giving up office space), each virtual machine can use more or less processing power, memory, and disk space. However, one key difference from the office building analogy is that you can also add performance and storage to the physical host server instantly whenever you need to—this would be like adding additional floors to the office building overnight!

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Virtualization: The Benefits

One major benefit of server virtualization is that it enables you to take multiple physical servers and convert them into virtual machines on a single host server. You create one highly efficient server and can eliminate the other physical servers that you no longer need.

When you get rid of those unnecessary servers, you eliminate the associated hardware maintenance. You also reduce the energy required to run and cool your servers, which will save you money and reduce your business’s impact on the environment.

Another major benefit is how quickly you can create new servers using virtualization compared with adding new physical servers. Rather than having to purchase the hardware and install and configure the server software, it is a simple process of creating a new virtual machine.

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Managing Your Systems More Efficiently

Are you spending more time managing your IT systems than your business? Are you tired of running from computer to computer trying to solve problems and keep your IT systems working smoothly?

In this section, we will discuss technology that you can use to simplify managing your systems. These tools will streamline management and empower you to stay on top of your technology without needing to devote yourself to the task.

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Built-In Desktop Operating System Management Tools

Depending on what desktop operating system you use, you may have access to a range of tools that can make the management experience easier. Some of the best of these tools provide:

Troubleshooting support, which includes troubleshooting and diagnostic tools designed for the typical user (rather than an IT expert). Basic troubleshooting tools should let users know when an error occurs, recommend solutions, and even let them implement a fix by simply selecting one of the options presented.

Scheduled maintenance, which gives users the ability to schedule an automatic cleanup of a computer's hard drive to fix errors, make better use of hard drive space, remove temporary files, and delete broken shortcuts. This can reduce how much basic maintenance you need to do and help prevent problems down the road.

Remote assistance, by which users can let you (or an IT partner or staff member) see whatever is on their screen. They can enable you to remotely control their computer to fix the problem without having to leave your desk or talk them through steps over the phone.

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Server-Based Management Tools

When you add a server into the mix, you can gain additional tools to help with systems management. Because a server acts as a hub in the network, depending on the server technology it can let you centrally control certain management tasks for computers and users on the network. Three of the most timesaving capabilities will let you:

Manage users and passwords centrally. With a server, you can set and control the user names and passwords that your employees use to access your systems. This increases security and makes it easier for your users to access network resources. Furthermore, in the event that a user forgets his or her password, it gives you the ability to reset that password and restore access easily.

Check on the status of system updates. Being able to automatically check the systems on your network to see if they have the latest software updates will save you from visiting each computer individually. Ideally, if you find that some computers are not up to date, you will also have the option of installing the updates over the network.

Manage computers and users as groups rather than individually. Being able to assign computers to different groups based on shared characteristics, such as where the computer is located (such as in the office or at the warehouse) and who the user is (such as a manager or salesperson), can let you apply settings once for an entire group. Group management capabilities also enable you to apply standard policy and security settings across every computer in your business.

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Working Together More Effectively with Anyone Using Collaborative Technology

Do your employees need an easier way to access shared files? Do communication delays keep you and your employees from working as efficiently as possible?

This section will cover technologies that you can implement within your business to help foster collaboration with employees, partners, and clients.

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Using Centralized File Storage to Share Documents

The number one problem when sharing documents is version control. Multiple copies of a file can quickly spread across computers, e-mail inboxes, and USB flash drives. It can become very difficult to track progress, feedback, and which copy is the latest version.

One way to solve this problem is with a content management system, or CMS. Sometimes called a document management system, this provides a central file storage location that everyone can access. With a content management system, teams can easily find and make changes to shared documents. If someone has a file checked out, the system can show who is working on it, eliminating the risk of multiple versions. Team members can also download a document to their computer and make changes later on, while they are offline. The next time they connect to the Internet, the system can automatically synchronize their offline changes with the centrally located version. Not only that, but a content management system can store and track previous versions of every document, so everyone can see what changes have been made. If things go wrong, they can restore a previous version.

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Enhancing Collaboration With Shared Workspaces

In addition to centralized file storage, you can choose a content management system that also supports shared, or collaborative, workspaces. Shared workspaces provide an online space where people can actively work together. Workspaces typically bring together all related information for a specific project, such as an event.

A shared workspace provides all of the benefits of centralized file storage (that is, a single place to get the latest information, plus version control) while adding a number of collaboration features. The actual features that you get will vary depending on what technology you use, but consider the advantages of a workspace that:

- Alerts you when someone makes a change to a document (and tells you what the change was).
- Lets two or more people work on the same document at the same time while keeping track of who is doing what.
- Lets someone share the document live in an online meeting so that everyone can see changes as they are made and even edit the document themselves.
- Lets you provide access to your stored files (with password protection) to people outside your business, such as your partners or customers.

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Sharing Information with Clients Using an Extranet

An extranet provides a fast, convenient, and secure online location for sharing files and other information between two or more organizations. It's ideal for any company that works on a project basis or regularly exchanges files with clients or partners. With an extranet, you get many of the same benefits that you get with centralized file storage. For example, you can check documents in and out and store a history of all previous versions. This makes it easy for multiple people at different companies to share and access documents whenever they need to. It also makes it easy to track changes and capture feedback without dealing with multiple versions. Since you can restrict access based on user identity, an extranet can also help you keep your shared documents secure.

An extranet that includes calendar, task, and project management capabilities can also help you run projects more easily. It can let everyone track the progress of the project, initiate new project activities, and stay informed of project changes.

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Working from Anywhere

Do you start worrying about what you're missing in the office the minute you step out the door? Can your employees work from offsite and still easily access all of the resources they would have in the office?

In this section, we will discuss tools that you can implement within your business so that you and your employees can stay connected to the business from anywhere.

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Staying Connected with a Smartphone

For many people, “working outside the office” means remaining responsive when on the move. Whether you're waiting for a flight at the airport or stopping for a coffee at the local café, sometimes keeping in sync with the business can mean the difference between making the sale or not. Smartphones allow you to stay connected, regardless of where you are or what time it is.

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Using a Smartphone to Deliver Customer Service from Anywhere

More than just a mobile phone, a smartphone delivers a computer-like experience, with the ability to send and receive e-mail, search the Web, and access your calendar and contact information. Depending on the applications you have, you can also use a smartphone to open and edit documents, spreadsheets, and presentations. It's the ideal tool to stay connected with the office, quickly review files, and make on-the-fly adjustments when you don't have a computer handy.

For many business owners, smartphones also allow them to stay on top of their online outreach efforts through social networking sites, such as Facebook, LinkedIn, and Twitter.

For more on using online tools to find and connect with customers, check out module III of this series, “Finding and Managing Customers.”

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Providing Remote Access to a Business Network

Providing remote access to your network allows you and your employees to work from offsite and still have easy access to all of the resources you have in the office.

Like many of the other technology solutions we've seen throughout this course, remote access can be server based or Web based.

If you are using or plan to use a server to provide your business with a central location for data and programs, make sure you use a server that supports remote access connections. This lets you and your employees connect to the server from outside your business network through an Internet connection.

Another way to provide remote access is with Web-based software services. One benefit of using Web-based services for remote access to central files is the time you can save when adding new users. With a server, you need to assign each new user secure access to the server, which can be a time-consuming process, particularly if you have this task outsourced to an IT consultant. With Web-based services, new users can be given secure access by simply adding a subscription to the service.

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Making Smarter Decisions by Quickly Getting Key Insights into Your Business

Do you know if you're steering your business in the right direction? Are you drowning in data instead of getting a clear picture of your business?

In this section, we will discuss ways you can gain better insights into your business and make quick, impactful decisions, relying on more than just your gut instinct.

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Pulling Insight from Spreadsheets

In the day-to-day running of your business, you gather plenty of data, including sales figures, inventory data, and customer information. One way to track this information is with spreadsheets. Depending on the program that you use, a spreadsheet can offer a lot more than basic accounting features. Some modern spreadsheet programs include simple tools to help you analyze your data without extensive training. The best of these programs will give you the ability to:

- Combine and manage different types of data (for example, banking, sales, inventory, and distributor data).
- Build and generate reports using the data.
- Quickly “pivot” the data to get different views based on different categories (for example, by region, year, or supplier).
- Quickly create charts and visual representations of the data to make it easier to understand and spot trends.

- Show data at a high level and then “drill” into it for more detail as required.
- Find out how changing certain values (for example, annual budget or time to production) will affect certain outcomes (for example, revenue)—called “what-if” analysis.

By using built-in reporting and analysis capabilities in your spreadsheet software, you can convert hard-to-understand rows and columns of data into easy-to-interpret information. For example, by pulling together your financial, inventory, cost, and sales data, you could compare your actual sales against targets, identify which of your products or services are your top sellers (and which make you the most money), and forecast future trends for your business.

Conclusion

In this module, we discussed a number of advanced technologies plus methods by which you can leverage them for your business. We covered:

- Web-based services, which can provide you with enhanced capabilities, often at a lower cost than traditional software and without requiring IT expertise.
- Ways that you can store and protect your business data.
- Server virtualization technology to make your servers work more efficiently.
- Management methods and practices to keep your systems operating reliably and securely.
- Collaborative tools to foster better teamwork.
- Tips and technologies to help you and your staff to work from anywhere.
- Tools to provide you with more insight into your business.

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Congratulations!

Congratulations on completing “Business Technology Simplified – Running Your Business on Your Own Terms”!

Remember, this is the second of three modules within the *Business Technology Simplified* series. Be sure to view the final module as well. Click on the links below to load a module in a new window.

You can also download the free eBook version of *Business Technology Simplified* using the link provided.

Click the appropriate link to advance to the final module or exit the course.