Red River

FOUR STEPS
TO AN EFFICIENT SECURE
CLOUD MIGRATION

Many businesses today are migrating to cloud services for a variety of reasons; some of the most common destinations are Amazon Web Services and Microsoft's Azure environment.

The benefits of moving your business to the cloud are numerous, like increased scalability and elasticity, reduced cost of infrastructure, and greater ability to connect and collaborate with colleagues and partners in a world where remote work is increasingly popular.

However, many businesses are also nervous about making such a move, for reasons that are completely understandable. Businesses may worry about losing valuable data in transition, or breaking existing systems and processes. There may be fears of costly downtime or loss of productivity as workers adapt to the new environment.

As an expert cloud managed services partner, Red River has combined decades of experience in managing cloud transitions and live deployments. In this ebook, we'll examine the benefits of migrating your business to the cloud, as well as our battle-tested four-step process for a cloud migration and deployment with minimal downtime or loss of productivity.

WHY MIGRATE TO CLOUD?

As a manager, executive, or business owner, it can be tempting to ask yourself: Why bother? Why fix what isn't broken and spend time and energy migrating to a new platform, when your old platform – whether on-premise servers, virtual machines, or a hybrid deployment – works perfectly fine?

Our answer to that is: Even if something currently works fine with little issue, there is no guarantee that it will continue to work without issue in the future, and switching to a cloud environment can forestall potential problems. Further, switching to the cloud comes with tremendous upsides in terms of how your business can thrive and grow.

In other words: If you don't switch, your competitors still will, and they'll be gaining advantages that you won't. Here are some of the many reasons to migrate to cloud environments like AWS, Azure, and more.

SCALABILITY AND FLEXIBILITY

Let's say your business is growing to the point where you need to purchase additional hard drive space to accommodate all the work being done, or additional servers to handle traffic load for the launch of a new product or service.

If you're still running a wholly on-premises environment, this necessitates purchasing and setting up additional hardware, an up-front investment of time and energy. Depending on your new needs and how significant your scaling, this can be quite significant. When your business is in a cloud environment, however, not only do you typically pay monthly – significantly reducing the up-front cost – purchasing additional capacity is simple, since that capacity already exists in one of the massive data centers run by companies like Amazon, Microsoft, and Google.

Not only is a cloud deployment more scalable, it is also more **flexible**. Perhaps your need for extra capacity was only temporary; in an on-premises environment, you would still have physical servers taking up space and resources while going unused. With a cloud deployment, it is simple to cut back and simply pay for less usage.

SECURITY AND EFFICIENCY

Even if your business would regularly use additional on-premises servers, there are costs associated with operating them: Additional electricity bills, paying people to service them, maintaining a climate-controlled environment, and so on. Furthermore, making sure that your servers are fully patched is a time-consuming but necessary process to ensure cybersecurity.

While most businesses today recognize the need to back up data, it isn't uncommon to have those backup drives physically in the same location. This can still help against drive failures, but it won't do a thing against fires or floods.

Further, even on-premise servers require maintenance, and when those servers are the totality of your business' capacity, that can result in unexpected downtime. It is exceptionally rare – virtually unheard of – for all the capacity of a provider like Microsoft or Amazon to be down at once.

COLLABORATION AND REMOTE WORK

This world is one that increasingly values remote work and collaboration. For small businesses, having access to a national – or even global – talent pool lets them hire great workers regardless of location while saving costs on renting larger spaces. Medium-sized businesses might find it valuable to offer work-from-home (WFH) policies as a benefit to attract or keep top talent, and large enterprises will typically have multiple locations around a country or around the world, and often have partners or suppliers in other corners of the globe who would greatly benefit from enhanced connectivity.

Maintaining your business in a cloud environment makes all of this not just possible, but virtually effortless. Connecting to the cloud is no different for an employee in your headquarters than for one living in rural Vermont or central Seoul.

WHAT CONCERNS DO PEOPLE HAVE ABOUT CLOUD MIGRATION?

With the benefits of being in a cloud environment so many, what makes people hesitate about making the transition?

- **Downtime.** This is one of the most common concerns about migrating to the cloud. If your business has a website and it's inaccessible during the transition, you're losing business and that means losing money. If your employees are unable to work due to a lengthy transition, that also means losing money.

- **Security and control**. Ultimately, "the cloud" is another word for "someone else's computer," and it can make business owners uncomfortable to not have their data directly in their control. For businesses with high compliance standards, for instance, businesses that deal with HIPAA, this can present a level of difficulty.

- **Broken dependencies or processes**. If you have an established automated process that, for instance, sorts information into correct folders, will it break when the folders are moved to the cloud?

- **Lost productivity**. Even with a flawless deployment and migration, workers will take some time to get up to speed and may work slowly at first.

While these are certainly all valid, understandable concerns, as we will go over in the following section, they are minimized – if not eliminated – with a proper migration plan and a reputable, trustworthy cloud services provider.

THE FOUR-STEP PROCESS TO CLOUD MIGRATION

In our combined decades of experience as cloud managed services providers, we have identified four steps to any cloud migration or deployment: Assess, Plan, Migrate, and Manage.

While cloud migration is still a task that requires a great deal of planning and effort, following this process will severely reduce risk and minimize downtime, meaning that your business will be able to swiftly enjoy the benefits of being in the cloud with few, if any, of the drawbacks mentioned above.

STEP #1: ASSESS

Like your first step onto the scale on January 1, any productive change should begin with an honest assessment of the situation. This step involves a comprehensive analysis of your business' current computing environment. It's important to understand architecture, any relevant processes, and the health of the environment. This can be further broken down into an additional four sections.

- **Performance analysis**. Take an in-depth look at how your existing environment is performing. Where are the heavy loads, what causes them, and is there a better way to distribute the work?

- **Right-sizing and TCO**. Is one of your drives full of empty TB of hard-disk space, while another is close to overflowing? It's important to assess your needs for computation and storage. You may be paying for bandwidth you don't need, or close to topped out. Identify the total cost of ownership (TCO) for where you are, and where you hope to grow.

- **Drill down**. Go deeper. Go into compute, storage, and network usage for each machine to understand optimal cloud settings – and how much it will cost in the cloud environment.

- **Predict performance**. Compare your current, extant performance in the on-premises environment with your predicted performance in the cloud environment, and see how much your business stands to benefit.

Once the assessment is done, it's time for what is arguably the most critical stage: planning.
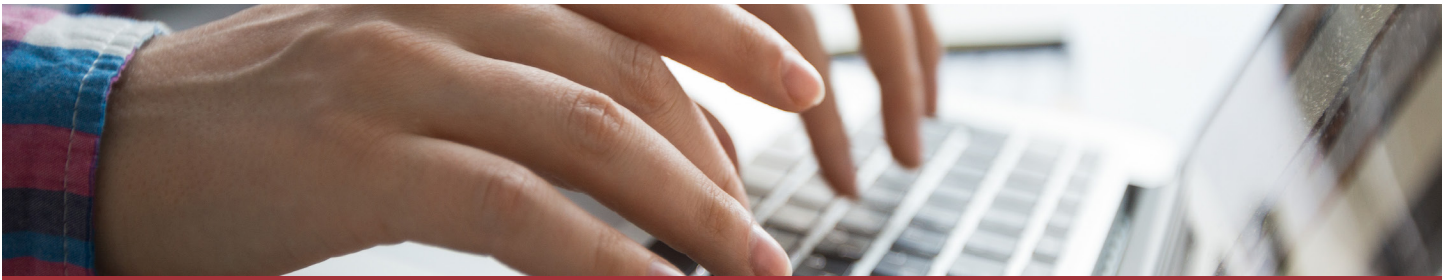
STEP #2: PLAN

The planning stage is often the longest stage and the one where the most work takes place, because it is the most critical stage in terms of a successful migration and deployment. Planning for a cloud migration boils down to several necessary parts.

- **Map dependencies**. As part of the assessment, it's key to understand processes and what relies on what. Once you understand application and workload dependencies, you can identify the proper migration order, so that nothing is moved to the cloud without a critical component or storage sector being moved first. This will determine the order in which your business moves to the cloud for optimal performance and minimal (if any) disruption.

- **Examine "what if" scenarios**. Consider what could go wrong – or might even be unexpected – and create contingency plans. It isn't necessarily always problems or unexpected developments, either; this process also involves modeling different regions, instance types, and pricing plans to determine the optimal cloud environment for your business.

- **Data protection**. In a proper deployment, you will never need to worry about a backup or disaster recovery strategy, but things can always go wrong. Identify a plan for what to do if something does go wrong, so you won't be caught unawares. Fortunately, cloud services are designed to fail gracefully.

- **Proof of concept**. Take a test run. Run a trial migration, see what didn't work well, and modify the migration plan accordingly.

- **Upload migration files**. Load all migration files to a staging platform and begin the preparation for the actual migration.

- **Train employees**. In this stage, carry out any necessary training for employees so that they can begin to do their work as soon as the initial deployment is finished. Don't worry about making them complete cloud experts just yet – this training should just cover the basics.

Once the plan has been put into place and you've successfully done your test migrations, it's time for the real thing. To quote the A-Team's Hannibal, we love it when a plan comes together.

STEP #3: MIGRATE

When everything has gone according to plan, this can actually be the easiest and least time-consuming stage of them all, because proper setup means it can be as simple as pushing a button.

The actual migration process can be different depending on whether or not your current environment is A) on-premises, B) VMware, or C) Hyper-V, for example, but broadly speaking, there will not be tremendous difference.

With the right migration tools, you can achieve a near-seamless migration of VMs and apps to the cloud environment, with zero data loss and near-zero downtime for you, your business, and your internet presence.

STEP #4: MANAGE

Once your business has moved into its new cloud environment, your managed services partner can still be of critical help. Companies like ours offer critical support services that can ensure your cloud deployment is running as smoothly as it can be. Here are just some examples of some useful services offered by cloud managed services teams like ours:

- **Invoice and subscription management**. One of the downsides of cloud services is that it can be difficult to parse your bill – providers often break down your invoice in a way that isn't intuitive to understand. We can help you gain clarity and insights into just what you're paying.

- **Governance and policy management**. Are you using best practices? We can bring our expertise and experience to bear and ensure that you're getting optimal use out of your new IaaS.

- **Capacity and resource planning**. We analyze your current cloud usage and look at places you can cut costs, such as terminating idle or mis-provisioned resources.

- **Security and identity management**. We help monitor sign-in activity and safeguard access to your business' data. This means that even in the event that an employee's credentials fall into the wrong hands, it can be possible to deny access from someone who shouldn't have it.

- **Monitoring, alerting and reporting**. We take a close look at your cloud deployment and notify you the moment anything seems amiss.

These are just some of the services we offer. Your cloud services provider may have a different offering, so we recommend consulting with them first to see how they can help your cloud deployment.

If you're looking for an expert cloud services provider to help your migration and deployment to an incredibly useful IaaS, <u>contact us today</u> at Red River. We can make this task as easy and downtime-free as it can possibly be.

ABOUT RED RIVER

Red River brings together the ideal combination of talent, partners and products to disrupt the status quo in technology and drive success for business and government in ways previously unattainable. Red River serves organizations well beyond traditional technology integration, bringing 25 years of experience and mission-critical expertise in security, networking, analytics, collaboration, mobility and cloud solutions. To learn more, visit redriver.com.