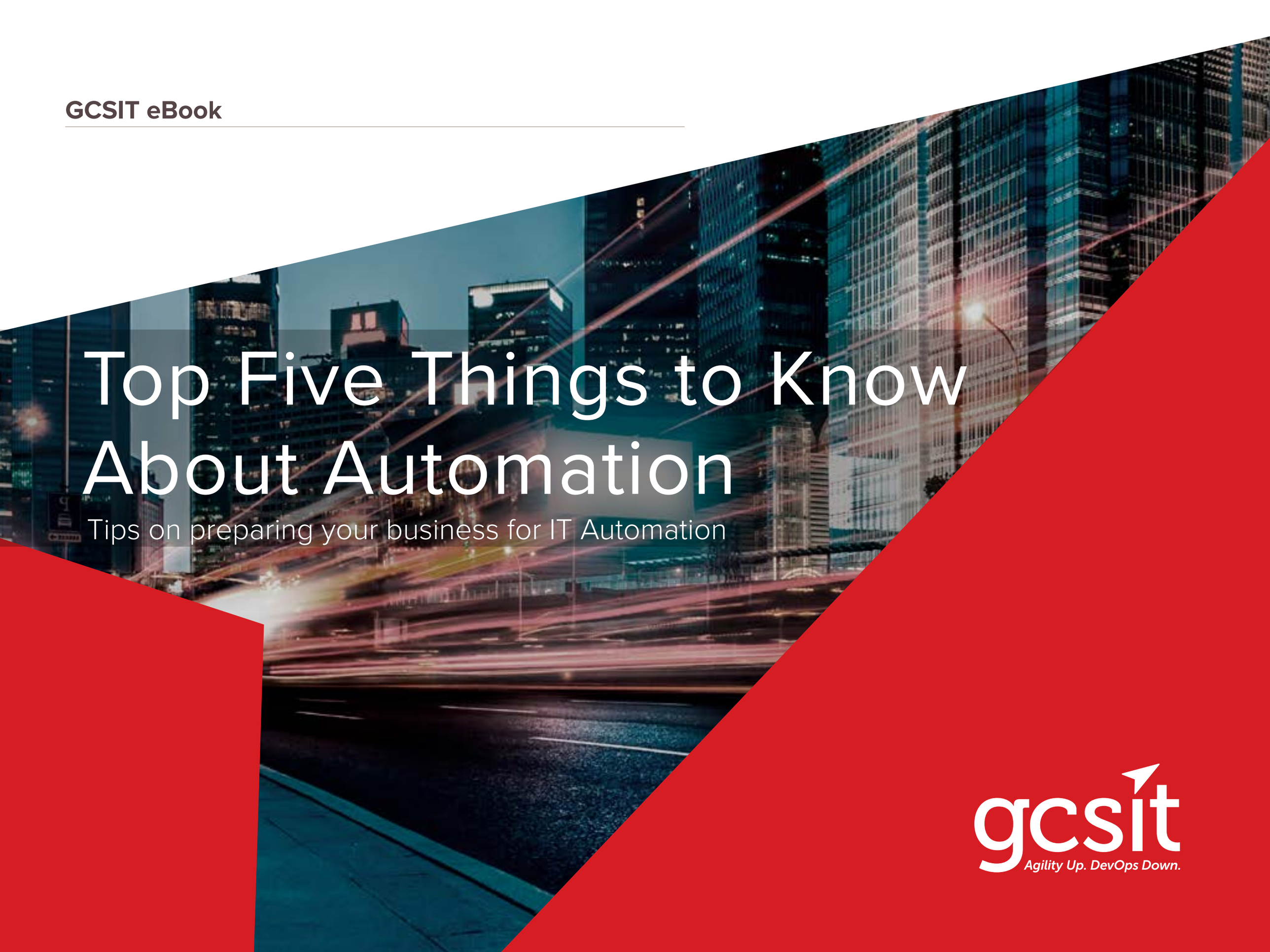
GCSIT eBook

Top Five Things to Know About Automation

Tips on preparing your business for IT Automation



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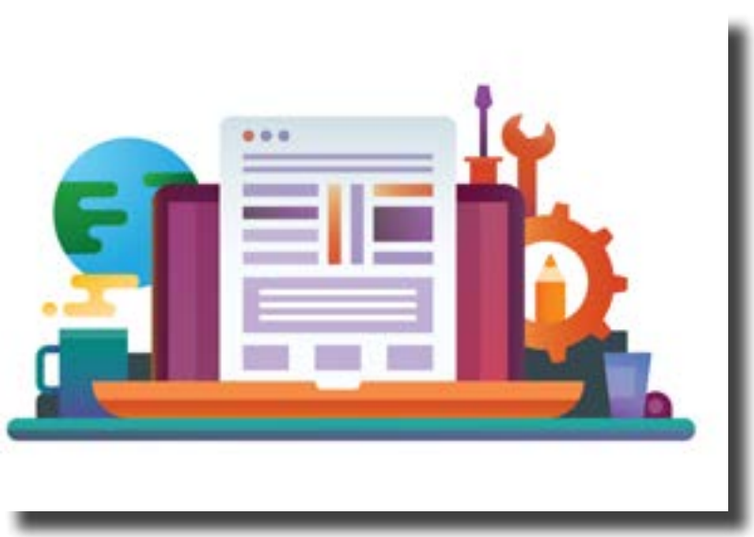
Agility Up. DevOps Down.

Contents

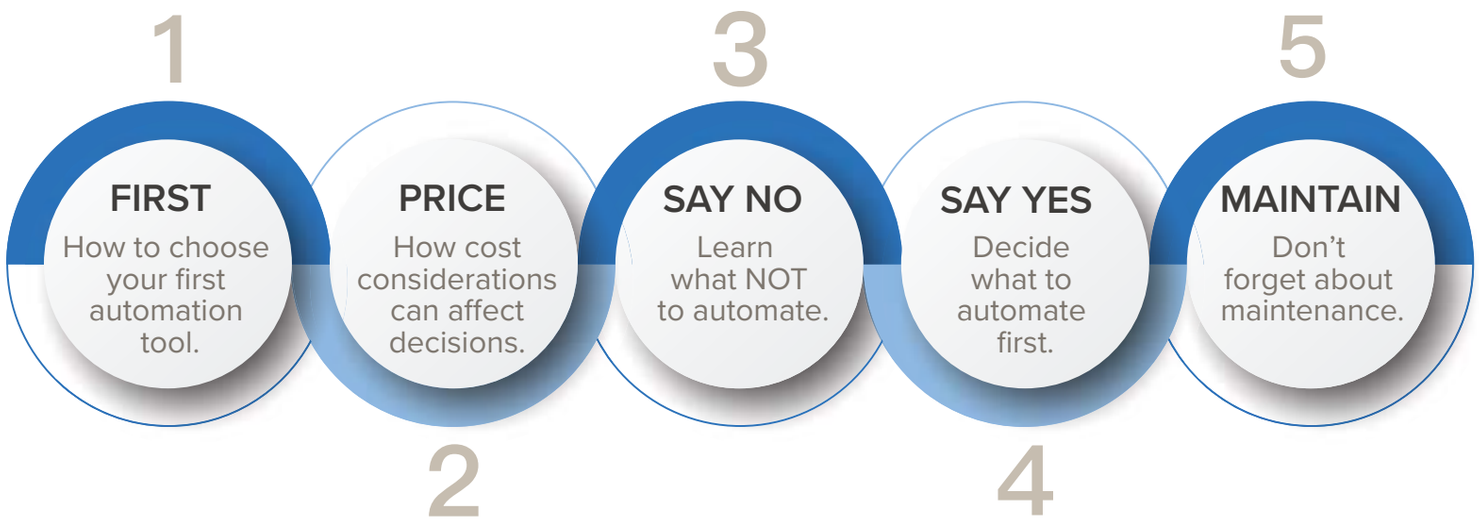


What is Automation?

IT automation, or infrastructure automation, is the use of software to create repeatable processes. The purpose of automation is to reduce human interaction with IT systems, and make the remaining interaction completely predictable. IT automation is the foundation of your modern datacenter when servers, storage, and networking are transformed into software-defined infrastructure.

In essence, Automation increases efficiency to improve your company's bottom line. It allows you take less time doing the routine, albeit business critical, processes and focus on innovation. Automation also alleviates stress, with the knowledge that things will get done, without you having to worry about remembering to do them.

Top 5 Things to Consider for Automation

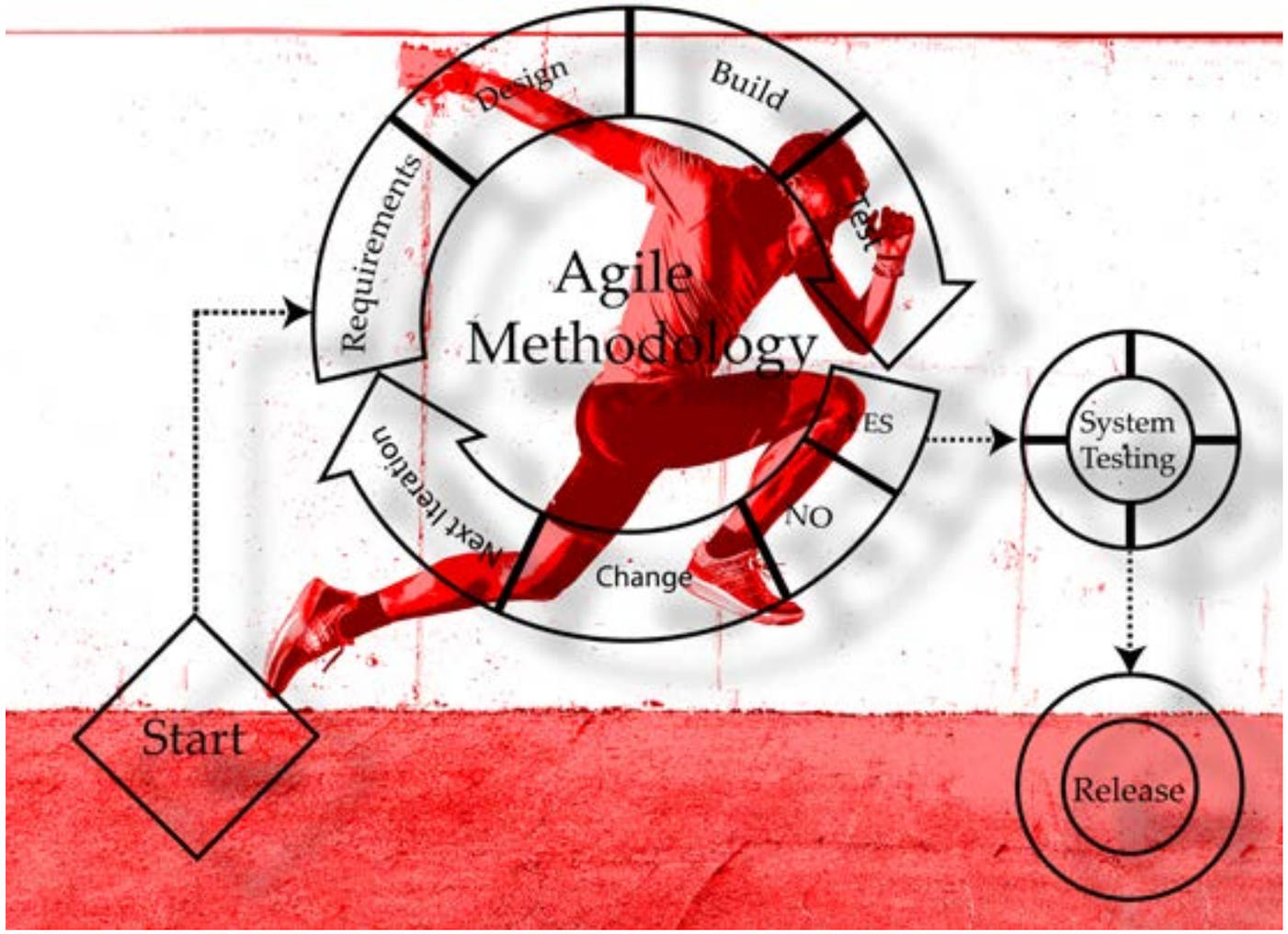


Agile DevOps and Automation

As companies move towards leaner, faster, smarter processes, Agile and Automation are becoming more than buzzwords to decision makers. They are both becoming keys to productive and profitable operations.

An Agile IT infrastructure is one that is designed to support short rapid deployment and provisioning cycles. Each of these short development cycles results in incremental upgrades and improvements to the code and its deployment. This, in turn, results in a continuous stream of incremental changes to the underlying infrastructure.

An Agile IT infrastructure applies the Agile philosophy to an organization's IT infrastructure computational, network, storage and security components.



> “ **Efficiency** is doing things **right.** **Effectiveness** is doing the **right things.**
>
> *-Peter Drucker*

When an IT organization is faced with the continuous stream of changes that are characteristic to an Agile infrastructure, they are faced with a scaling problem. The old way of sequentially taking each of these requested configuration changes and manually implementing each one just doesn’t scale to the new reality. This is where Automation comes in.

The original driving factor behind automation was to help DevOps in companies with a growing Agile development team to scale. However, more and more companies are unifying infrastructure and streamlining with operational efficiency through the incorporation of automation. Some estimates show that 40% of current businesses are already embracing automation.

IT operations cannot realize high levels of agility without automation. The lack of automation could mean higher operational cost and a slower response to meet critical business needs, which is why so many are incorporating automation into their Agile infrastructure plan.

Preparing for Automation

Automation is almost always about achieving operational efficiencies. It is about performing an activity or a process in the best possible way with minimum time, effort, and cost yielding maximum output.

While the original driving factor behind automation was the enablement of DevOps in companies with a growing Agile development team, the modern IT organization has found many more reasons to embrace the emerging technology beyond the promise of scaling. However, as enterprises make progress in their automation projects, business leaders must evolve from doing things right to doing the right things.

1 How to choose your first automation tool.

Start with the basics. Identify the use cases you wish to optimize in order to improve the efficacy and efficiency of a process. Aim to transform business processes by experimenting with new ways of delivering value. This can be done by redesigning and optimizing processes. In your roadmap, clearly distinguish your use cases and their outcomes associated to your revenue, cost and risk goals.

2 Cost considerations can affect decisions.

Cost, in terms of automation, can be thought of in a number of ways. It does take a certain amount of time investment to create automation functionality. The key is choosing processes that are used a great deal in your operation and can benefit the organization with both the time saving of doing that operation but also in ensuring that operation works the same way every time.

Cost can be seen in several ways. Most commonly, the cost to develop the automation will be compared to the cost reduction by taking manual tasks out of the hands of the operations team. This is of course a very valid way to decide whether something is worth automating, and can result in a very simple ROI formula. Automation projects where the development cost is far less than the future manual execution cost can be easily justified.

3 Learn what not to automate

Be careful to not optimize the wrong thing. Quite often, automating a bad process can make it worse. It is essential to structure business processes for high performance. This is applicable when automation requires organizations to take a new view on key characteristics of processes related to data structure, component delineation and exceptions. Essentially, if the task is highly sensitive and is not a daily operation, it's not a good candidate for automation.

4 Decide what to automate first

It may sound counter-intuitive, but trying to make that first project demonstrate all of the benefits of automation often makes the project difficult to finish. Nobody likes hours and hours of coordination meetings between a handful of teams that have never done automation before. Companies that attempt this often cross the finish line at the expense of lost team enthusiasm.

We recommend starting with smaller automation tasks that can be finished by one person or a two-member team. A good example would be the implementation of some Operating System (OS) configuration. For example, choose a security setting that needs to be executed on a large amount of systems, or a specific OS setting that needs to be redone after each upgrade. The smaller the initial project the better. It is rare to find someone that has created their own small Ansible playbook that isn't eager to get started on the second one.

5 Don't forget about maintenance.

Every automation playbook should be seen as a small development project and use the proper versioning system. When versioning is combined with the truly declarative features of a powerful DevOps tool, the environment's configuration can be rolled forward by executing the newer version of the playbook, and rolled back by executing an older version.

The more you automate, the more the benefits become automatic.

Agile and Automation are both processes that become more familiar and more refined over time. Start with the basics and keep learning and improving over time. In a way, it's like working with GCSIT generally. We are always learning and the longer we work with you, the more we learn together.

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About GCSIT

GCSIT is a different kind of engineering firm. We act as our customers' personal technology optimization team to create and maintain custom-built, agile infrastructure solutions.

GCSIT's tech pioneers have decades of combined experience to help small to mid-size companies confidently navigate the complex field of technological advancements. We act as an extension of our customers' team to help them achieve enterprise-level results—faster and leaner.

Relentlessly committed to providing knowledge and mentorship from DevOps down, GCSIT offers the best-of-breed IT efficiency needed for our customers to remain ahead of the curve.

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GCSIT confidently guides you toward predictable, scalable, agil infrastructure.