



WHITE PAPER

```
9 require 'capybara/rspec'
10 require 'capybara/rails'
11
12 Capybara.javascript_driver = :webkit
13 Category.delete_all; Category.create
14 Shoulda::Matchers.configure do |config|
15   config.integrate do |with|
     with.test_framework :rspec
     with.library :rails
  end
end
```

# Eight Essential Skills Your Technical Team Should Possess



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skillsoft 

## **EXECUTIVE SUMMARY**

Technology is evolving at breakneck speed. A productive and successful business is one that chooses its technology wisely and ensures the necessary support mechanisms are in place to deliver round-the-clock availability. Just one hour of business downtime may be catastrophic to any business and its reputation. Some automated processes, for example hardware failover, are helpful in providing temporary patches and work-arounds. However, nothing is more valuable or reassuring than a highly-skilled in-house technical team member who can solve problems and engineer better ways of doing business.

Success in today's workplace depends on employees' digital knowledge and skills. Focusing on eight essential skills can keep your technical team and organization protected from costly data breaches and open up time for thoughtful innovation.

This paper explains how embedding essential key skills within your IT team can keep your organization's data safe, encourage employee productivity and deliver real benefits to the business.

## TECHNICAL SKILLS SHORTAGES—ASSESSING THE RISK TO BUSINESS

If you work within a technical team, you have no doubt experienced the problems caused by skills shortages. Troubleshooting can often take longer than it should, proactive processes are harder to implement because of lack of knowledge and potential issues can go unnoticed until they become critical. The risk to business is huge and organizations must protect themselves by up-skilling their teams.

No matter what size your business, your technical team should possess a number of fundamental skills to support your infrastructure effectively. Whether you are a business owner or an IT manager, it's essential that you have confidence in your IT staff and their ability to keep your business systems operating. Start here for essential skills your organization needs to build a solid foundation.



Data Storage and  
Data Integrity Insight



Software Development



Information Technology  
Infrastructure Library Knowledge  
(ITIL)



Security Expertise



Database Design  
and Management



Network Know-How



Cloud Computing Prowess



Soft Skills

## IDENTIFYING AND CLOSING THE SKILLS GAP

The reason for skills shortages is simple—lack of training. Unfortunately, training is often seen as a luxury, but when it comes to the support of your key business systems, training is a necessity and needs to be made a priority. For best-in-class organizations, as Bill Pester of Deloitte notes, training and upskilling your workforce is “not a nicety; it’s almost a business imperative.”<sup>1</sup>

Trained IT staff not only have the skills to support your infrastructure, but they can also bring fresh ideas to projects, pre-empt potential issues, make systems more efficient, and help to enhance your company reputation through high availability and uptime. Training can help your organization retain talent, attract new talent, reward IT staff and help keep everyone current with their skills.

Investing in developing in-house teams is a strategy that will benefit your business now and in the future. Data integrity, system availability and other key support functions are essential not just for the day-to-day operations of your business, but to the growing of your brand and business reputation. IT support is no longer just about ‘keeping the lights on.’ It involves making key technology decisions on behalf of the business and the development of new technology that will give your business competitive advantage.<sup>2</sup>

## THE 8 ESSENTIAL SKILLS YOUR TECHNICAL TEAM SHOULD POSSESS

At Skillsoft we understand the growing technology needs and concerns of your business. We’ve identified eight essential skills that your technical team should possess. These are the skills that will keep your day-to-day operations flowing smoothly and ensure your business never suffers from lost data or downtime.

For best-in-class organizations, as Bill Pester of Deloitte notes, training and upskilling your workforce is “not a nicety; it’s almost a business imperative.”

<sup>1</sup> “The Critical Components to Reskill Your Workforce.” Lauren Dixon, *Talent Economy*, May 8, 2017.

<sup>2</sup> “The CIO’s Future: Tech is No Longer Enough.” Marc Wilczek, *CIO*, November 10, 2017.

## **1. DATA STORAGE AND DATA INTEGRITY INSIGHT**

One of the most important considerations for any business is data storage. Documents, mailboxes, email archives, SQL databases and many other critical data objects rely on robust data storage systems to operate efficiently. Backups and data resilience are also key to ensuring data availability, recoverability and integrity.

Data storage has changed quite dramatically in the last decade. The typical data server in many companies has evolved from a single physical server into arrays of virtual servers and cloud-based storage. It's important that your team has a broad understanding of new storage technologies in order to know best how to leverage the features each type of store offers.

The integrity of your data could be compromised if backups are not organized well or if you have no staff available who understand disaster recovery. Choosing a training route that provides in-depth understanding of storage configuration, disaster recovery solutions, data governance, resilience and also replication of data across the enterprise will ensure your team has the skills in place to keep data safe, secure, available and recoverable.

## **2. SOFTWARE DEVELOPMENT**

If your company is using bespoke software, server database solutions, or software that has been developed in-house, it's important that you have the means in place to support it. Many such systems are either customer-facing or drive operations essential to productivity. Software vendors will always attempt to push their off-the-shelf software at you when all you need is a cost-effective strategic solution that fits your IT infrastructure perfectly. In-house software development skills will prove to be a huge asset to your company. Many software companies charge exorbitant day and consultancy rates in addition to annual support costs to develop software for you. Empowering and developing your IT teams to handle your software development needs gives you total control over software design and spend.

### 3. INFORMATION TECHNOLOGY INFRASTRUCTURE LIBRARY KNOWLEDGE (ITIL)

Project management, implementation and future change are all areas in information technology that need oversight. If a recent project has failed or you are finding it harder to keep track of configuration changes, ITIL training will help to address and avoid these issues and the risks to your business.

A methodical approach to IT management, ITIL will help mitigate risks, maximize customer relations, and lay a sound foundation for a prosperous IT department and culture. A framework rather than a strict set of rules, ITIL provides a flexible way of approaching organizational IT management. Training your team on ITIL ensures robust project and change management measures are put in place using the most widely accepted method of IT service management worldwide.<sup>3</sup>

### 4. SECURITY EXPERTISE

In the past few years we've witnessed major data breaches from companies like Equifax, Anthem, and Yahoo—data breaches that cost hundreds of millions of dollars and exposed the private information of millions.<sup>4</sup> While not all IT security issues are as catastrophic as these historic breaches, your organization must be prepared to handle a spectrum of IT and cybersecurity concerns.

Denial of service attacks, company-wide virus outbreaks, and compromised business data are all risks that an organization faces from external threats. It's no surprise Gartner projects 2018 global security spending budgets will rise 8% from the previous year to \$96 billion.<sup>5</sup> As a business, you need to be sure that your data is safe and secure, and that your hardware and applications are protected against the latest security threats. It's also essential that end-users are aware of potential security risks through security awareness training and the introduction of a user security policy. Whether you have a dedicated security team or one team handling all IT issues, you need to ensure your technical experts have the necessary skills to configure, support and troubleshoot security systems and to protect your business assets 24 hours a day.

Ensure your technical experts have the necessary skills to configure, support, and troubleshoot network security systems and to protect your business assets 24 hours a day.

<sup>3</sup> "Information Technology Infrastructure Library Guide."

<sup>4</sup> "Equifax Breach Could Be Most Costly in Corporate History." John McCrank and Jim Finkle, Reuters, March 2, 2018.

<sup>5</sup> "Gartner Forecasts Worldwide Security Spending Will Reach \$96 Billion in 2018, Up 8 Percent from 2017." Gartner, December 7, 2017.

The well-documented worldwide shortage of cybersecurity professionals means training and upskilling are crucial to building a robust security team. An Indeed.com report found that individuals with the combination of technical know-how and deep understanding of security risks are hard to find worldwide.<sup>6</sup>

The secret of building a great security team lies in identifying the right people, and then providing the training they need to constantly develop their security skills to keep up with the constantly changing threat landscape. For those early on in their security career, Skillsoft recommends the CompTIA Security+ certification training path, followed by more advanced certifications going up through the CISSP and CompTIA Cybersecurity Analyst+.

## **5. DATABASE DESIGN AND MANAGEMENT**

Database design and management skills within your workforce can increase productivity and ensure that business functions are supported quickly and cost-effectively. Let's say you are using an Oracle database within your enterprise that was initially designed by a third-party company. That third-party may be charging you thousands in support costs each year when you could be passing this ownership and responsibility to your in-house teams. Arranging Oracle training for key members of your IT team will ensure you can tap into sophisticated database design and have the skills available to support issues and manage change.

Many problems arise from bad database management. The most common problems involve corruption of data or unsupported database versions causing issues. If you have individuals in-house who understand the complexities of database management and how to support the data they store, you can be sure your databases are accessible, operate efficiently and are backed up and proactively supported.

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<sup>6</sup> "Indeed Spotlight: The Global Cybersecurity Skills Gap." Indeed blog, Indeed.com, January 17, 2017.

## 6. NETWORK KNOW-HOW

Think about the last time you experienced a major network outage. Perhaps it was only last week or maybe you can't remember the last significant drop in service. Either way, connectivity issues can mean huge problems for business and just a few moments of network downtime can result in lost transactions, customers and revenue.

A highly-trained network team will have the skills and expertise to ensure high availability and high performance of your key business systems, your company website if you host it in-house, and to configure, support and deliver a wide range of networked services including VoIP, mobile networking, and networked collaborative applications such as SharePoint. In our connected world, it pays to protect your business interests around the clock and ensure that you can do business 24/7 without any drop in connectivity.

## 7. CLOUD COMPUTING PROWESS

As cloud technology has become the norm across enterprises, it's imperative to make sure your IT team is properly skilled to handle the changing requirements of a post-hardware world.

Cloud-computing can offer the best features of today's modern world: the ability to access information from anywhere, anytime and on just about any device. Cloud-computing offers reliability, scalability and easier management of business systems to both your workforce and your customers. But extending your enterprise's digital infrastructure beyond the network perimeter comes with a need for strong cloud-specific IT skills and practical security measures.

If you've not yet migrated to cloud-based storage, it's likely on the horizon in the very near future. Does your IT team have the necessary skills to oversee the implementation, the security of your approach, and the load balancing between your organization's on-premise and cloud presence?





## **8. SOFT SKILLS**

Technical know-how is undeniably the powerhouse of your IT department, but soft skills are critically important as well. It's soft skills—the ability to communicate clearly, work collaboratively, think critically and analyze seemingly disparate information, that have will elevate your team's ability to meet the ever-changing requirements of IT today. No longer just a supportive role in your organization, IT departments of today must be prepared to tackle unexpected and imminent threats, communicate with members of previously siloed teams, and for the CIO, act as a driver of organizational change and innovation. Ensuring your IT department is prepared to meet the current and future needs of your organization means emphasizing and demonstrating the necessity of soft skills as well as technical expertise.

## **A TALENT INVESTMENT THAT PAYS DIVIDENDS**

Investing in your IT team not only saves your organization time and money—training shows your organization recognizes the importance of your IT personnel and sees them worthy of your investment. A trained, motivated and enthusiastic team instills confidence that your systems are performing at optimum levels and lowers the risk of downtime significantly.

Skillssoft's affordable and self-paced learning addresses skills shortages and provides your employees with the tools they need to lead your industry. By empowering your people to learn and grow their skills, your organization will enjoy the benefits of technology while also supporting and protecting your investment.

## **LEARN MORE**

To learn more about how Skillssoft supports these essential skills, visit our website.

## ABOUT THE AUTHOR

Jim Zimmermann is the Director of Skillsoft's Solution Practice and the practicing Solution Principal for IT and Digital training solutions for North America and EMEA. Jim holds a BS in Natural Sciences from St. Thomas Aquinas College and leads a team of Solution Principals that support all of Skillsoft's core training coverage areas including business and management, leadership development, IT and digital and compliance.

During his 40+ years in the IT and media industries, Jim has worked for the largest IT firms as well as SMBs and startups. Jim started his career as a scientific programmer for an environmental engineering firm where he ended up teaching programming to other scientists. Jim went on to hold positions in product management, product and corporate marketing and technical consulting.

For more than 15 years, Jim has worked for Skillsoft in a variety of capacities, starting in the Books business where he created the AnalystPerspectives collection, moving to directing the Product Marketing efforts for Skillsoft's entire award winning IT and Digital Skills training product line. In his current role, he works with Skillsoft's largest strategic customers to help them provide optimized solutions for training their leaders, managers and staff.



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Skillsoft is the global leader in corporate learning, delivering beautiful technology and engaging content that drives business impact for modern enterprises. Skillsoft comprises three award-winning solutions that support learning, performance and success: Skillsoft learning content, the Percipio intelligent learning platform and the SumTotal suite for Human Capital Management.

Skillsoft provides the most comprehensive selection of cloud-based corporate learning content, including courses, videos, books and other resources on Business and Management Skills, Leadership Development, Digital Transformation, IT Skills and Certification Training, Productivity and Collaboration Tools and Compliance. Percipio's intuitive design engages modern learners and its consumer-led experience accelerates learning. The SumTotal suite features four key components built on a unified platform: Learning Management, Talent Management, Talent Acquisition and Workforce Management.

Skillsoft is trusted by thousands of the world's leading organizations, including 65 percent of the Fortune 500. Learn more at [www.skillsoft.com](https://www.skillsoft.com)