EVERYTHING YOU NEED TO KNOW
ABOUT DEVOPS

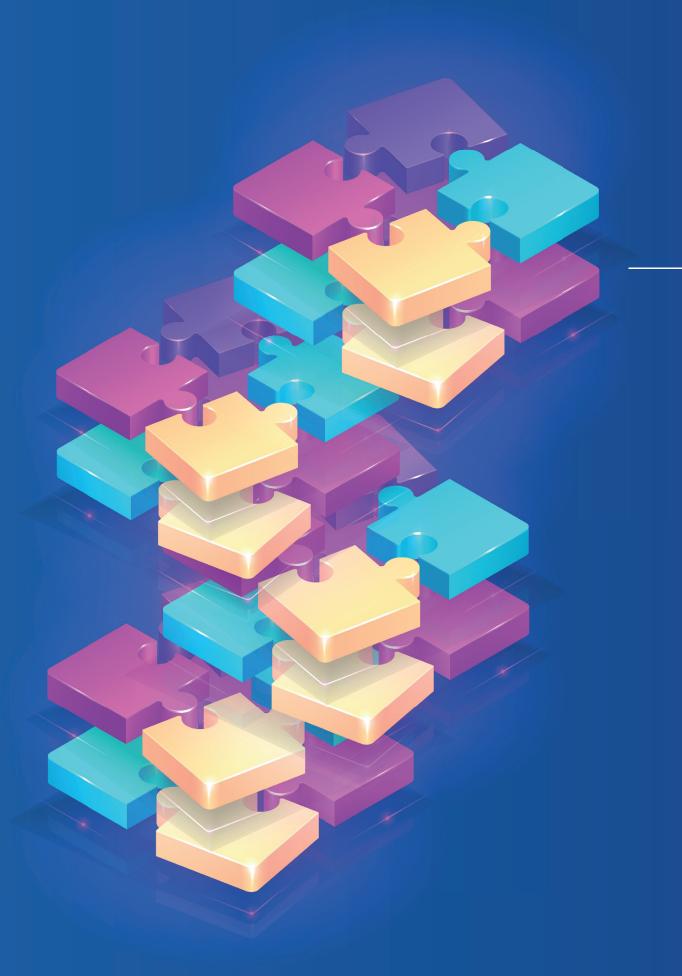## CONTENTS

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'DEVELOPMENT' AND
'OPERATIONS'

As overwhelming as the Digital Age can be, it's always worth keeping in mind that even corporate IT is far from being a single entity. Diverse roles and responsibilities exist in every organization from small startups to megacorporations, and it takes more than a stable internet connection to make them work together effectively.

Despite all falling under a similar umbrella, collaboration between key IT actors is often strikingly lacking, even in hugely successful organizations. Poor communication, the failure to pool expertise and a focus on siloed goals can lead to a startling absence of perspective. This, in turn, can result in tasks being drawn out unnecessarily, as any issues which could easily be solved with structured cooperation only come to light once a project gets passed from one group to the next.

DevOps (its name being a combination of 'Development' and 'Operations') is a set of software development practices designed to solve this human error. It encourages greater integration, communication, collaboration and automation, creating cultures and frameworks which ensure that software-enabled products and services can be developed, released and improved efficiently without sacrificing quality.

So, what do you need to know about DevOps, and how can it contribute to creating an atmosphere of continuous improvement?

SO WHAT IS **DEVOPS**

As the portmanteau name suggests, DevOps works by combining or bridging different elements of IT. Typically, a Development (Dev) team will complete code, then hand it over to Operations (Ops) and forget about it. However, in a DevOps environment, both teams would be working together throughout the stages of the development cycle and beyond.
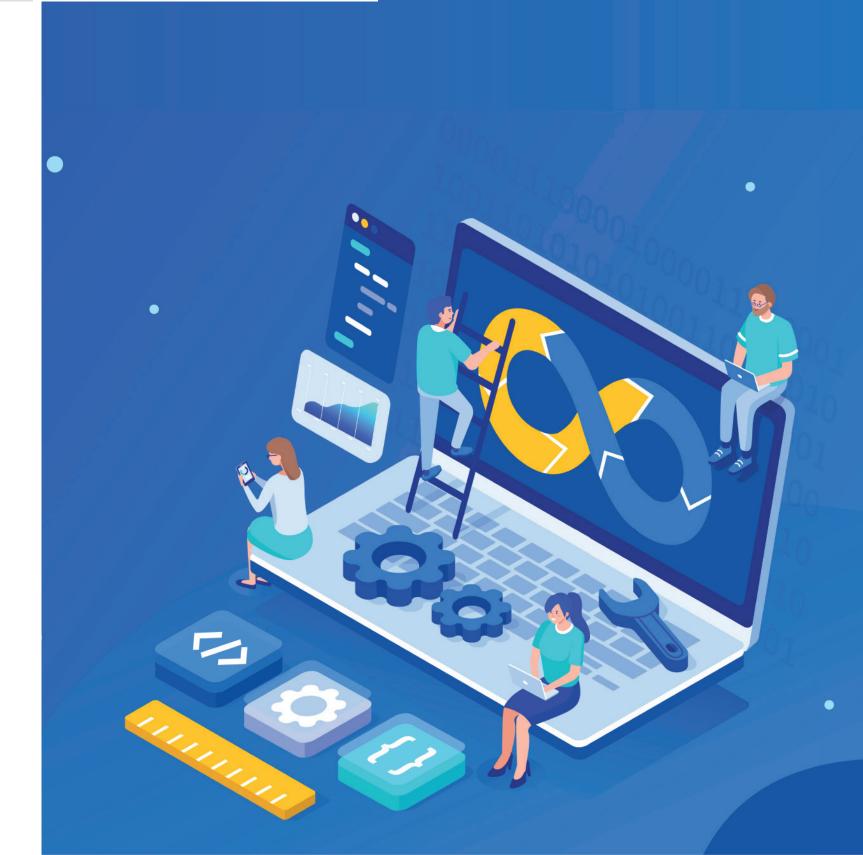
Keep in mind that 'Development' and 'Operations' are blanket terms which encompass a variety of roles, including systems engineers, security specialists, support staff, product management executives, and so on. Having such a diverse group pool their expertise and resources must sound like a common-sense idea, and DevOps is ideal for establishing such an environment.

Indeed, in a DevOps-powered workplace, everyone's considerations will be taken into account early on in a project's lifecycle, preventing delays or issues caused by incompatibility further down the line. For example, security has become much more essential in recent years, with developments like GDPR and public concerns over data privacy. With DevOps, security specialists would be involved in the planning stages, ensuring that their concerns can permeate a project (rather than only being taken into account later on). Similarly, those whose specialties lie in post-release operations can provide insight into customer expectations earlier on, helping to ensure

that the end result is better prepared for the market. DevOps also uses an Agile-style delivery method. Large projects are divided into smaller stages, making it easier for those involved to take new considerations into account. For example, changes to the marketplace or the release of new technology might make it expedient to alter the scope of a project before it is completed. At the same time, finishing tasks in this way can also allow users to enjoy project benefits earlier on, which can be vital for keeping customers and stakeholders happy.

As a result of both collaboration and Agile delivery, code is often completed far more quickly in DevOps environments. The approach makes it easier to monitor and improve code on the go, rather than having to come back to it later on. It can also free up time to add value elsewhere, such as by researching the market or planning additional features.

Finally, DevOps puts a huge emphasis on automation wherever possible. When essential processes can be automated, not only can this save a great deal of time and effort, but it can also make these processes far more reliable. This is often applied to testing, infrastructure management, workflow management, security, communication and more. To help with this, DevOps teams will often bring in new tools or software, such as GitHub or Chef.

HOW CAN **DEVOPS BENEFIT...**

Organizations

One of the most immediate benefits of utilizing DevOps is how it can increase the rate of delivery for software-powered products and services. DevOps can bestow a startling level of efficiency on existing IT structures, improving time to market and granting significant competitive advantages. With quicker releases and fixes, DevOps users will also have a far easier time keeping customers happy.

The benefits of increased automation can also be significant. It can make crucial processes far more efficient and reliable, saving time while also boosting the likelihood of projects being completed successfully. Crucially, this can free up hours for staff to use to add value elsewhere.
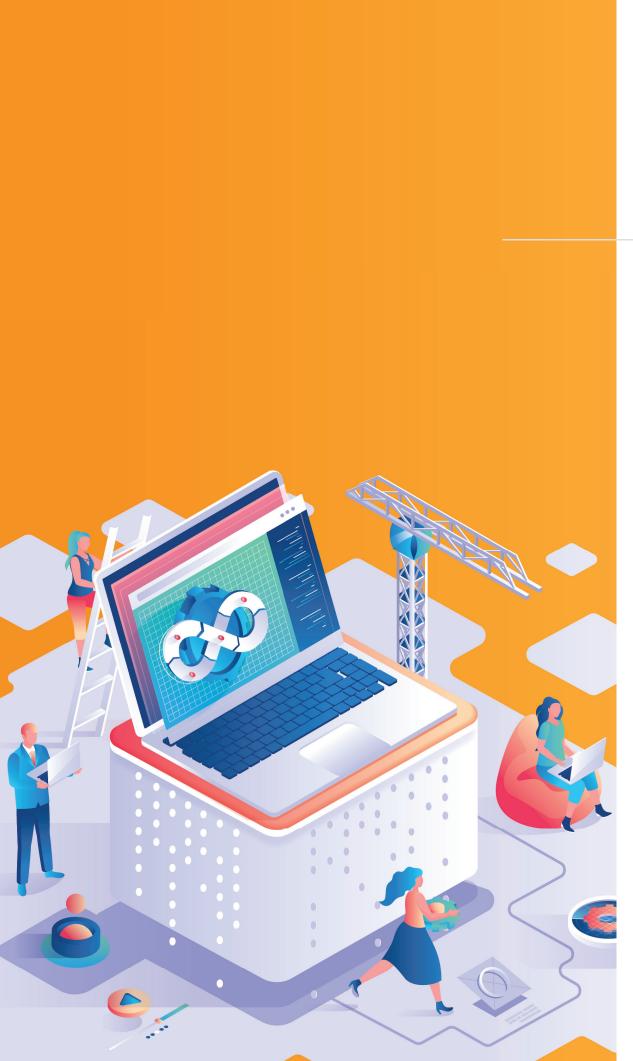
With speedier completion times, flexible iterative planning and an efficient collaborative culture, DevOps can transform an organization's IT operations into a well-oiled machine. Indeed, most businesses will invest in DevOps training for multiple departments in order to maximize these benefits.

Individuals

The growing popularity of DevOps has led to the coining of 'DevOps Engineer' as a role. However, there is no set method for becoming a DevOps engineer. Just as DevOps itself is designed to be used by anyone involved in the planning, development, release and maintenance of software-enabled products and services, DevOps engineers often come from a variety of different backgrounds.

Because of this, studying DevOps can provide an excellent career stepping stone for anyone with experience working in IT. The approach can help them to gain insight into a variety of different departments, helping them to become more valuable in their organizations and giving them the perspective to take on more management-oriented tasks.

With DevOps continuing to build up its global presence, becoming certified can also be highly lucrative. DevOps certifications are becoming increasingly recognized and valued, helping certified professionals to unlock higher paying roles, as well as opportunities in new industries and locations. With the right amount of experience, a DevOps engineer can easily earn over six figures on average!

FAQ

What kind of organizations can use DevOps?

Most industries now rely on software to some degree, such as for customer service or web-enabled payments. Because of this, DevOps can provide useful insight for virtually any organization which utilizes software development.

How do you become a DevOps engineer?

There is no strict path to becoming a DevOps engineer, though becoming certified will obviously help! That being said, it can be worth familiarizing yourself with common elements of DevOps culture. For example, you may want to invest time in studying management and infrastructure automation tools such as Windows PowerShell DSC or Chef.

Remember, for top-paying DevOps engineer roles, you will need to gain demonstrable experience in working with DevOps cultures. Many students will ask their employers to fund DevOps training, before building up familiarity with it in their day jobs.

How is DevOps different from Agile?

Speaking generally, DevOps has a wider focus than most Agile methodologies. While Agile tends to focus on development, DevOps also deals with collaboration. Similarly, DevOps emphasizes both quality and timeline management, rather than just the latter, and automation as well as agility. Finally, DevOps has users collecting feedback from a wider number of resources than they would with Agile.

How necessary is DevOps?

The question of how 'necessary' DevOps is is somewhat subjective. DevOps practices can boost the efficiency, fluidity and overall success of software development in almost any organization. It may be that an organization already has a worldwide presence and a huge market share, but if it is not optimizing its IT as much as possible, there will always be a greater risk of completing substandard projects and, inevitably, losing ground to competitors.

It is also worth keeping in mind that DevOps is a long term investment. It creates cultures which are designed to be permanent, ensuring that organizations can make the most of their resources even as worldwide industries and marketplaces continue to evolve. Considering how perpetual this kind of evolution seems to be in the Digital Age, studying DevOps may well be more necessary than you expect.

How is DevOps different from Agile?

In a DevOps environment, security plays a vital role from beginning to end. Security is becoming increasingly specialized these days, as concerns over data privacy and developments like GDPR make it all the more important for organizations around the world. Indeed, when using DevOps, considerations regarding factors like authentication, data privacy and so on will be built into new products and services as soon as possible. This can help to ensure that security is maximized, allowing organizations to avoid serious fines and public embarrassment down the line.

DEVOPS® CERTIFICATIONS

Earn a DevOps certifi cation with a fully-accredited online course from Orbus Software! A perfect choice for professionals working within IT operations, development, testing, quality assurance (QA) or management and a fantastic fi rst step for aspiring DevOps engineers, who will fi nd their skills increasingly in demand as more businesses adopt the DevOps methodology.

Not only does Orbus Software provide engaging online training materials, but we also make our courses mobile-accessible and provide a FREE exam voucher for when learners are ready to sit the exam.

DEVOPS **FOUNDATION®**

The DevOps Foundation course provides a baseline understanding of key DevOps terminology, helping all students to speak the same language and understand the benefits of using DevOps to support organizational success.

Accredited by PeopleCert & the DevOps Institute

14+ hours of course material

Quizzes and revision modules

DEVOPS **LEADER® (DOL)**

Students who take this course will gain a number of tangible skills to help them spearhead the cultural transformations which are such a critical success factor in utilizing DevOps. They will also be fully prepared for the DevOps Leader (DOL) exam, allowing them to earn a valuable higher DevOps certification.

Accredited by PeopleCert & the DevOps Institute

16+ hours of course material

Quizzes and revision modules

FREE exam voucher included

DEVSECOPS **ENGINEERING (DSOE)SM**

This course is ideal for anyone seeking a clear understanding of the benefits, concepts and vocabulary of DevSecOps and how it fits in with DevOps security practices and cultures. This often includes IT security professionals, managers, team leaders, application developers and DevSecOps engineers.

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