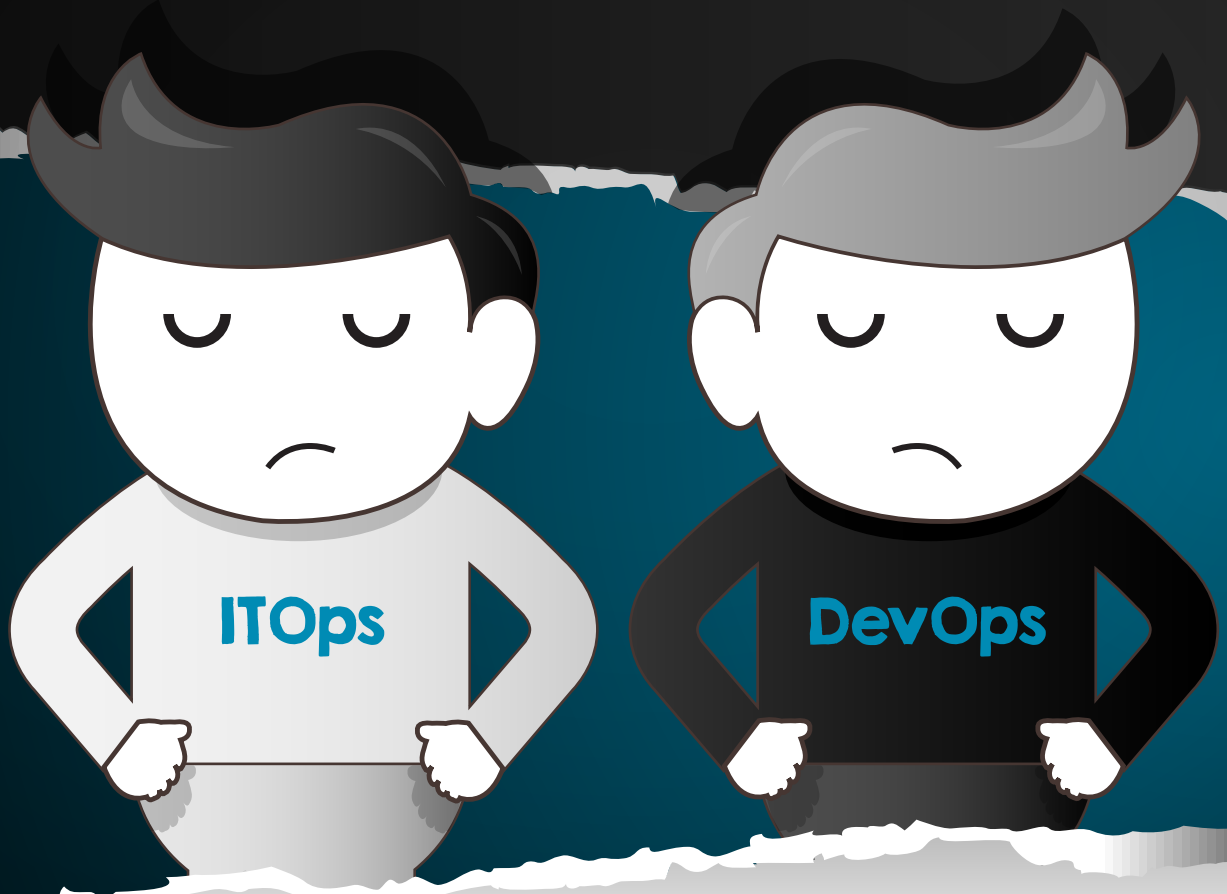
Conflict to Cooperation: Aligning ITOps and DevOps

Improve Agility, Meet Deadlines, and Eliminate ShadowOps



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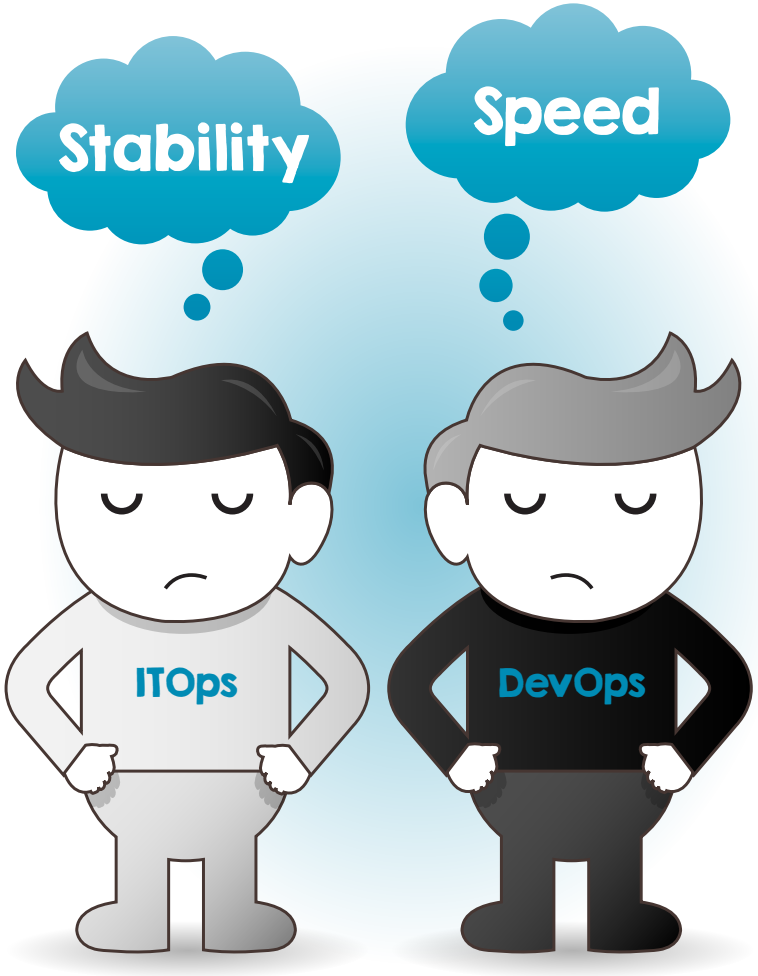
The Best of Frenemies

The rapid pace of application development in today's businesses has strained IT Operations (ITOps) to the point where organizations are abandoning traditional shared development models. Application development functions and budget are moving to individual business units, with dedicated "DevOps" roles created to ensure applications launch fast enough to satisfy business objectives. This decentralized development has been successful at eliminating the tug-of-war between business units and ITOps over application release schedules. But in many cases, the conflict has resurfaced in the form of daily friction between ITOps and DevOps.

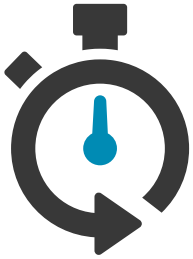


While DevOps and ITOps have the same goals for operational excellence, they are often pitted against one another when problems arise. Fingerpointing between these teams is not uncommon, as both groups have unique viewpoints on service and infrastructure health. Allowing an adversarial relationship to exist between these two critical groups is not only disruptive, it undermines the very operational goals each team is trying to achieve.

Both ITOps and DevOps have the potential to be engines of efficiency. Transforming conflict into cooperation by aligning their practices and processes can yield not only improved relations, but significant gains in service reliability, IT productivity, and cost savings.

A (Brief) History of Frustration and Mistrust

DevOps as a concept – not to mention a practice – has not been around for very long. During this brief history, ITOps has come to view DevOps not only as a business enabler, but somewhat of a usurper. This, of course, doesn't make for a particularly solid base for collaboration – leading to the perception of an adversarial relationship between the two groups. The "us" vs. "them" dynamic stems from four main areas:



#1 Time to Market

The prevalence of DevOps is a result of businesses frustrated with the slow time-to-market for new services. ITOps was simply not able to move quickly enough to support business objectives. While there are very good reasons for ITOps' inability to deliver services more quickly, the perception that ITOps is slow and inflexible is not particularly flattering.

With business units hiring their own developers, armed with new toolsets that make it easier to rapidly develop new applications, the time to market hurdles have been overcome. That doesn't mean smooth sailing for ITOps. With development out of their control, complexity and unpredictability become a daily challenge.

#2 Budget Control

Decentralizing application development translates into decentralized IT budgets. Today, it is not uncommon for up to 30% of the IT budget to be allocated to development and DevOps teams within the business units.

This budget is not only being used by business units to fund developer paychecks – but for outsourced development, developer and application monitoring tools, and even software-as-a-service applications. Worse yet, when ITOps appears to be a hurdle, DevOps can simply circumvent internal processes and subscribe directly to cloud-based infrastructure platforms to run their applications.

#3 Infrastructure Commoditization and ShadowOps

ITOps has taken on a new charter to become the shared infrastructure service provider for the business. Unfortunately, the infrastructure requirements for supporting various applications from development teams across multiple business units has increased infrastructure complexity and variability. Even communicating these demands can be complex, which has created yet another source of friction.

Take data storage, for example. While one DevOps group may need fast read storage, another group may need fast write storage. And that's just one component. The variation in infrastructure capabilities needed by applications developed in multiple development teams can be overwhelming. These demands make it extremely challenging to meet service delivery goals while also maintaining the stability of the overall infrastructure. So even though you have development teams rapidly churning out new apps and updates, the ITOps organization may STILL not be able to move quickly enough to accommodate their infrastructure requirements.

Enter cloud platforms that offer Infrastructure-as-a-Service (IaaS). With a few clicks, infrastructure needed to support your application can be served up via an a la carte subscription – making it very easy to view infrastructure as a commodity. DevOps teams that are unsatisfied with the response from ITOps simply go buy their own infrastructure – getting as good or better infrastructure from a cloud provider. In doing so, however, they are establishing what we like to refer to as "ShadowOps" – which may end up opening up the company to unintended risks.

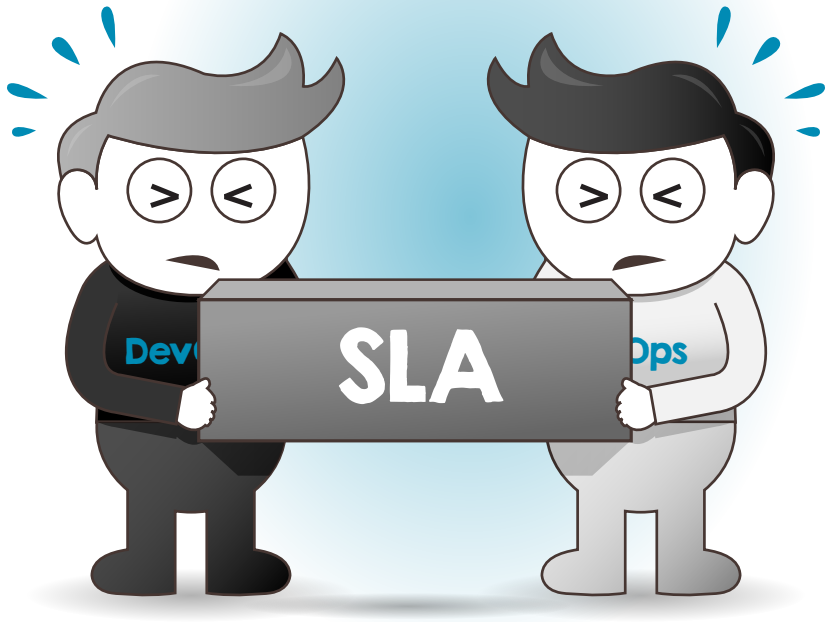
#4 Service Reliability and Security

While convenient, DevOps sourcing infrastructure independently from cloud providers – or ShadowOps – introduces real risk to businesses. ITOps organizations design infrastructure with high availability, business continuity, compliance, and security access standards in mind. Cloud providers may not be able to adequately address these concerns.

By using cloud-provided infrastructure, DevOps may be opening up the organization to legal and regulatory risk – not to mention threats to revenue and customer satisfaction. If high availability and disaster recovery aren't in place, the organization could be exposed to massive service failures. From a security and compliance perspective, customer data could be compromised, bringing with it not only lost revenue and customer confidence, but expensive legal ramifications.

Finding Common Ground

Understanding the early evolution of DevOps' practices, it isn't surprising that DevOps and ITOps have an adversarial relationship. Each party has valid frustrations and business concerns with the other group's operational protocols. But the reality is that both groups have very similar goals.



DevOps and ITOps both want apps and services to meet established service-level agreements (SLAs). They want the business to be productive and to position IT as a key lever for revenue generation. They want to make sure users, whether internal or external, have the tools and capabilities they need to be successful. And, of course, they both want to be able to enjoy evenings, weekends, and vacations without being interrupted by service availability emergencies.

The good news is, by focusing on this common ground, DevOps and ITOps can actually assist each other in driving success for their individual groups, as well as the overall business.

How DevOps Can Help ITOps

DevOps is all about bringing applications and services to market faster and more efficiently. The best practices they have developed around version control, proactive monitoring, and continuous delivery are driving productivity way up. A 2014 study by Puppet Labs shows strong correlation between these DevOps best practices and overall IT operational performance.

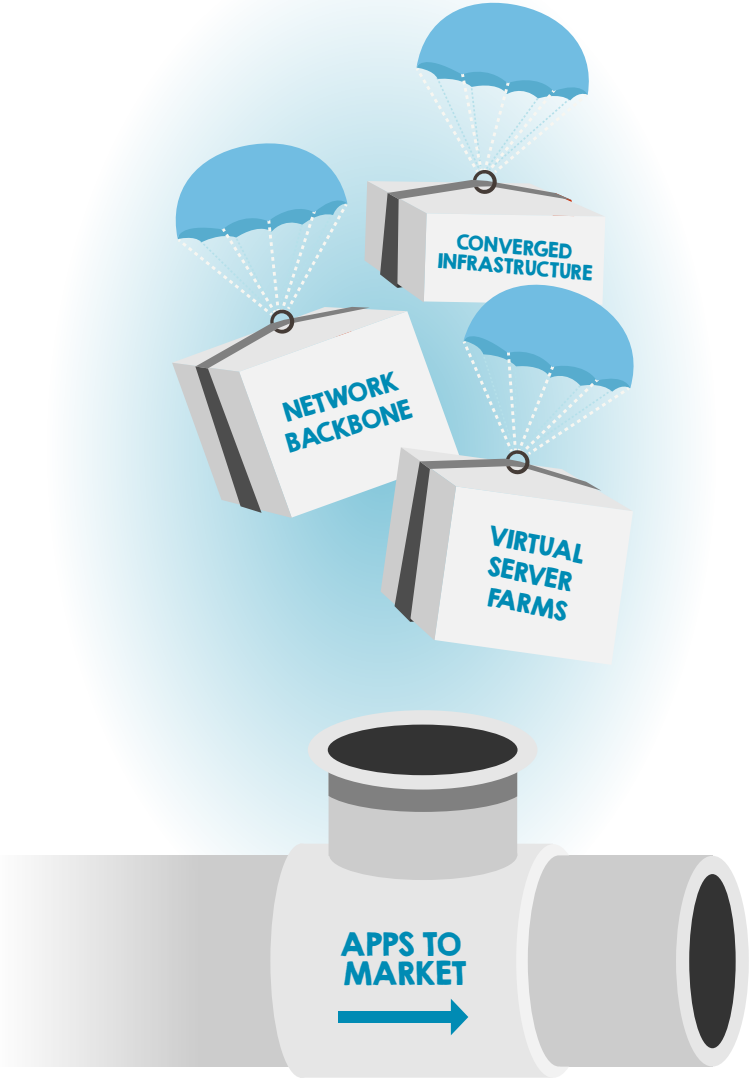
ITOps teams can take advantage of the best practices and productivity gains that DevOps is pioneering in the organization to help improve service delivery and support across the board. These practices can be mirrored in internal application roll-outs and systems management, allowing ITOps organizations to operate a more agile infrastructure. That will drive down costs and drive up productivity – all of which makes ITOps look great.

DevOps teams are also comprised of application experts that help keep ITOps focused on their core priorities. If an organization has hundreds of different applications spread across a dozen business units, imagine the amount of application issues that would be routed to ITOps for resolution if DevOps wasn't there to catch them first. DevOps has the combined understanding of business unit goals and application nuances, helping them resolve application issues without having to drag in ITOps, thereby further increasing the productivity of the ITOps team.

How ITOps Can Help DevOps

While DevOps can help drive efficiency within ITOps, ITOps has just as much benefit for DevOps. First of all, imagine what it would be like if each business unit controlled their own IT infrastructure: unified communications; virtual server farms; network backbone; converged infrastructure. If every DevOps team had to control their infrastructure separately, it would be both chaotic and expensive.

ITOps not only makes it possible to obtain economies of scale by serving up shared infrastructure, it does so in a way that also protects DevOps' most valuable assets. Application developers know the app best – how much CPU, how much storage, how much RAM, etc. What they don't have is expertise in the infrastructure supporting those applications. If the application runs into a problem with VMware vSphere, Cisco UCS, VCE Vblock, IBM hardware, or EMC storage, ITOps is there to add their expertise to pinpoint and resolve the problem, hopefully before DevOps' applications are affected. With this expertise, ITOps can make infrastructure decisions that help DevOps launch their apps faster and more securely.



A Monitoring Case Study

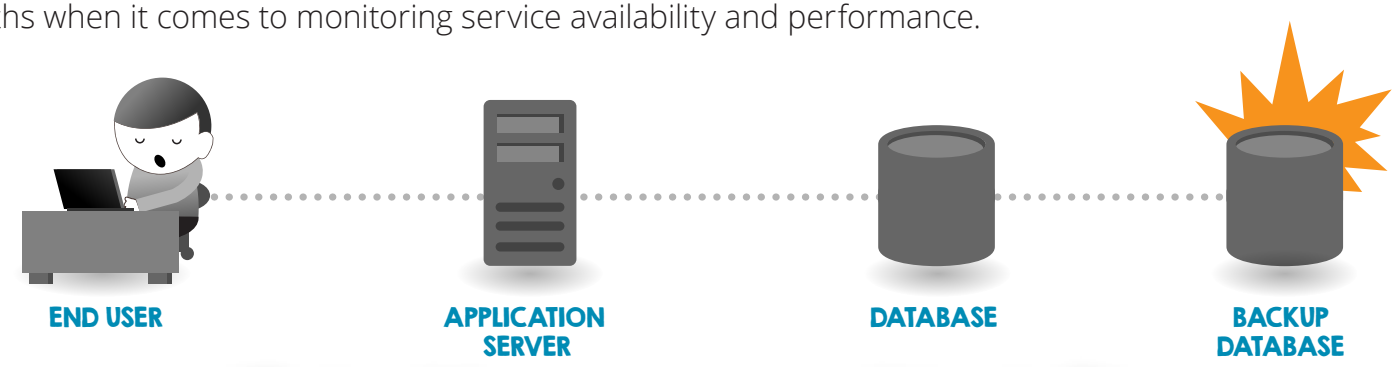
One area where the synergy between DevOps and ITOps is readily apparent is monitoring. DevOps and ITOps both need to have a way to monitor their technology domains. But that doesn't mean they have the same viewpoint or toolset.

Application vs. Infrastructure Viewpoint

The DevOps organization of a large Zenoss customer was using an Application Performance Management (APM) tool to monitor their applications. They were convinced that this tool was the only thing they needed to ensure service availability and performance – as it allowed them to trace transactions and see the end-user experience for each application.

The ITOps team, on the other hand, had decided to implement Zenoss for insight into how their infrastructure was supporting the applications and services that DevOps was delivering. One day, IT Ops, via Zenoss, identified a backup database failure for a critical application. Zenoss alerted them to the event, showing that the database was down and that the service was at an elevated risk but not yet directly impacted. The application was humming along utilizing the primary database, but if it experienced an issue, an outage was inevitable.

The APM tool did not alert the DevOps team to this issue – simply because the end-user experience was fine and the application was performing well. Zenoss, however, made it possible for ITOps to address the backup database issue before the primary database failed, avoiding potential disaster. Essentially, the teams had different viewpoints based on tools that have different strengths when it comes to monitoring service availability and performance.



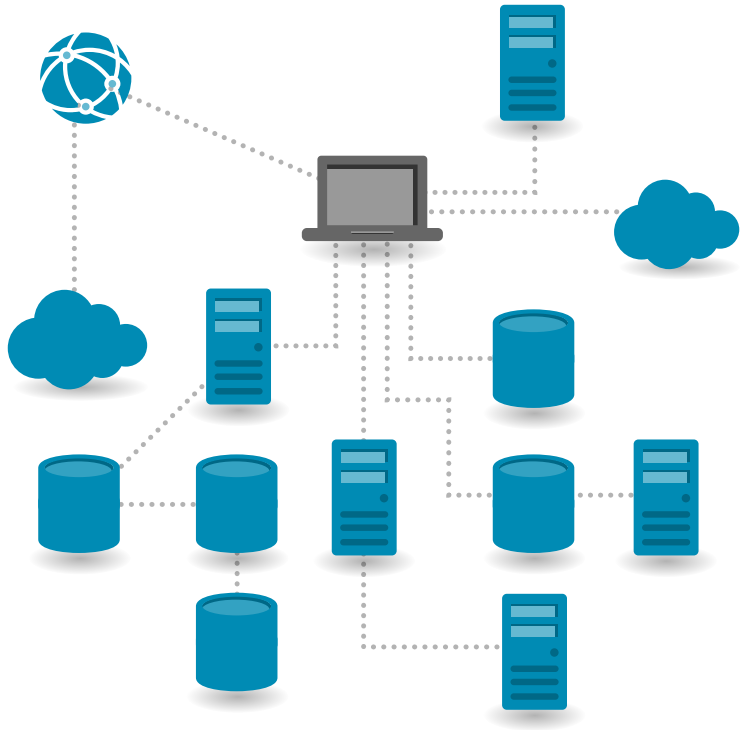
Why Both Viewpoints Matter

The key takeaway from this example is not that the Zenoss tool is better than the APM tool – but that they both have their roles to play. The DevOps' tool is able to address application performance issues, primarily in the code at the application server layer, and identify degraded end-user experiences. Zenoss helps ITOps monitor the infrastructure in the context of the services it supports. These efforts support each other rather than compete.

This simple monitoring example, however, shows just a single instance of how DevOps and ITOps both have complex and dynamic challenges to address in their respective roles. But it's actually much more complicated than that, given that most apps today are componentized and highly distributed.

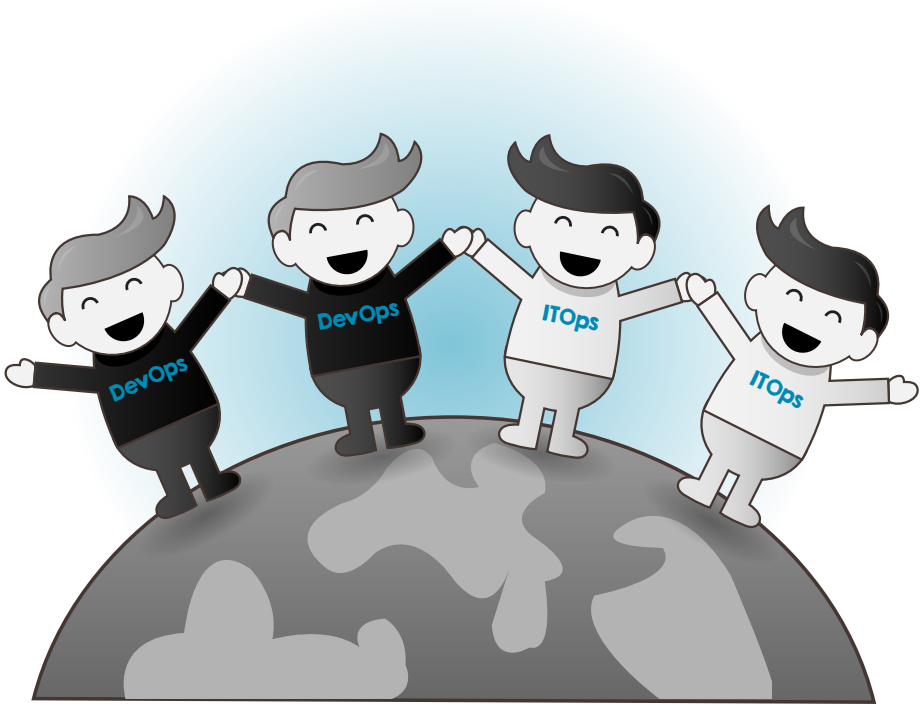
If you take a retail app, for example, the product browsing, shopping cart, payment, and fulfillment functions will often leverage separate applications. The app development teams maintain and fine tune these applications and the DevOps' personnel ensure that they are delivering against business goals. Some of those components, like the payment processing, may be a third-party software-as-a-service component hosted in the cloud, while others are hosted on-premises. Regardless of where and how DevOps needs these applications to live, ITOps needs to ensure the infrastructure behind them is reliable, secure, and meets corporate policies.

In this highly complex, fast paced environment – why on earth would you want to make the challenge even greater by not cooperating?



Transforming Conflict into Cooperation

DevOps and ITOps – when stripped of the drama and dysfunction – clearly benefit from a symbiotic relationship. DevOps teams have every interest in working in partnership with ITOps to ensure they have access to the resources they need to deliver services in a way that avoids bottlenecks or barriers to entry. ITOps, on the other hand, has it in its best interest to leverage the efficiency and productivity gains that DevOps orgs bring to the table.

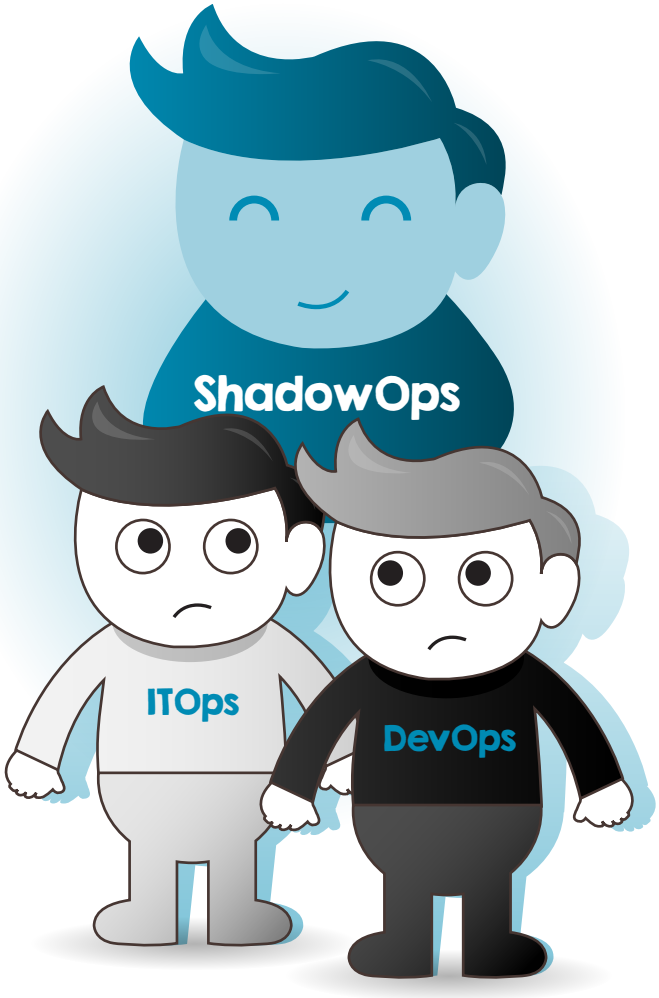


That is not to say however, that DevOps and ITOps just need to sing a few rounds of "Kumbaya" together and business productivity will flourish. There is a transformation being driven by the growth of DevOps, and these teams need to align their efforts to make it a successful one. ITOps organizations, as the "old guard," need to be willing to embrace this change, or the results will be lackluster.

Adapting Operations

The largest burden of change will rest on ITOps, as they are the most established group within the IT organization. ITOps needs to offer infrastructure services that DevOps can consume quickly and easily. They have a huge amount of value to add to the DevOps process, serving as the broker of physical, virtual, and cloud resources – regardless of whether those resources live inside their organizational walls or not. Centralizing this infrastructure role not only ensures that the company is getting the best value from its technology investments – whether on-premises or cloud – but that corporate compliance, security, and reliability standards are enforced consistently across all applications.

If ITOps doesn't make this effort to adapt, ShadowOps will just continue to grow, creating further risk and complexity and leeching efficiency from overall operations. Since service delivery is being fueled by the explosion of dynamic infrastructure technologies taking over the datacenter, it can be argued that ITOps' effectiveness is more important than ever. They need to take advantage of the opportunity to partner with DevOps to maximize the success of both teams.

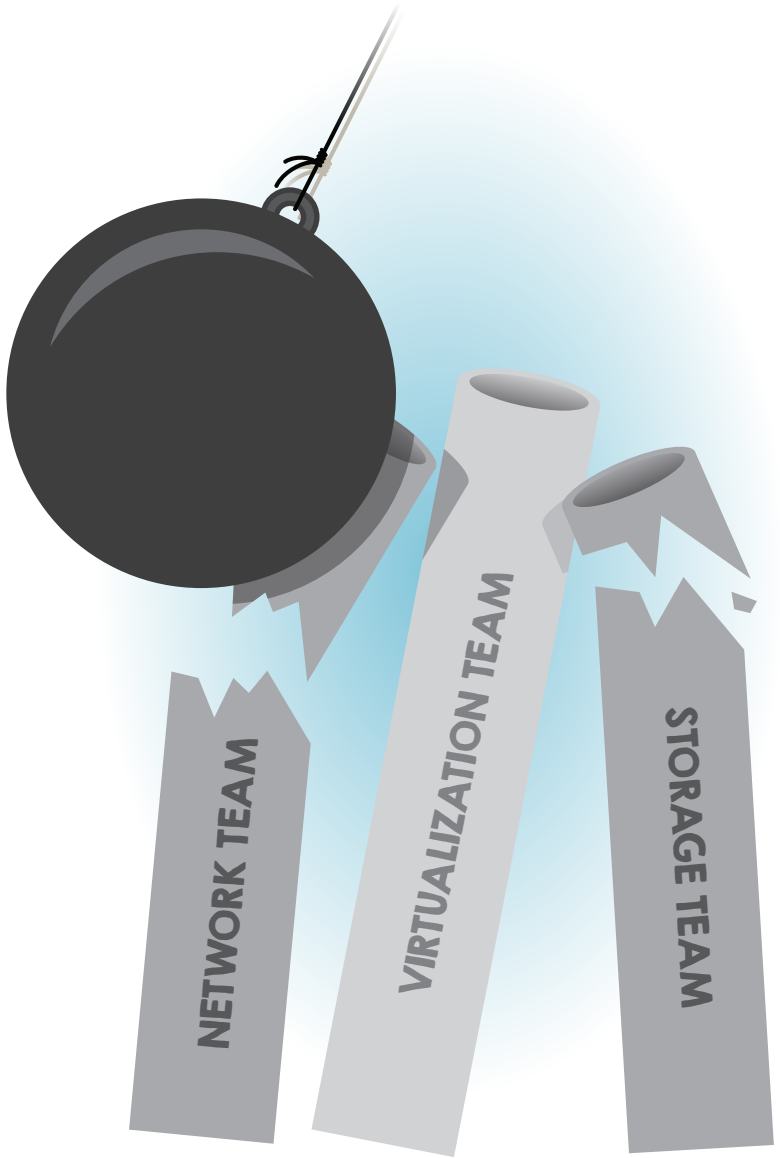


Driving Organizational Change

Creating the partnership between DevOps and ITOps is not necessarily going to be easy – especially in large organizations. The silos and political structures that have been built over years are not going to come crashing down over night. However, there are steps that you can take to make the transition easier.

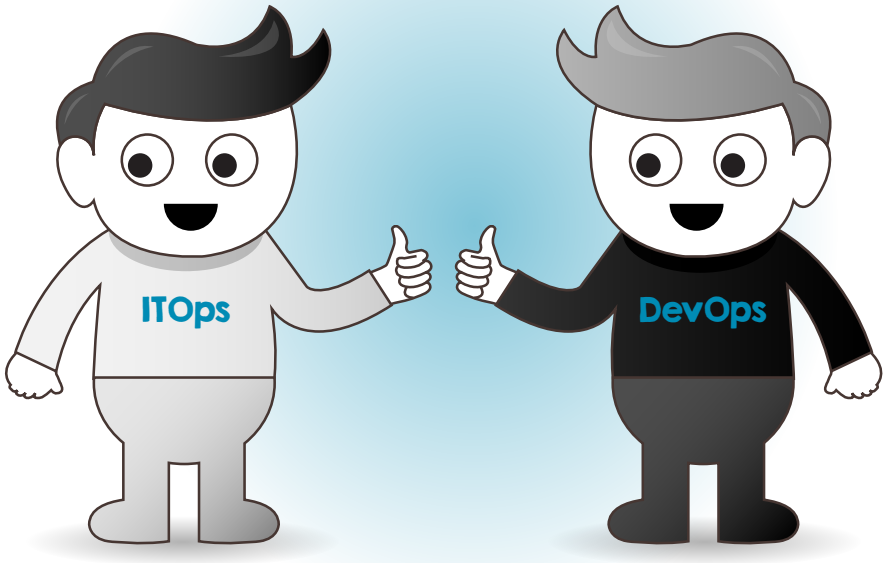
One of the easiest first steps is to use tools – like Zenoss – that help you cross those silo borders. Having one tool that can work across physical, virtual, and cloud resources is important. Even more so is the ability to quickly and easily integrate with existing siloed tools – like the APM example we discussed earlier.

Beyond that, your IT leaders are going to have to roll up their sleeves and focus on fostering collaboration between the two teams. This can include anything from simply promoting weekly or monthly team building activities to a much more drastic organizational restructuring. There are many options out there – co-locating the team, time sharing, etc. – your leaders will just need to decide what works best for your organization.



Conclusion

The evolution of application development into business unit-based development teams originally grew out of frustration with the lack of flexibility and speed of centralized development within IT. Inherent differences in operational protocols and timelines have created a rivalry between ITOps and DevOps, but both groups must co-exist to meet common goals for operational excellence and SLA attainment. Working together, these teams can use their shared expertise and experience to dramatically improve IT productivity and reduce operating costs. While there is significant organizational work needed to bring the groups into closer cooperation, investing in tools like Zenoss can help cross and break down operational silos to deploy applications more quickly and with less risk.



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About Zenoss

Zenoss is a leading provider of unified monitoring and analytics software for physical, virtual, and cloud-based IT infrastructures. Over 35,000 organizations worldwide have deployed Zenoss to manage their networks, servers, virtual devices, storage, and cloud infrastructure, gaining visibility and control of their IT operations.

About Zenoss Service Dynamics

Zenoss Service Dynamics is an enterprise-class solution designed from the ground up for today's dynamic physical, virtual, cloud, and converged infrastructure environments. It uses a single code base, a single user interface, and agentless data collection, making it easy to deploy and operate. Unlike legacy monitoring solutions or point products, it provides Unified Service Insight into the end-to-end operation of infrastructures that support service delivery, helping to improve service quality and reduce operational costs.