



SHATTERING BOTTLENECKS THE QUINTESSENTIAL DEVOPS TOOLS

Bottlenecks and businesses don't mix all that well. They suck up profits, slow down growth and hinder the cultural transformation within an organization which is crucial for truly taking advantage of the DevOps Movement.



IDENTIFYING BOTTLENECKS



As you plan to leverage automation and micro-services that are crucial to the DevOps movement, the most critical initiative should be identifying the bottleneck that is holding the business back.



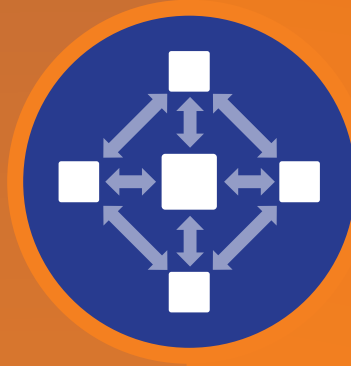
SILOS

Organizational silos result in misaligned priorities, lack of information flow, and lack of coordinated decision making across departments.



LACK OF ACCOUNTABILITY

When the blame game ensues, fingers are pointed, the buck is passed around and no clear solution is developed and progress is debilitated.



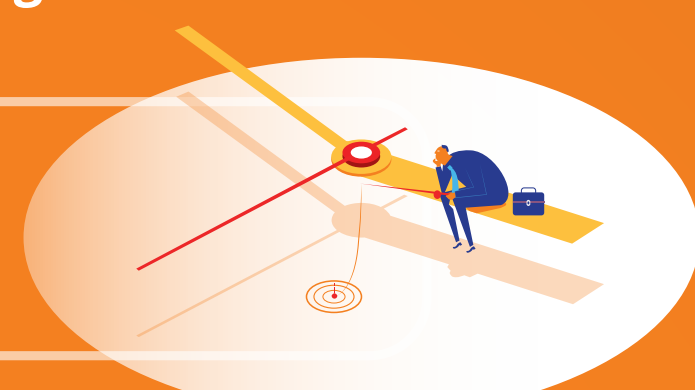
CONFUSING PROCESS

Legacy processes created back when deploying and updating solutions and infrastructure changes were few and far in between now have a knack for getting in the way of deploying faster & more frequent updates.

Once the major bottleneck(s) have been identified, it brings us to our next challenge.

TIME

The biggest roadblock for DevOps is that provisioning databases for non-production environments can take several days.



WHY IS TIME THE GREATEST CHALLENGE?

Creating applications can take too long given the challenges of provisioning new storage, moving data, masking it, and keeping it current. Let's look at a scenario to get a better idea.

PROBLEM

The only way to guarantee application performance and minimize the amount of bugs discovered later in the process is to test against a fresh copy of the whole production data set.

STANDARD SOLUTION



STEP 1

Developer submits provisioning request to the DBA for a fresh copy of the production data set.

STEP 2

DBA realizes that there is not enough storage capacity allocated to support the request and thus requests the storage administrator to provision the appropriate capacity.

STEP 3

The DBA then makes the copy & runs any necessary scripts to prepare it for the developer.

RESULT

- Consumes expensive disk space
- Puts pressure on resource allocation
- May take hours to days depending on the company's size

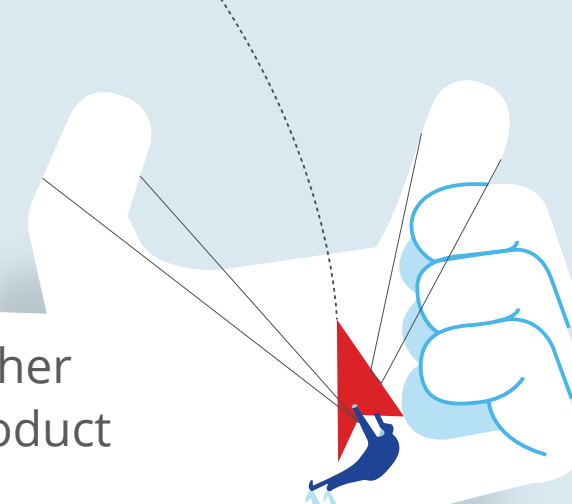


So how do you overcome these DevOps challenges?



OVERCOMING DEVOPS CHALLENGES THE 4 ESSENTIAL TOOLS

DevOps is all about bringing development and operations engineers together & these tools are intended to aid teams in their journey to closely align product goals, which in turn lead to alignment in achieving business objectives.



CONFIGURATION MANAGEMENT TOOL

There are numerous configuration management tools that automate the configuration of compute instances and applications. The key is to pick one and standardize on it.

OPTIONS

- Chef** The weapon of choice for developers.
- Puppet** The usual preference of system engineers.
- Saltstack** Easily scalable, therefore suited for variable organization size.
- Ansible** Does not require an agent.

CENTRALIZED LOGGING TOOL

Centralized logging allows developers and systems engineers to search logs and create a more transparent picture of what is causing problems in the application stack, or where performance tuning may make a difference.

OPTIONS

- Splunk** One of the most trusted logging tools, lacks SaaS capabilities.
- SumoLogic** Has excellent analytics capabilities, packaged in a SaaS offering.
- Loggly** Has the most intuitive web interface among this bunch, starts with SaaS.

SOURCE CODE MANAGEMENT TOOL

Placing all automation, configuration, and application code into the same repository allows every component to run an application to reside in the same place, the SCM.

OPTIONS

- Github** Has an ecosystem of support tools, allows for commit triggers.
- Bitbucket** Allows you to control user authentication through centralized user management.
- AWS** One of the newer tools on the block, also has an option in codeCommit.

CONTINUOUS INTEGRATION TOOL

Teams adopting the use of Continuous Integration (CI) tools find that they spend less time doing lower value tasks, freeing them up to focus on new feature creation and deeper automation in the deployment process.

OPTIONS

- Jenkins** Has a large community that contributes an extensive list of plugins.
- Travis CI** Has been coming on strong recently, with a focus on integrated testing.

By replacing legacy systems with simple, fast, effective and virtualized data, the bottlenecks and complexity disappear

Along with expensive infrastructure, software, and operating costs. Having instant access to unlimited amounts of production data not only eliminates resource overhead but also provides a medium to satisfy all of the business' testing procedures. Thus, developers are able to deliver better quality code and expedite the development cycle which drives immediate value to the company's bottom line.



SOURCES: <http://relus.com/how-to-conquer-devops-challenges/>
<http://relus.com/how-to-shatter-bottlenecks-devops-style/>
<http://relus.com/5-essential-tools-for-devops-success/>