

Agile Operations

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DRW

The new server – a fable

Alice requests a new server

Bob submits a ticket to Charlie

Charlie speaks to Diana, the supplier

Diana has some questions

so she asks Charlie, who asks Bob, who goes back to Alice

You wait... time passes...

Diana provides a quote

- Charlie passes the quote to Bob
- Bob emails Alice with the quote

It's a big quote, so Charlie emails Eric, for approval

Eric doesn't know anything about the server.

Eric calls Bob, and asks why Alice needs this server

How should I know? replies Bob. I'll go ask

Bob spends the rest of the day relaying messages

except Alice is on vacation

The new server – a fable

Eric approves the purchase

You wait... time passes...

Alice asks Bob where her server is

Bob checks. Turns out it's waiting for Alice to sign off

What do you mean sign off? says Alice. I asked for it in the first place

Alice (sigh) signs off the purchase

Charlie orders the hardware from Diana

You wait... time passes...

The hardware arrives. Bob submits a ticket to Fiona in the data centre

Bob submits a ticket to Gary in the OS team

Bob submits a ticket to Helen in the networking team

You wait... time passes...

Bob sighs

Alice cries...

I. Would. Like. A. New. Server.

Please!

What's wrong with this picture?

Time-consuming hand-offs

Error prone manual procedures

We're baking waste into the process

Waste comes in flavours

Transportation

Inventory

Movement

Waiting

Overproduction

Overwork

Defects

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What is Agile Operations?

Integrating DevOps into Lean Operations

so let's unpack that a little...

Lean Operations

Toyota

– and Ford!

Theory of Constraints

The Modern Firm

Lean Operations

The unsexy-but-critical stuff

Turning the Organisation inside out

- Build around the Value Chain, not the CEO

Measuring results

- Not utilisation

The waste is always in the hand-offs

DevOps

Agile development meets Operations discipline

- Version-controlled... CM
- Test-driven... infrastructure
- Pragmatic automation... of environment

“Infrastructure as code”

How Agile Operations works

Identify the goal

- Plan
- Do
- Check
- Adapt

It's like Lean Operations
...but with shell scripts 😊

Example 1: Monitoring in one line

```
while :; do curl -f -s $SERVER -o /dev/null || mailx -s  
"$SERVER is dead!" monitoring@drw.com; sleep 10; done
```

: is the null command.

```
echo $SERVER  
: ${SERVER:=localhost}  
echo $SERVER
```

Chris likes mailx. Dan likes mutt. Chris is Old Skool.

– Dan & Chris both like vim. Vim is purty.

Don't forget about cron!

Example 2: server provisioning

First change the process

Any automation will reinforce the process

– whatever the process...

Then visit the unbelievers with explanatory scripts

– with apologies to Terry Pratchett

Example 3: server configuration

All your /etc are belong to us

- Get your existing servers under control
- Start with git branches
- Graduate to chef, puppet

Start with the tin

- If you can't cut cookies, you don't get cookies!

Optimise for repeatability

Example 4: test-driven network

Put network config under source control

- Servers
- Services
- DNS

Automate changes

- Use pre-commit hooks as sanity check

Create sentinels

- No news is good news!

Example 5: automated deployment

A small shell script replaced our deployment tool.

- Fast. Like *really* fast.
- Easy to change.
- Fits in your head.
- Rollback is trivial. But we usually just roll forward.
- Did we mention *fast*?

Understands the context

- Checks git status.
- Bakes in versioning and deployment metadata.

Getting Started

“Start where you are”

The very next system change you make

```
git init; git add .; git commit
```

or

```
hg init; hg add .; hg commit
```

...and relax

Make it a habit

Thank you

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