Process and Incidents

Teams, not solo

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Teams

Lower bus factor

Personal responsibility

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Teams

Require code reviews

Do code readings

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Pair Programming

Not instead of reviewing

Helps newcomers on board

Modularisation

Many small modules

Internal libraries

Modularisation

Internal interfaces

Validate at interface edges

One team, many modules

A team is **responsible** for their module

Other teams send **patches** for review

The Issue Tracker

All development goes through Issue Tracker

All issues go as separate forks or branches

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The Issue Tracker

Jira (BitBucket), GitHub, Bugzilla, trac…..

Review Issues

Bugs, Features, Description

Treat them as prose / code

Code Reviews

Require them

(Mailing list, Gerrit, GitHub, etc.)

Code Reviews

Unreviewed code is bad code

Never merge bad code

Track reviews

Flag tricky / interesting commits

Use reviews as teaching aid

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Track reviews

Reviewed-by:

Signed-off-by:

Avoid “Velocity”

Prioritize Reviewing over Writing

Reviewing is not Velocity

Avoid singular work

Don’t make one dev do all reviewing

Don’t make one group spend time reviewing

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Teach reviewing

Make management do it

“Should be easy, it’s just reading”

Reward reviewing

Reward teaching

Don’t accept lazy management

Managers shouldn’t be allowed slack

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Involve management

Management should review issues

Involve management

Management works overtime in Crunch

Time based releases

Set schedule

Cut features

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Major release

Every 6 / 9 months

Not yearly, too big changes

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Minor release

Major + 3 weeks (bugfix)

Major + 8 weeks (bugfix)

Major + 12 weeks (bugfix)

Time based releases

Release every 5-8 weeks

On schedule, mix features & bugs

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Time based releases

Track versions of modules

Bump module version with Major release

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Use a release repo

Merge-only, release repository

Tag all releases

Sign tags

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Use a branching strategy

Tag releases

Branches or Forks for Issues

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Branching Strategy

Plenty of well documented ones

Branching Strategy suggestion

master = next-stable

branches/forks = development

release = old-stable (tagged)

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Testing

Test teams are great

Unittests are good

Automation rocks

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Testing

Is a whole workshop alone

Incident response

Have a process

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Incident response

1. Verify
2. Track
3. Document
4. Find
5. Fix
6. Release

Incident response

Needs to be practiced

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Use Incident response internally

Don’t paper over internal finds

Practice incident response

On security issues caught in review

Use the response process

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Not a heavy process

Don’t over do it

Make sure many get training

Track externals and respond

Libraries, OS, upgrades

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Have a security contact

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Don’t shoot the messenger

Will ruin your PR

Will impact your future

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Respond quickly

< 12 hours

Keep reporter posted

After a compromise

Different process, harder

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Compromised?

When?

Why?

What?

How?

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Compromised

Clone drives

Dump logs

Compromised?

All servers in UTC timezone?
NTP running?
Timeline wrt. Logs

Compromised?

Backup integrity?

Never restore

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Compromised?

New systems in place

You have automation for this

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Compromised?

Find their way in before going live

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Compromised?

Assume credentials stolen

Of all users with access

Everywhere.

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Compromised?

Take your time,

Panic won’t help

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Compromised?

Audit trails

Logs

Timestamps

Compromised?

That’s a whole other course again.

Talk to us if interested.

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Have a Process

Practice your process