



Maintaining Cloud Infrastructure Health: Best practices for monitoring and event resolution

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Agenda

- Problem Statement
- Cloud Health Overview
- Best Practices
- Case Study
- Key Results
- Q&A

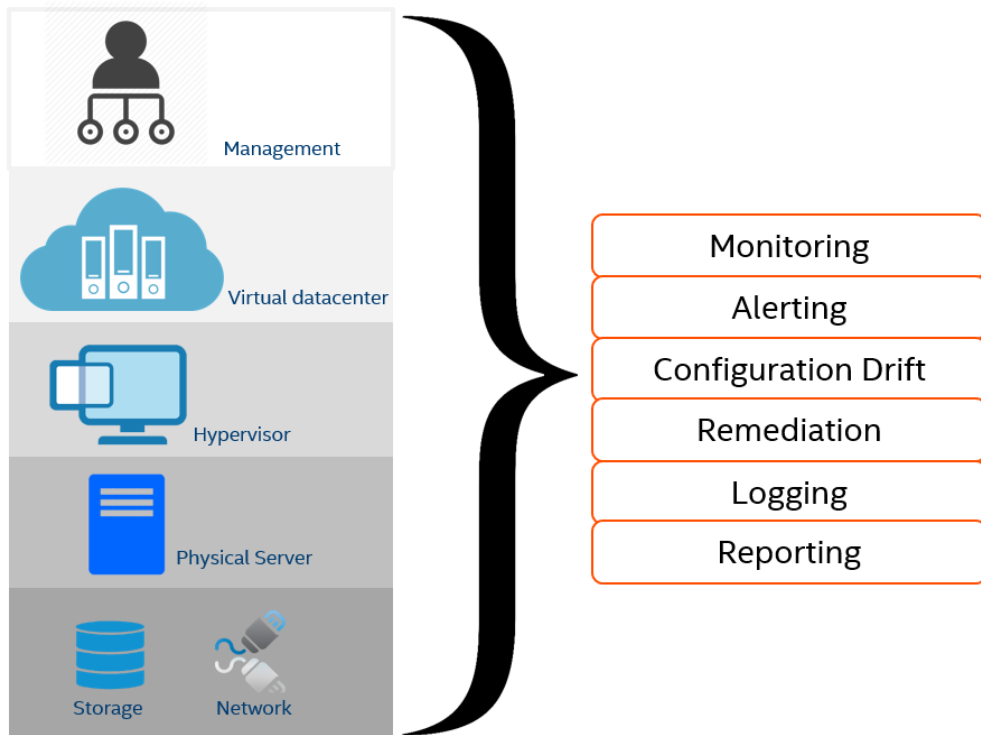


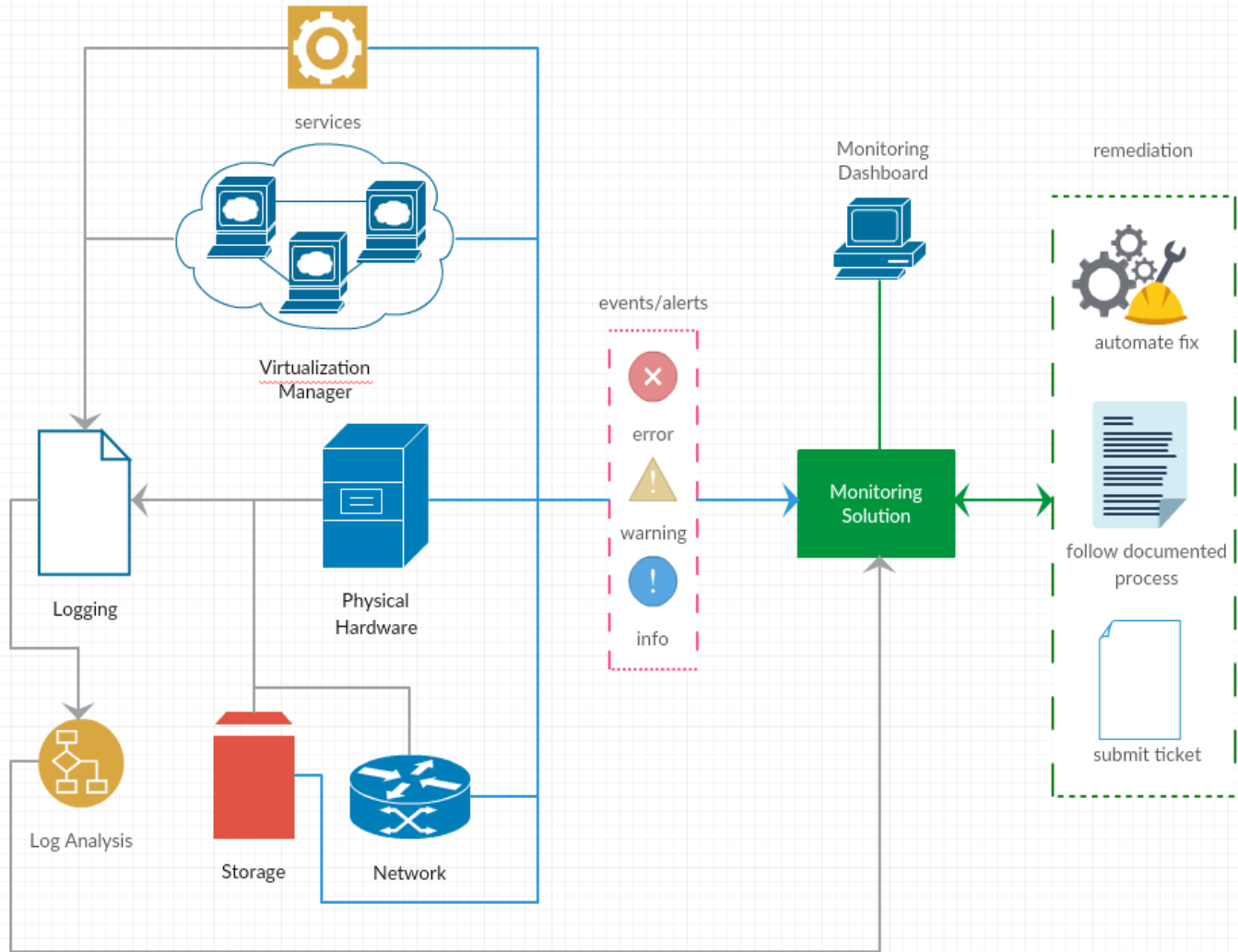
Problem Statement

“How do we *maintain a healthy cloud infrastructure at scale while simplifying support and minimizing customer impact*”



Cloud Health System





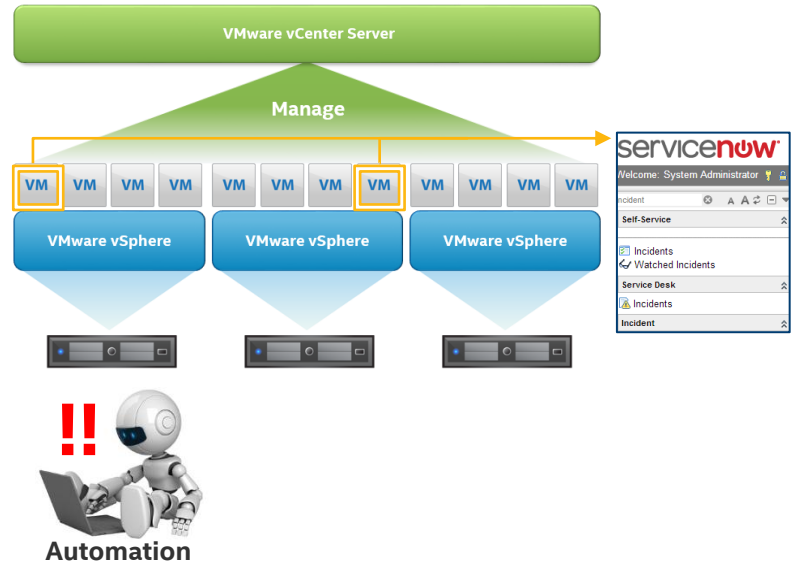


Ideal State

customer identified issues



preemptive detection & remediation.





Best Practices

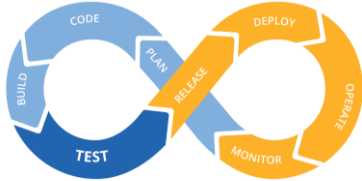
- Identifying the top issues:
 - Team brainstorming
 - Ticket Queue analysis
- Determine a resolution to each issue
- Implement the solution
 - Scope the work
 - Schedule the work
 - Resource the work





Best Practices: Leverage Support Teams

Dev-Ops

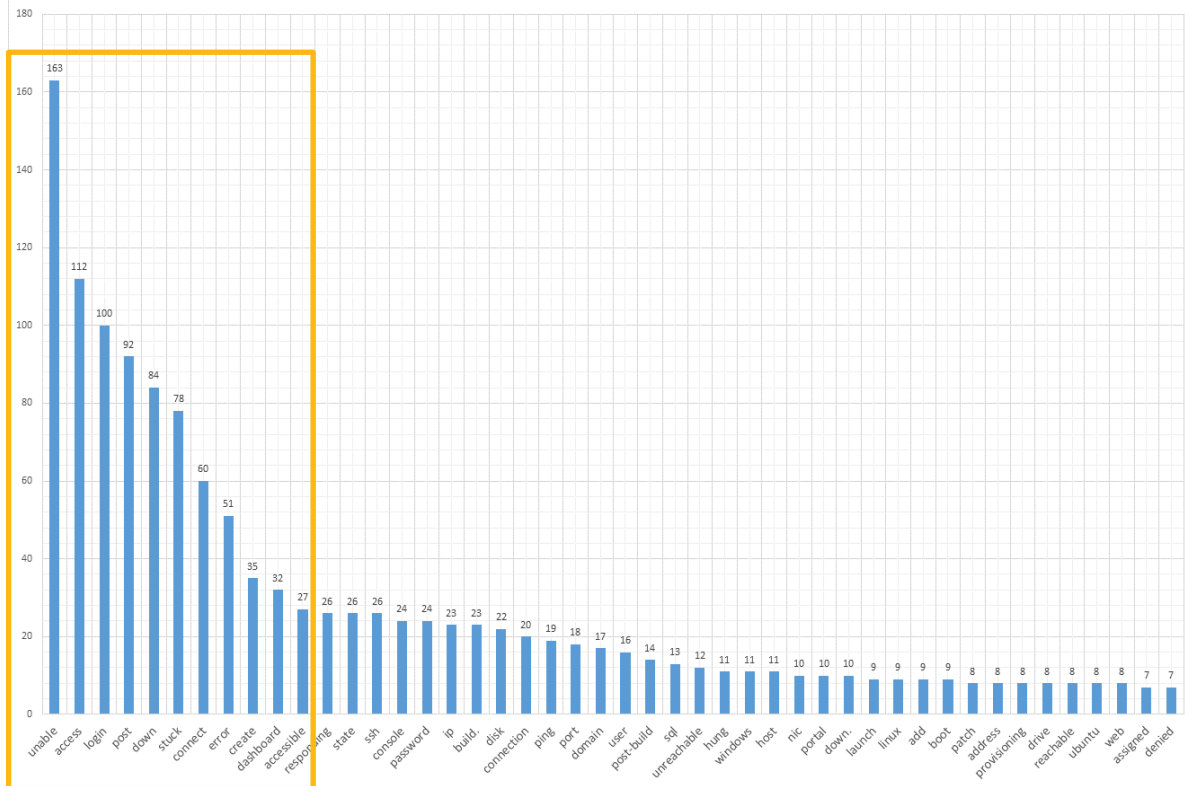


- We support what we build
- Collaborate to identify **top 10** support issues
 - Most impactful (outage for customer)
 - Most frequently occurring
 - Most potential for automation
 - Most time consuming



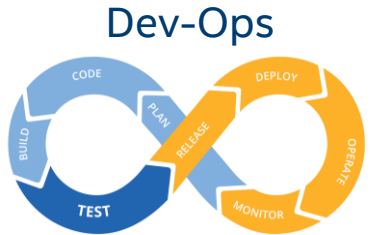
Best Practices: Leverage the data

Word Count, Intel Cloud Incident Short Descriptions

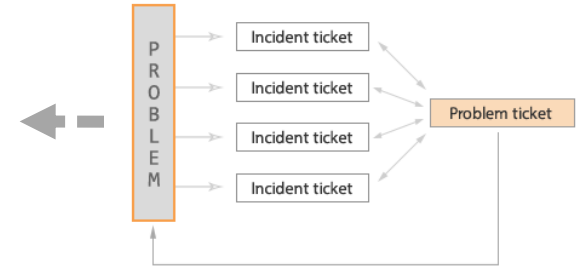




Best Practices: Consolidate the outcomes



Issues	Total
Top Issue	339
Next Issue	293
...	259
...	111
...	30
	29
Security Groups	18
VM Login Issues	16
VM Orphaned in VC	0
VM Resize	0





Best Practices: Determine actions

- **Automate** a solution
- **Document** a known process and provide training to support engineers
- **Improve** user experience (UX) through enhanced UI and self-service options
- **Root cause** the issue and provide patch/fix.
- **No Action** (complexity vs. frequency did not warrant additional effort).



Best Practices: Example UI Improvement

- **Document** a known process and provide training to support engineers
- **Improve** user experience (UX) through enhanced UI and self-service options

The screenshot shows a web interface for 'Inside Blue' with a navigation bar containing 'Home', 'Activity', 'Browse', 'Explore', and 'Apps'. A user profile icon with '@ 11' is visible in the top right. The main content area is a help article by 'Bock, Charles V' dated 'May 31, 2016 11:36 AM'. The article title is 'Intel Cloud Account Issues and Resolutions'. It contains three sections: 1) 'What username format should I be using to login to the Intel Cloud Portal?' with a list of formats: 'ad_cvbock' (green checkmark), 'amr\ad_cvbock' (red X), and 'cvbock' (red X). 2) 'The portal says my account is disabled or locked' with instructions on password resets and a link to TAC phone numbers. 3) 'The portal says my account password is expired' with instructions for internal and external password resets and links to the respective forms.

Inside Blue Home Activity Browse Explore Apps @ 11

Bock, Charles V May 31, 2016 11:36 AM

Intel Cloud Account Issues and Resolutions

What username format should I be using to login to the Intel Cloud Portal?

You should be using your ad_idsid account directly without any prefix or suffix. See examples below.

ad_cvbock	✓
amr\ad_cvbock	✗
cvbock	✗

The portal says my account is disabled or locked

Most of the time resetting your password will re-activate your account.
See instructions for resetting your password under the "The portal says my account password is expired" heading below.
If that does not work you will need to call TAC to have the account re-enabled.
TAC Phone Numbers: <http://it.intel.com/#/tacphonenumbers>

The portal says my account password is expired

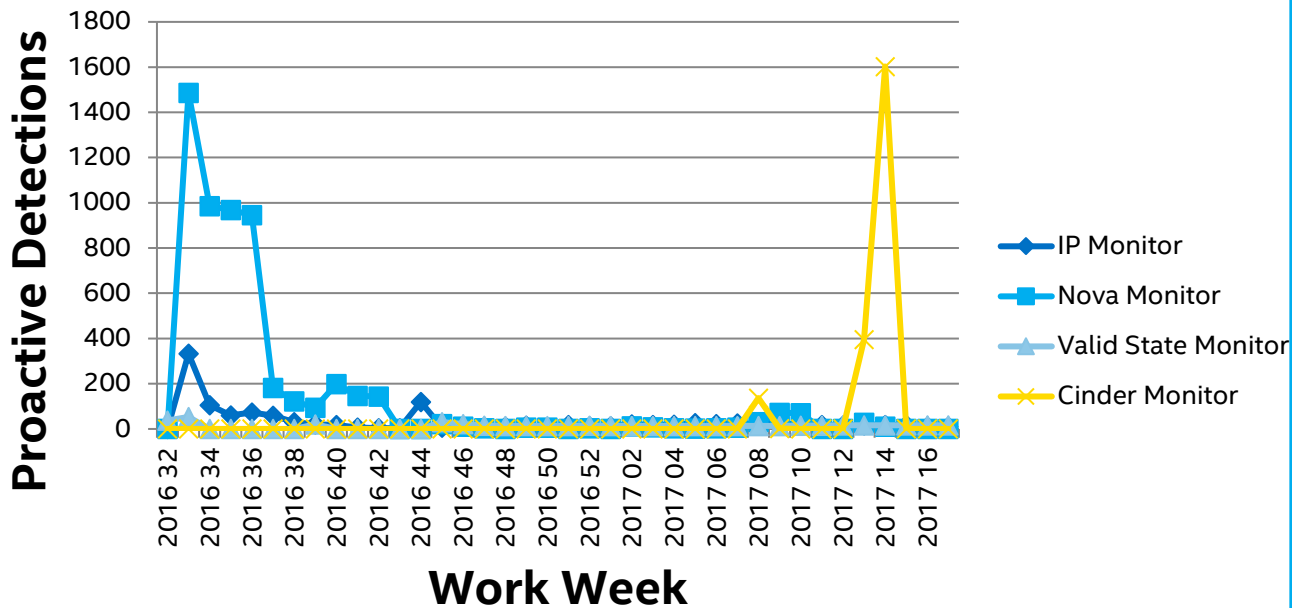
For Internal reset your CORP Admin password via the password reset form below.
AD Account Password Reset Form: <https://passwordreset.intel.com/adminaccountreset.aspx?SelectedItem=ADreset>

For External reset your ED Admin password via the password reset form below.
ED Account Password Reset Form: <https://passwordreset.intel.com/EDAccount.aspx?SelectedItem=EDreset>



Case Study: Outcomes

Automated Detections by Work Week





Case Study: Outcomes

- The same automation was reused to help fix at least 400+ issues during major MI (late 2016)
- The same automation is also in reuse in our long term health and monitoring efforts (ongoing)





Key Results

Three main high-level takeaways.

- Embrace the Dev-Ops Feedback Loop.
- Drive priorities with data and solve the biggest stuff first.
- Re-use and contribute back. Code, data, learnings, etc.



Key Results

Leverage support data and feedback to engineer service improvements.

- Continually look for sources of operational and customer feedback.
- Review frequently and stay in touch with key stakeholders and customers.





Key Results

Target the most significant problems & complete them rapidly. Use data-driven problem solving.

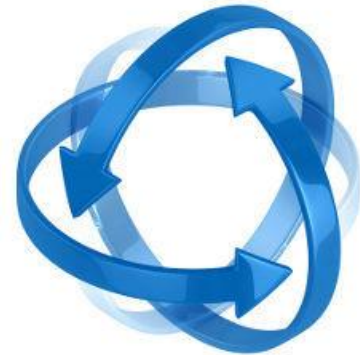
- Use available data to prioritize your issues.
- Collect and review resolution data for ROI calculation and feedback.





Key Results

Write code with intent to reuse, leverage existing Open Source libraries. Contribute back!



- Re-use where you can and Extend where you cant.
- Bonus points for contributing your extensions back so others can re-use.

Questions?

Questions you might have:

- How can they get started automating their support work?
- What tools are available and how do you evaluate them?
- Did we use POR tools as part of our solution?

