How to Health Check your Azure Environment

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Health Check?!

an occasion when a **doctor or nurse** examines **someone's body,** takes blood **tests**, etc. in order to **make sure** the person has **no health problems**…

an occasion when an **IT Expert** examines **someone's IT landscape**, with doing **tests**, etc. in order to **make sure** the environment has **no health problems**…

Health = Security ?!

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Health Check?!

Health is even more:

    Decision Making on IT

    Service and Financial Reporting

    Monitoring

    Policies and Compliance

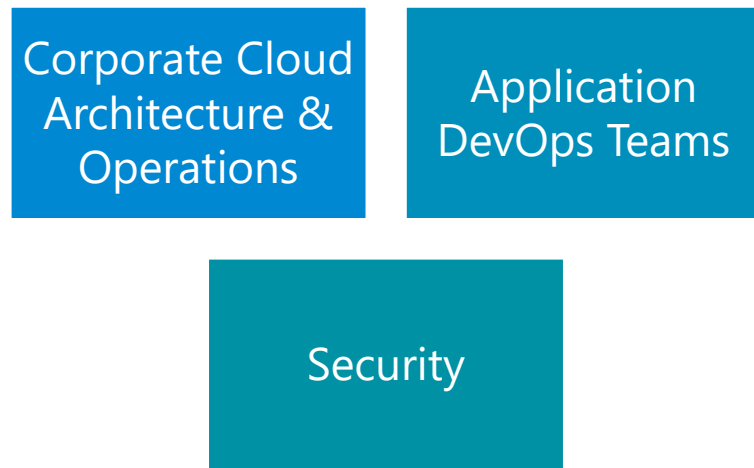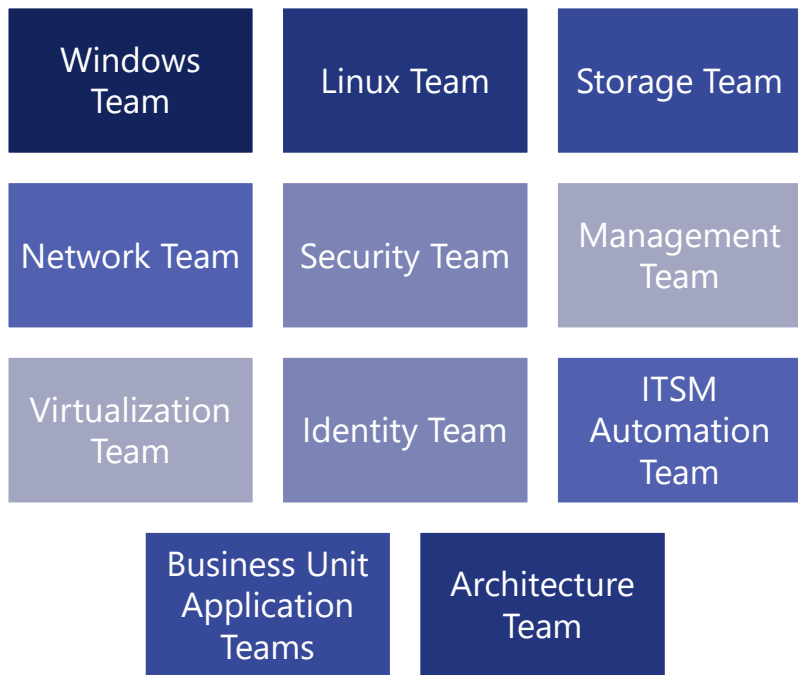   Standards and Practices

    Tools

    Security

    ...

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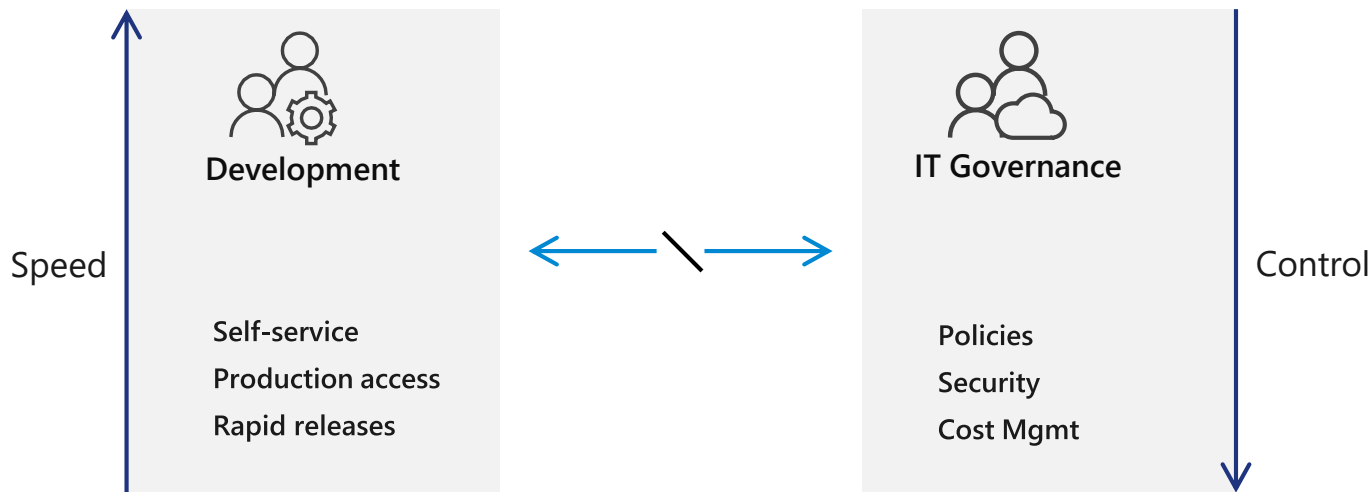
OLD IT VS. NEW CLOUD WORLD

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OLD IT   VS.   CLOUD WORLD

Windows Team	Linux Team	Storage Team
Network Team	Security Team	Management Team
Virtualization Team	Identity Team	ITSM Automation Team
Business Unit Application Teams	Architecture Team	

Corporate Cloud Architecture & Operations	Application DevOps Teams
Security	

TRADITIONAL APPROACH NEEDS RETHINKING

Speed versus **Control**

Speed

Development

Self-service
Production access
Rapid releases

Control

IT Governance

Policies
Security
Cost Mgmt

BUILT-IN MODERN GOVERNANCE

Speed and Control
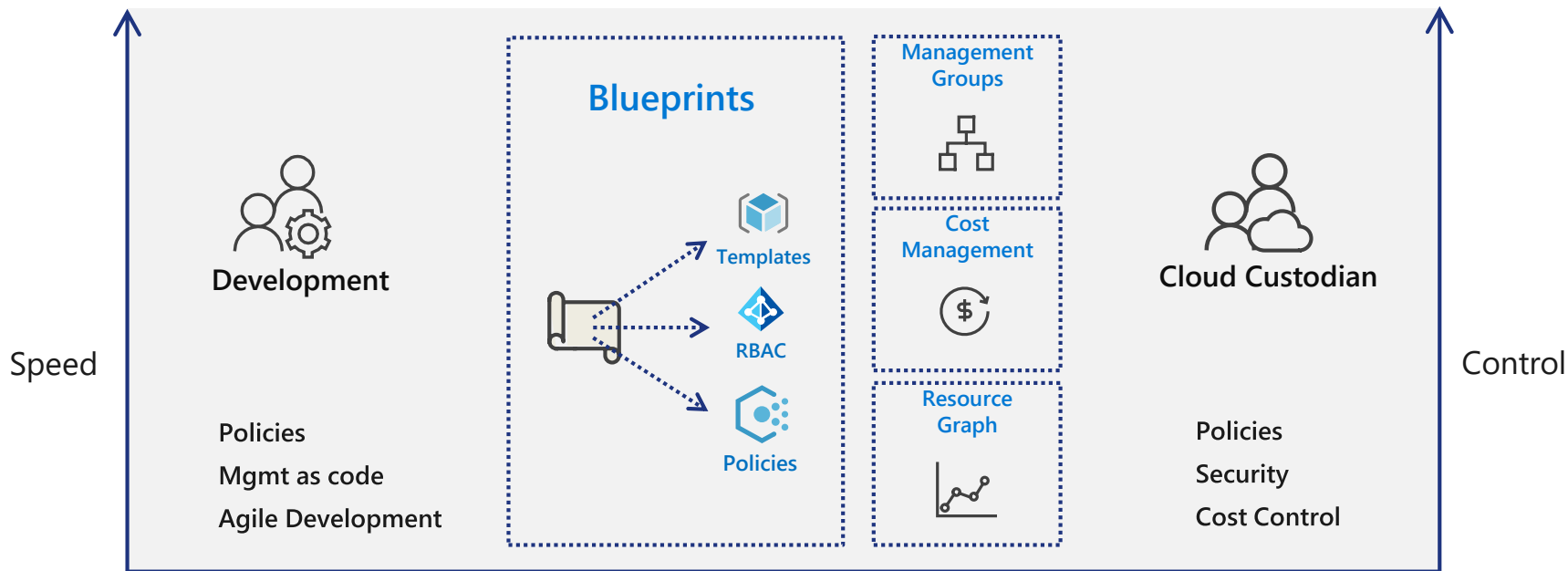
OLD IT   VS.   NEW CLOUD WORLD
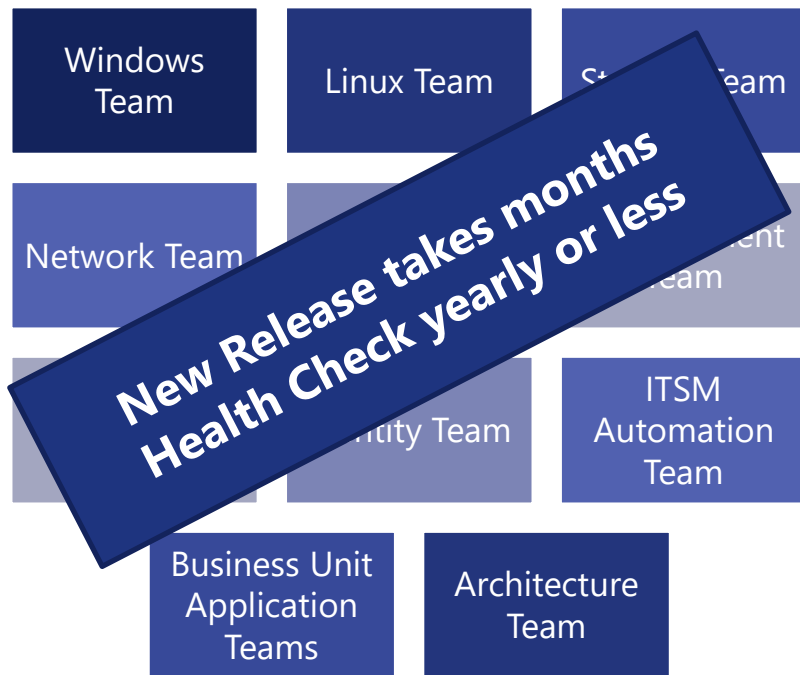
Windows Team

Linux Team

St... ...eam

Network Team

...ent ...eam

...tity Team

ITSM Automation Team

Business Unit Application Teams

Architecture Team

New Release takes months Health Check yearly or less

Corporate Cloud Architecture & Operatio...

Security

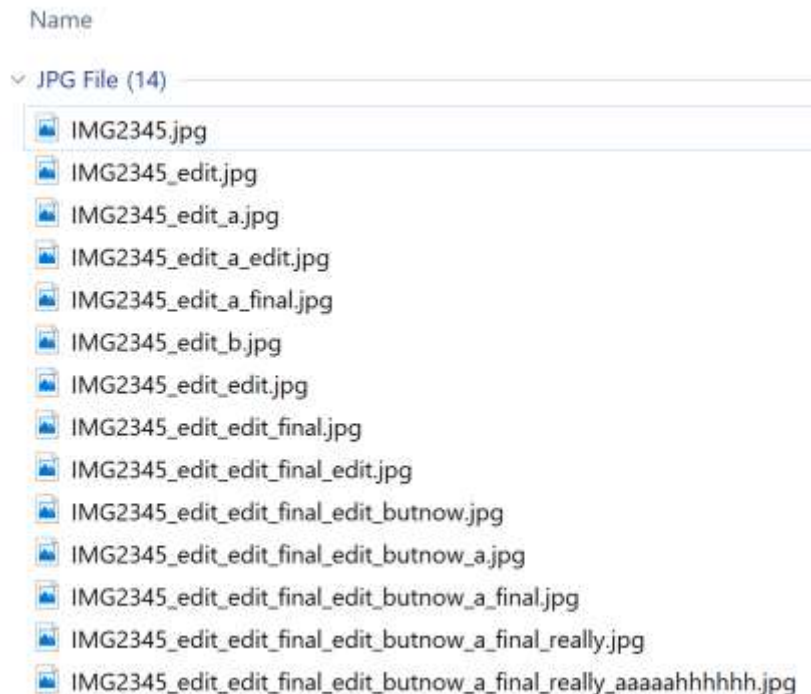**New Release every few minutes Health Check with every release**

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EXAMPLES / DEMO

EXAMPLES – NOTHING NEW ☺
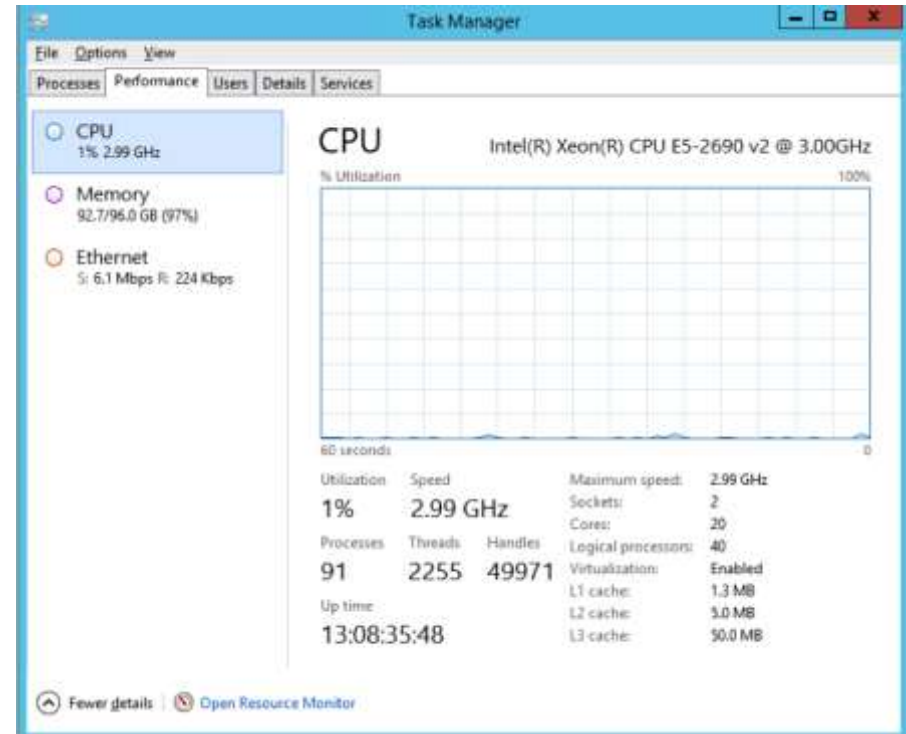
Never touch a running system

EXAMPLES – NOTHING NEW ☺

Never touch a running system
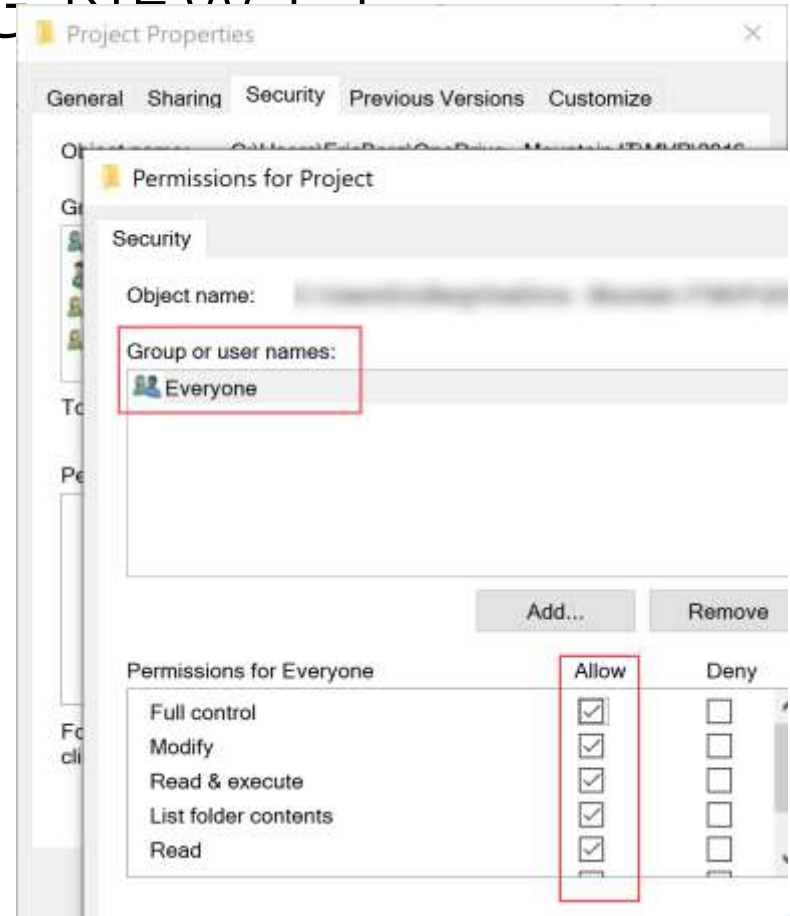
Never touch an old file

Name

JPG File (14)

IMG2345.jpg
IMG2345_edit.jpg
IMG2345_edit_a.jpg
IMG2345_edit_a_edit.jpg
IMG2345_edit_a_final.jpg
IMG2345_edit_b.jpg
IMG2345_edit_edit.jpg
IMG2345_edit_edit_final.jpg
IMG2345_edit_edit_final_edit.jpg
IMG2345_edit_edit_final_edit_butnow.jpg
IMG2345_edit_edit_final_edit_butnow_a.jpg
IMG2345_edit_edit_final_edit_butnow_a_final.jpg
IMG2345_edit_edit_final_edit_butnow_a_final_really.jpg
IMG2345_edit_edit_final_edit_butnow_a_final_really_aaaaahhhhhh.jpg

EXAMPLES – NOTHING NEW ☺

Never touch a running system

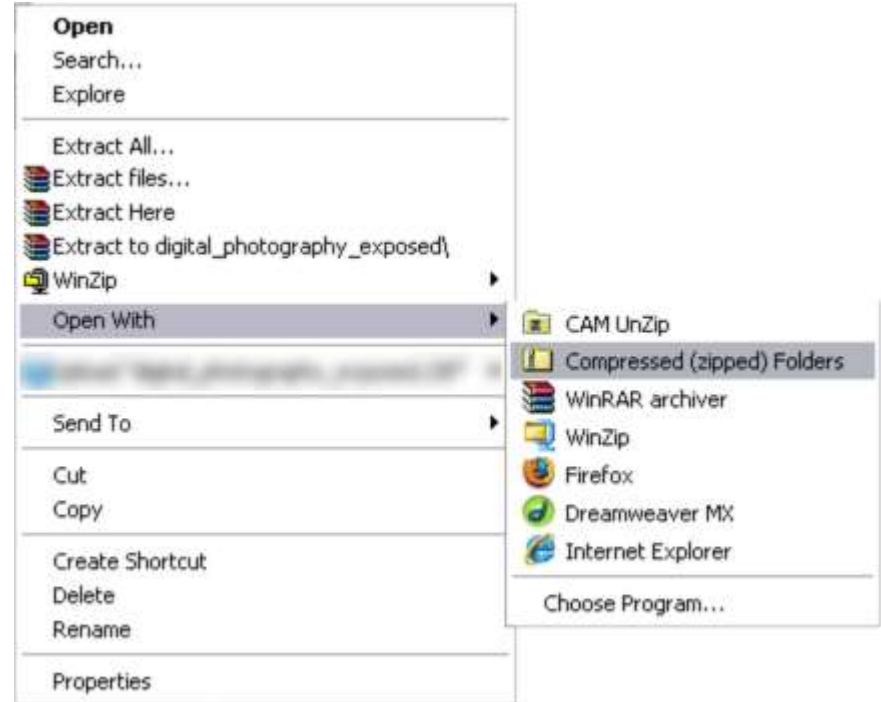Never touch an old file

There are never enough rights

EXAMPLES – NOTHING NEW ☺

Never touch a running system

Never touch an old file

There are never enough rights

Use the right tool
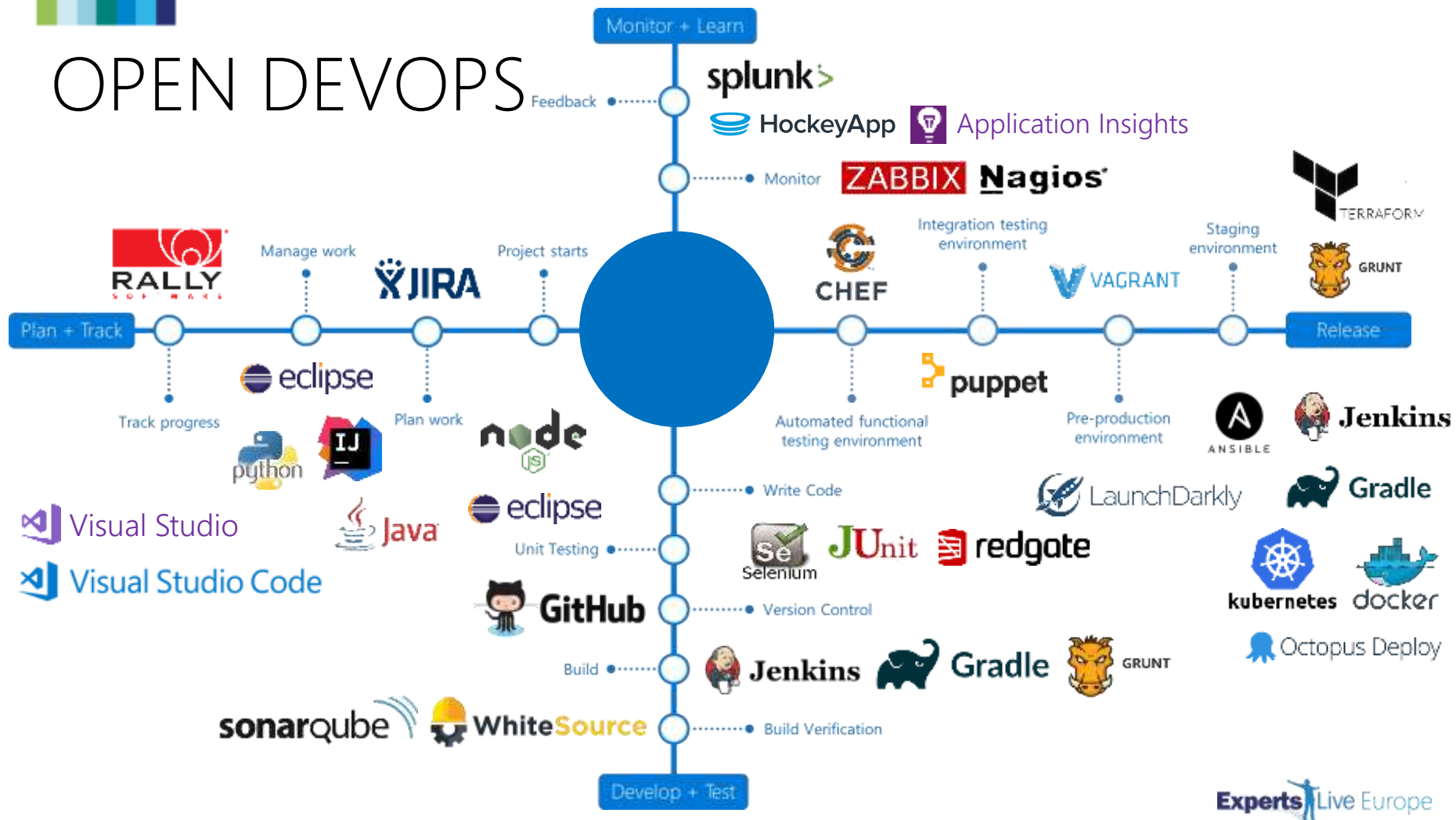
EXAMPLES – CLOUD

Running Resources without usage

Empty Resource Groups

Too many Owners

4 DevOps Stacks "in use"

OPEN DEVOPS

EXAMPLES – CLOUD

Running Resources without usage
Empty Resource Groups
Too many Owners
4 DevOps Stacks "in use"
No cost control
No policy set up
No logging and auditing
No monitoring
No clue of shared responsibility model

…

DEMO

MANUAL STEPS

MANUAL STEPS

Check Role-Based Access Controls
Check Resource Groups – Naming, Location, Usage
Check Resources – Naming, Location, Usage
Check Tags
Check Security
Check Updates
Check Activity Logs
Check Cost Management

...

NOW THINK ABOUT LARGE SCALE – MORE THAN xxx SUBSCRIPTIONS –
HAPPY HEALTH CHECK

AUTOMATION TOOLS

MAIN RULES

YOU NEED AZURE GOVERNANCE AS BASIS FOR HEALTH CHECK

IMPLEMENT GOVERNANCE IN TOOLS

IMPLEMENT GOVERNANCE IN MINDS

AUDIT AND KEEP LOGS FOR ANALYSIS
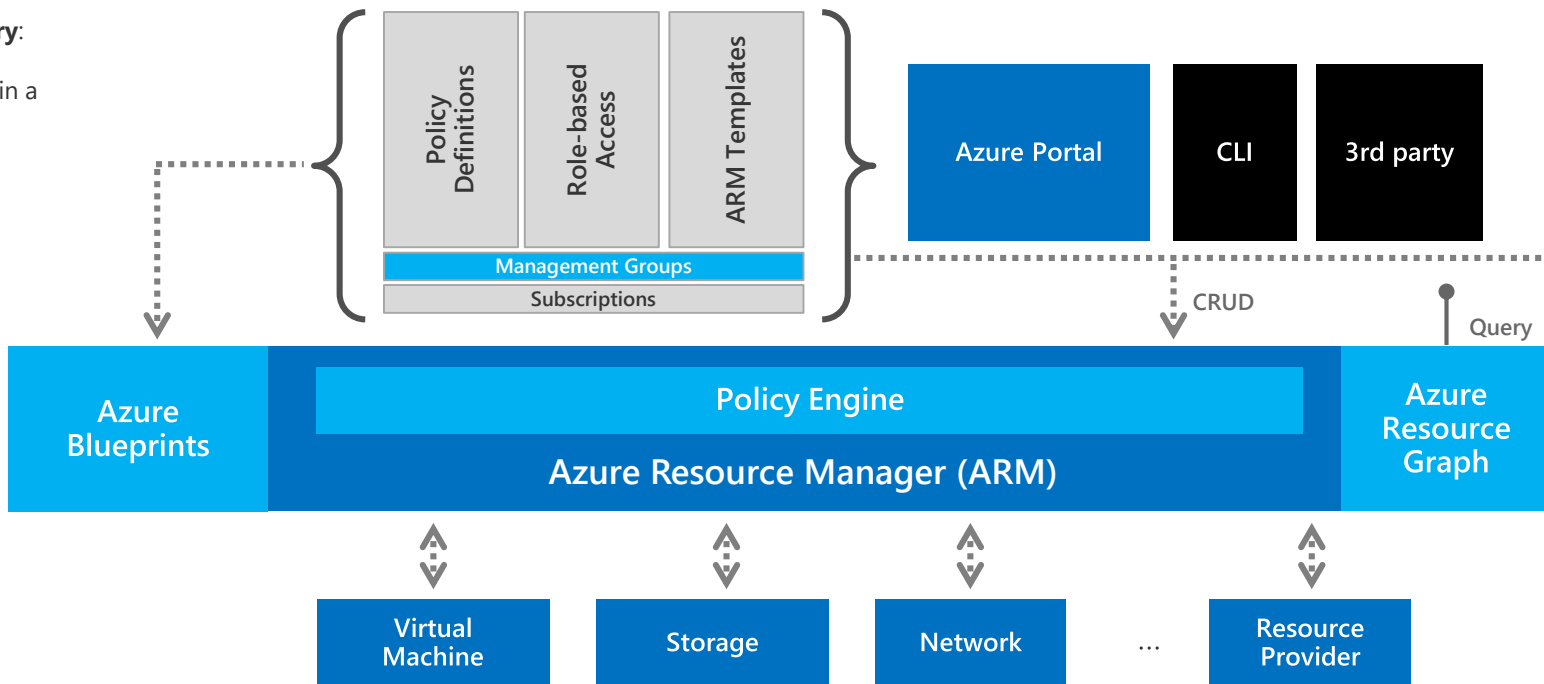
ESTABLISH A CODE FIRST PRACTICE

HEALTH CHECK AS YOUR DAILY BUSINESS

RENAME HEALTH CHECK TO CLOUD OPERATIONS :-)

AZURE GOVERNANCE ARCHITECTURE

1. Environment Factory:
Deploy and update cloud environments in a repeatable manner using composable artifacts

Policy Definitions

Role-based Access

ARM Templates

Management Groups

Subscriptions

Azure Portal

CLI

3rd party

CRUD

Query

Azure Blueprints

Policy Engine

Azure Resource Manager (ARM)

Azure Resource Graph

Virtual Machine

Storage

Network

...

Resource Provider

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TOOLS TO USE

AZURE POLICY

AZURE RESOURCE GRAPH

AZURE AUTOMATION

AZURE MONITOR

AZURE SECURITY CENTER

AZURE ADVISOR

AZURE AD PIM

AZURE AD MFA

…

DEMO

FRAMEWORK

FRAMEWORK

Bring the tools together
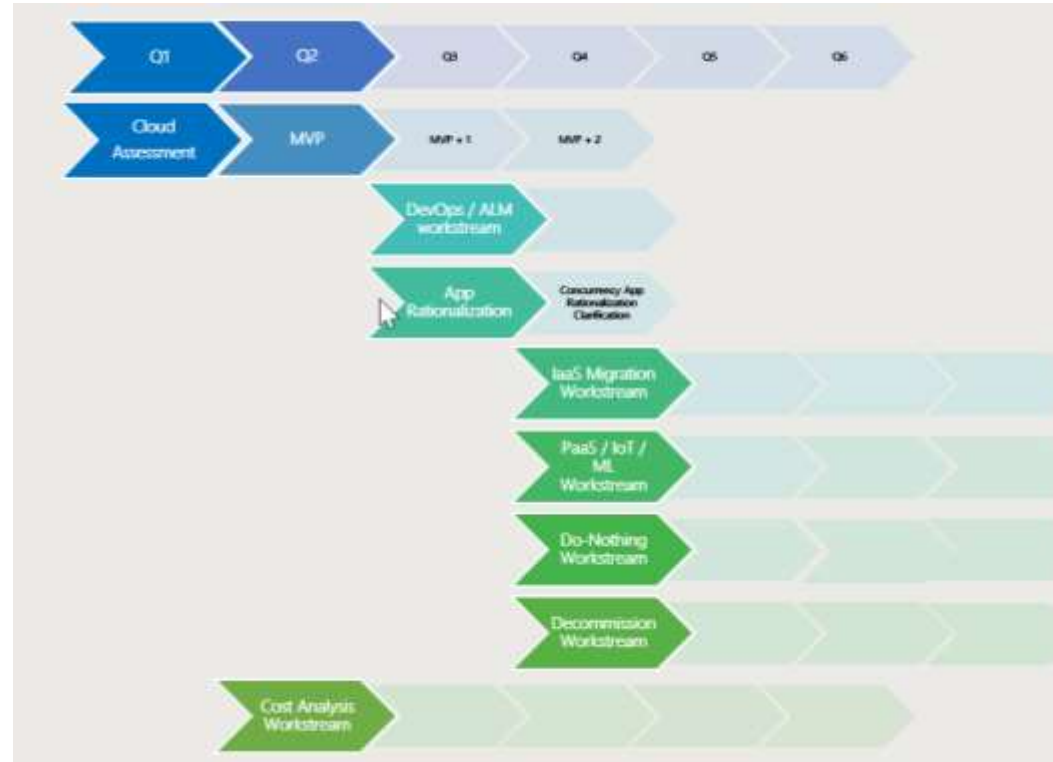
Build your workflows

Define your output

Alerts - Logs - LogicApps

Integrate in Tool-Stacks

...

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XCES.

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