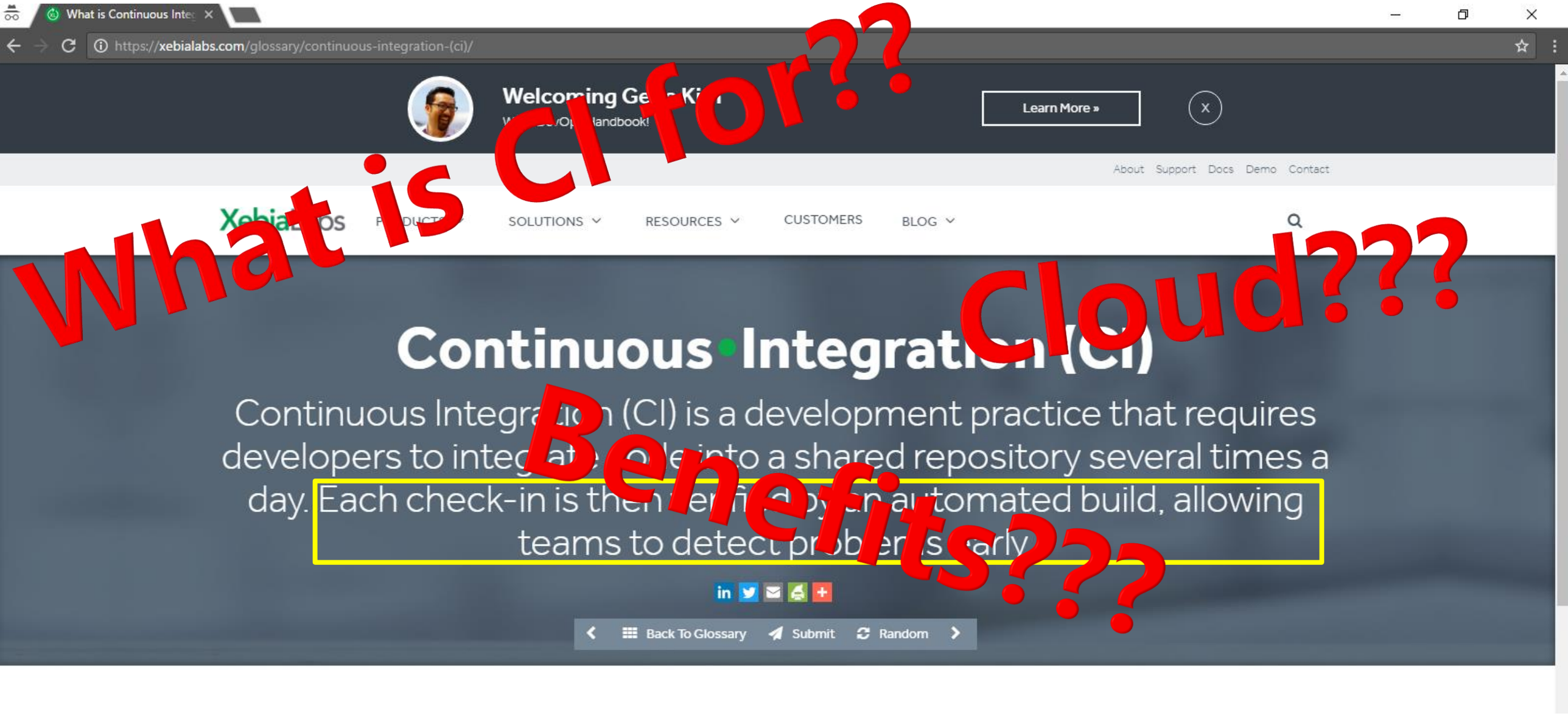
Microsoft

Enabling Continuous Integration on Azure

Jessica Pérez


What is Continuous Inte
https://xebialabs.com/glossary/continuous-integration-(ci)/
Welcoming Ge Ki
Handbook!
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SOLUTIONS
RESOURCES
CUSTOMERS
BLOG
Continuous Integration (CI)
Continuous Integration (CI) is a development practice that requires developers to integrate code into a shared repository several times a day. Each check-in is then verified by an automated build, allowing teams to detect problems early.
Back To Glossary
Submit
Random
What is CI for??
Cloud???
Benefits???

Have in mind

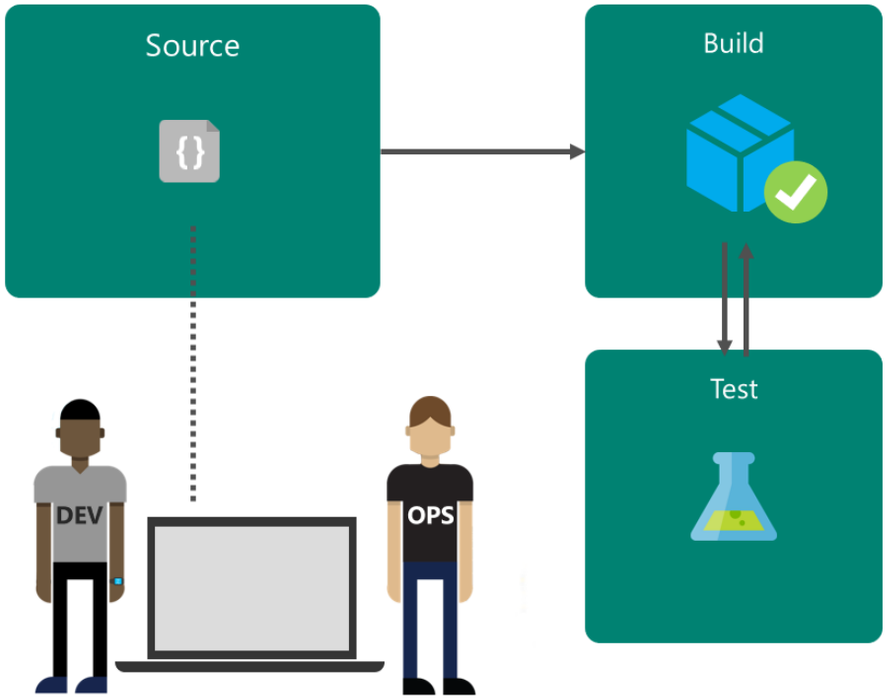
- Infrastructure as Code (IaC)
- Continuous Integration
- Automated Testing
- Continuous Deployment
- Release Management
- App Performance Monitoring
- Load Testing & Auto-Scale

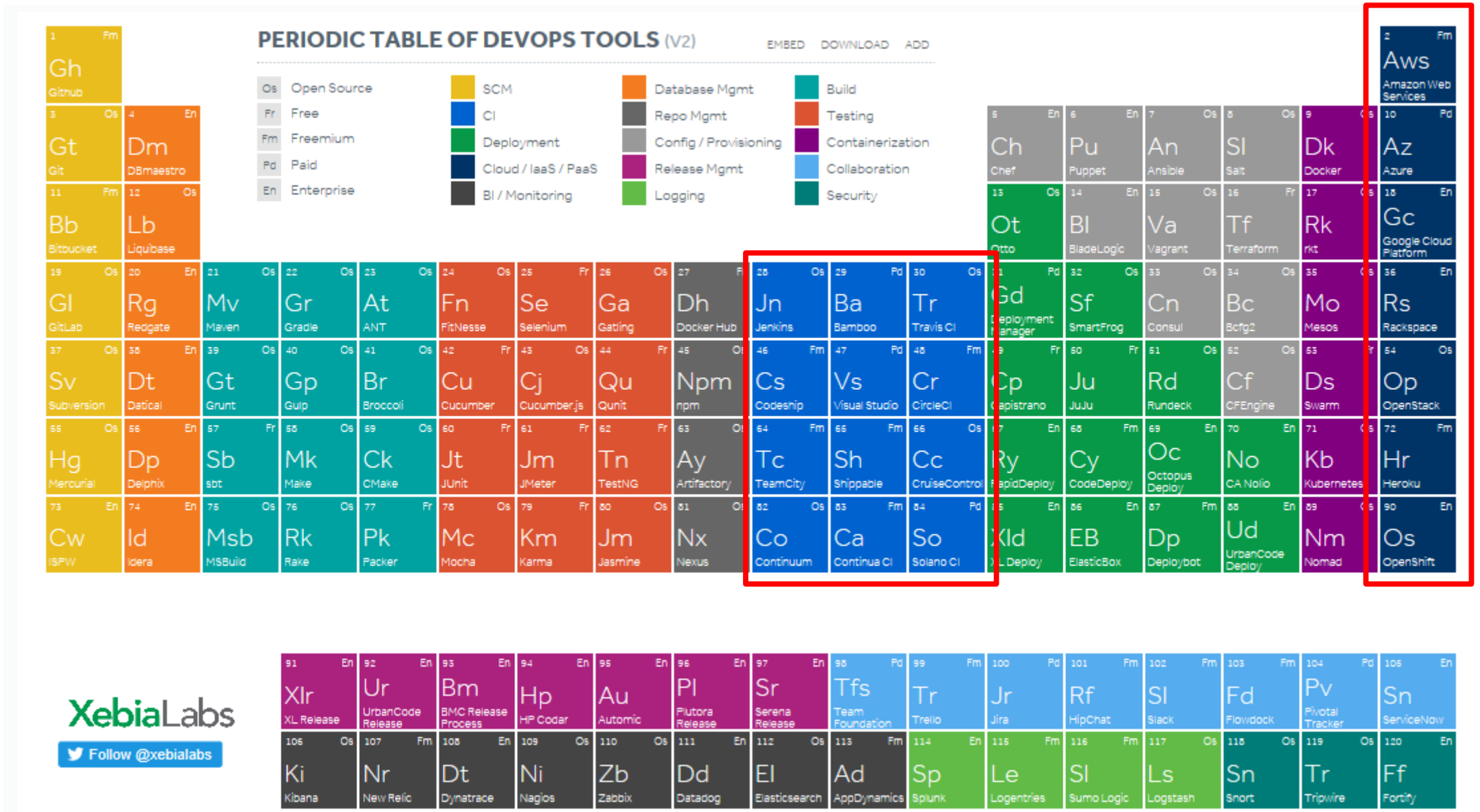
- Availability Monitoring
- Change/Configuration Management
- Feature Flags
- Automated Environment De-Provisioning
- Self Service Environments
- Automated Recovery (Rollback & Roll-Forward)
- Hypothesis Driven Development
  - Testing in Production
  - Fault Injection
  - Usage Monitoring/User Telemetry

http://www.itproguy.com/devops-practices/

Continuous Integration + Cloud

- Define the tools
- Define goals
- Define measurements
- Architecture Decisions





https://xebialabs.com/periodic-table-of-devops-tools/

CI tools

https://xebialabs.com/the-ultimate-devops-tool-chest/continuous-integration/

Azure cloud

DevOps
Nagios
VAGRANT
GRUNT
Gradle
Clients
Xamarin
APACHE CORDOVA
Management
CHEF
puppet labs
ANSIBLE
SALTSTACK
mist.io
libcloud
SCALR CLOUD MANAGEMENT
Applications
Joomla!
Drupal
PaaS & DevOps
apprenda
Jelastic
App Frameworks & Tools
php
nodeJS
Java
Ruby
IntelliJ IDEA
eclipse
Databases & Middleware
hadoop
redis
cleardb
cloudera
MySQL
mongoDB
Couchbase
Infrastructure
redhat
suse
bitnami
ORACLE LINUX
FreeBSD
docker

Architecture Decisions

Azure VMs (IaaS)

- Most control, but most management overhead
- Most cost
- Puppet/Chef/DSC agent integration
- Easier to port workloads from on-premises

Containers

- Easiest portability from on-premises
- Ecosystem of apps
- Host OS abstracted, but still requires management

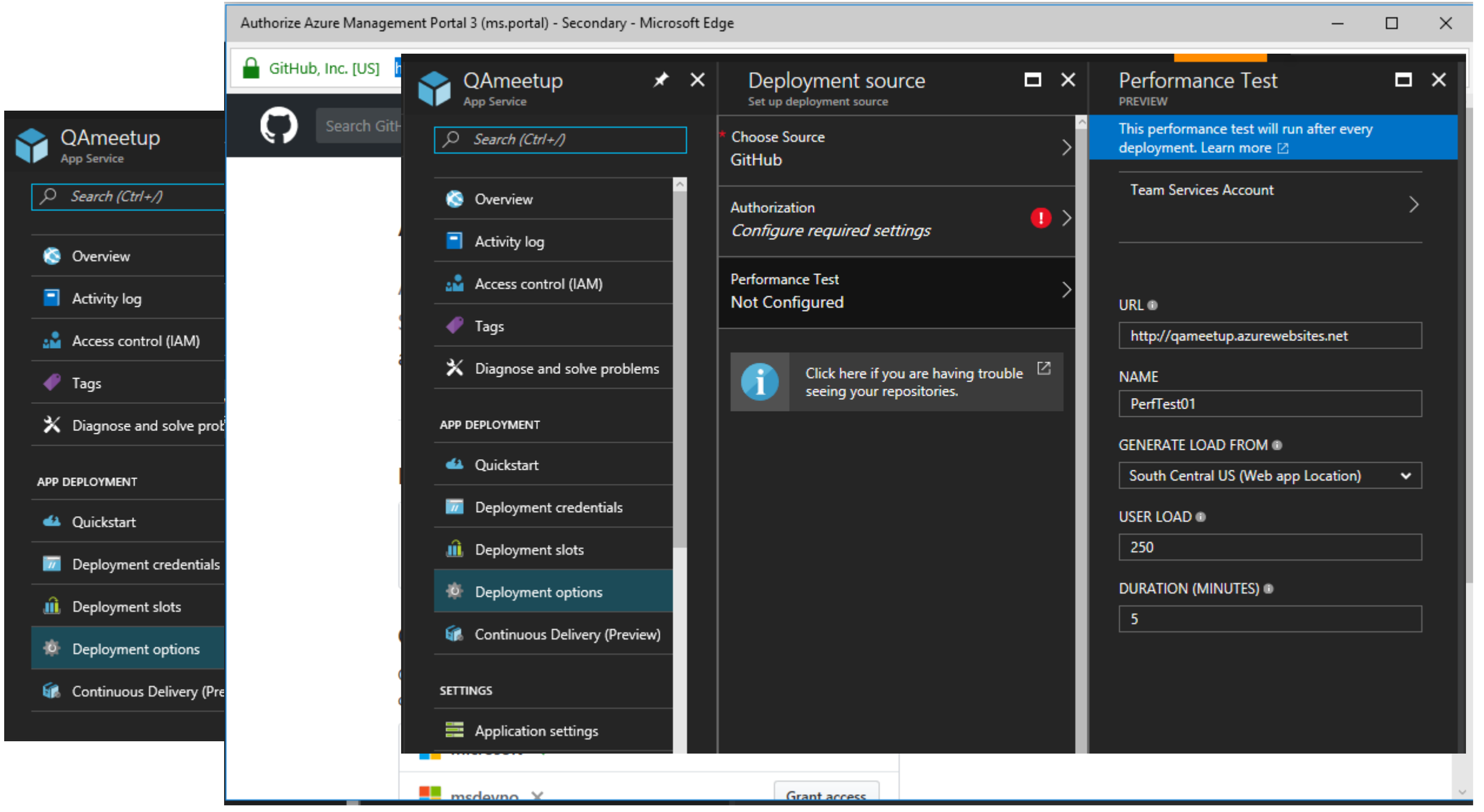
Azure Cloud Services (PaaS)

- Startup tasks
- More complex workloads
- Do more than websites
- APM compatible

Azure Websites (PaaS)

- Easy CI and CD setup
- Easy Auto Recovery
- Easy Testing in Prod
- Easy deployments and scale
- Efficient Cost
- Only websites

Configure CI repos on Azure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App Service
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Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve prob
APP DEPLOYMENT
Quickstart
Deployment credentials
Deployment slots
Deployment options
Continuous Delivery (Pre
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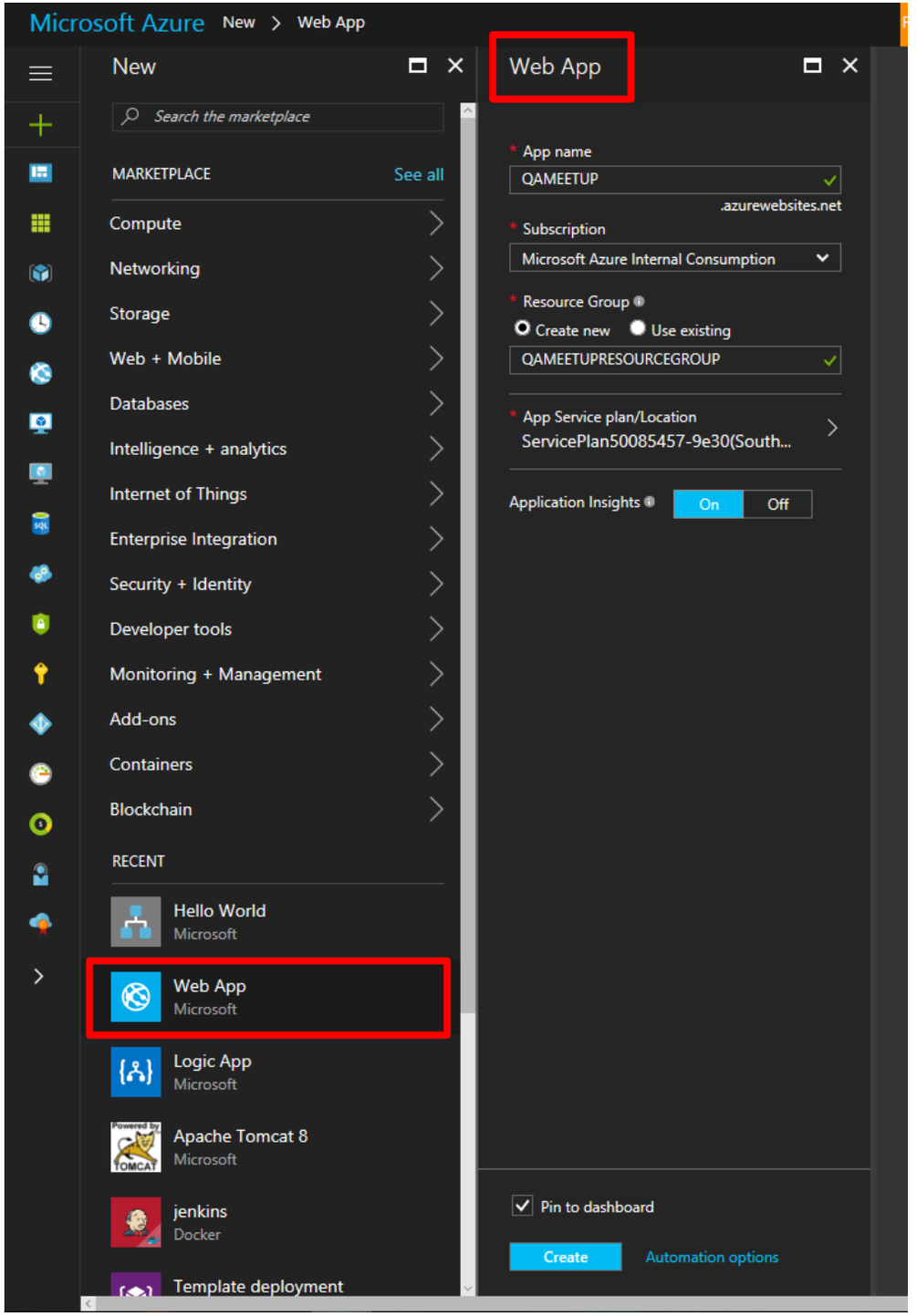
App Service
Search (Ctrl+/)
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
APP DEPLOYMENT
Quickstart
Deployment credentials
Deployment slots
Deployment options
Continuous Delivery (Preview)
SETTINGS
Application settings
Deployment source
Set up deployment source
Choose Source
GitHub
Authorization
Configure required settings
Performance Test
Not Configured
Click here if you are having trouble seeing your repositories.
Performance Test
PREVIEW
This performance test will run after every deployment. Learn more
Team Services Account
URL
http://qameetup.azurewebsites.net
NAME
PerfTest01
GENERATE LOAD FROM
South Central US (Web app Location)
USER LOAD
250
DURATION (MINUTES)
5
msdevpo
Grant access

Deployment Slots on Azure


Microsoft Azure
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Search the marketplace
MARKETPLACE
See all
Compute
Networking
Storage
Web + Mobile
Databases
Intelligence + analytics
Internet of Things
Enterprise Integration
Security + Identity
Developer tools
Monitoring + Management
Add-ons
Containers
Blockchain
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Application Insights
On
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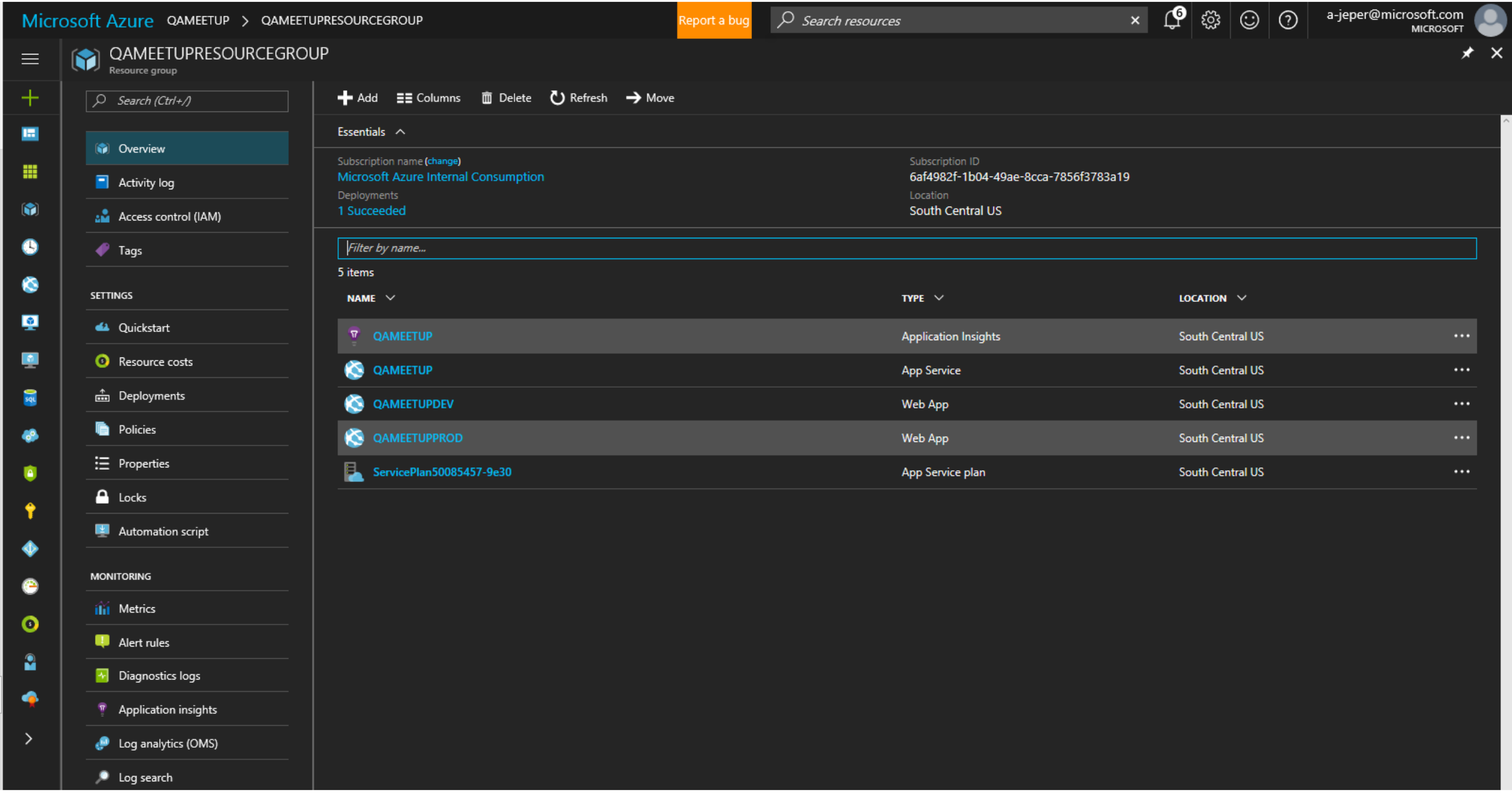
Automation options


Microsoft Azure
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MICROSOFT
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Resource group
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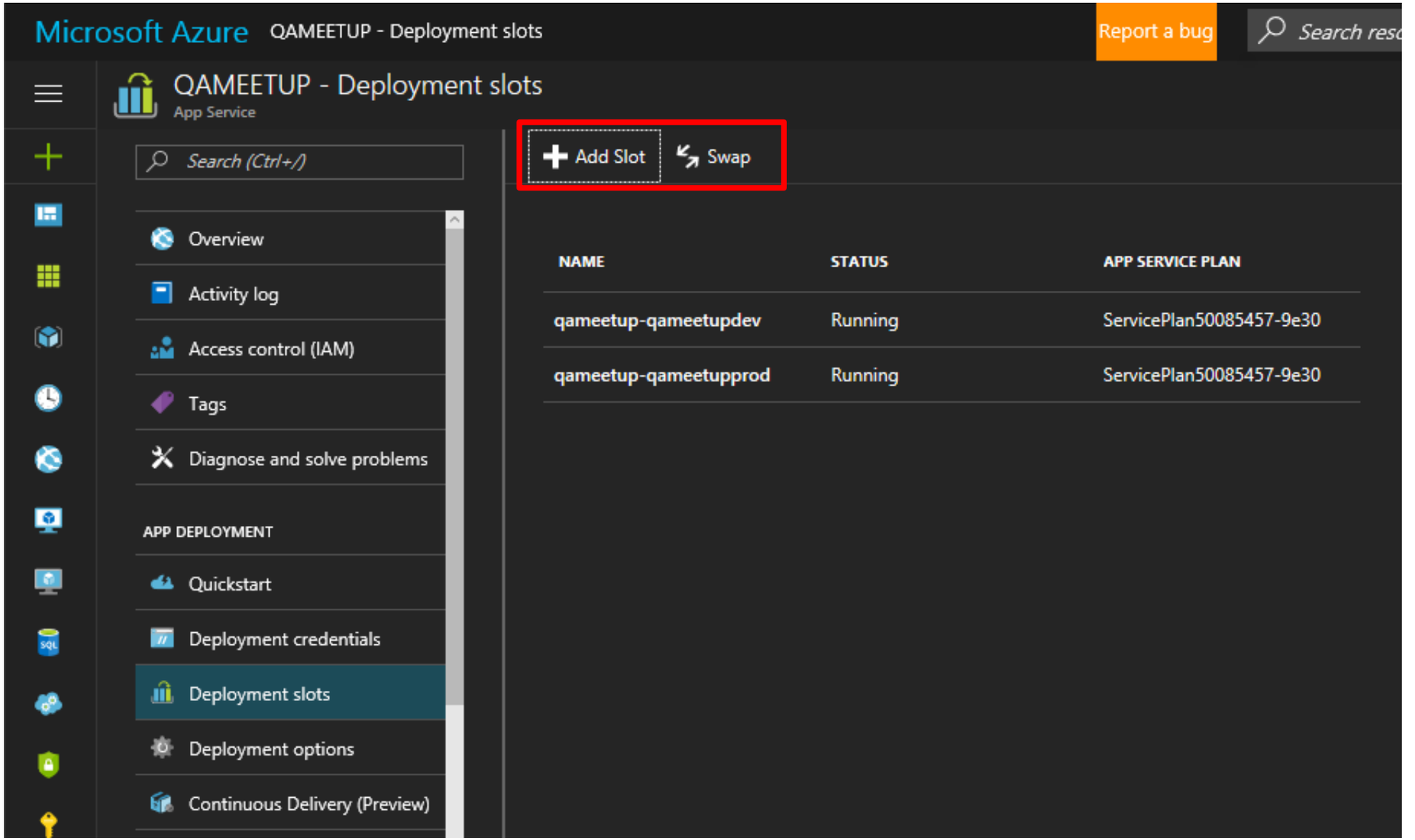
Activity log
Access control (IAM)
Tags
SETTINGS
Quickstart
Resource costs
Deployments
Policies
Properties
Locks
Automation script
MONITORING
Metrics
Alert rules
Diagnostics logs
Application insights
Log analytics (OMS)
Log search
Add
Columns
Delete
Refresh
Move
Essentials
Subscription name (change)
Microsoft Azure Internal Consumption
Deployments
1 Succeeded
Subscription ID
6af4982f-1b04-49ae-8cca-7856f3783a19
Location
South Central US
Filter by name...
5 items
NAME
TYPE
LOCATION
QAMEETUP
Application Insights
South Central US
QAMEETUP
App Service
South Central US
QAMEETUPDEV
Web App
South Central US
QAMEETUPPROD
Web App
South Central US
ServicePlan50085457-9e30
App Service plan
South Central US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Continuous Delivery (Preview)
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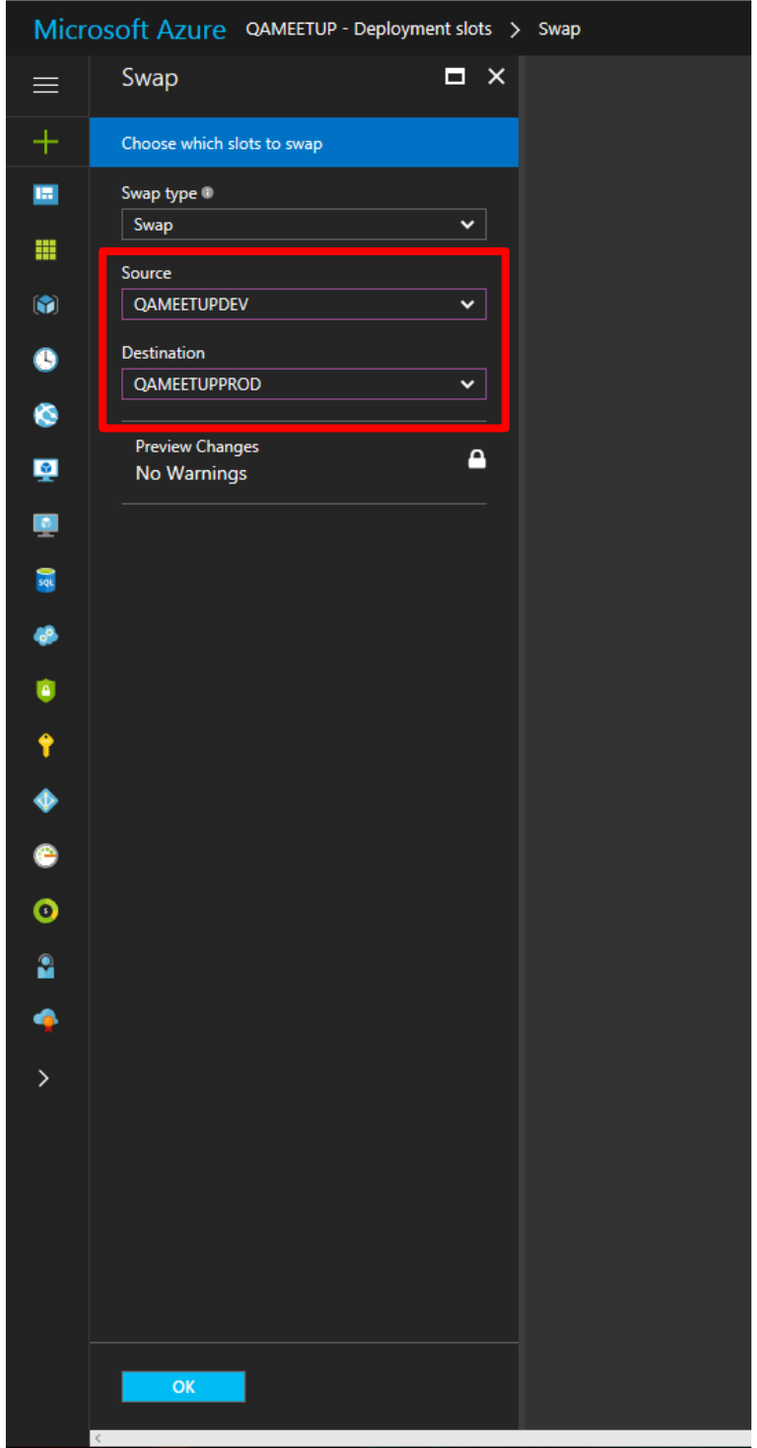
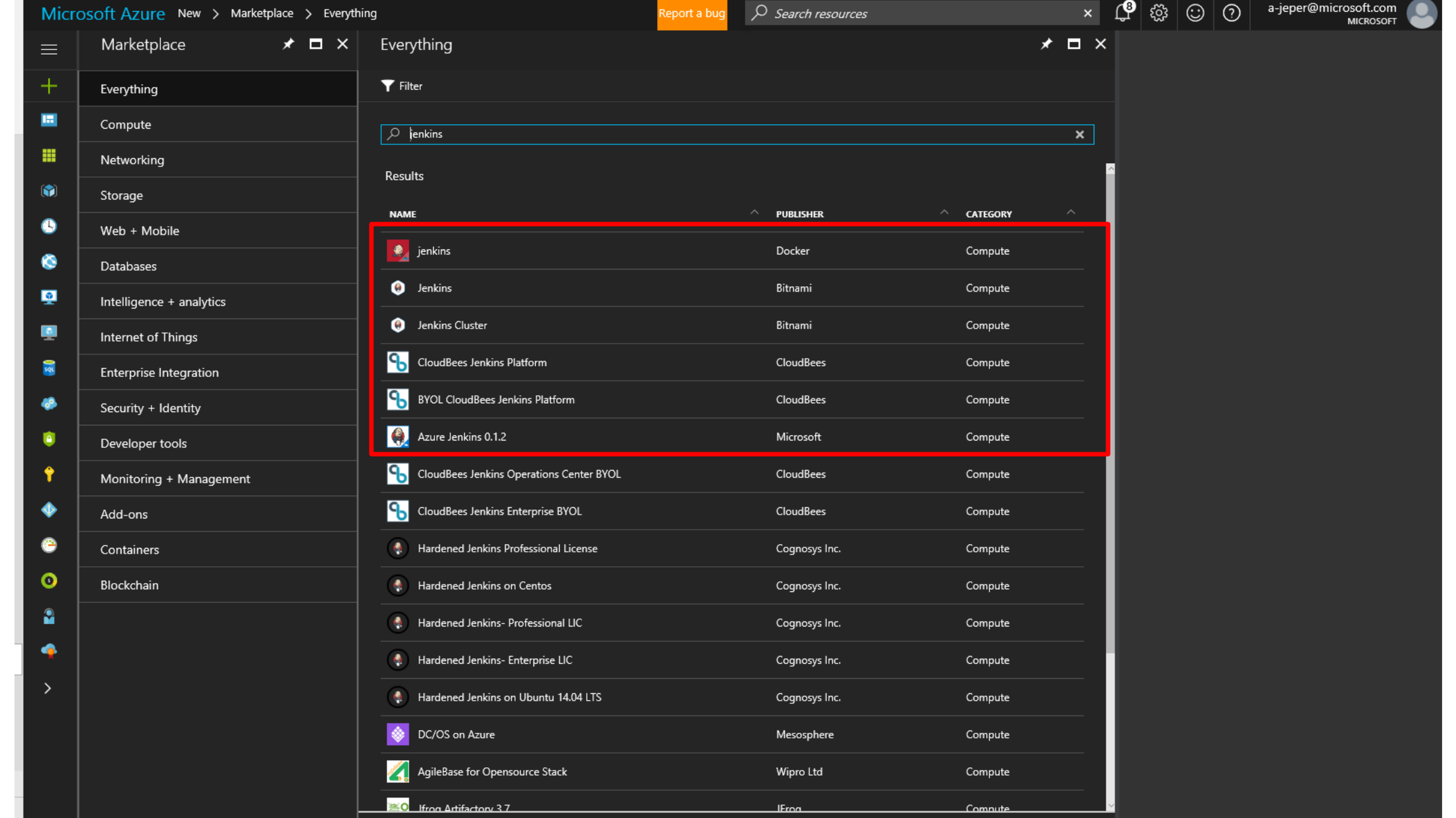


- General settings
- App settings
- Connection strings
- Handler mappings
- Monitoring and diagnostic settings
- Web job content

Deploy CI tools on Azure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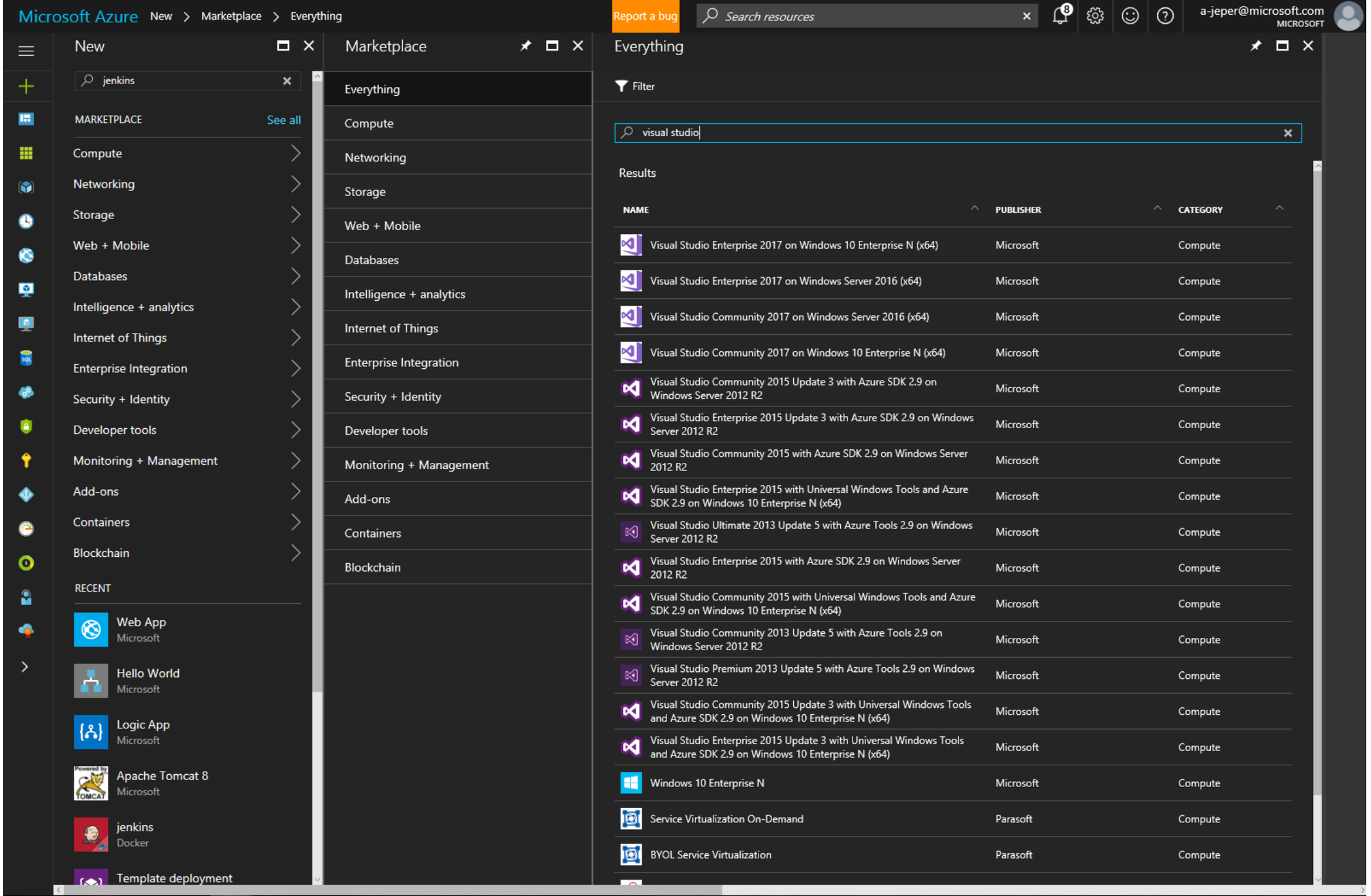
MICROSOFT
Marketplace
Everything
Compute
Networking
Storage
Web + Mobile
Databases
Intelligence + analytics
Internet of Things
Enterprise Integration
Security + Identity
Developer tools
Monitoring + Management
Add-ons
Containers
Blockchain
Everything
Filter
jenkins
Results
NAME
PUBLISHER
CATEGORY
jenkins Docker Compute
Jenkins Bitnami Compute
Jenkins Cluster Bitnami Compute
CloudBees Jenkins Platform CloudBees Compute
BYOL CloudBees Jenkins Platform CloudBees Compute
Azure Jenkins 0.1.2 Microsoft Compute
CloudBees Jenkins Operations Center BYOL CloudBees Compute
CloudBees Jenkins Enterprise BYOL CloudBees Compute
Hardened Jenkins Professional License Cognosys Inc. Compute
Hardened Jenkins on Centos Cognosys Inc. Compute
Hardened Jenkins- Professional LIC Cognosys Inc. Compute
Hardened Jenkins- Enterprise LIC Cognosys Inc. Compute
Hardened Jenkins on Ubuntu 14.04 LTS Cognosys Inc. Compute
DC/OS on Azure Mesosphere Compute
AgileBase for Opensource Stack Wipro Ltd Compute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Visual Studio Enterprise 2017 on Windows Server 2016 (x64) Microsoft Compute
Visual Studio Community 2017 on Windows Server 2016 (x64) Microsoft Compute
Visual Studio Community 2017 on Windows 10 Enterprise N (x64) Microsoft Compute
Visual Studio Community 2015 Update 3 with Azure SDK 2.9 on Windows Server 2012 R2 Microsoft Compute
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Service Virtualization On-Demand Parasoft Compute
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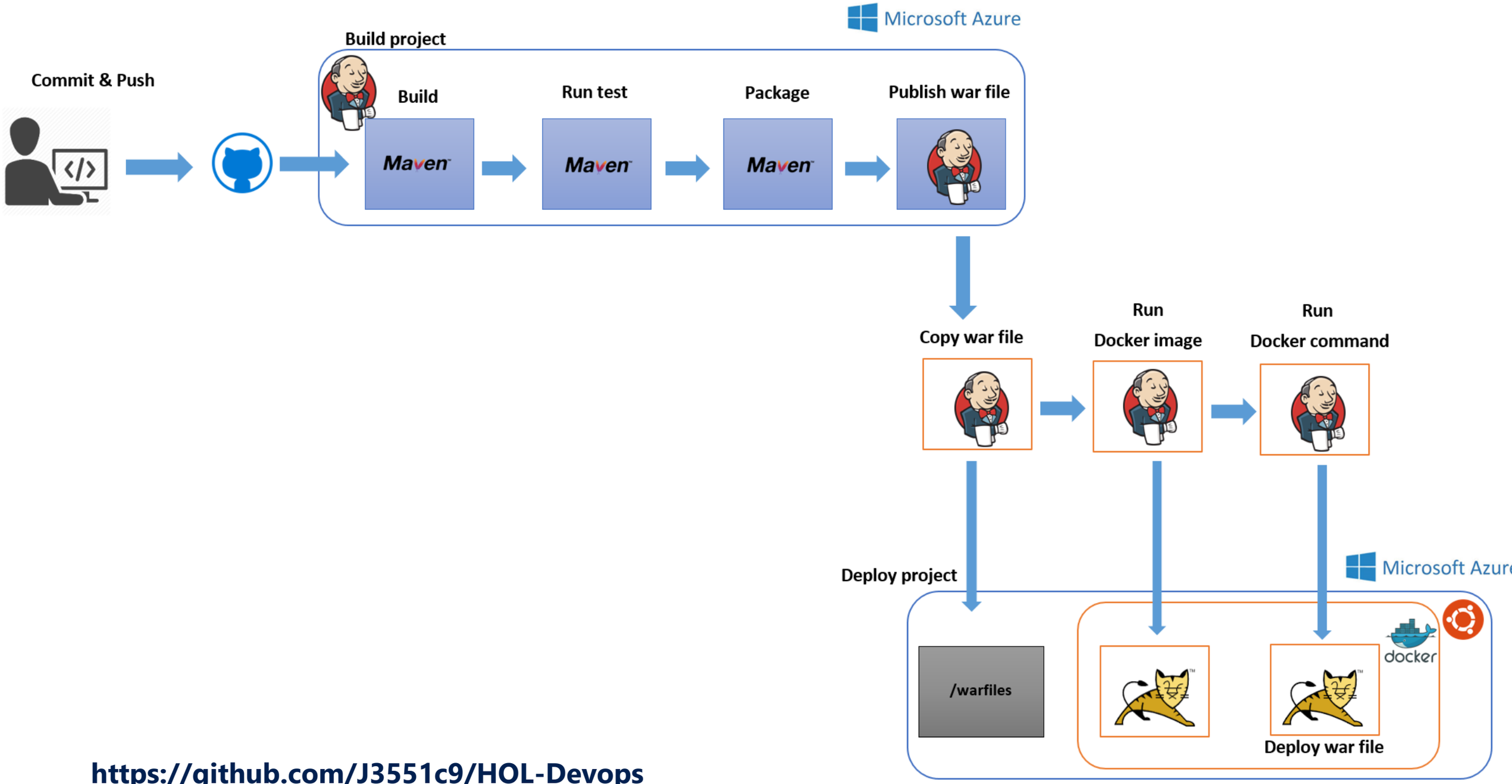
HOL



https://github.com/J3551c9/HOL-Devops

Thank you

Jessica Pérez

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Microsoft