Welcome to the

2019 Global Azure BOOTCAMP

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Bengaluru, India

Our Supporters

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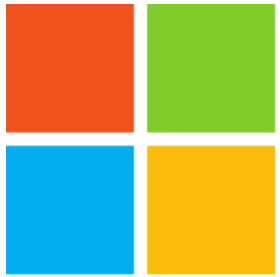

Microsoft

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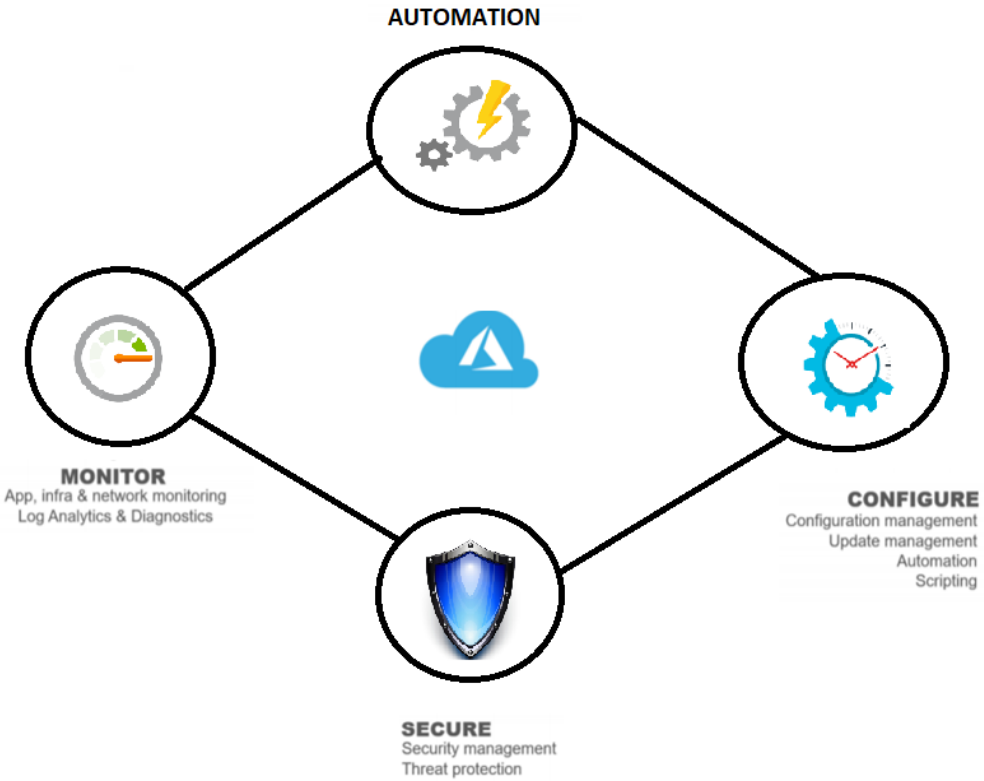
Monitoring and Managing the Hybrid Infrastructure with Azure Monitor and Azure Automation



Keshav Jain

Avinash Kumar

About us.

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Keshav

Around 10 years of experience in IT Infrastructure Management.

Working in DXC.Technology.

Prior to this, I was in Microsoft and worked on tools like Azure Monitor , Azure Automation and SCOM.

https://www.linkedin.com/in/keshav-jain-016427121/

Avinash

Around 9 years of experience in IT Infrastructure Management.

Working in Microsoft.

Works on Azure IAAS, Azure Automation and Hybrid Cloud.

https://www.linkedin.com/in/avinash-kumar-1034b06b/

We both were the part of the System Center team in 2014. He was the first one in our team to work on Automation and I picked up the “OMS” at the same time.

Agenda.

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- Monitoring.
- Manageability.
- Introduction to Azure Monitor and Log Analytics.
- Configure the Log Analytics Workspace.
- Introduction to Azure Automation.
- Running Automation Runbooks on Azure Automation.
- Executing the Automation Runbooks on Hybrid Environment.
- Automation State Configuration (PowerShell DSC).
- Integration of the Azure Monitor and Automation to do the Update Management, Change and Inventory Management.

Monitoring

Monitoring is the act of collecting and analyzing data to audit the performance, health, and availability of your resources.

- **Know** what devices and applications make up the Digital Transformation.
- **Keep an eye on those devices** in terms of availability, health status and performance and assessing their performance periodically.
- **Reporting to provide details about what has happened/is happening.**

And many more things…

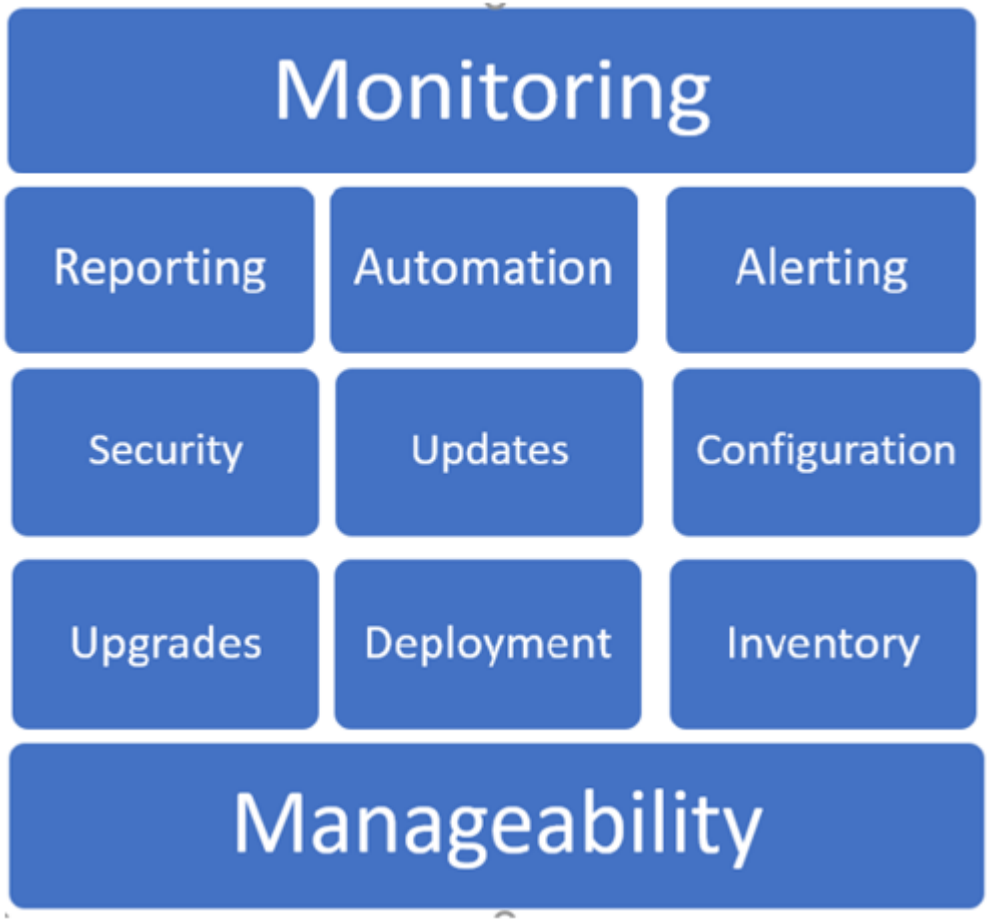
Only Monitoring ?

Nobody wants to do "Only Monitoring".

Everyone wants :-

- End to End Full Stack Monitoring.
- Resiliency in their infrastructure.
- Fix the problem ASAP.
- Predict the failures and outages.
- Infrastructure secure from all threats.
- Keep their infrastructure updated by applying the appropriate updates.
- Assess the health of the infrastructure.
- Keep the data for future assessment.

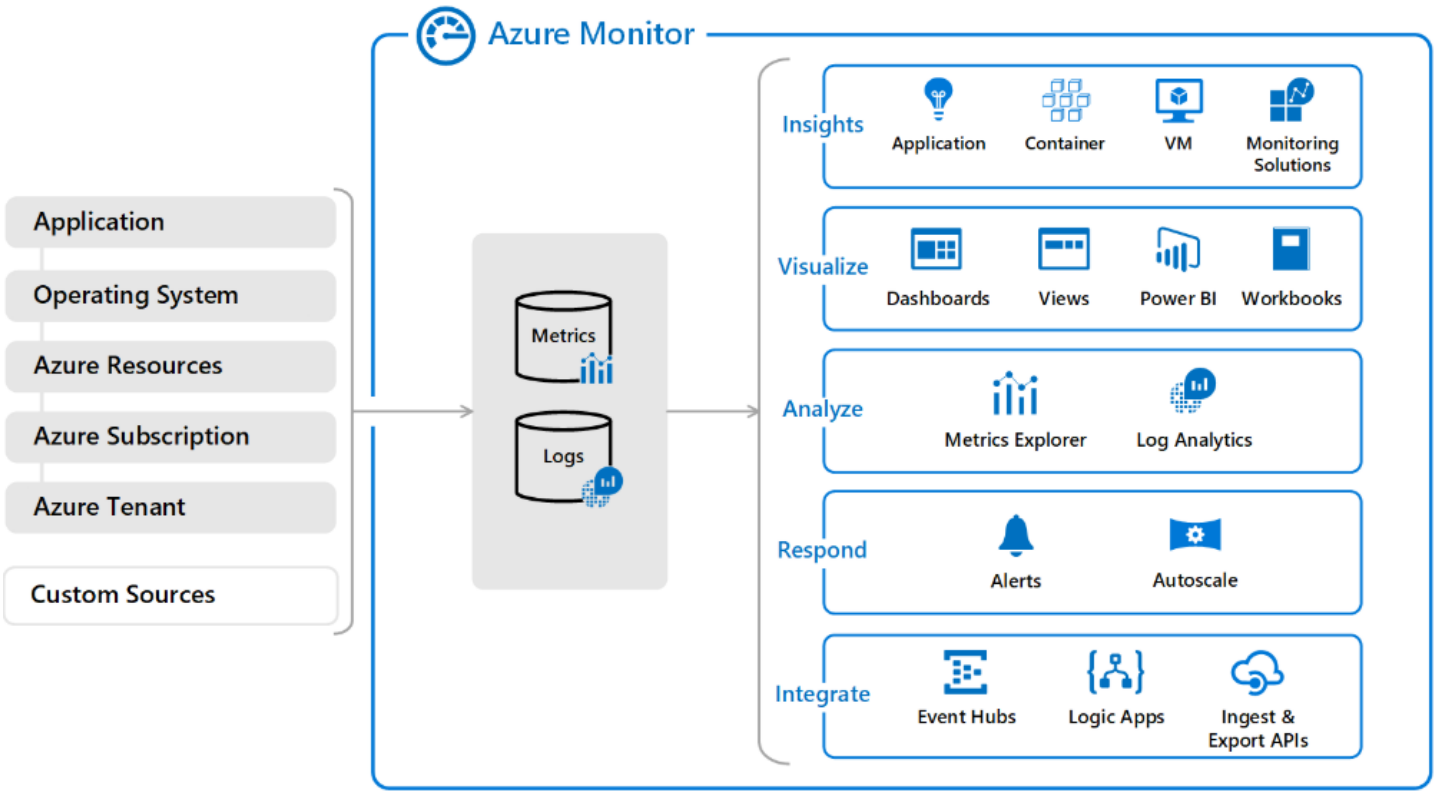
In simple words, when something goes wrong, the system should have the power to automatically fix it or automatically alert someone or even automatically create a ticket in a service desk and assign it to a queue.



Azure Monitor

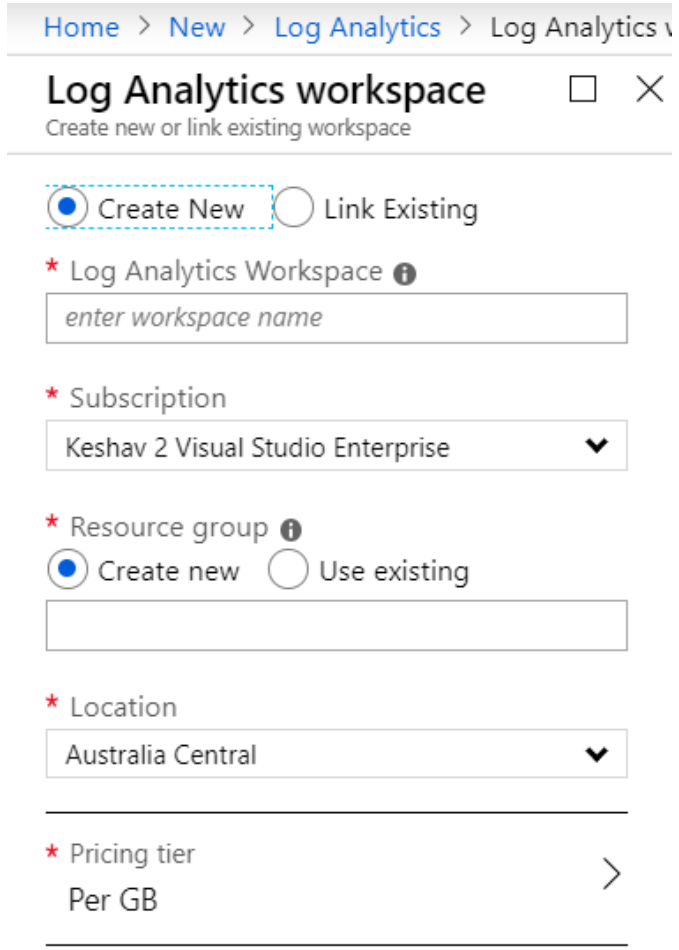
Azure Monitor provides sophisticated tools for collecting and analyzing telemetry that allow you to maximize the performance and availability of your cloud and on-premises resources and applications.

- Provides easy mechanism for collecting telemetry Data
- Built-in dashboards and visualizations that help you quickly understand the trends.
- Proactively identify issues and automatically respond to alerts.
- Flexible enough to get integrated with partner integrations to help you bring your DevOps, ITSM, SIEM and other custom tools.



Lets Configure the Monitoring !

- Log data collected by Azure Monitor is stored in a Log Analytics workspace.
- Workspace stores collected machine data in a specified region.
- Here you can Manage and protect Azure or AWS, Windows Server or Linux with a cost-effective, all-in-one cloud IT management solution.



Azure Automation.

Azure Automation delivers a cloud-based automation and configuration service that provides consistent management across your Azure and non-Azure environments.

- Build / Deploy resources
- Configure VMs.
- Monitor
- Protect
- Govern

Process Automation

Orchestrate processes using graphical, PowerShell, and Python runbooks

Configuration Management

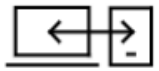
Collect inventory
Track changes
Configure desired state

Update Management

Assess compliance
Schedule update installation

Shared capabilities

Role based access control
Secure, global store for variables, credentials, certificates, connections
Flexible scheduling
Shared modules
Source control support
Auditing
Tags



Heterogenous

Windows & Linux
Azure and on-premises

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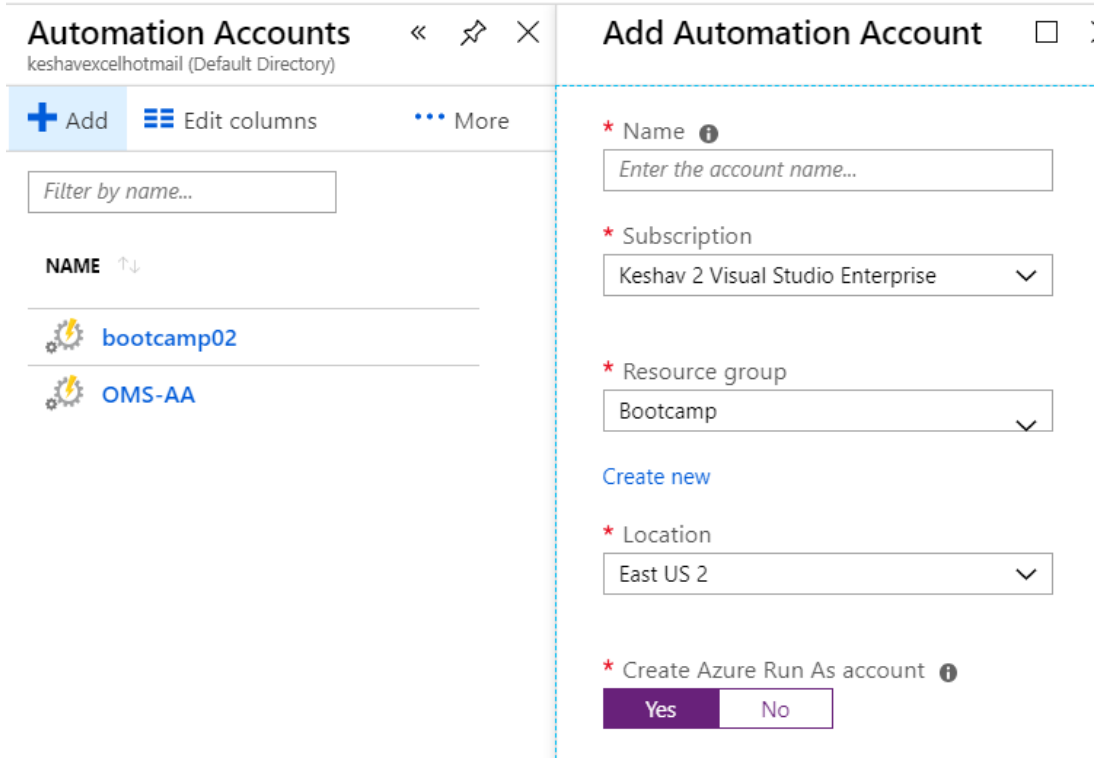
Configuring the Azure Automation Account.

- Automation to configure and automate operational tasks across a hybrid environment.
- Control hybrid environments.
- Integrate management systems using serverless runbooks.
- Ensure consistent management for Windows and Linux.



Running runbooks thru Azure Automation.

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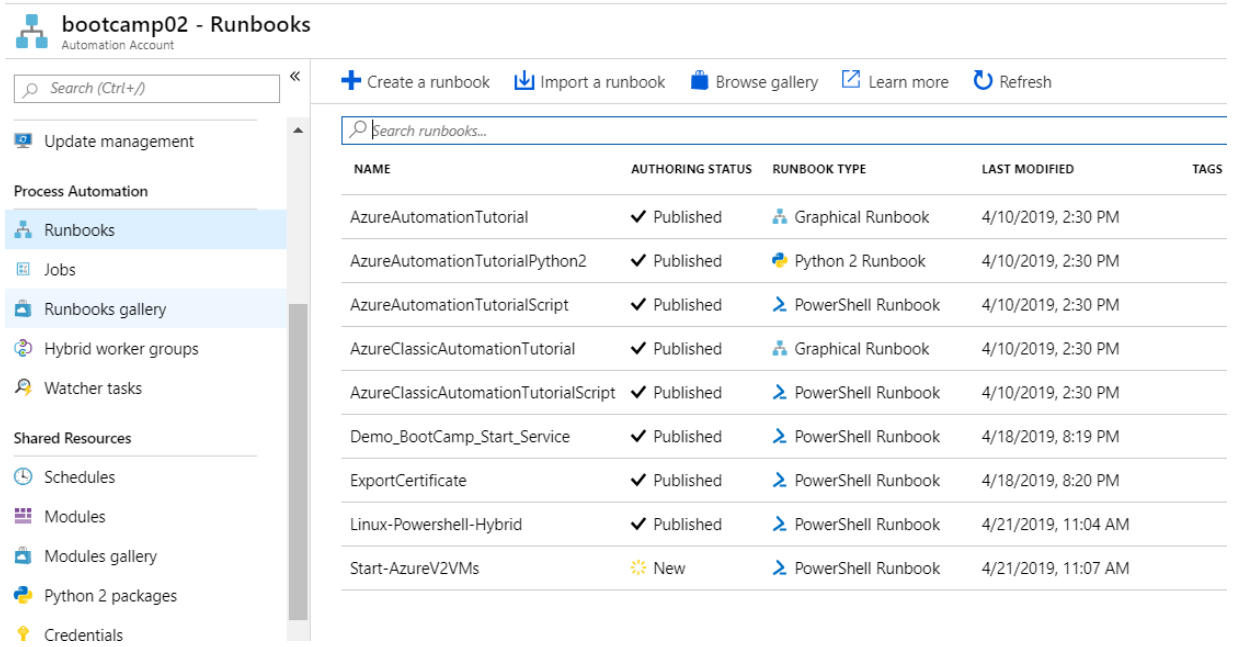
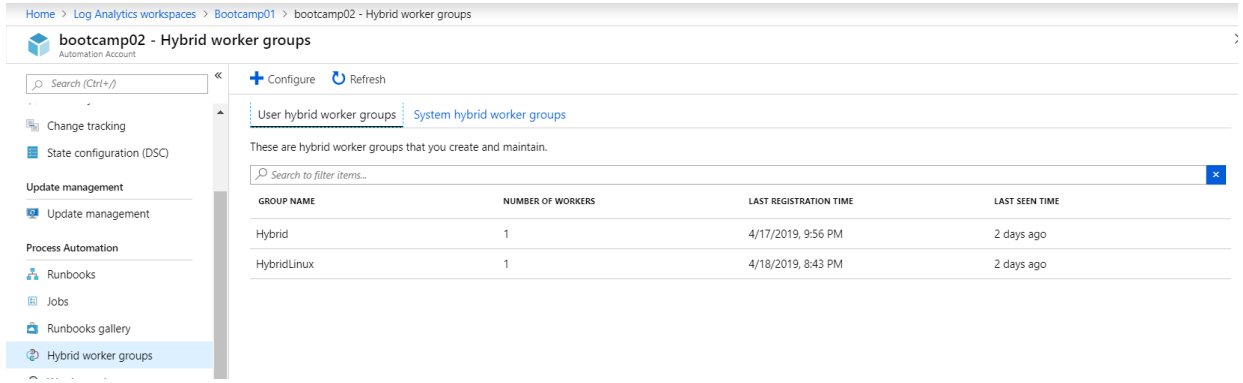
With Azure Automation we can automate frequent, time-consuming, and error-prone cloud management tasks.



Executing the Runbook on Hybrid Environment

Runbooks in Azure Automation might not have access to resources in other clouds or in your on-premises environment because they run on the Azure cloud platform.

We can use the Hybrid Runbook Worker feature of Azure Automation to run runbooks directly on the computer that's hosting the role and against resources in the environment to manage those local resources.

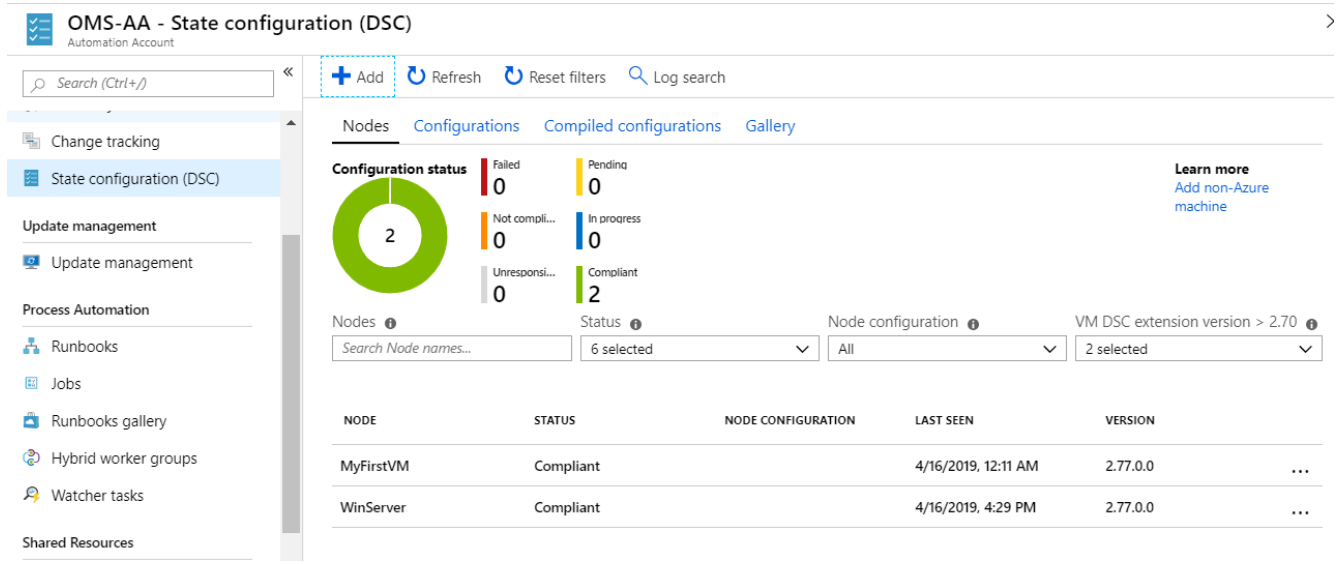


Desired State Configuration.

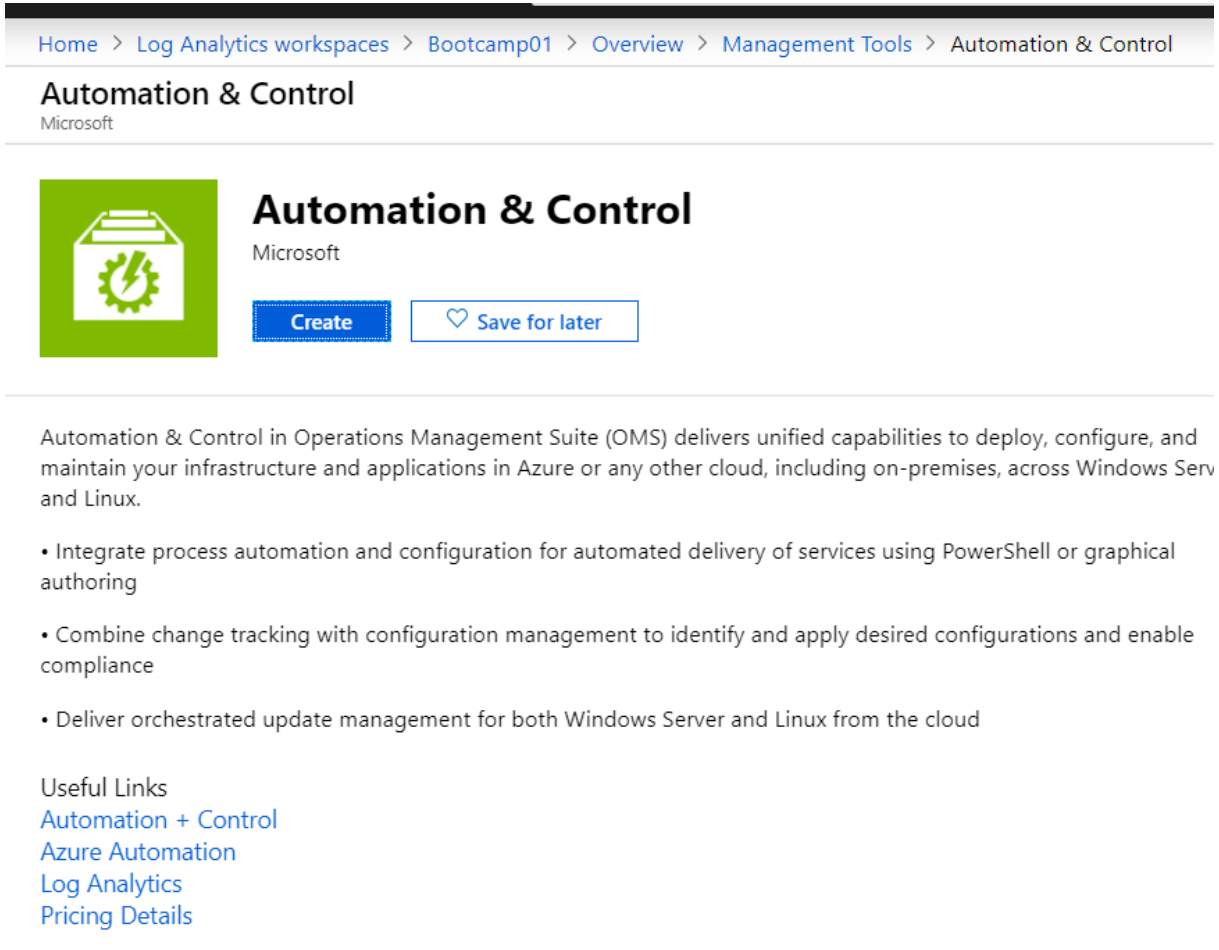
Azure Automation State Configuration is an Azure service that allows you to write, manage, and compile PowerShell Desired State Configuration (DSC) configurations, import DSC Resources, and assign configurations to target nodes.

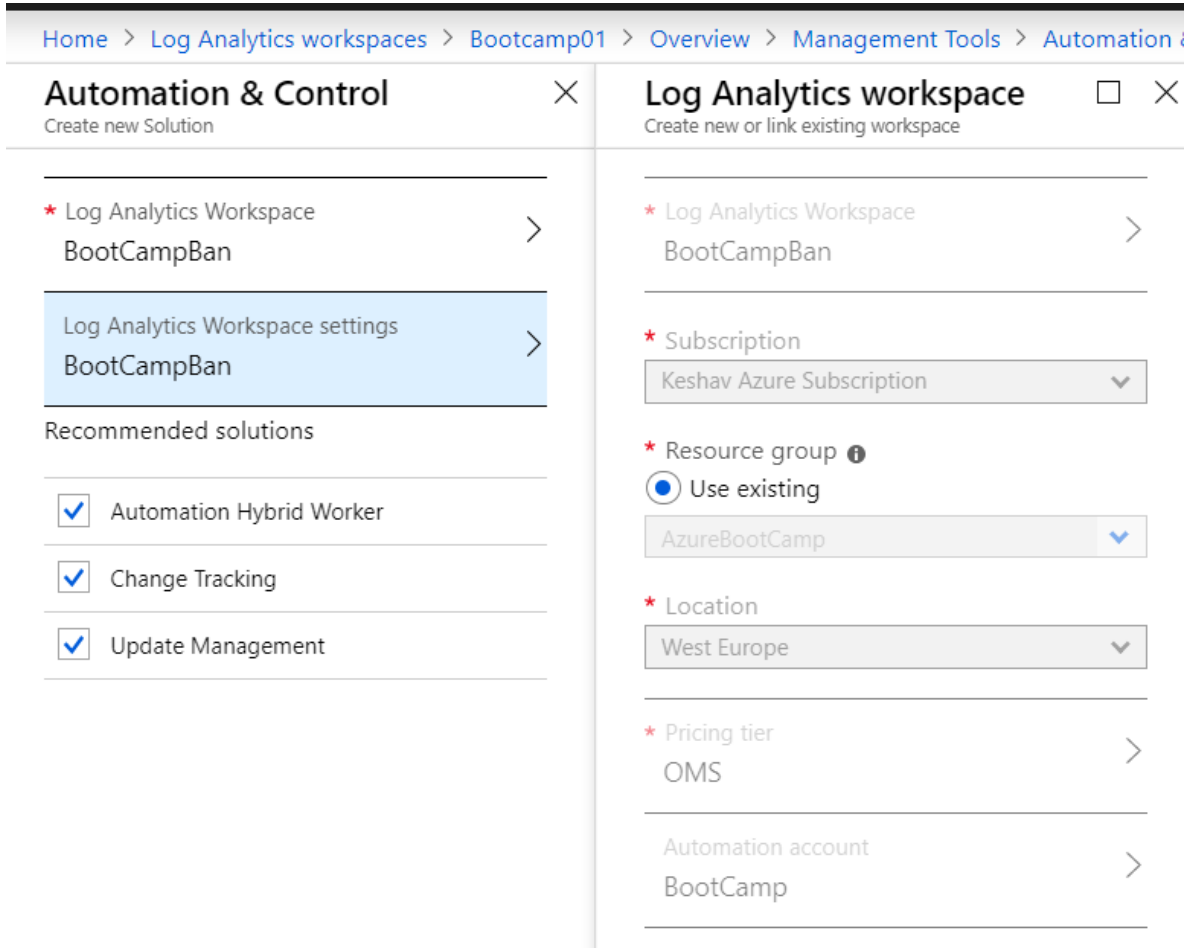
Built-in pull server.
Azure Automation State Configuration provides a DSC pull server similar to the Windows Feature DSC-Service so that target nodes automatically receive configurations, conform to the desired state, and report back on their compliance.

The built-in pull server in Azure Automation eliminates the need to set up and maintain your own pull server. Azure Automation can target virtual or physical Windows or Linux machines, in the cloud or on-premises.



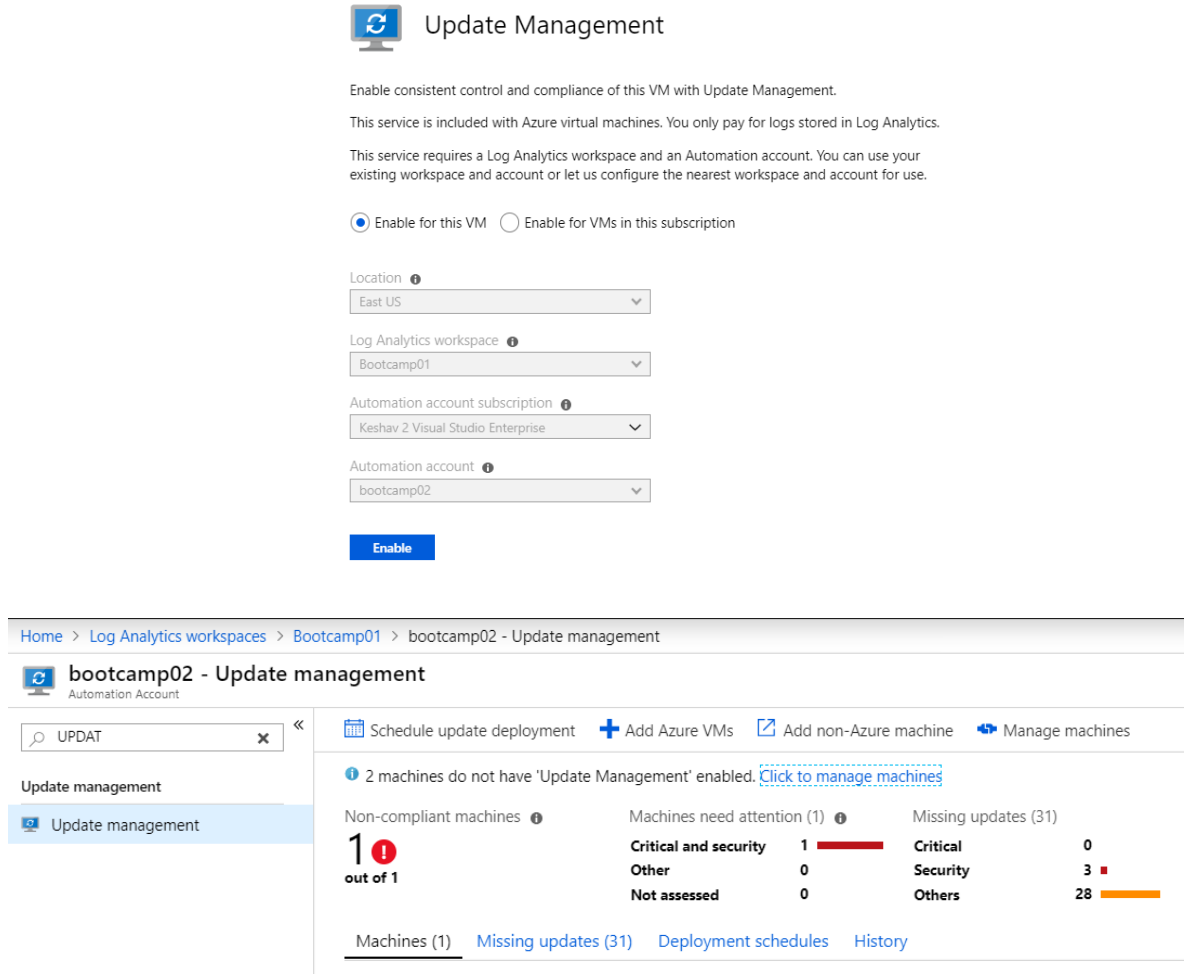
Integrating the Automation and Log Analytics Workspace.





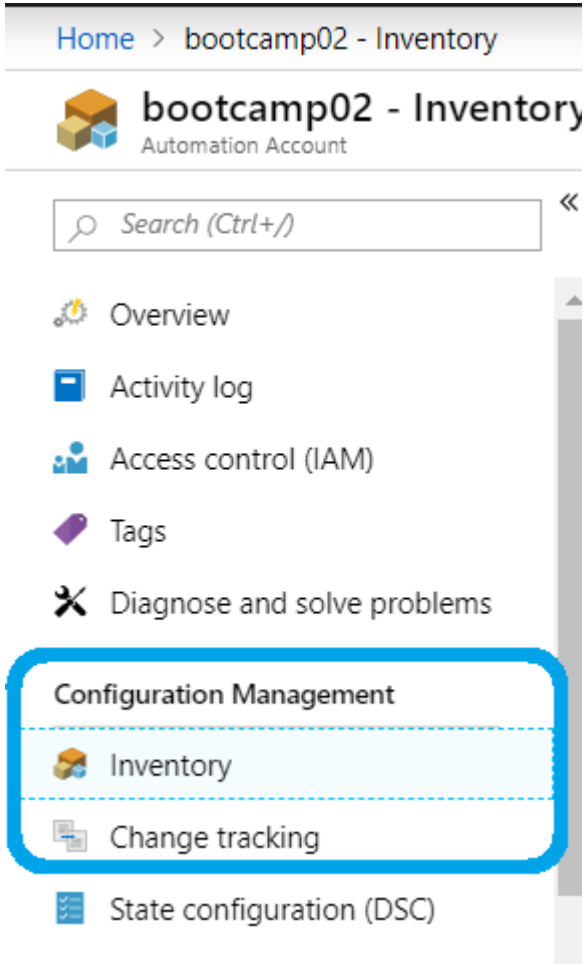
Update Management

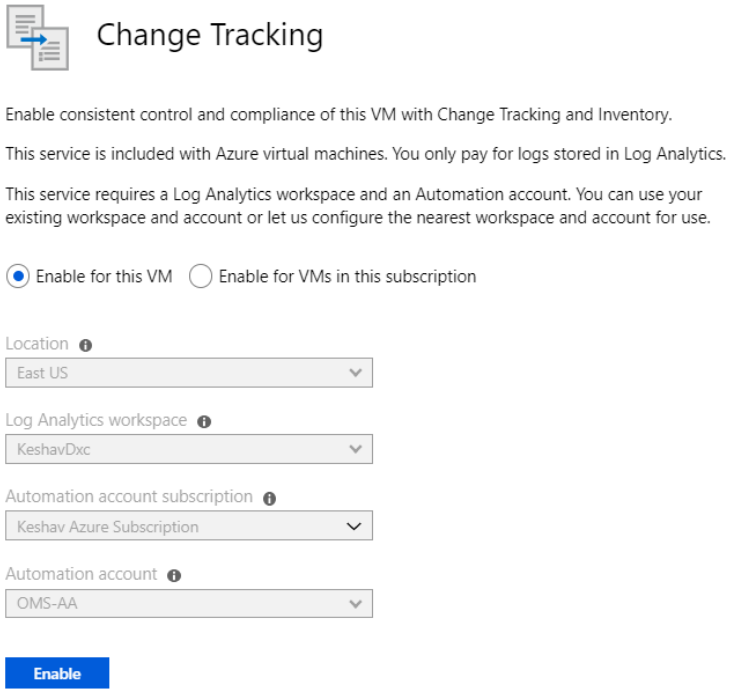
- Azure Update Management is a service included as part of your Azure Subscription that enables you to assess your update status across your environment and manage your Windows and Linux server patching from a single pane of glass, both for on-premises and Azure, or in other cloud providers.



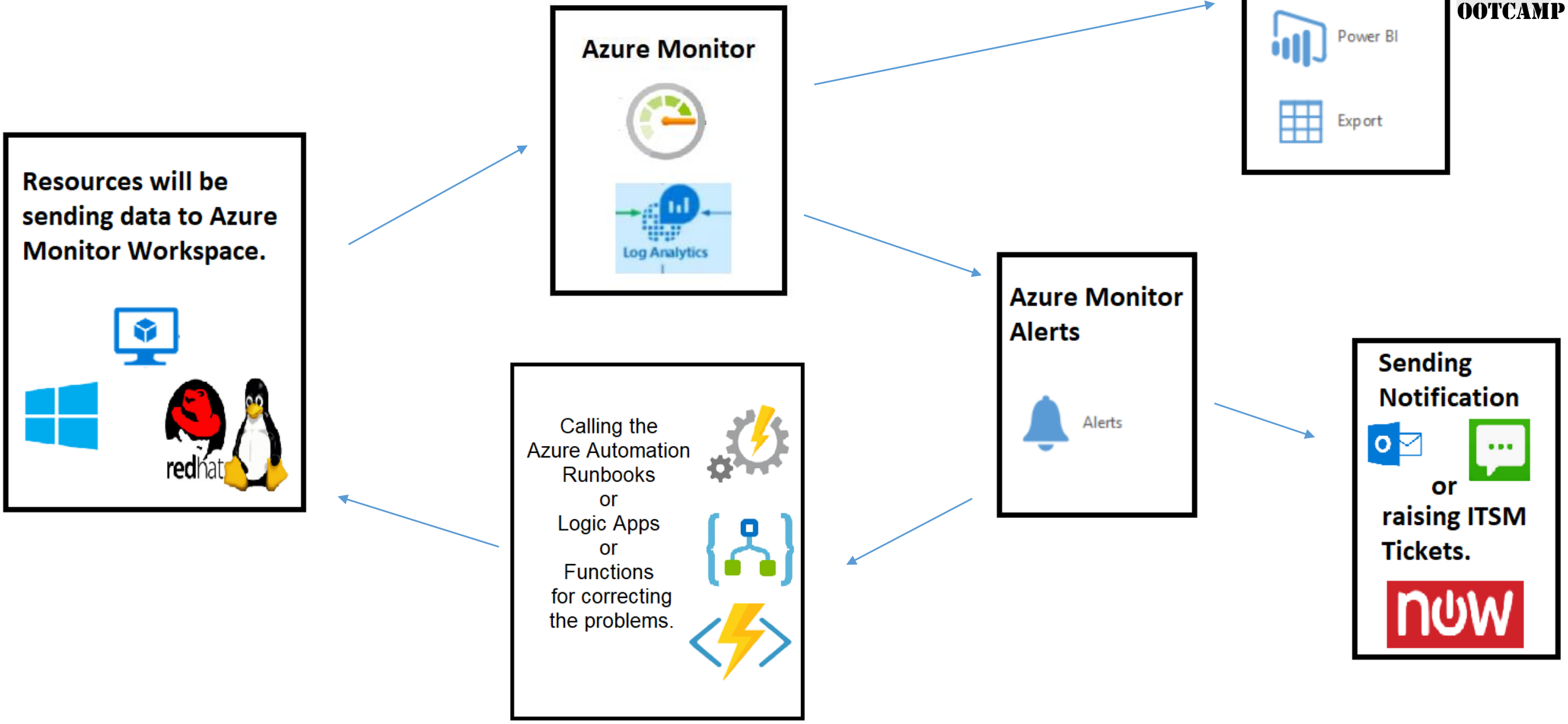
Inventory and Change Management

- Get an inventory of operating system resources including installed applications and other configuration items.
- Track changes across services, daemons, software, registry, and files to promptly investigate issues. The inventory of your VM in-guest resources gives you visibility into installed applications as well as other configuration items you wish to track.
- Rich reporting and search is available to quickly find detailed information to help understand everything that is configured within the VM.





Auto correcting the issues.



Auto correcting the issues with Azure Alerts.

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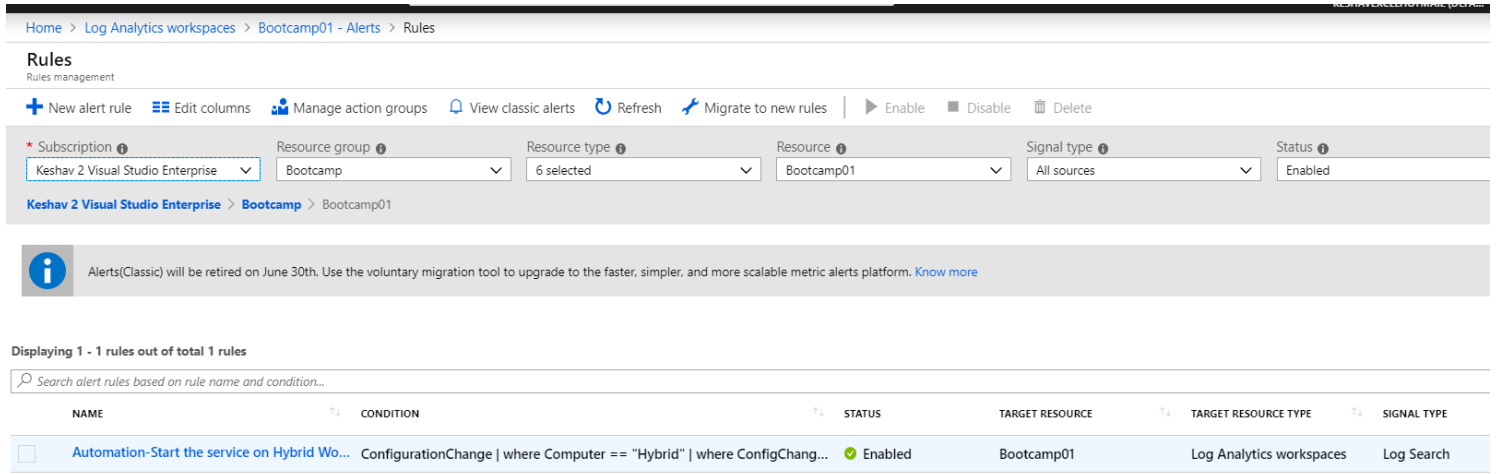
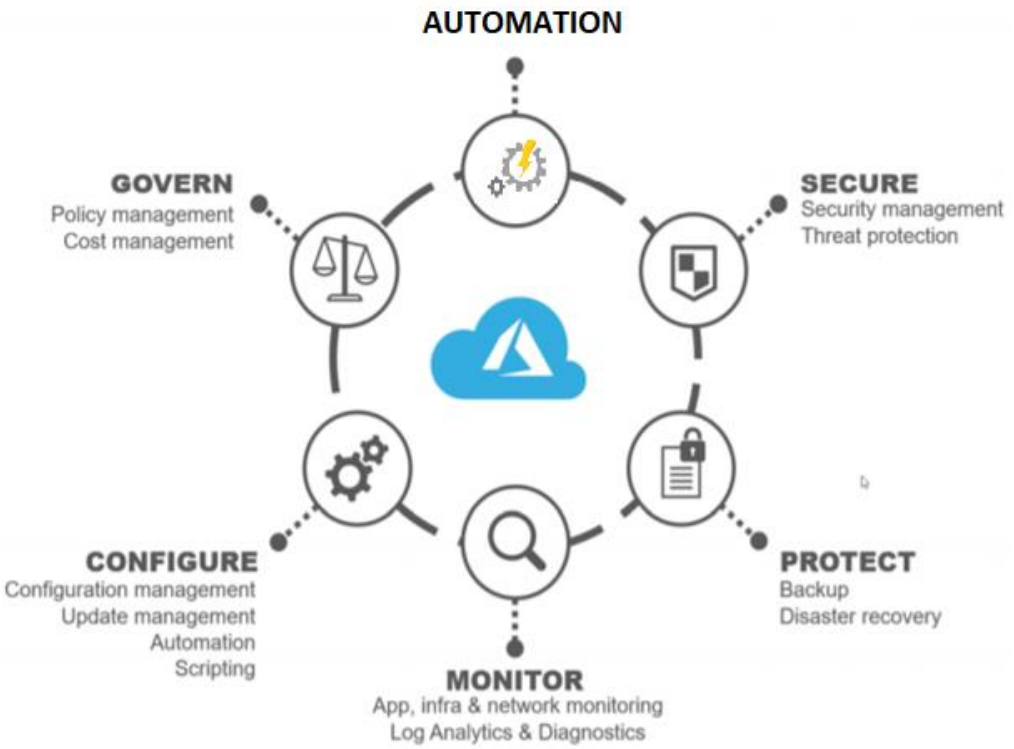
Azure Alerts proactively notify you when important conditions are found in your monitoring data. They allow you to identify and address issues before the users of your system notice them.



- ✓ *Monitoring the infrastructure and then triggering a Automation when something goes wrong.*
- ✓ *Dashboards to analyze the health of the infrastructure.*
- ✓ *Quick deployment of the resources by automating their deployment with use of ARM templates, PowerShell script, Azure DSC.*
- ✓ *Controlling the cost of the Azure Infrastructure by scaling them down.*
- ✓ *Deploying and managing the updates on windows or Unix or Linux machines.*
- ✓ *Assessing the Machines\Applications before they goes for upgrades.*
- ✓ *Integrating it with ITSM tools and other tools*



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Use the HASHTAG

#askgab19

And the organizers and volunteers will try to support!

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extensively

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Find all the online locations here

Join our Meetup group here

http://bit.ly/azrmeetup

Check the event photos here

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Note: You could also upload your selfies and other photos you have taken at the event

Check slide decks and other samples presented at the event here

http://bit.ly/gab2019-repo

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Thanks