Experts Live Netherlands

Track, Inventory and Patch VMs in Azure (Windows or Linux)
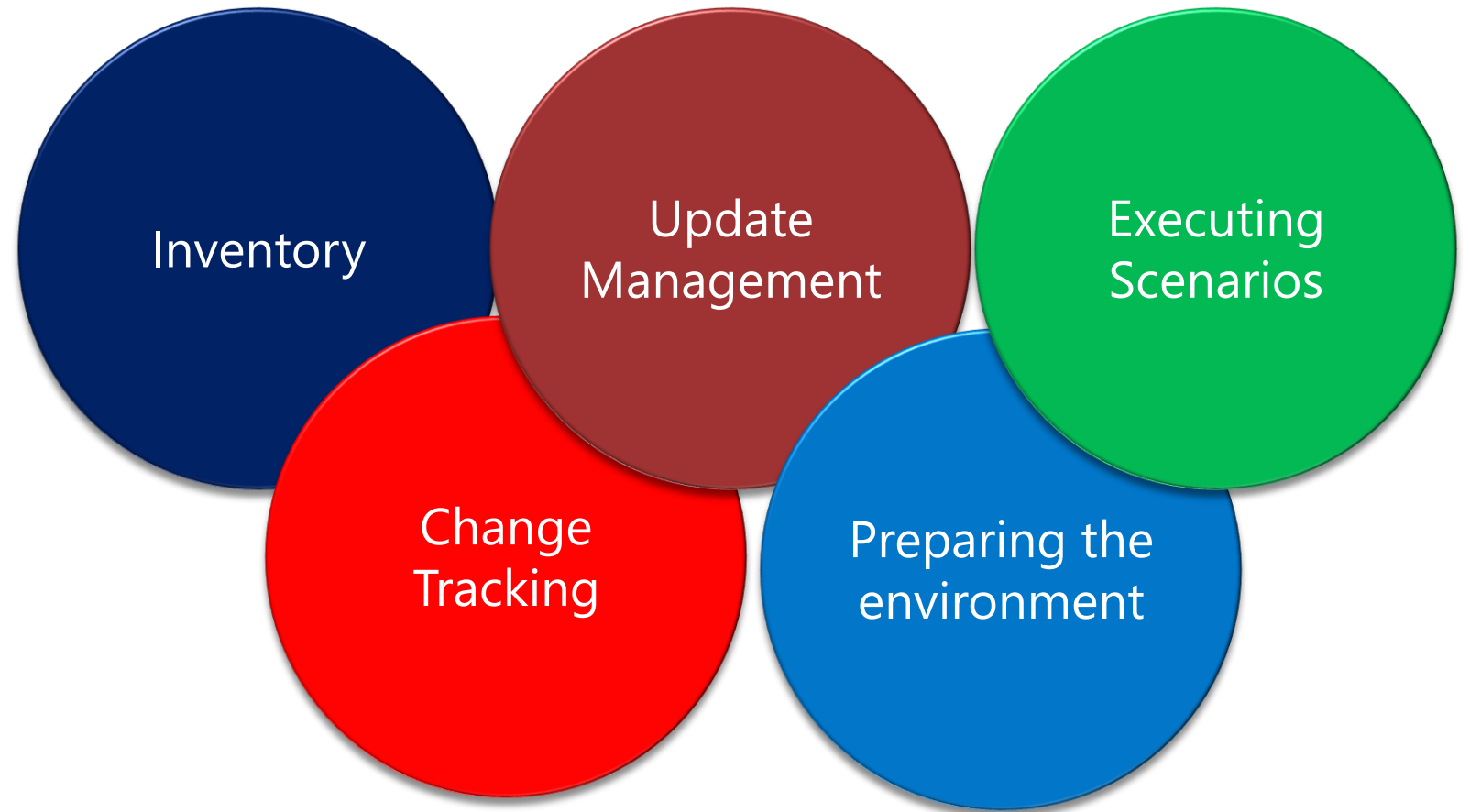
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Microsoft® MVP Most Valuable Professional

Microsoft® MVP Most Valuable Professional

Taking the everyday out of everyday

Start with Why

Overview

Planning and Scenarios

Continuous delivery of built-in, hybrid management services

MIGRATE

GOVERN
Policy Management
Blueprints
Cost Management

SECURE
Security Management
Threat Protection

CONFIGURE
Configuration
Update Management
Automation
Scripting

PROTECT
Backup
Site Recovery

MONITOR
App, Infra, and Network Monitoring
Log Analytics & Diagnostics
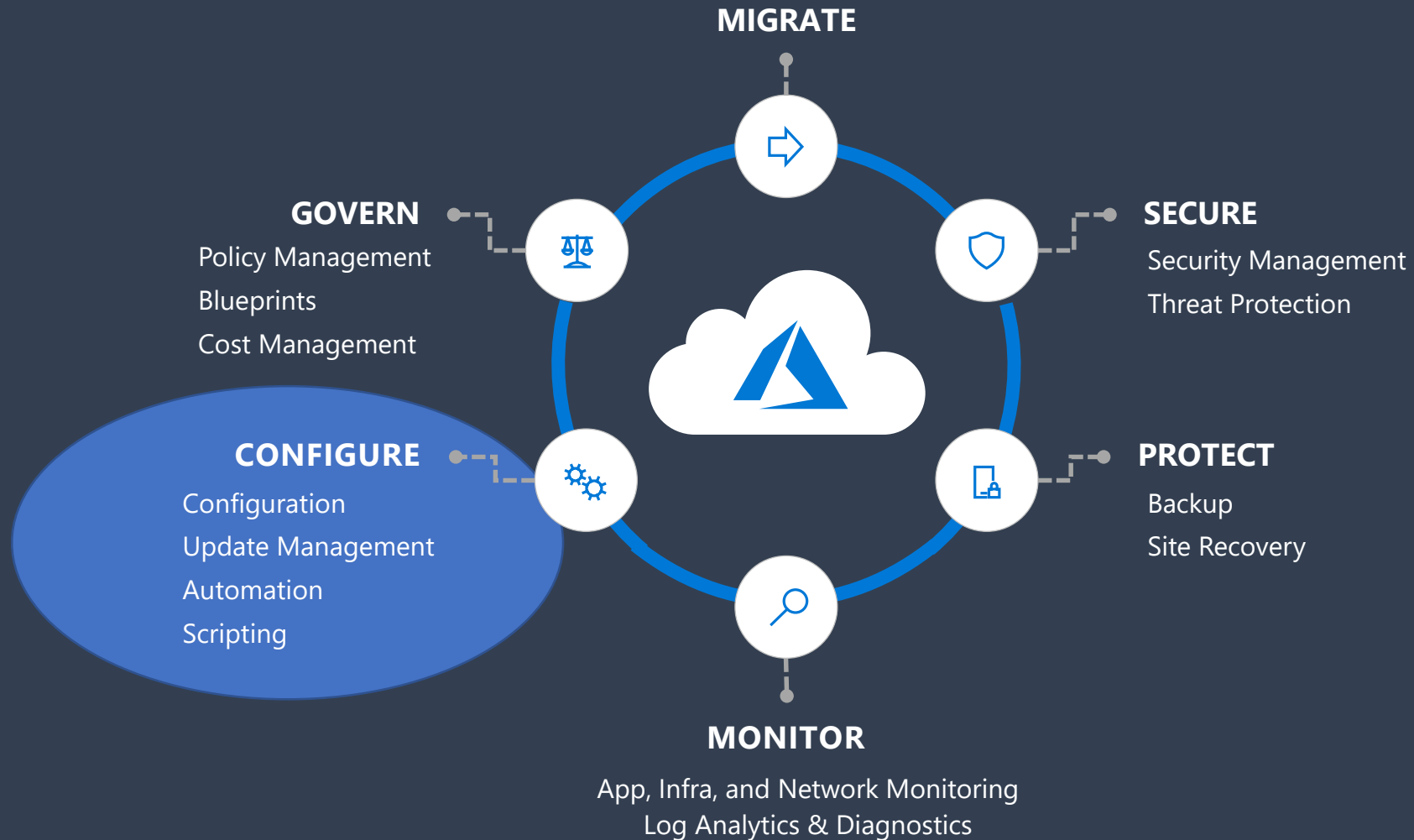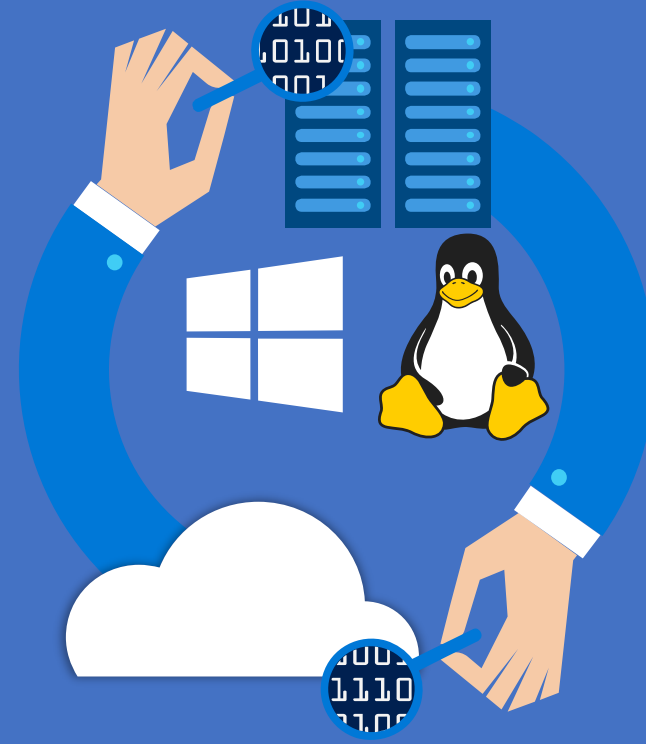
Consistent server management spanning on-premises & cloud environments

SCCM vs. Azure Services

Workload	SCCM	Azure Services
Patch	✓	Azure Update Management
Settings	✓	Azure State Configuration
Security	✓	Azure Security Center
Inventory	✓	Azure Inventory
Automation	✓	Azure Automation
Change tracking	✓	Azure Change Tracking
App management	✓	*This is cloud – it must be on the way*
Backup	X	Azure Backup
Disaster recovery	X	Azure Site Recovery
Monitoring	X	Azure Monitor
Linux support	X	✓

Inventory

Inventory
Discover the state of your environment

Discover what's installed on your machines

- Software
- Services/Daemons
- Files
- Registries

View how many machines have a specific software or version

Updated when a change is detected

Inventory

Add Azure VMs   Add non-Azure machine   Manage machines   Log Analytics   Edit Settings   Create a machine group

New software ⓘ
17
Last 24 hours

Machines reporting ⓘ
51
Last 24 hours

Learn more
Inventory
Provide feedback

Machines(17)   **Software(2)**   Files(285)   Windows Registry(186)   Windows Services(197)   Linux Daemons(109)   Machine Groups(3)

🔍 Chrome

NAME	VERSION	PUBLISHER	LAST REFRESHED TIME	MACHINES
Google Chrome	69.0.3497.81	Google Inc.	9/10/2018, 12:18 PM	1
google-chrome-stable	69.0.3497.81-1	Chrome Linux Team <chromium-dev@chromium.org>	9/10/2018, 12:53 PM	1

Demo

Inventory

Change Tracking, and
Resource Change History

Change Tracking
Detect server changes

Detect changes to your machines

- Software
- Services/Daemons
- Files
- Registries

View changes when troubleshooting

Alert on critical changes

Difference in Inventory snapshots

Change Tracking

Home > Monitor - Alerts > Create rule

Create rule
Rules management

1. Define alert condition

Alert condition configuration requires 1) Target selection and 2) Alert criteria definition

* Alert target   Target Hierarchy

⊕ ContosoMarketingWorkspace   🔑 Contoso IT - demo

＋ Select target

* Alert criteria

No criteria defined, click on 'Add criteria' to select a signal and define its lo...

＋ Add criteria

2. Define alert details

Create alert rule

Configure signal logic

11:25 AM   11:30 AM   11:35 AM   11:40 AM   11:45 AM

* Search query ⓘ

```
ConfigurationChange |
where SvcName contains "W3SVC" |
where SvcState == "Stopped"
```

Query to be executed : *ConfigurationChange | where SvcName contains "W3SVC" | where SvcState == "Stopped"↵ | count*
For time window : *9/12/2018 11:41:04 AM - 9/12/2018 11:46:04 AM*

Alert logic

Based on ⓘ   Condition ⓘ   * Threshold ⓘ

Number of results ▾   Greater than ▾   0

Condition preview

Whenever the custom log search is greater than 0 count

Evaluated based on

* Period (in minutes) ⓘ   * Frequency (in minutes) ⓘ

5   5

Monitor - Activity log
Microsoft

⊞ Edit columns	↻ Refresh	⬆ Export to Event Hub	⬇ Download as CSV	📊 Logs	📌 Pin current filters	�️ Reset filters

🔍 Search	✕		💡 Quick Insights

(Management Group : **None**) (Subscription : **Contoso IT - demo**) (Timespan : **Last 6 hours**) (Event severity : **All**) (＋ Add Filter)

First 155 items.

OPERATION NAME	STATUS	TIME	TIME STAMP	SUBSCRIPTION	EVENT INITIATED BY
▶ ⓘ SoftwareUpdateConfigurationRuns	Succeeded	1 min ago	Fri Apr 19 2...	e4272367-5645-4c4e-9c67-3b74b59a6982	miroman@microsoft.
▶ ⓘ SoftwareUpdateConfigurationMachineRu	Succeeded	1 min ago	Fri Apr 19 2...	e4272367-5645-4c4e-9c67-3b74b59a6982	miroman@microsoft.
▶ ⓘ Write GuestConfigurationAssignments	Succeeded	2 min ago	Fri Apr 19 2...	e4272367-5645-4c4e-9c67-3b74b59a6982	MicrosoftGuestConfi
▶ ⓘ SoftwareUpdateConfigurationRuns	Succeeded	2 min ago	Fri Apr 19 2...	e4272367-5645-4c4e-9c67-3b74b59a6982	miroman@microsoft.
▶ ⓘ SoftwareUpdateConfigurationMachineRu	Succeeded	2 min ago	Fri Apr 19 2...	e4272367-5645-4c4e-9c67-3b74b59a6982	miroman@microsoft.
▶ ⓘ Create or Update Virtual Machine	Succeeded	3 min ago	Fri Apr 19 2...	e4272367-5645-4c4e-9c67-3b74b59a6982	jehunte@microsoft.c
▶ ⓘ SoftwareUpdateConfigurationRuns	Succeeded	3 min ago	Fri Apr 19 2...	e4272367-5645-4c4e-9c67-3b74b59a6982	miroman@microsoft.
▶ ⓘ SoftwareUpdateConfigurationMachineRu	Succeeded	3 min ago	Fri Apr 19 2...	e4272367-5645-4c4e-9c67-3b74b59a6982	miroman@microsoft.
▶ ⓘ SoftwareUpdateConfigurationRuns	Succeeded	4 min ago	Fri Apr 19 2...	e4272367-5645-4c4e-9c67-3b74b59a6982	miroman@microsoft.
▶ ⓘ SoftwareUpdateConfigurationMachineRu	Succeeded	4 min ago	Fri Apr 19 2...	e4272367-5645-4c4e-9c67-3b74b59a6982	miroman@microsoft.
▶ ⓘ Write GuestConfigurationAssignments	Succeeded	5 min ago	Fri Apr 19 2...	e4272367-5645-4c4e-9c67-3b74b59a6982	MicrosoftGuestConfi
▶ ⓘ SoftwareUpdateConfigurationRuns	Succeeded	5 min ago	Fri Apr 19 2...	e4272367-5645-4c4e-9c67-3b74b59a6982	miroman@microsoft.
▶ ⓘ Health Event Activated	Active	5 min ago	Fri Apr 19 2...	e4272367-5645-4c4e-9c67-3b74b59a6982	

Sidebar

🔍 Search (Ctrl+/)

⊘ Overview
▦ Activity log
⚠ Alerts
📈 Metrics
📊 Logs
💙 Service Health
📕 Workbooks (preview)

Insights
💡 Applications
🖥 Virtual Machines (preview)
🔲 Containers
🌐 Network
⋯ More

Settings
▦ Diagnostics settings
↗ Autoscale

Support + Troubleshooting
💲 Usage and estimated costs

Monitor - Activity log
Microsoft

Search (Ctrl+/)

- Overview
- **Activity log**
- Alerts
- Metrics
- Logs
- Service Health
- Workbooks (preview)

Insights

- Applications
- Virtual Machines (preview)
- Containers
- Network
- More

Settings

- Diagnostics settings
- Autoscale

Support + Troubleshooting

- Usage and estimated costs

Edit columns   Refresh

Search

Management Group : None

First 155 items.

OPERATION NAME

- ▶ ⓘ SoftwareUpdateConfig
- ▶ ⓘ SoftwareUpdateConfig
- ▶ ⓘ Write GuestConfigura
- ▶ ⓘ SoftwareUpdateConfig
- ▶ ⓘ SoftwareUpdateConfig
- ▶ ⓘ Create or Update Virtu
- ▶ ⓘ SoftwareUpdateConfig
- ▶ ⓘ SoftwareUpdateConfig
- ▶ ⓘ SoftwareUpdateConfig
- ▶ ⓘ SoftwareUpdateConfig
- ▶ ⓘ Write GuestConfigura
- ▶ ⓘ SoftwareUpdateConfig
- ▶ ⓘ Health Event Activated

Create or Update Virtual Machine
Fri Apr 19 2019 10:38:05 GMT-0700 (Pacific Daylight Time)

➕ New alert rule

Summary   JSON   Change history (Preview)

Operation name	Create or Update Virtual Machine
Time stamp	Fri Apr 19 2019 10:38:05 GMT-0700 (Pacific Daylight Time)
Event initiated by	jehunte@microsoft.com

Monitor - Activity log
Microsoft

Search (Ctrl+/)

Overview

Activity log

Alerts

Metrics

Logs

Service Health

Workbooks (preview)

Insights

Applications

Virtual Machines (preview)

Containers

Network

More

Settings

Diagnostics settings

Autoscale

Support + Troubleshooting

Usage and estimated costs

Edit columns   Refresh

Search

Management Group : None

First 155 items.

OPERATION NAME

▶ ⓘ SoftwareUpdateConfig

▶ ⓘ SoftwareUpdateConfig

▶ ⓘ Write GuestConfigurat

▶ ⓘ SoftwareUpdateConfig

▶ ⓘ SoftwareUpdateConfig

▶ ⓘ Create or Update Virtu

▶ ⓘ SoftwareUpdateConfig

▶ ⓘ SoftwareUpdateConfig

▶ ⓘ SoftwareUpdateConfig

▶ ⓘ SoftwareUpdateConfig

▶ ⓘ Write GuestConfigurat

▶ ⓘ SoftwareUpdateConfig

▶ ⓘ Health Event Activated

Create or Update Virtual Machine
Fri Apr 19 2019 10:38:05 GMT-0700 (Pacific Daylight Time)

+ New alert rule

Summary   JSON   **Change history (Preview)**

The following changes to this resource were detected up to 30 minutes before and after the time of the operation.

CHANGE DETECTION TIME

Fri Apr 19 2019 10:38:09 GMT-0700 (Pacific Daylight Time)

Fri Apr 19 2019 10:34:47 GMT-0700 (Pacific Daylight Time)

View more changes

Change history (Preview)

📦 View resource   ⧉ View resource schema   🗐 Activity log

Resource name : **Marketing1**   Subscription ID : e4272367-5645-4c4e-9c67-3b74b59a6982

Resource group : **ContosoAutomation**   Resource type : Microsoft.Compute/virtualMachines

⟰

Selected change log

Fri, 4/19/2019, 10:34:47 AM

(Timespan : **Last week**)

CHANGE DETECTION TIME

Fri, 4/19/2019, 10:44:47 AM

Fri, 4/19/2019, 10:38:09 AM

Fri, 4/19/2019, 10:34:47 AM

Thu, 4/18/2019, 5:15:54 PM

Thu, 4/18/2019, 9:40:43 AM

Thu, 4/18/2019, 9:39:42 AM

The following changes occurred on Marketing1 between Thu, 4/18/2019, 5:15:54 PM (left) and Fri, 4/19/2019, 10:34:47 AM (right).

```
 1   {                                                      1   {
 2 - "id": "/subscriptions/e4272367-5645-4c4e-9c67-3b74     2 + "id": "/subscriptions/e4272367-5645-4c4e-9c67-3b74
 3     "name": "Marketing1",                                3     "name": "Marketing1",
 4     "type": "microsoft.compute/virtualmachines",         4     "type": "microsoft.compute/virtualmachines",
 5     "location": "eastus",                                5     "location": "eastus",
 6     "tags": {                                            6     "tags": {
 7        "businessowner": "",                              7        "businessowner": "",
 8        "compositeApp": ""                                8        "compositeApp": ""
 9     },                                                   9     },
10     "kind": "",                                         10     "kind": "",
11     "properties": {                                     11     "properties": {
12        "hardwareProfile": {                             12        "hardwareProfile": {
13 -         "vmSize": "Standard_B2s"                       13 +         "vmSize": "Standard_B2ms"
14        },                                               14        },
15        "networkProfile": {                              15        "networkProfile": {
16           "networkInterfaces": [                        16           "networkInterfaces": [
17              {                                          17              {
18                 "id": "/subscriptions/e4272367-564      18                 "id": "/subscriptions/e4272367-564
19              }                                          19              }
20           ]                                             20           ]
21        },                                               21        },
22        "osProfile": {                                   22        "osProfile": {
23           "adminUsername": "demouser",                  23           "adminUsername": "demouser",
```
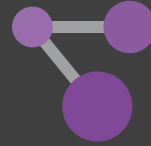
Azure Resource Graph
Holds last 14 days of resource snapshots
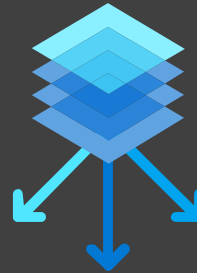
Change History
Compares snapshots for differences

Demo

Change Tracking

Azure Update Management

Azure Update Management

Assess update status of servers across your environment

- Windows, Linux
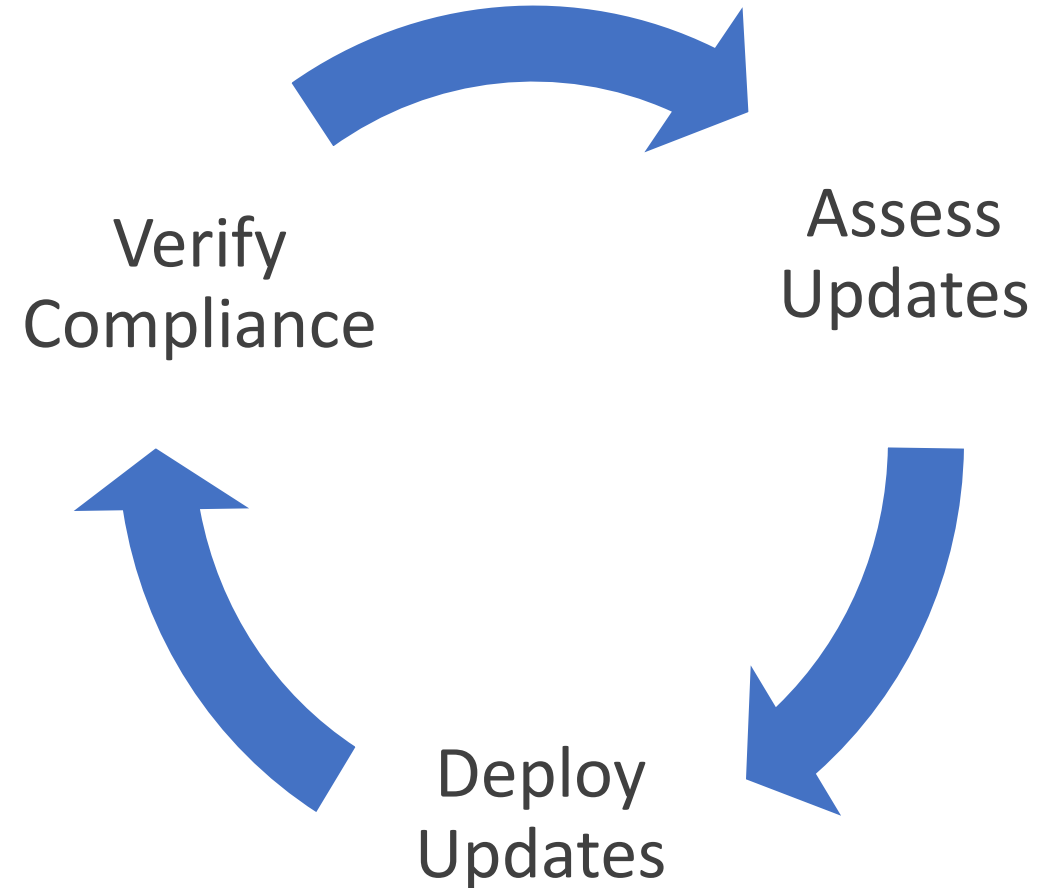- Azure, other cloud, on-prem

Deploy updates

- Custom approval criteria
- Single pane of glass
- Automated periodic deployments

Verify update compliance across your environment

Free for all environments*

first 5GB/month of Log Analytics inbound data

Verify Compliance

Assess Updates

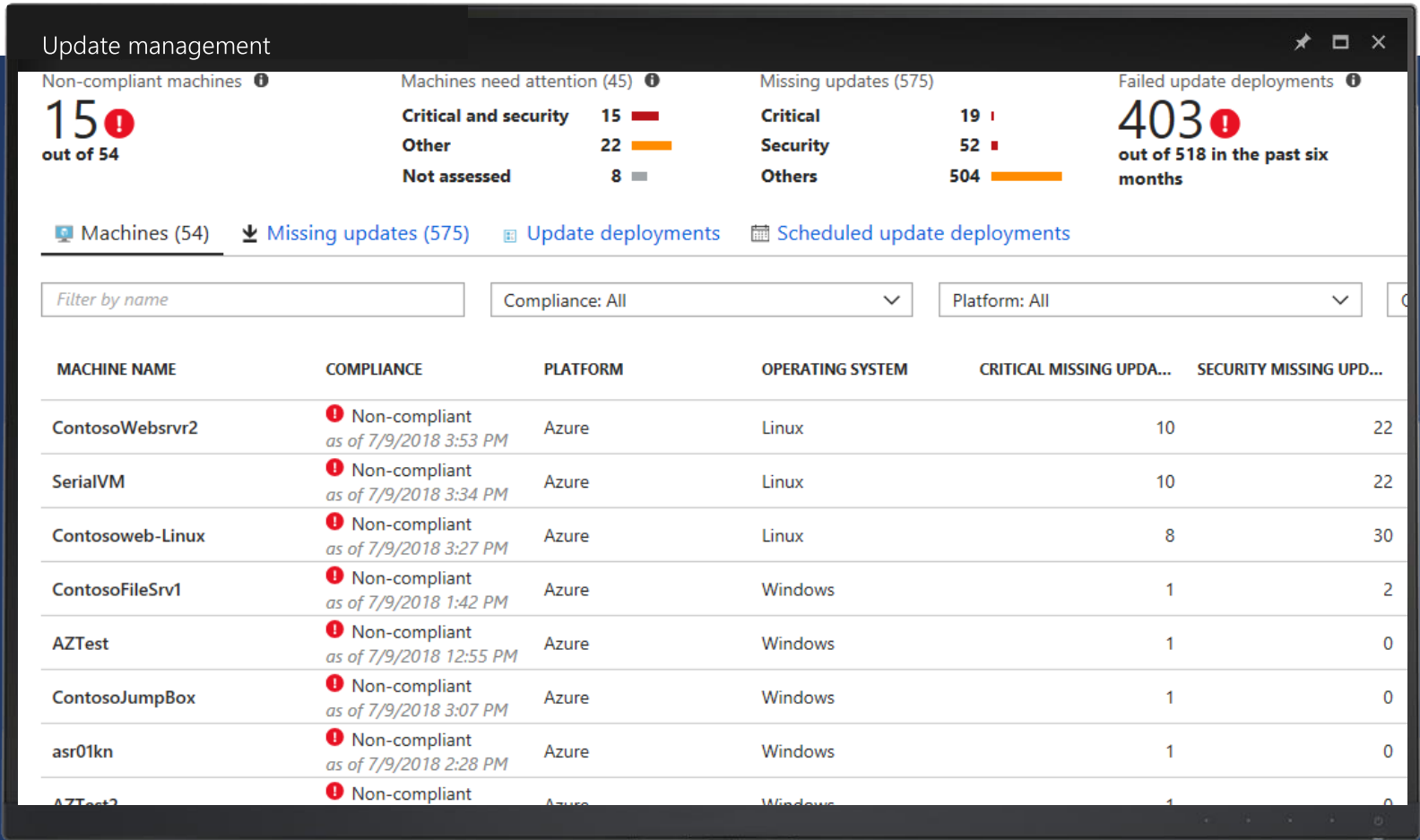Deploy Updates

Update Management
Assess & deploy server patches

Assess update status of servers across your environment

Deploy updates to your machines from a single pane of glass

Verify update compliance across your environment

Update management

Non-compliant machines ⓘ
15❗
out of 54

Machines need attention (45) ⓘ
Critical and security	15	▬
Other	22	▬
Not assessed	8	▬

Missing updates (575)
Critical	19	❗ ▬
Security	52	▬
Others	504	▬

Failed update deployments ⓘ
403❗
out of 518 in the past six months

🖥 Machines (54)   ⬇ Missing updates (575)   🗔 Update deployments   🗓 Scheduled update deployments

Filter by name	Compliance: All ⌄	Platform: All ⌄

MACHINE NAME	COMPLIANCE	PLATFORM	OPERATING SYSTEM	CRITICAL MISSING UPDA...	SECURITY MISSING UPD...
ContosoWebsrvr2	❗ Non-compliant as of 7/9/2018 3:53 PM	Azure	Linux	10	22
SerialVM	❗ Non-compliant as of 7/9/2018 3:34 PM	Azure	Linux	10	22
Contosoweb-Linux	❗ Non-compliant as of 7/9/2018 3:27 PM	Azure	Linux	8	30
ContosoFileSrv1	❗ Non-compliant as of 7/9/2018 1:42 PM	Azure	Windows	1	2
AZTest	❗ Non-compliant as of 7/9/2018 12:55 PM	Azure	Windows	1	0
ContosoJumpBox	❗ Non-compliant as of 7/9/2018 3:07 PM	Azure	Windows	1	0
asr01kn	❗ Non-compliant as of 7/9/2018 2:28 PM	Azure	Windows	1	0
AZTest2	❗ Non-compliant	Azure	Windows	1	

Supported operating systems

Windows	Red Hat Enterprise	SUSE Linux Enterprise Server	Ubuntu Server	CentOS 6
Server 2008, 2008 R2, 2012, 2012 R2, 2016, 2019	Linux 6 (x86/x64) and 7 (x64)	11 (x86/x64) and 12 (x64)	14.04 LTS & 16.04 LTS	(x86/x64) and 7 (x64)

Pricing

✓ Inventory : FREE
  ✓ You only pay for log data stored

✓ Change Tracking : FREE
  ✓ You only pay for log data stored in Log Analytics

✓ Update Management : FREE
  ✓ You only pay for log data stored in Log Analytics

Update Management
Preparing the environment

Azure Automation Account

Update Management service configured

Azure Log Analytics workspace

Manage Machines

Executing scenarios

How do I get a similar experience to query based collections in SCCM?

Save money by using pre-post scrips?

I want to make sure I stop a service before and restart it after patching

Demo

Azure Update Management

Azure Update Management Integration Points

Azure Security Center

SCVMM integration

Windows Admin Center

Azure Stack

Azure Monitor

Log Analytics

Documentation Links

Product	Link
Azure Update Management	aka.ms/updatemanagement
Azure State Configuration	aka.ms/dsclearnmore
Azure Guest Configuration Policy	aka.ms/gcpol
Azure Inventory	aka.ms/inventorysolution
Azure Change Tracking	aka.ms/changetracking
Azure Change History	aka.ms/changehistoryapi

Track, Inventory and Patch VMs in Azure (Windows or Linux)

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