



VMware AutoUG

VMware VEBA

Version 1.0

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ATEA

VMware VEBA

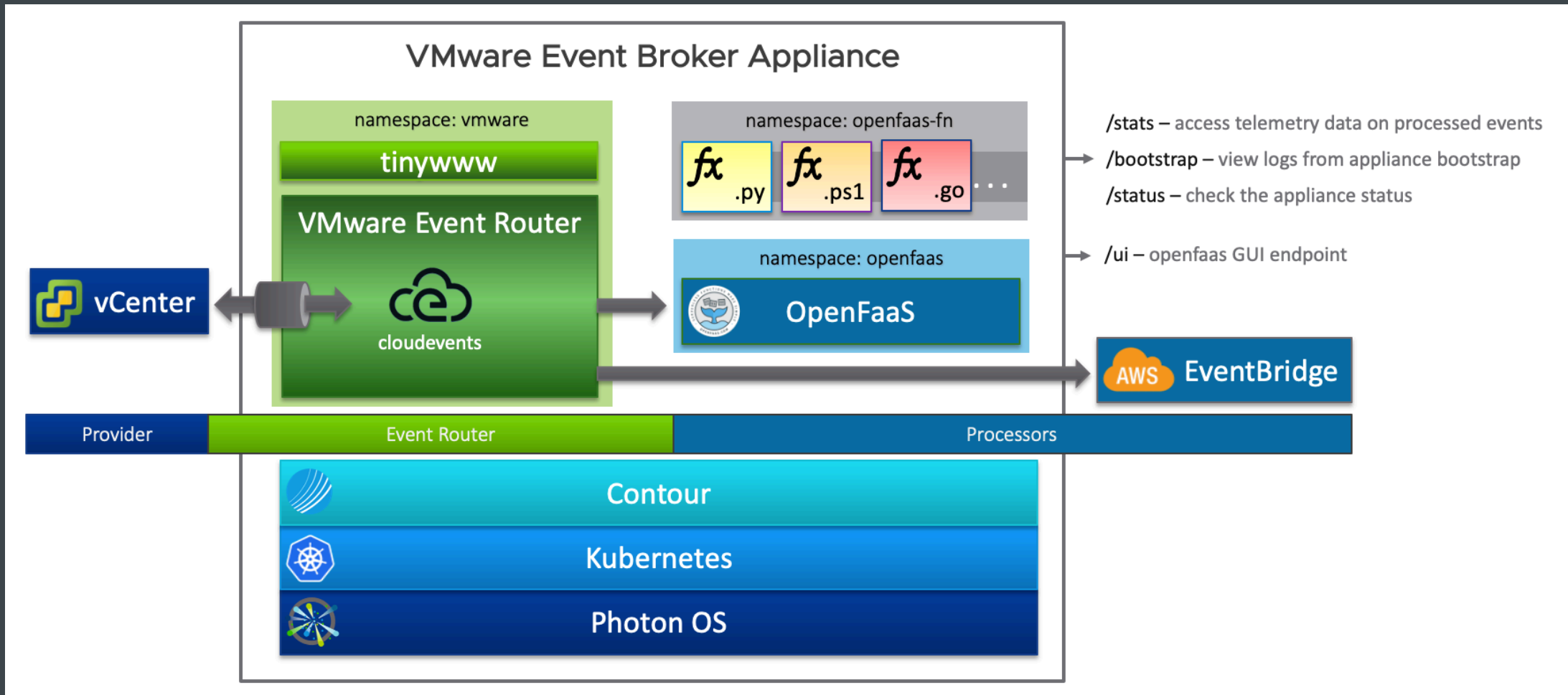
Hvad er VMware VEBA

- VMware Event Broker Appliance
 - Dette er en Fling og Open source project på github
 - Lavet af William Lam og Michael Gasch
 - Den “tager/abonnere” på vCenter events, og kan bruge dem til at kører custom eller prebuild actions baseret på disse events
 - vCenter 6.7 har mere end 1650 forskellige event, hvis man har NSX så er der
 - Den leveres som en Appliance, men kan også installeres i et kubernetes cluster
 - Den har en selvstændig hjemmeside: <https://vmweventbroker.io/>
 - Den benytter OpenFaaS eller AWS EventBridge

DrsExitStandbyModeFailedEvent	error	Standard	DRS cannot exit the host out of standby mode
DrsInvocationFailedEvent	error	Standard	DRS invocation not completed
DrsRecoveredFromFailureEvent	info	Standard	DRS has recovered from the failure
DrsResourceConfigureFailedEvent	error	Standard	Cannot complete DRS resource configuration
DrsResourceConfigureSyncedEvent	info	Standard	DRS resource configuration synchronized
DrsRuleComplianceEvent	info	Standard	VM is now compliant with DRS VM-Host affinity rules
DrsRuleViolationEvent	info	Standard	VM is violating a DRS VM-Host affinity rule
DrsSoftRuleViolationEvent	info	Standard	The VM is violating a DRS VM-Host soft affinity rule
DrsVmMigratedEvent	info	Standard	DRS VM migrated
DrsVmPoweredOnEvent	info	Standard	DRS VM powered on
DuplicateIpDetectedEvent	info	Standard	Duplicate IP detected

VMware VEBA

VMware VEBA Arkitektur



VMware VEBA

VMware VEBA “use cases”

- Notification
- Automation
- Integration
- Remediation
- Audit
- Analytics

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Functions

- En function er en action/function der bliver udført når en 1 en event sker i et vCenteret
- En function kan godt triggers af flere forskellige events
 - En event kan godt trigger flere functions
- En function er stateless og gemmer ikke data*
- En function kan benytte mange forskellige code/script sprog fx.
 - PowerShell Core
 - Golang
 - Python
 - Ruby
 - Java
 -
- Det er en God ide at integrere fuctions med fx vRealize Orchestrator

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vCenter Event

id : 087b4a78-5699-44c3-ace5-5c20f56d10fc
source : https://vcenter01/sdk
specversion : 1.0
type : com.vmware.event.router/event
subject : EnteringMaintenanceModeEvent
time : 2020-10-30T13:43:46.76901243Z
data : @{{Key=28778687; ChainId=28778686; CreatedTime=10/30/2020 13:43:46; UserName=Domain\\Allan; Datacenter=; ComputeResource=; Host=; Vm=; Ds=; Net=; Dvs=; FullFormattedMessage=Host
esx1.domain.local
in
Datacenter
has
started
to
enter
maintenance
mode; ChangeTag=}}

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Function structure eksempel

```
/<function name>/  
  stack.yml  
  <function name> secret.json  
  template/  
    <lang>/  
      Dockerfile  
      template.yml  
      function/  
        script.ps1  
  handler/  
    script.ps1
```

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Scripts fra samples

```
{  
  "VC" : "vcenter-hostname",  
  "VC_USERNAME" : "tagadmin@vsphere.local",  
  "VC_PASSWORD" : "FillMeIn",  
  "TAG_NAME" : "VMworld 2019"  
}
```

```
1  provider:  
2    name: openfaas  
3    gateway: https://veba.primp-industries.com  
4  functions:  
5    powercli-tag:  
6      lang: powercli  
7      handler: ./handler  
8      image: vmware/veba-powercli-tagging:latest  
9      environment:  
10       write_debug: true  
11       read_debug: true  
12       function_debug: false  
13     secrets:  
14       - vc-tag-config  
15     annotations:  
16       topic: DrsVmPoweredOnEvent
```

```
1  FROM vmware/powercli-core:latest  
2  
3  RUN mkdir -p /home/app  
4  USER root  
5  RUN echo "Pulling watchdog binary from Github." \  
6    && curl -sSL https://github.com/openfaas/faas/releases/download/0.9.14/fwatchdog > /usr/bin/fwatchdog \  
7    && chmod +x /usr/bin/fwatchdog \  
8    && cp /usr/bin/fwatchdog /root  
9  
10  
11  
12  WORKDIR /root  
13  
14  USER root  
15  
16  # Populate example here - i.e. "cat", "sha512sum" or "node index.js"  
17  SHELL [ "pwsh", "-command" ]  
18  ENV fprocess="xargs pwsh ./function/script.ps1"  
19  COPY function function  
20  # Set to true to see request in function logs  
21  ENV write_debug="true"  
22  
23  EXPOSE 8080  
24  
25  HEALTHCHECK --interval=3s CMD [ -e /tmp/.lock ] || exit 1  
26  CMD [ "fwatchdog" ]
```


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Scripts fra samples

```
1 # Process function Secrets passed in
2 $VC_CONFIG_FILE = "/var/openfaas/secrets/vc-tag-config"
3 $VC_CONFIG = (Get-Content -Raw -Path $VC_CONFIG_FILE | ConvertFrom-Json)
4 if($env:function_debug -eq "true") {
5     Write-host "DEBUG: `"$VC_CONFIG`""
6 }
7
8 # Process payload sent from vCenter Server Event
9 $json = $args | ConvertFrom-Json
10 if($env:function_debug -eq "true") {
11     Write-Host "DEBUG: json=`"$($json | Format-List | Out-String)`""
12 }
13
14 $vmName = $json.data.vm.name
15
16 Set-PowerCLIConfiguration -InvalidCertificateAction Ignore -DisplayDeprecationWarnings $false -ParticipateInCeip $false -Confirm:$false | Out-Null
17
18 # Connect to vCenter Server
19 Write-Host "Connecting to vCenter Server ..."
20 Connect-VIServer -Server $($VC_CONFIG.VC) -User $($VC_CONFIG.VC_USERNAME) -Password $($VC_CONFIG.VC_PASSWORD)
21
22 # Retrieve VM and apply vSphere Tag
23 Write-Host "Applying vSphere Tag `"$($VC_CONFIG.TAG_NAME)`" to $vmName ..."
24 Get-VM $vmName | New-TagAssignment -Tag (Get-Tag -Name $($VC_CONFIG.TAG_NAME)) -Confirm:$false
25
26 Write-Host "Disconnecting from vCenter Server ..."
27 Disconnect-VIServer * -Confirm:$false
```

VMware VEBA

Udfordringer med VEBA

- Scalability
- “at least once” delivery, see message delivery guarantees
- Persistency and Retries
- Out of Order Message Arrival
- Idempotency (Message Deduplication)
- “no upgrade”*

* Dette er ikke noget stort problem, da det er nemt at flytte til ny appliance

vRealize Automation

DEMO'er

AT&A

vRealize Automation

Spørgsmål

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