CA Service Virtualization on Docker

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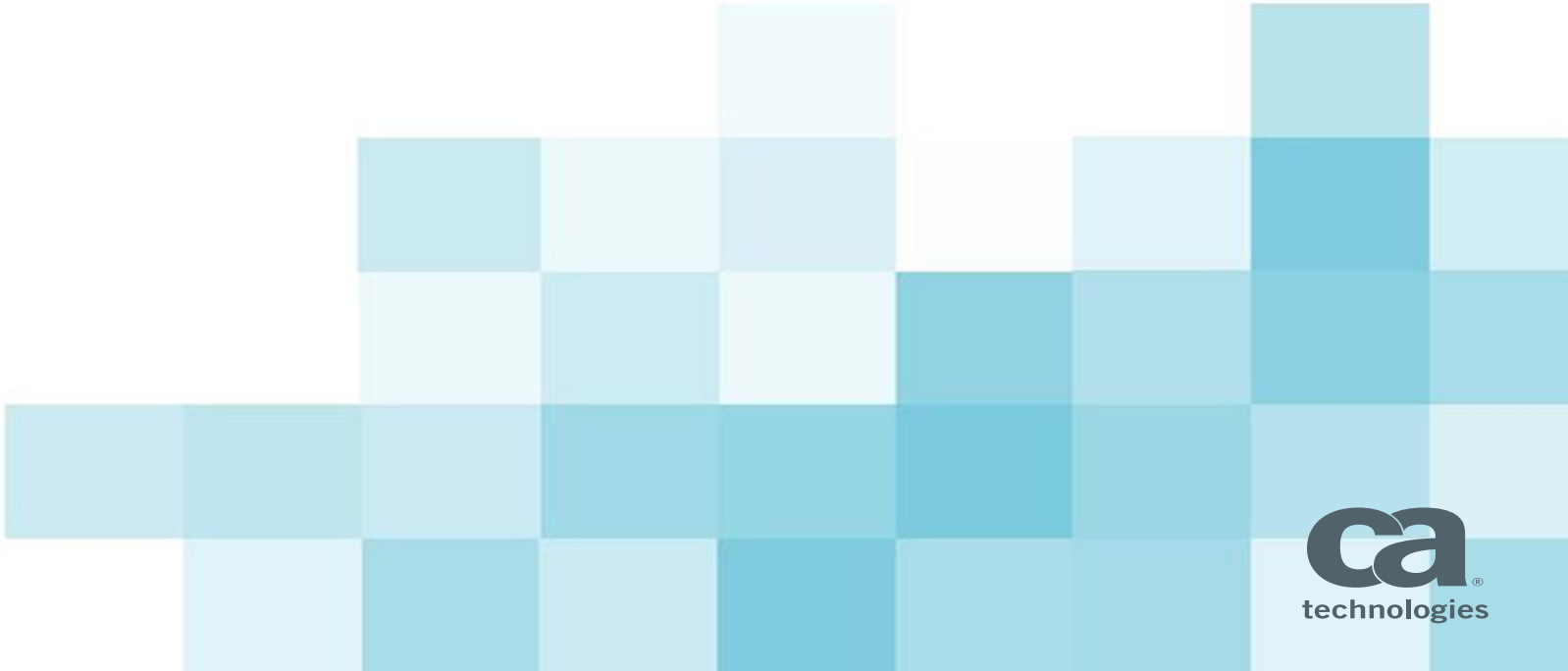

CA Service Virtualization on Docker Agenda

1. WHAT IS DOCKER?
2. WHY CA SERVICE VIRTUALIZATION SUPPORT FOR DOCKER?
3. PREREQUISITES FOR DOCKER SUPPORT
4. DOCKER IMAGES
5. START AND RUN THE DOCKER CONTAINERS
6. VALIDATE DEVTEST, DEPLOY AND TEST VIRTUAL SERVICES
7. DEMO
8. Q&A

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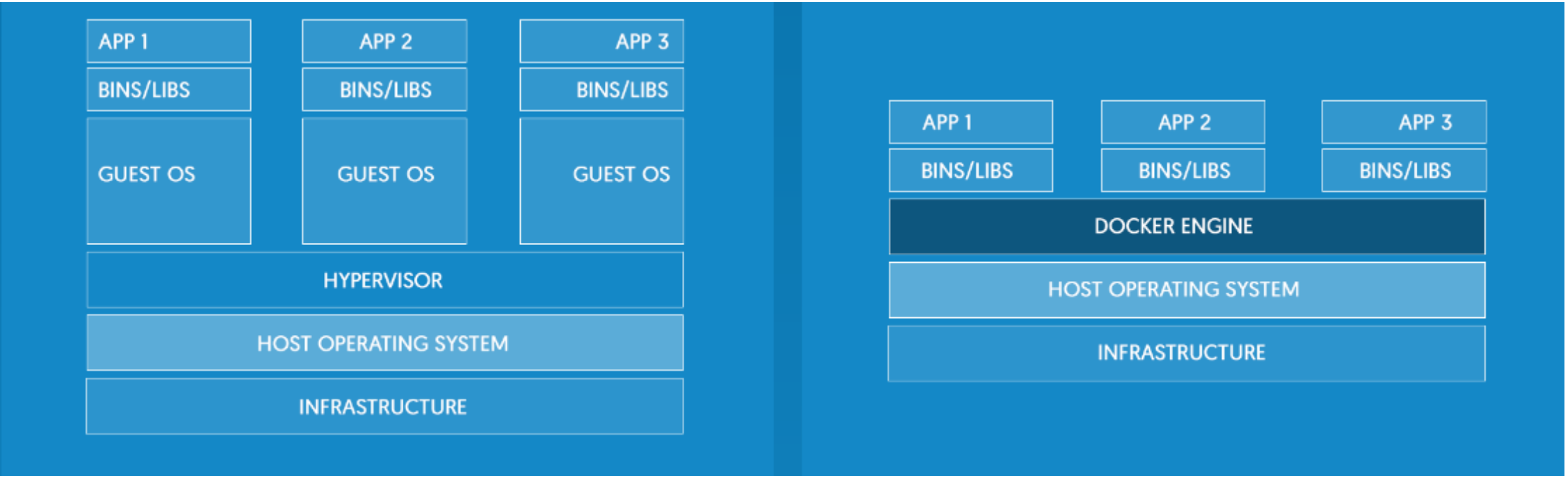
What is Docker?



- Open Standards
- Lightweight
- Secured
- Quickly Scale

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Why CA Service virtualization support for Docker?

- CI/CD – create/test Virtual Services
- Performance Testing
- All containers on a single box or individual containers on separate boxes
- Deploy containers –
  - on prem
  - In the cloud
  - On Hybrid

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Prerequisites For Docker Support

- Full version of Linux that supports Docker features
- Docker already installed
- DevTest Linux installer (8.3 and above)
- Understanding of Linux
- Understanding of Docker!

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Docker Images

- Docker subfolder under DevTest_Home folder
- Run ***gradlew build*** command to build all images

```
~# docker images
REPOSITORY                    TAG                 IMAGE ID            CREATED             SIZE
dradis-licensed               latest              4448df81879a        2 weeks ago         664.7 MB
devtest/portal-base           9.5.1.6             8056c220ba2c        5 weeks ago         1.082 GB
devtest/portal-base           latest              8056c220ba2c        5 weeks ago         1.082 GB
devtest/dradis-base           9.5.1.6             2a47c5d3799a        5 weeks ago         664.7 MB
devtest/dradis-base           latest              2a47c5d3799a        5 weeks ago         664.7 MB
devtest/devtest-base          9.5.1.6             24dceb5a41e8        5 weeks ago         1.575 GB
devtest/devtest-base          latest              24dceb5a41e8        5 weeks ago         1.575 GB
devtest/registry-broker-base  9.5.1.6             ad3a76e75b73        5 weeks ago         1.245 GB
devtest/registry-broker-base  latest              ad3a76e75b73        5 weeks ago         1.245 GB
devtest/servers-base          9.5.1.6             0ff6e83b3ba0        5 weeks ago         831.1 MB
devtest/servers-base          latest              0ff6e83b3ba0        5 weeks ago         831.1 MB
devtest/demoserver            9.5.1.6             591f37132fd4        5 weeks ago         383.7 MB
devtest/demoserver            latest              591f37132fd4        5 weeks ago         383.7 MB
devtest/core-libs             9.5.1.6             fa931ffd7439        5 weeks ago         656.5 MB
devtest/core-libs             latest              fa931ffd7439        5 weeks ago         656.5 MB
devtest/shared-libs           9.5.1.6             1ac0e963c717        5 weeks ago         615.5 MB
devtest/shared-libs           latest              1ac0e963c717        5 weeks ago         615.5 MB
devtest/devtest-jre           9.5.1.6             82fb8b8182a3        5 weeks ago         360.3 MB
devtest/devtest-jre           latest              82fb8b8182a3        5 weeks ago         360.3 MB
ubuntu                        latest              45bc58500fa3        6 weeks ago         126.9 MB
```


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Docker Images

- Examples/dradis-licensed folder has prebuilt image ‘dradis-licensed’ (for Enterprise Dashboard)
- Copy your license file to that folder

```
[root@warko0111915 dradis-licensed]# cp ../../../devtestlic.xml .
[root@warko0111915 dradis-licensed]# cat README.md
```

- Build this image which applies the license file and creates a new layer

```
[root@warko0111915 dradis-licensed]#  docker build -t dradis-licensed:latest .
Sending build context to Docker daemon 5.632 kB
Step 0 : FROM devtest/dradis-base
 ---> f4a36e951e6b
Step 1 : ADD devtestlic.xml /opt/devtest/devtestlic.xml
 ---> 5eec1656299a
Removing intermediate container 9a8a2900d0ba
Successfully built 5eec1656299a
[root@warko0111915 dradis-licensed]#
```


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Start And Run Docker Containers

- Start Enterprise Dashboard

```
~# docker ps -a
CONTAINER ID        IMAGE                    COMMAND                  CREATED             STATUS              PORTS                                                NAMES
d899a23049ac        dradis-licensed:latest   "/opt/devtest/bin/Ent"   15 seconds ago      Up 13 seconds       0.0.0.0:1506->1506/tcp, 0.0.0.0:2003->2003/tcp   dashboard
~#
```

- Start Registry

```
~# docker run -d --name registry -p 2010:2010 -p 1505:1505 -p 1528:1528 -e LISA_MORE_VM_PROPS="-Ddevtest.enterprisedashboard.host=warko01N30180" devtest/registry-broker-base /opt/devtest/bin/Registry -n tcp://warko01N30180
:2010/Registry
c7038aa10b527a1e1083b09b49d2e34061c06adb72280313457096511a0c0864
~#
```

- Start Simulator

```
~# docker run -d --name simulator -p 2014:2014 devtest/servers-base /opt/devtest/bin/Simulator -n tcp://warko01n30180:2014/Simulator -m tcp://warko01n30180:2010/Registry
0f329a040e929430a87736749746bd1c14897538b590637dea6675f025bdf317
~#
```

- Start Coordinator

```
~# docker run -d --name coordinator -p 2011:2011 devtest/servers-base /opt/devtest/bin/CoordinatorServer -n tcp://warko01n30180:2011/Coordinator -m tcp://warko01n30180:2010/Registry
aa53eccd4dcafd2727902079505a6e7e9a1ec0770dbd114c94370845d1602830
~#
```


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Start And Run Docker Containers

- Start Portal

```
~# docker run -d --name portal -p 1507:1507 devtest/portal-base /opt/devtest/bin/Portal -J-Dregistry.host="warko01n30180" -J-DlisaAutoConnect="tcp://warko01n30180:2010/Registry"
76e49bde3d3b2062d0e889fba8eb614fd55cf716515b1e5a5755156c876b5327
~#
```

- Start VSE

```
~# docker run -d --name vse -p 2013:2013 -p 7001:7001 devtest/servers-base /opt/devtest/bin/VirtualServiceEnvironment -n tcp://warko01n30180:2013/VSE -m tcp://warko01n30180:2010/Registry
0fc43abd3d9c411f25dd380c6d0a1b4805b322dce50d95188a1e66caa940a028
~#
```

- Start Docker UI

```
~# docker run -d --name mydockerUI -p 9000:9000 --privileged -v /var/run/docker.sock:/var/run/docker.sock uifd/ui-for-docker
a670057782aaef6da948d903ca8ff83e06dca27c01fb25521ccfa35a23349c30
~#
```


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Start And Run Docker Containers

- All running DevTest Container & Free Docker UI container

```
~# docker ps -a
CONTAINER ID        IMAGE                       COMMAND                  CREATED             STATUS              PORTS                                                                  NAMES
a670057782aa        uifd/ui-for-docker          "/ui-for-docker"         49 seconds ago      Up 48 seconds       0.0.0.0:9000->9000/tcp                                                 mydockerUI
0fc43abd3d9c        devtest/servers-base        "/opt/devtest/bin/Vir"   About a minute ago  Up About a minute   0.0.0.0:2013->2013/tcp, 0.0.0.0:7001->7001/tcp                         vse
76e49bde3d3b        devtest/portal-base         "/opt/devtest/bin/Por"   9 minutes ago       Up 9 minutes        0.0.0.0:1507->1507/tcp                                                 portal
aa53eccd4dca        devtest/servers-base        "/opt/devtest/bin/Coo"   14 minutes ago      Up 14 minutes       0.0.0.0:2011->2011/tcp                                                 coordinator
0f329a040e92        devtest/servers-base        "/opt/devtest/bin/Sim"   15 minutes ago      Up 15 minutes       0.0.0.0:2014->2014/tcp                                                 simulator
c7038aa10b52        devtest/registry-broker-base "/opt/devtest/bin/Reg"  19 minutes ago      Up 19 minutes       0.0.0.0:1505->1505/tcp, 0.0.0.0:1528->1528/tcp, 0.0.0.0:2010->2010/tcp  registry
d899a23049ac        dradis-licensed:latest      "/opt/devtest/bin/Ent"   22 minutes ago      Up 22 minutes       0.0.0.0:1506->1506/tcp, 0.0.0.0:2003->2003/tcp                         dashboard
~#
```

```
~# docker ps -a
CONTAINER ID        IMAGE                       COMMAND                  CREATED             STATUS              PORTS                                                                  NAMES
a670057782aa        uifd/ui-for-docker          "/ui-for-docker"         49 seconds ago      Up 48 seconds       0.0.0.0:9000->9000/tcp                                                 mydockerUI
0fc43abd3d9c        devtest/servers-base        "/opt/devtest/bin/Vir"   About a minute ago  Up About a minute   0.0.0.0:2013->2013/tcp, 0.0.0.0:7001->7001/tcp                         vse
76e49bde3d3b        devtest/portal-base         "/opt/devtest/bin/Por"   9 minutes ago       Up 9 minutes        0.0.0.0:1507->1507/tcp                                                 portal
aa53eccd4dca        devtest/servers-base        "/opt/devtest/bin/Coo"   14 minutes ago      Up 14 minutes       0.0.0.0:2011->2011/tcp                                                 coordinator
0f329a040e92        devtest/servers-base        "/opt/devtest/bin/Sim"   15 minutes ago      Up 15 minutes       0.0.0.0:2014->2014/tcp                                                 simulator
c7038aa10b52        devtest/registry-broker-base "/opt/devtest/bin/Reg"  19 minutes ago      Up 19 minutes       0.0.0.0:1505->1505/tcp, 0.0.0.0:1528->1528/tcp, 0.0.0.0:2010->2010/tcp  registry
d899a23049ac        dradis-licensed:latest      "/opt/devtest/bin/Ent"   22 minutes ago      Up 22 minutes       0.0.0.0:1506->1506/tcp, 0.0.0.0:2003->2003/tcp                         dashboard
~#
```


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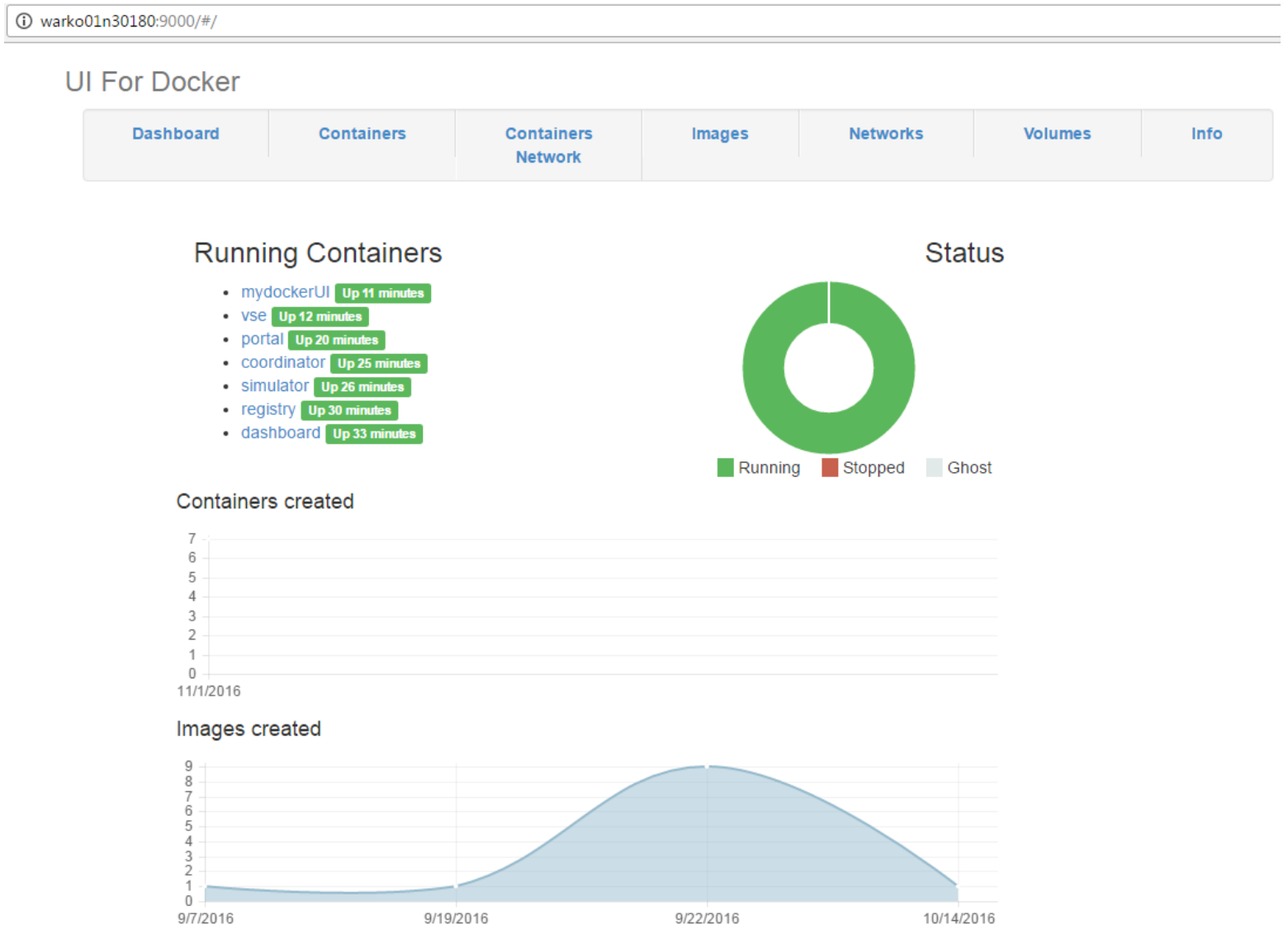
View and Manage Docker Containers



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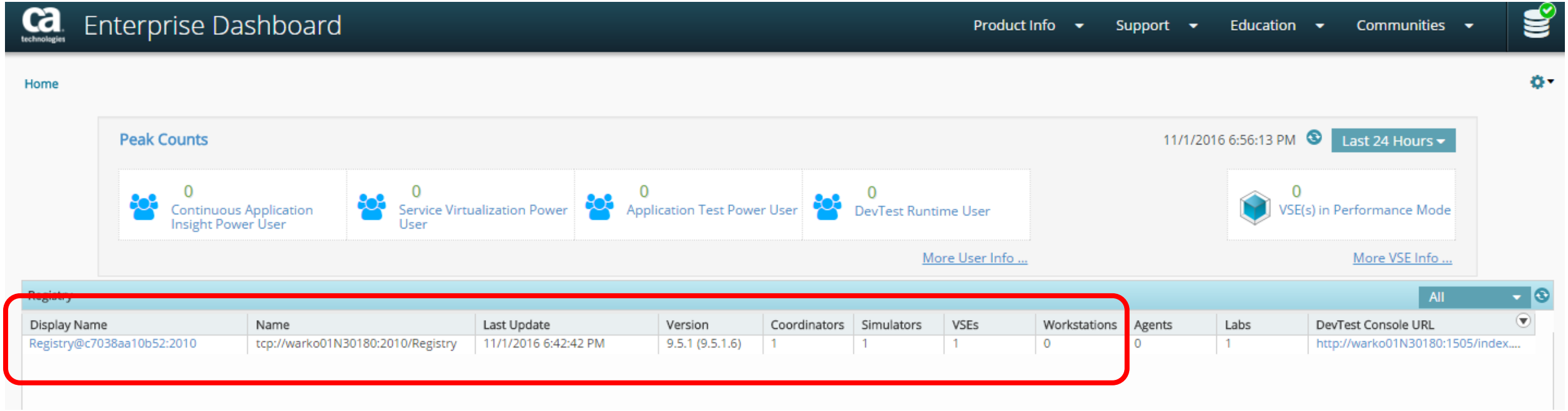
Validate DevTest, Deploy and Test Virtual Services



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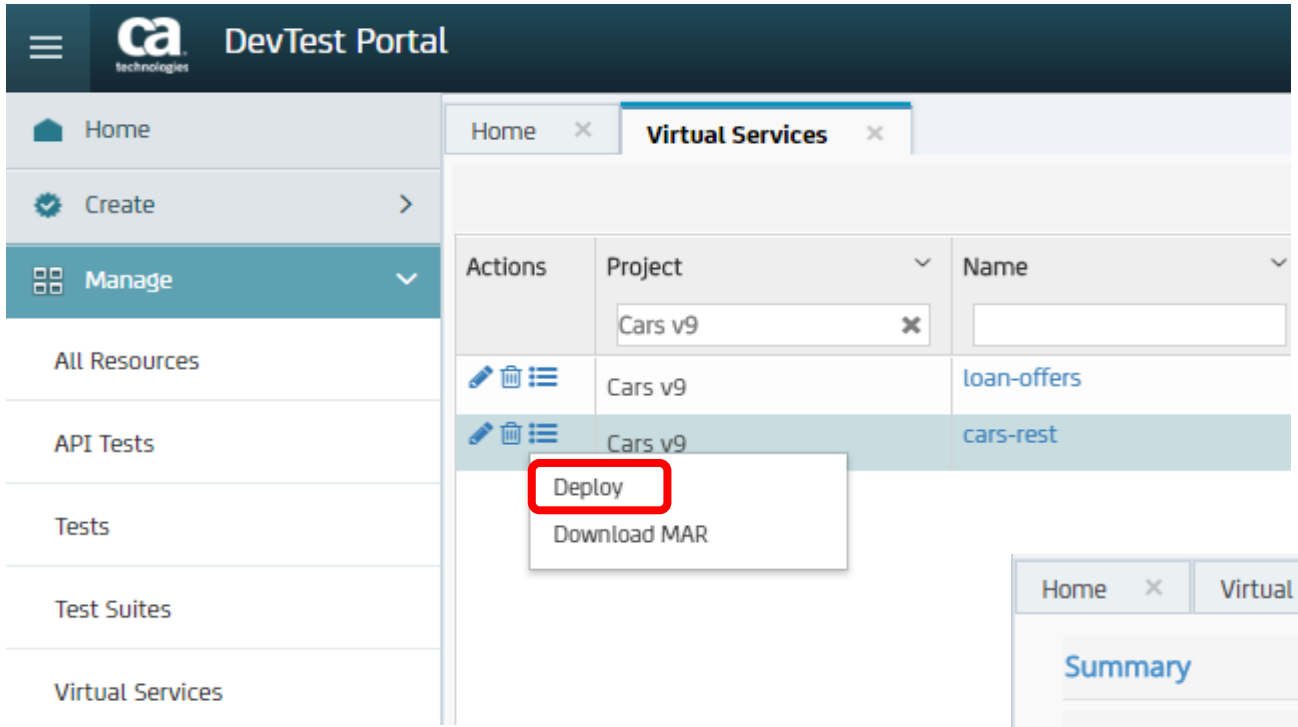
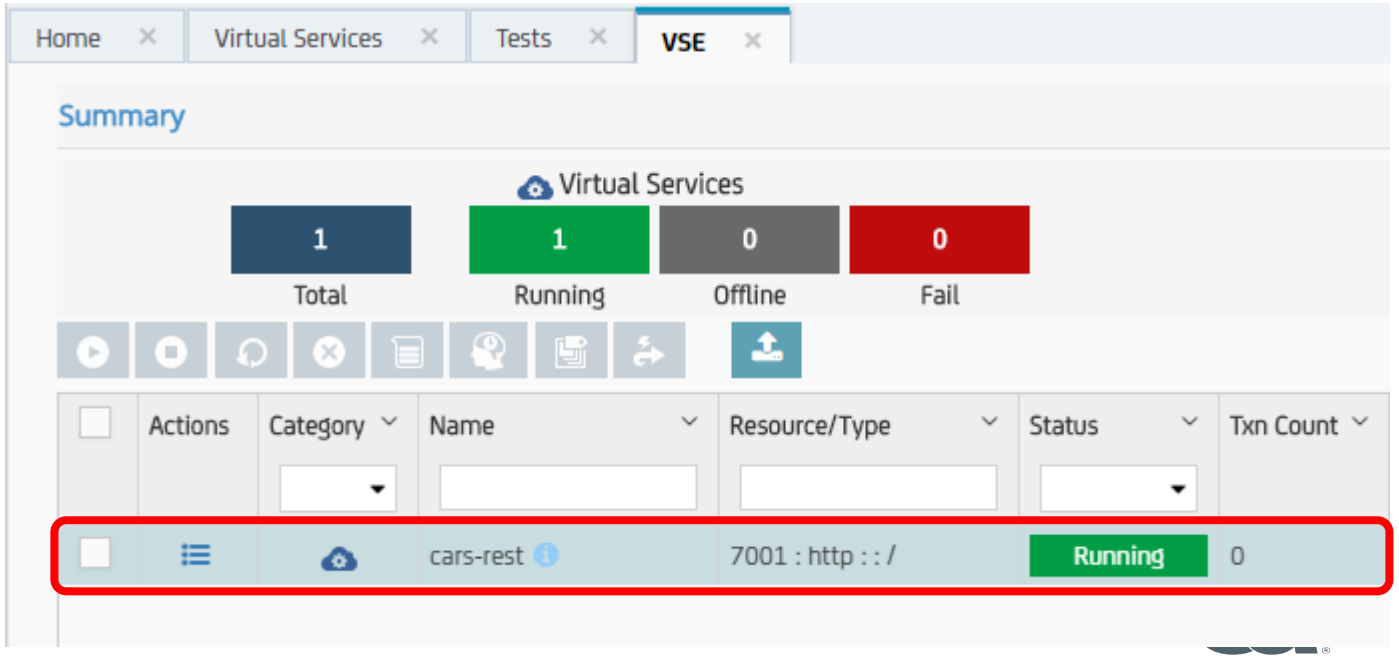
Validate DevTest, ***Deploy*** and Test Virtual Services





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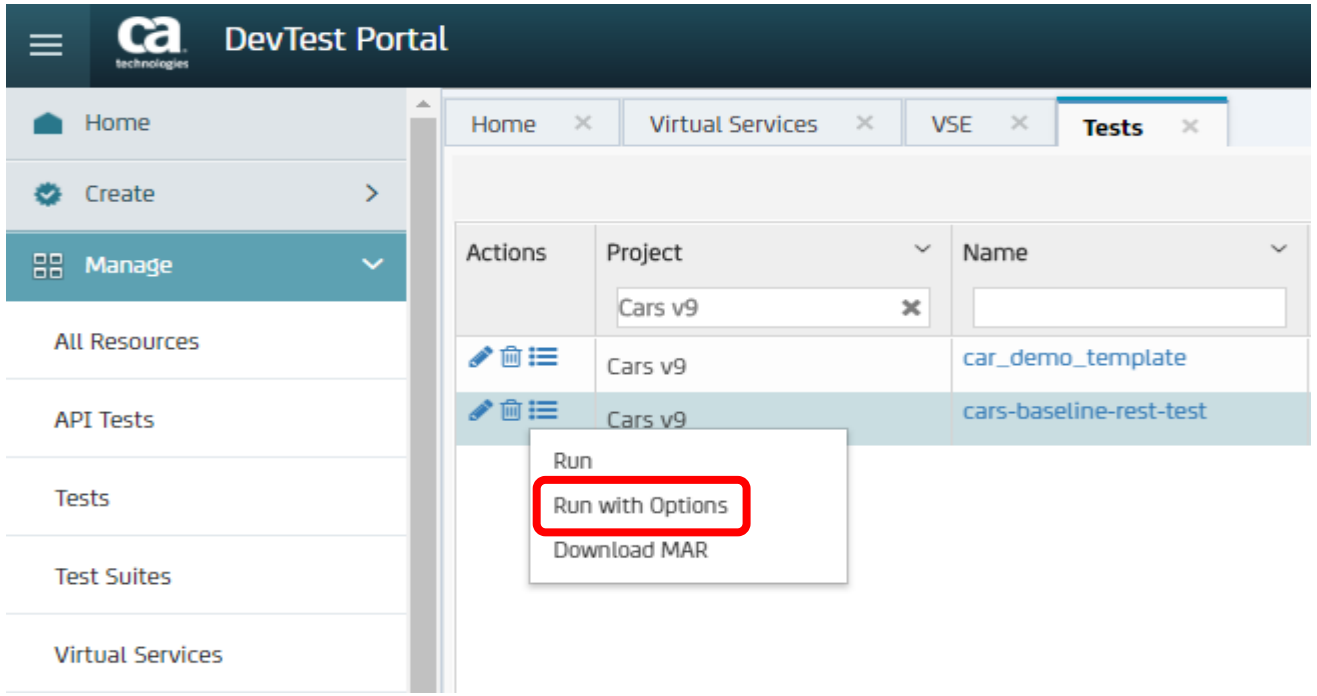
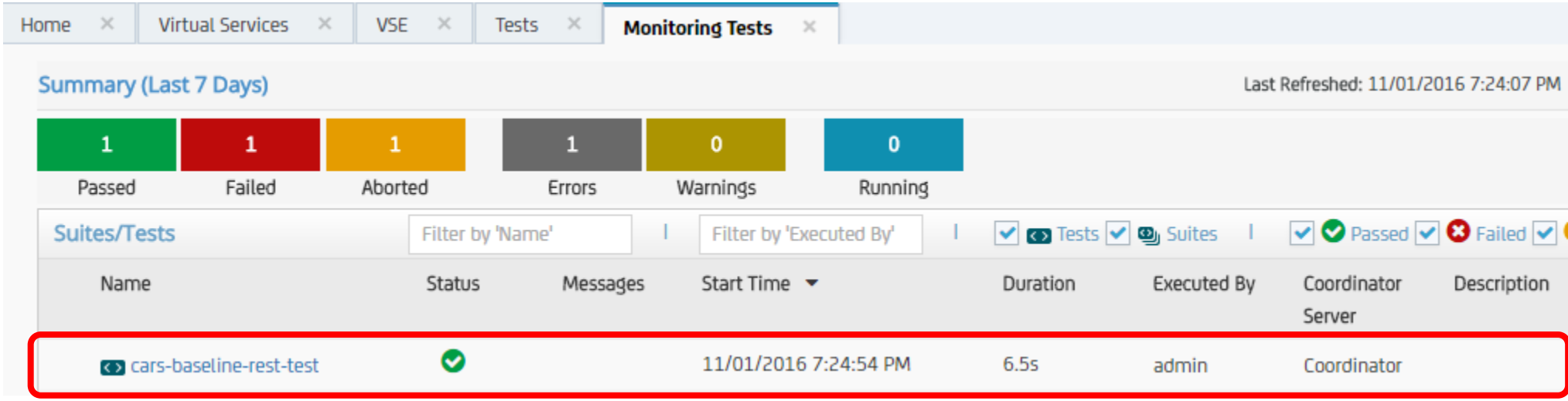
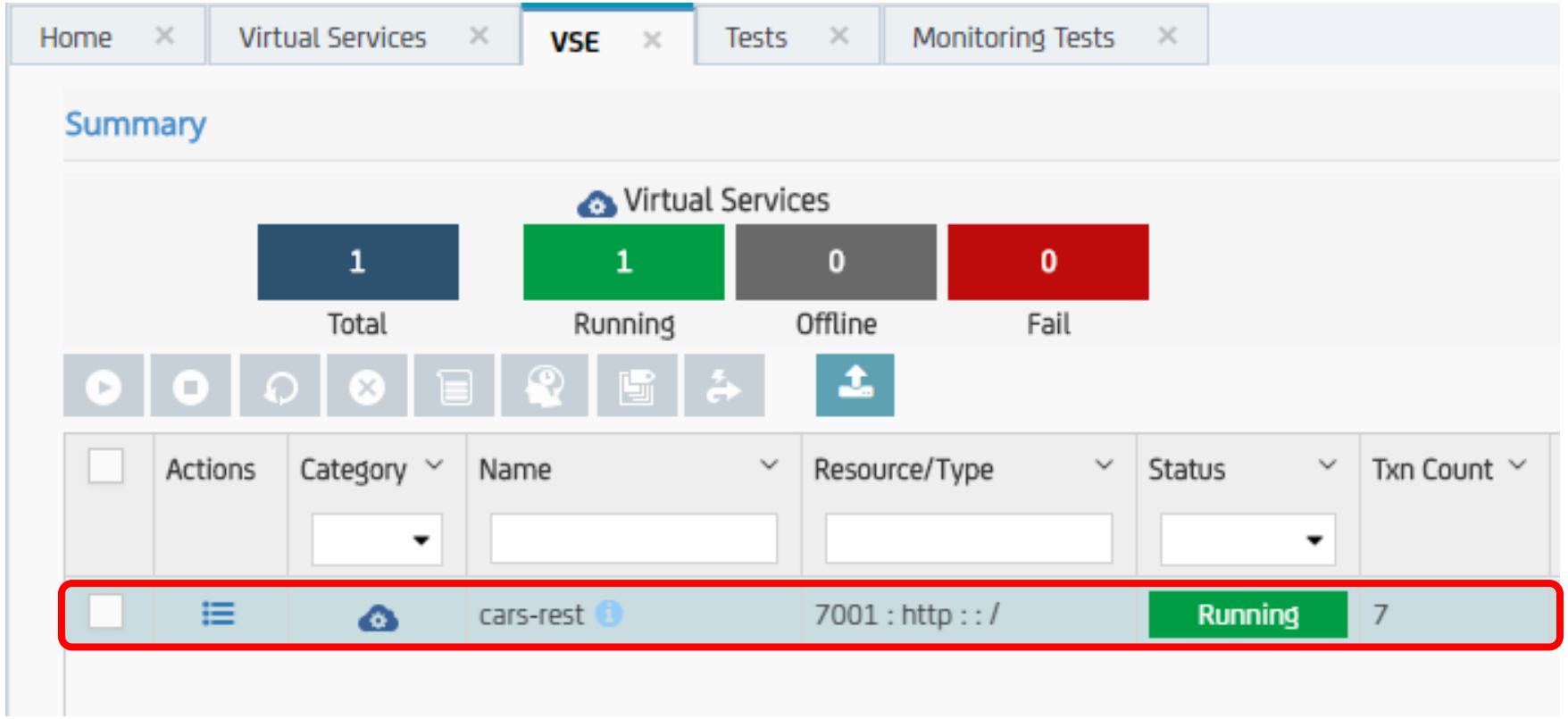
Validate DevTest, Deploy and *Test Virtual Services*





Validate DevTest, Deploy and ***Test Virtual Services***



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Demo

Q&A