**Maintenance event:** vCloud Director 5.5.5 upgrade

**Overview:** vCloud Director is a cloud orchestration platform that consists of software components that enable Markley Cloud Services Infrastructure-as-a-Service capabilities. There are a total of 11 software components on 5 servers that are affected by this work. While all components are scheduled to be upgraded, only a subset affect end-user access, thus those components will be upgraded after hours during a predefined maintenance window. The remaining components will be upgraded at a later date, non-disruptively, during “rolling” maintenance activities, which are defined in phases outlined below. Customer workloads will not be affected by this work.

**Goals:** The main goals of this work are to upgrade the following products:

vCloud Director 5.5.4 --> 5.5.5

vShield Manager 5.5.4.1 --> 5.5.4.2

vCenter Server 5.5 Update 2e --> 5.5 Update 3b

ESXi 5.5 Update 3a → ESXi 5.5 Update 3b

vShield Edge 5.(various) → vShield Edge 5.5.4.2

These upgrades provide security patches, bug fixes, additional guest OS compatibility, and enhanced browser support.

**Phase 1** - Upgrade vCD, VSM, vCenter Server

**Phase 1 maintenance window:** 3/22/2016 @ 21:00 - 24:00 (3 hours)

**Staff required:** Aaron Patrick

**Staff required on-site:** N/A

**Customer impact:** End-user access to the self-service portal at vcd.markleycloud.com will be disabled although customer workloads will **not be affected** by planned activities.

**Phase 2** - Upgrade ESXi hosts

**Phase 2 maintenance window:** Rolling upgrade (5-6 hours total)

**Staff required:** Aaron Patrick

**Staff required on-site:** N/A

**Customer impact:** None

**Phase 3** - Upgrade vShield Edge appliances

**Phase 3 maintenance window:** Scheduled individually with each customer (5 minutes per customer)

**Staff required:** Aaron Patrick

**Staff required on-site:** N/A

**Customer impact:** 15-30 seconds network interruption for each customer.

**Compatibility**

<https://www.vmware.com/resources/compatibility/sim/interop_matrix.php>

**Release Notes**

<http://pubs.vmware.com/Release_Notes/en/vcd/555/rel_notes_vcloud_director_555.html>

**Phase 1 action plan**

disable zenoss and monitis alerting (0:05:00)

sql-bos1.mgcsops.net

vad-bos1.mgcsops.net

vc-bos1.mgcsops.net

vcd-01.mgcsops.net

vcd-02.mgcsops.net

vcd.markleycloud.com

vsm-bos1.mgcsops.net

disable end-user access to vcd.markleycloud.com (0:05:00)

add ‘vcd\_maintenance\_planned’ aflex rule to virtual service on A10

verify aflex maintenance page

Disable vcenter alarms

Health status change

Health status monitoring

Disable Zerto alarms

Disable CBM alarms

vcloud director - <http://kb.vmware.com/kb/2059464> (0:30:00)

enable administrator account in vcd.markleycloud.com

quiesce and stop all vcd cells as root

# /opt/vmware/vcloud-director/bin/cell-management-tool -u administrator cell --status

# /opt/vmware/vcloud-director/bin/cell-management-tool -u administrator cell --quiesce true

# /opt/vmware/vcloud-director/bin/cell-management-tool -u administrator cell --status

# /opt/vmware/vcloud-director/bin/cell-management-tool -u administrator cell --shutdown

disable administrator account in vcd.markleycloud.com

backup vcd db

foreach (cell-1, cell-n) {

disable vmware-vcd service

init 0

vm snapshot

power on

yum -y update

}

on first cell

increase database timeout

install vcloud binary

upgrade database

restart vmware-vcd

re-enable vmware-vcd service

decrease database timeout

on remaining cells

install vcloud binary

restart vmware-vcd

re-enable vmware-vcd service

vsm - <http://kb.vmware.com/kb/2055673> (0:30:00)

shutdown

vm snapshot

power on

upload and install vsm 5.5.4.2

vcenter - <http://kb.vmware.com/kb/2035001> (1:00:00)

stop/disable vcenter service

stop/disable vsphere web client service

backup vc db

shutdown

vm snapshot

windows updates

reboot

enable/start vsphere web client service

enable/start vcenter service

upgrade vcenter components

sso

web client

inventory service

vcenter server

register vsm with lookup service

reconnect vsm to vcenter

refresh vcenter from vcloud

re-enable end-user access to vcd.markleycloud.com

**Phase 1 complete**

**Phase 1 backout plan**

vCloud Director

restore VM snapshot

restore database

restart services

vShield Manager

restore VM snapshot

restore backup

vCenter Server

restore VM snapshot

restore database

restart services

re-enable end-user access to vcd.markleycloud.com

**Phase 2 action plan**

esxi (0:20:00 per host)

on all vcd hosts

disable vcd host

auto deploy update esxi

enable host

**Phase 2 complete**

**Phase 2 backout plan**

set deploy ruleset for prior ESXi image

reboot

assign original host profile to reverted host

**Phase 3 action plan**

vshield edge (0:05:00)

datacenter -> network virtualization -> edge -> upgrade -> 10-15 seconds network interruption

**Phase 3 complete**