

INTUITIVE

Introduction – UCS PowerTool Suite – Secrets, Tips & Tricks

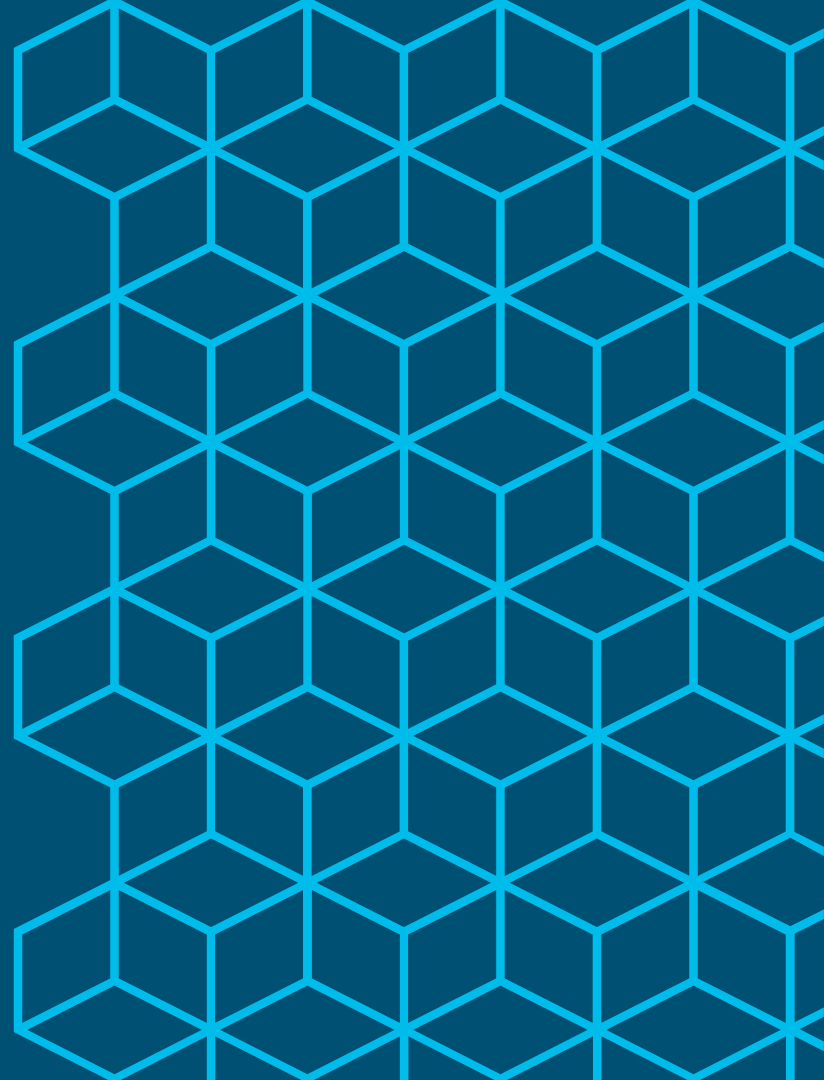
John McDonough – Technical Leader – Developer Evangelist

Agenda

- Installation Overview
- Connect / Query / Filter / Dump XML
- Get Help / Variable Inspection / Meta Data
- Configure / Transactions
- Compare / Sync / Code Generation
- Conclusion

UCS PowerTool

Installation

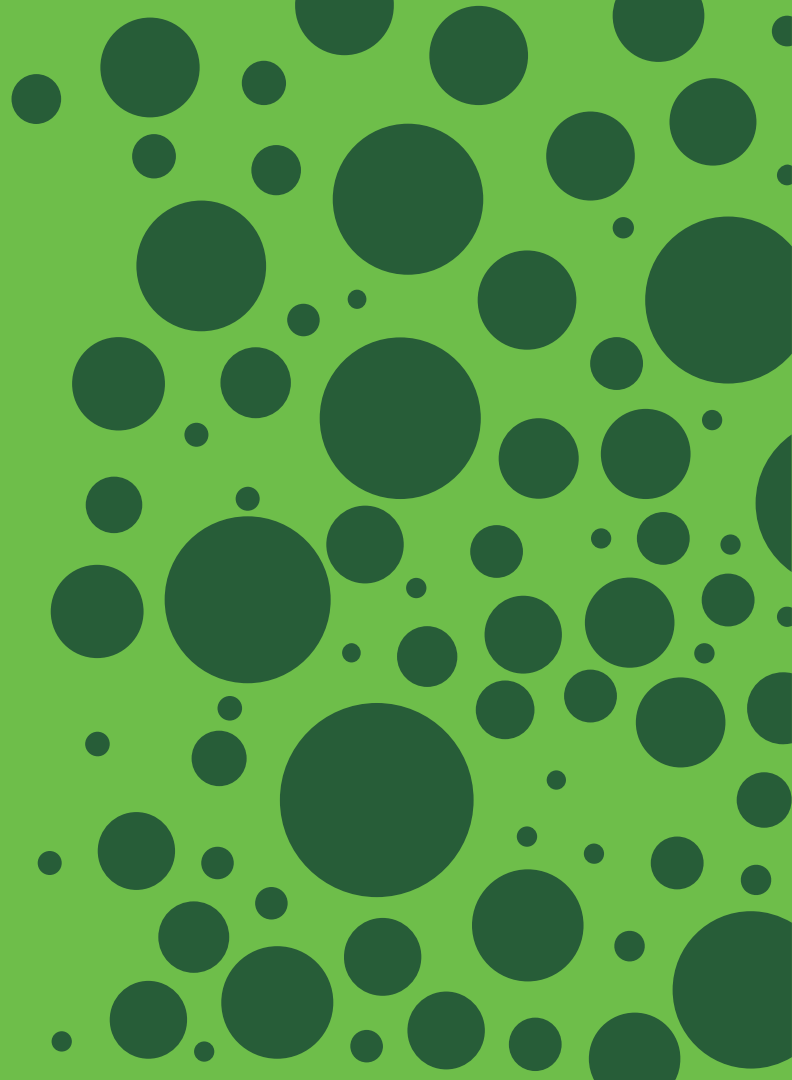


Cisco UCS PowerTool – Install

- Key Capabilities:
 - Full coverage UCS Manager / UCS Central / UCS IMC
 - Over 5600 Cmdlets (Microsoft PowerShell name for a command)
 - Access to all UCS object data / metadata / parameters
-
- Operational Aspects:
 - Simple [download](#) and Install
 - Adherence to Microsoft PowerShell guidelines



Connect
Query
Filter
Dump XML



Connect / Query / Dump XML

> ex-01.ps1 x

DEVWKS-2061 > > ex-01.ps1

```
1 # ex_01.ps1
2 # Connect
3 Connect-Ucs -Name 198.18.133.91
4 Get-UcsPSSession
5 Get-help Connect-Ucs
6
7 # Query UCS Manager
8 Get-UcsBlade
9 Get-UcsBlade | Select-Object Dn, Serial, Model
10 Get-UcsBlade -Xml
11
12 # Get Cmdlets are Class Based but can retrieve a Single Object
13 Get-UcsBlade -Dn sys/chassis-3/blade-1 -Xml | Select-Object Dn, Serial, Model
14
```


Query – Filter

> ex-02.ps1 x

DEVWKS-2061 > ex-02.ps1

```
1 # ex_02.ps1
2 # PowerShell is case sensitive by default
3 Get-UcsBlade -Model UCSB-B200-M4 | Select-Object Dn, Serial, Model
4 Get-UcsBlade -Model ucsb-B200-M4 | Select-Object Dn, Serial, Model
5
6 # PowerShell is case insensitive by default
7 Get-UcsBlade | ?{$_.Model -eq 'ucsB-b200-M4'} | Select-Object Dn, Serial, Model
8
9 # Filter Strings
10 Get-UcsBlade -Filter 'Model -ilike UcsB-b200-M3' -Xml | Select-Object Dn, Model | more
11 Get-UcsBlade -Filter 'Model -ilike UcsB-b200-M4' -Xml | Select-Object Dn, Model | more
12
```

Get Help Variable Inspection Metadata

Get Help / Variable Inspection

> ex-03.ps1 x

DEVWKS-2061 > > ex-03.ps1

```
1 # ex_03.ps1
2 Get-Help Connect-Ucs
3
4 $DefaultUcs
5
6 Get-UcsPsSession
7
```

Metadata

> ex-04.ps1 x

DEVWKS-2061 > > ex-04.ps1 > ...

```
1 # ex_04.ps1
2 # Metadata
3 Get-UcsVlan | Select Dn, SwitchId, Id
4
5 Get-UcsCmdletMeta -Noun Vlan
6 Get-UcsCmdletMeta -Noun UcsVlan
7 Get-UcsCmdletMeta -ClassId FabricVlan
8 Get-UcsCmdletMeta -ClassId FabricVlan -Tree
9
10 $vlan_meta = Get-UcsCmdletMeta -ClassId FabricVlan
11 $vlan_meta
12
```

Metadata

> ex-05.ps1 x

DEVWKS-2061 > ex-05.ps1

```
1 # ex_05.ps1
2 # Metadata
3 $vlan_meta.MoMeta
4 $vlan_meta.MoMeta.PropertyMeta
5 $vlan_meta.MoMeta.PropertyMeta[9].Restriction
6 $vlan_meta.MoMeta.PropertyMeta | Where-Object {$_.Name -eq "Id"} | Select-Object -ExpandProperty Restriction | Select-Object Range
7
8 $vlan_meta.MoMeta.PropertyMeta[15].Restriction
9 $vlan_meta.MoMeta.PropertyMeta | Where-Object {$_.Name -eq "Name"} | Select-Object -ExpandProperty Restriction | Select-Object Pattern
10
11 $vlan_meta.MoMeta.PropertyMeta[27].Restriction
12 $vlan_meta.MoMeta.PropertyMeta | Where-Object {$_.Name -eq "Sharing"} | Select-Object -ExpandProperty Restriction | Select-Object ValueSet
13
```

Configure Transactions

Configure

```
> ex-06.ps1 x
DEVWKS-2061 > > ex-06.ps1 > ...
1 # ex-06.ps1
2 # Configure
3
4 # Add a VLAN
5 Get-UcsLanCloud | Add-UcsVlan -Name CiscoLive -Id 500
6
7 # Add an Organization
8 $ucsOrg = Add-UcsOrg -Name CiscoLiveOrg
9 Add-UcsServiceProfile -Org $ucsOrg -Name CiscoLiveSP
10 Add-UcsBootPolicy -Org $ucsOrg -Name CL_BP -RebootOnUpdate yes -BootMode legacy | Add-UcsLsbootVirtualMedia -Access "read-only-local" -LunId "0" -Order 1
11
12 Get-UcsServiceProfile -Name CiscoLiveSP | Set-UcsServiceProfile -BootPolicyName CL_BP -Force
13 Add-UcsServiceProfile -Org $ucsOrg -Name CiscoLiveSP -BootPolicyName CL_BP -ModifyPresent
14 Get-UcsServiceProfile -Name CiscoLiveSP
15
16 Get-UcsOrg -Name CiscoLiveOrg | Get-UcsBootPolicy -Name CL_BP | Remove-UcsBootPolicy -Force
17 Get-UcsServiceProfile -Name CiscoLiveSP
18
```

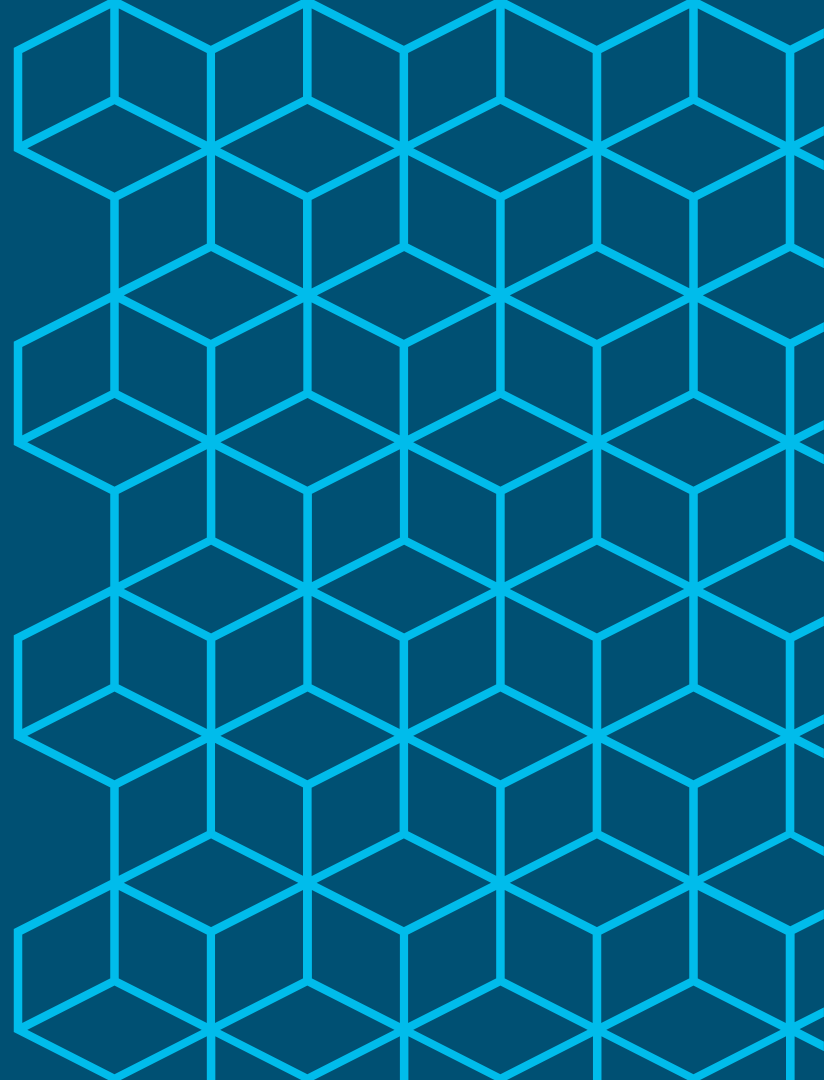
Transactions

> ex-07.ps1 x

DEVWKS-2061 > > ex-07.ps1 > ...

```
1 # ex-07.ps1
2 # Transactions
3 $ucsLanCloud = Get-UcsLanCloud
4
5 Start-UcsTransaction
6 101..104 | %{Add-Ucsvlan -LanCloud $ucsLanCloud -Name vlan$_ -id $_}
7 Complete-UcsTransaction
8
9 Start-UcsTransaction
10 105..120 | %{Add-Ucsvlan -LanCloud $ucsLanCloud -Name vlan$_ -id $_}
11 Complete-UcsTransaction
12
13 Start-UcsTransaction
14 Get-UcsVlan | ?{$_.id -ge 102 -and $_.id -le 120} | Remove-UcsVlan -Force | Out-Null
15 Complete-UcsTransaction | Out-Null
16
```


Compare / Sync Code Generation



Compare / Sync

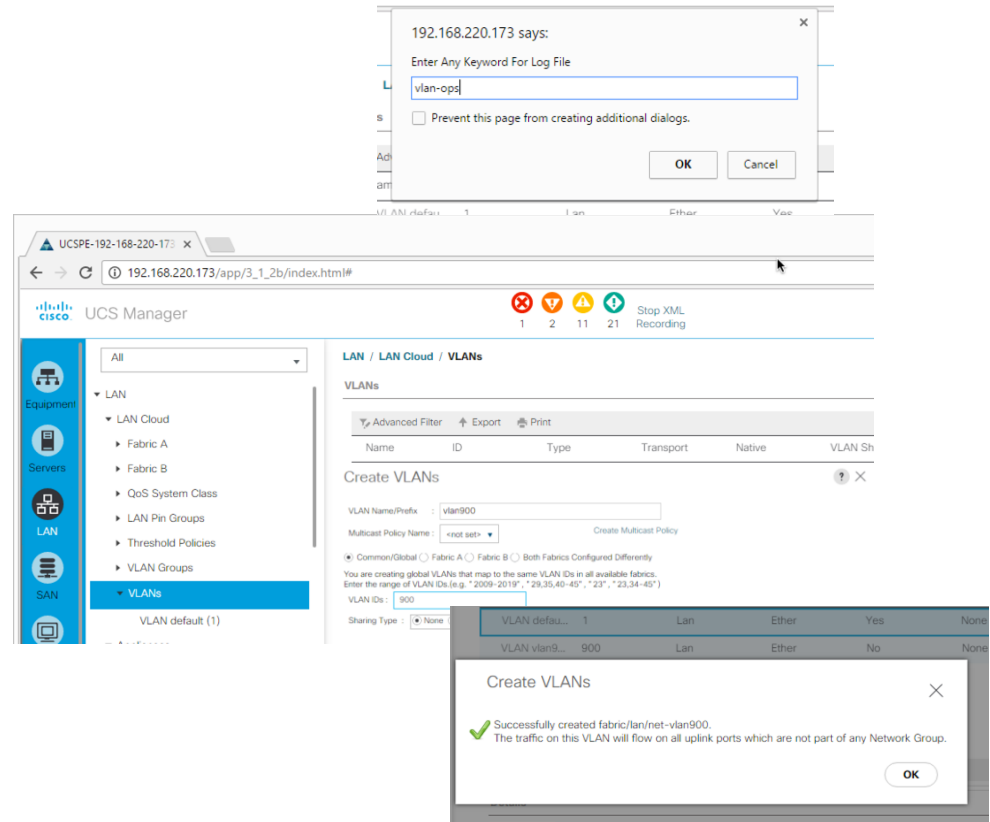
> ex-08.ps1 x

DEVWKS-2061 > ex-08.ps1 > ...

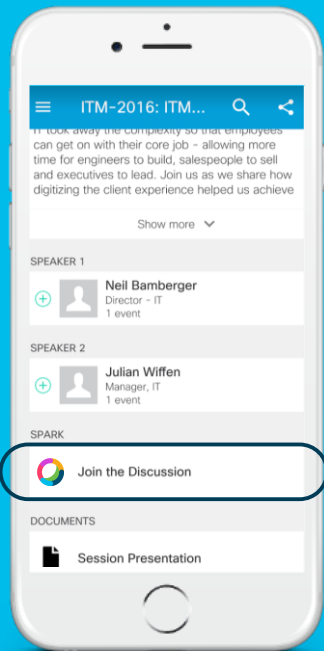
```
1 # ex-08.ps1
2 # Compare / Sync
3 $ucsCred = Get-Credential
4 $ucsSource = Connect-Ucs -Name 198.18.133.91 -Credential $ucsCred -NotDefault
5 $ucsTarget = Connect-Ucs -Name 198.18.134.249 -Credential $ucsCred -NotDefault
6
7 Compare-UcsMo $(Get-UcsVlan -Ucs $ucsTarget) $(Get-UcsVlan -Ucs $ucsSource)
8
9 Sync-UcsMo -Ucs $ucsTarget $(Compare-UcsMo $(Get-UcsVlan -Ucs $ucsTarget) $(Get-UcsVlan -Ucs $ucsSource)) -WhatIf -DeleteNotPresent
```

Code Generation

1. control-option/alt-q (MAC)
Ctrl-Alt-q (Windows)
2. Click Record XML
3. Do Configuration
4. Click Stop XML Recording
5. Download XML file
6. Feed XML file to
ConvertTo-UcsCmdLet



ConvertTo-UcsCmdlet -Xml -LiteralPath C:\Users\demouser\Downloads\org_ops_xmlReq.log



cs.co/ciscolivebot#DEVWKS-2061

Cisco Webex Teams

Questions?

Use Cisco Webex Teams (formerly Cisco Spark) to chat with the speaker after the session

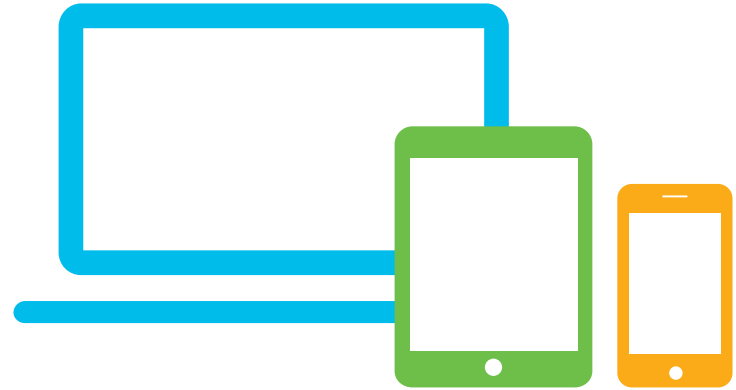
How

- 1 Find this session in the Cisco Events Mobile App
- 2 Click “Join the Discussion”
- 3 Install Webex Teams or go directly to the team space
- 4 Enter messages/questions in the team space

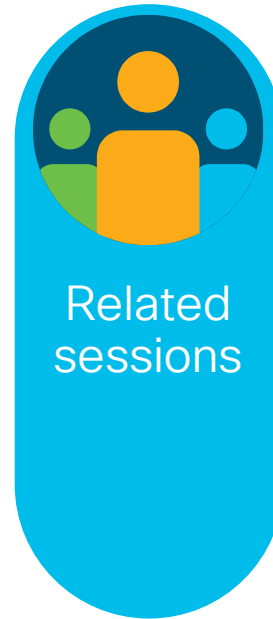
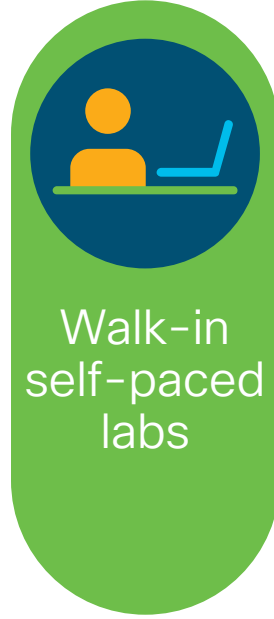
Complete your online session survey

- Please complete your Online Session Survey after each session
- Complete 4 Session Surveys & the Overall Conference Survey (available from Thursday) to receive your Cisco Live T-shirt
- All surveys can be completed via the Cisco Events Mobile App or the Communication Stations

Don't forget: Cisco Live sessions will be available for viewing on demand after the event at ciscolive.cisco.com

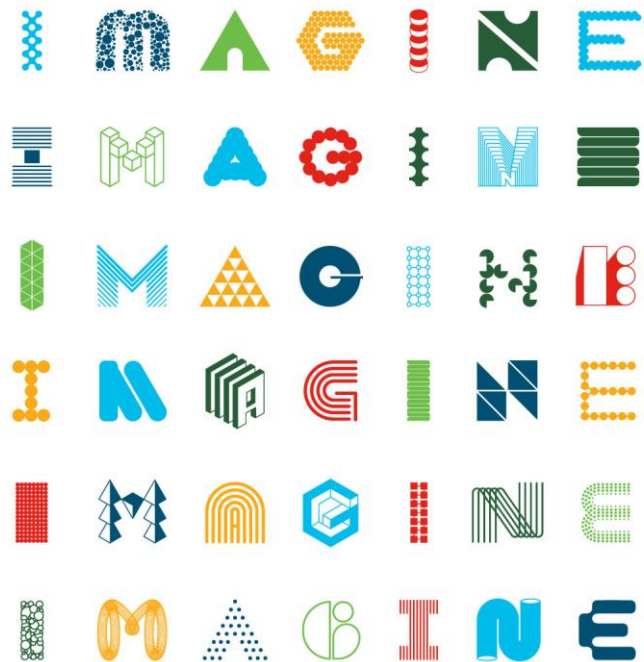


Continue Your Education





Thank you



INTUITIVE



INTUITIVE