

Introduction to NSX APIs

vBrownBag EMEA

Sam McGeown
21/11/2017



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Agenda

- Who am I?
- Getting started
 - What's in my toolkit?
 - NSX API basics
 - My modus operandi: how I work, and tips and tricks
- NSX API Structure
- Demo

Getting Started

What's in my toolkit?

- Postman
 - <https://www.getpostman.com/>
 - Disable SSL verification
 - Take a look at the Tests
- Visual Studio Code
 - <https://code.visualstudio.com/>
 - Wrangle JSON, XML, PowerShell, (insert scripting language of choice)
- PowerShell
 - PowerNSX (hint: it's awesome!) <https://github.com/vmware/powernsx>
- vRealize Orchestrator



Getting Started

NSX API basics

- The NSX API Bible
 - https://docs.vmware.com/en/VMware-NSX-for-vSphere/6.3/nsx_63_api.pdf
 - <https://code.vmware.com/apis/107/nsx-for-vsphere>
- Uses Basic Authentication – header is sent with every request
- HTTPS – TCP over 443, same certificate as your web interface
- Headers
 - Content-Type: application/xml
 - Accept: application/xml
- Query Parameters
 - startindex and pagesize define pagination of results
 - scopelds target a specific scope for the request

Getting Started

NSX API basics

- vCenter Object IDs
 - Authenticate to Managed Object Browser (<https://vcenter/mob/>)
 - **Datacenter**
 - MOB > content > rootFolder > childEntity
 - **Cluster/Host**
 - MOB > content > rootFolder > childEntity > hostFolder > childEntity
 - **Resource Group**
 - MOB > content > rootFolder > childEntity > hostFolder > childEntity > resourcePool
 - **Distributed Switch**
 - MOB > content > rootFolder > childEntity > networkFolder > childEntity
 - **Portgroup**
 - MOB > content > rootFolder > childEntity > networkFolder > childEntity
 - **VM**
 - MOB > content > rootFolder > childEntity > vmFolder > childEntity

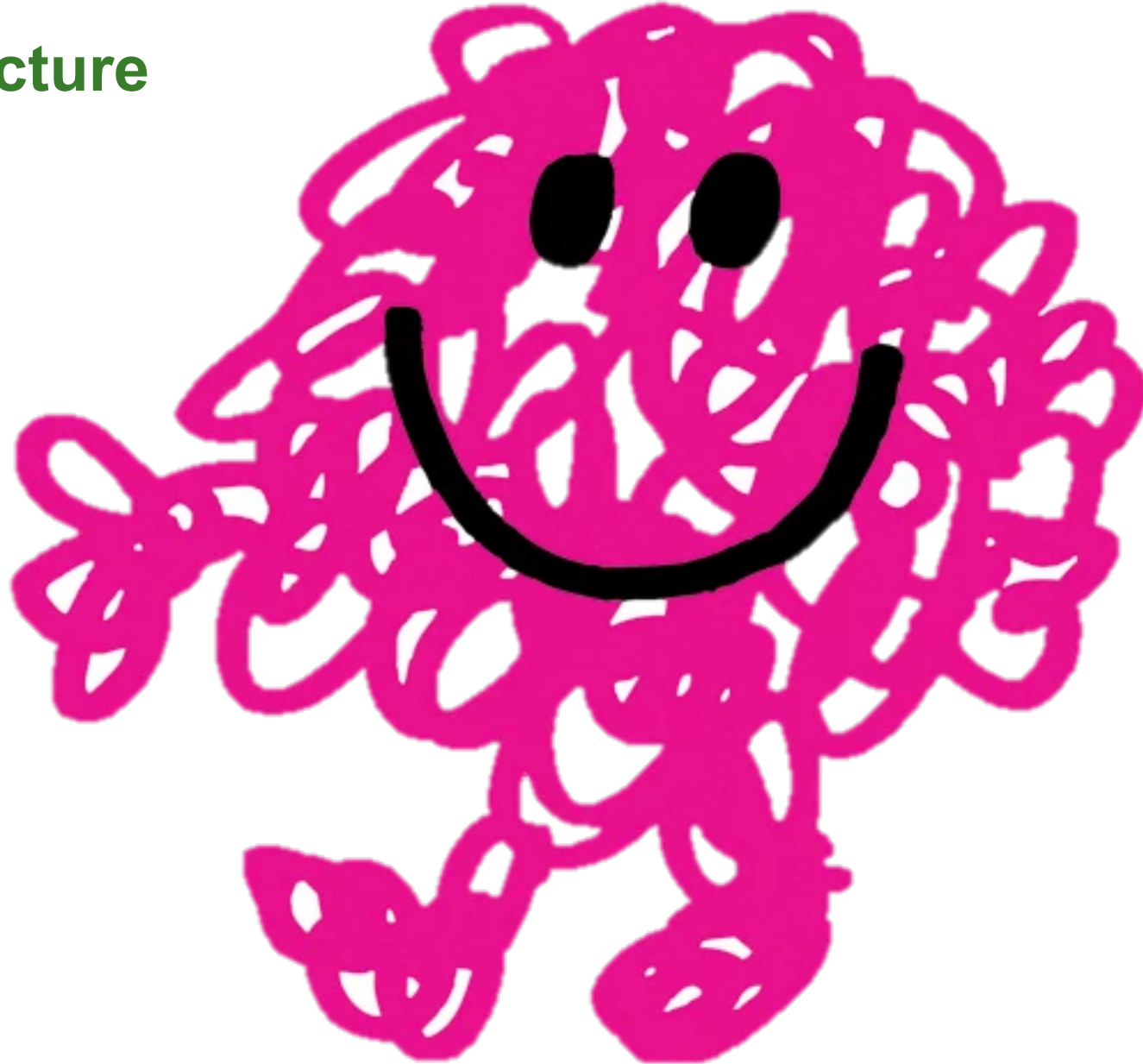
Getting Started

Tips/Tricks/how I work

- Typical process
 - Deploy it manually (through the GUI)
 - Use the GET method to view the configuration
 - Look up the PUT/POST method in the API docs
 - Run the method in Postman
 - Write the PowerShell/vRO workflow
- PowerNSX has probably already written it!
 - Dig through the .psm1 file and look at the code
- Learn HTTP error codes
- Let Postman write your code

NSX API Structure

- Mind map!



Demo time!

Resources

- <https://github.com/sammcgeown/vBrownBagNSXAPI>
- Postman Collection
 - Demo Requests Collection
 - Demo Environment JSON
- NSX API Mind Map

Questions?

Thanks for listening!