



# SCOM MIGRATION SCENARIOS

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Bibi





► **Bob Cornelissen**

► Im using facebook though



► @Bob\_Cornelissen

**BICTT**



► 7 Year CDM MVP

► Managing Consultant and CTO  
of BICTT Group



► Fisheries Biologist -> Sysadmin  
-> MOM -> SCOM -> SCOMosaur



► SpareRibs, ice cream

# BIG QUESTION... WHAT SCOM DO YOU HAVE?



LomChooi

## Versions

MOM 2000 & SP1  
MOM 2005 & SP1  
SCOM 2007 RTM  
SCOM 2007 SP1  
SCOM 2007 R2  
SCOM 2012  
SCOM 2012 SP1  
SCOM 2012 R2  
SCOM 2016  
SCOM 1801  
SCOM 1807

## Release and updates

2001 - 2003  
2004 - 2005  
2007  
2008 - 2010  
2008 - 2013  
2011 - 2015  
2013 - 2015  
2014 - 2017  
2016 - Some time  
2018 - End July 2019  
2018 - End Jan 2020



# Starting Point

The first questions you need to ask yourself...

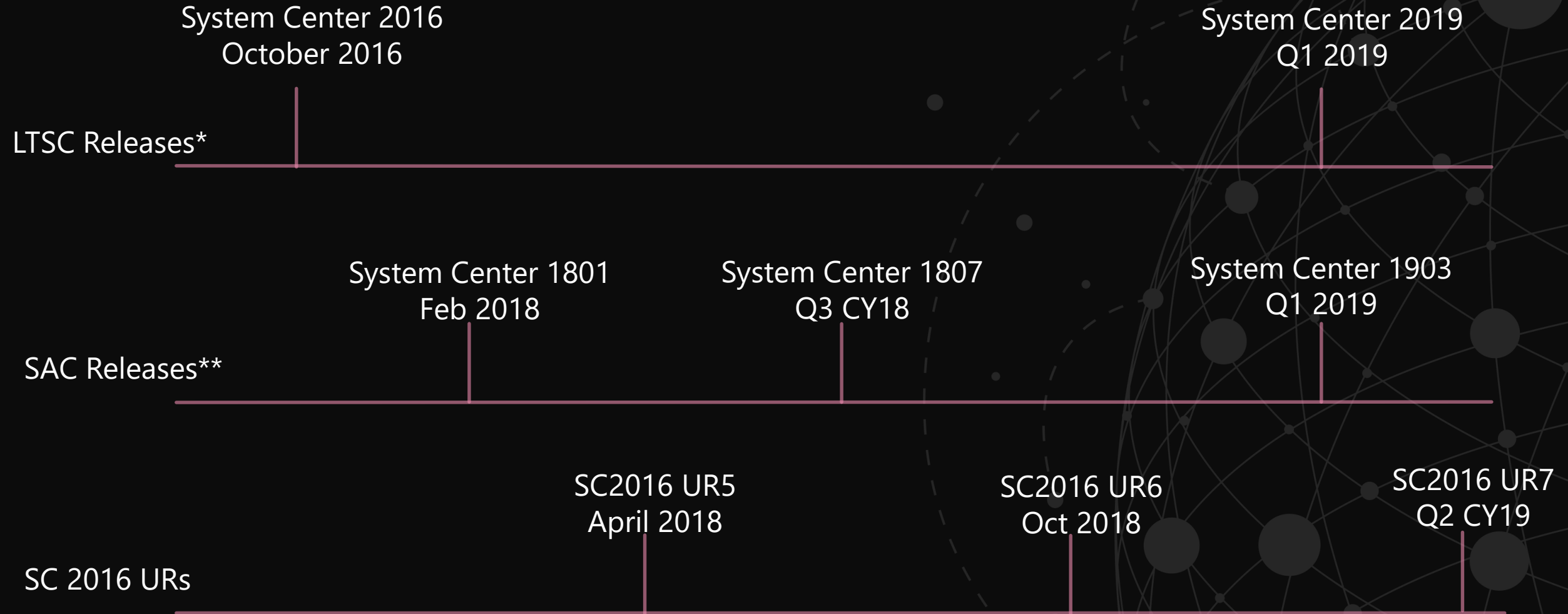
- What is my target SCOM version?
  - Looking at LTSB or SAC versions
- In-place upgrade (single or multiple) or side-by-side?
  - Depends on your current version
  - Depends on current health and setup

**YOU'VE GOT TO ASK  
YOURSELF ONE  
QUESTION: 'DO I FEEL  
LUCKY?' WELL, DO YA  
PUNK?**

QUOTEHD.COM

Clint Eastwood  
American Actor

# SYSTEM CENTER RELEASE CADENCE



\* LTSC releases are supported for 5 year (mainstream) + 5 year (extended)

\*\* SAC releases are supported for 18 months

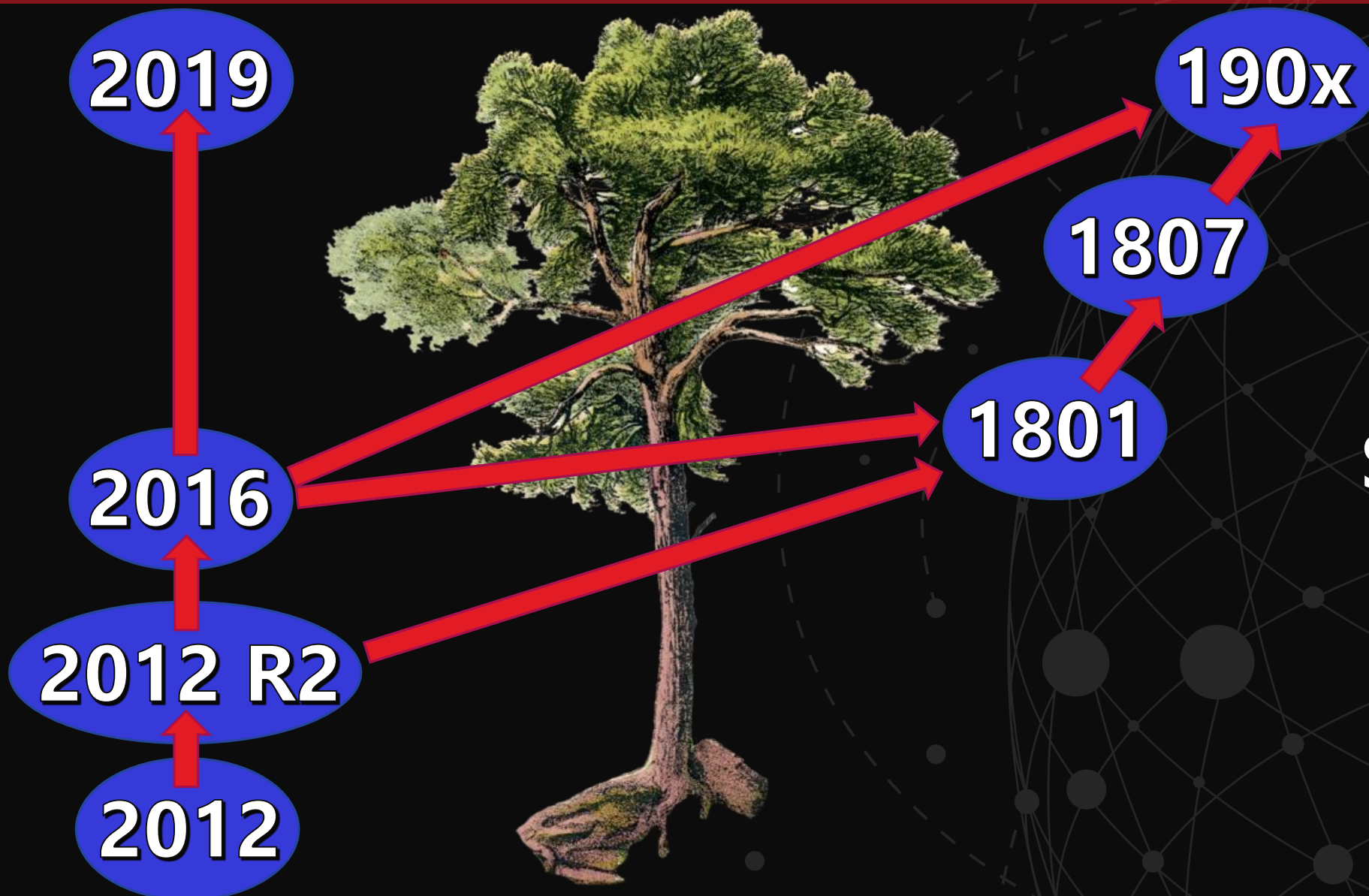




# THE SCOM UPGRADE AND INSTALL TREE

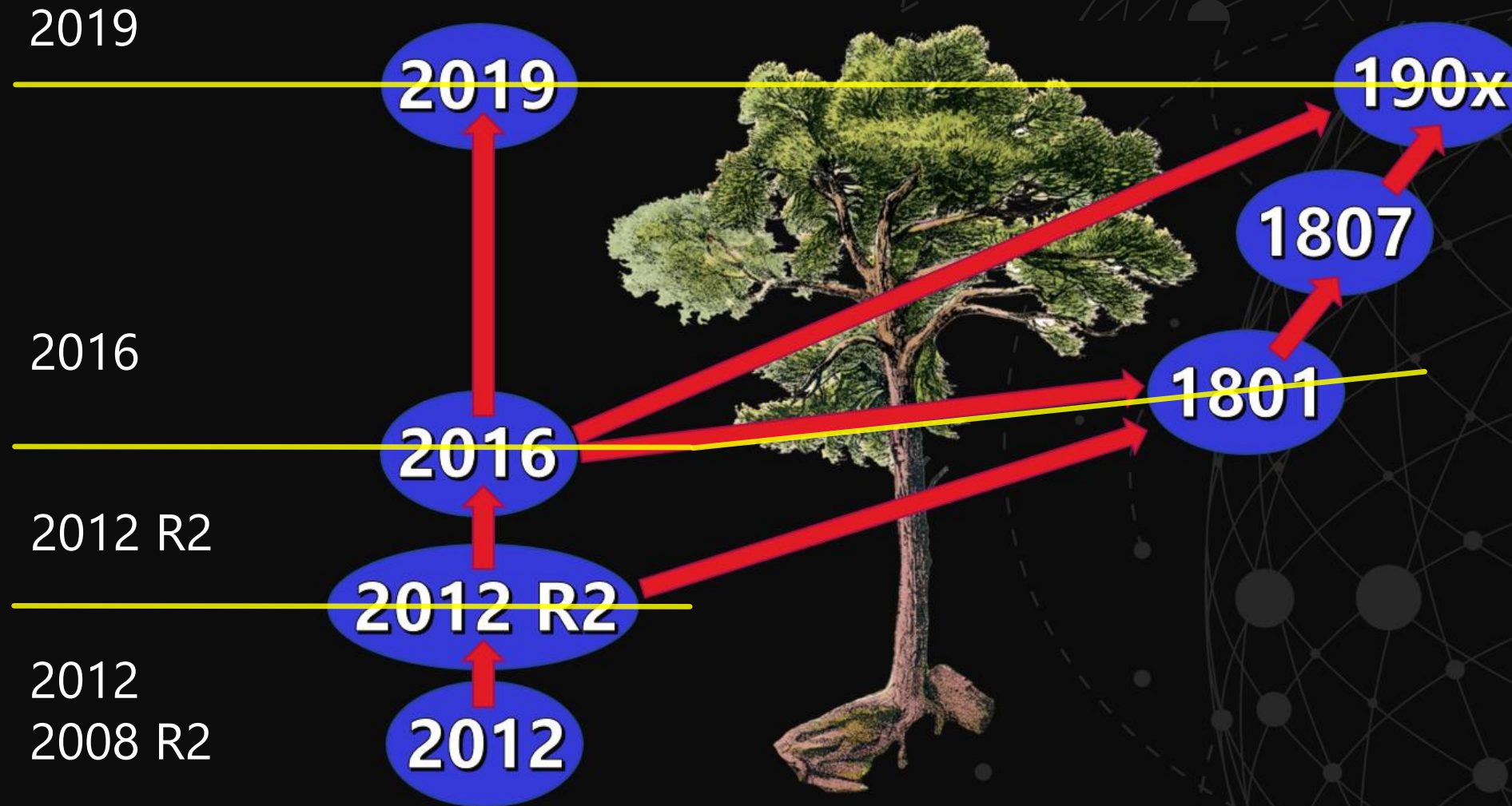
LTSB

SAC



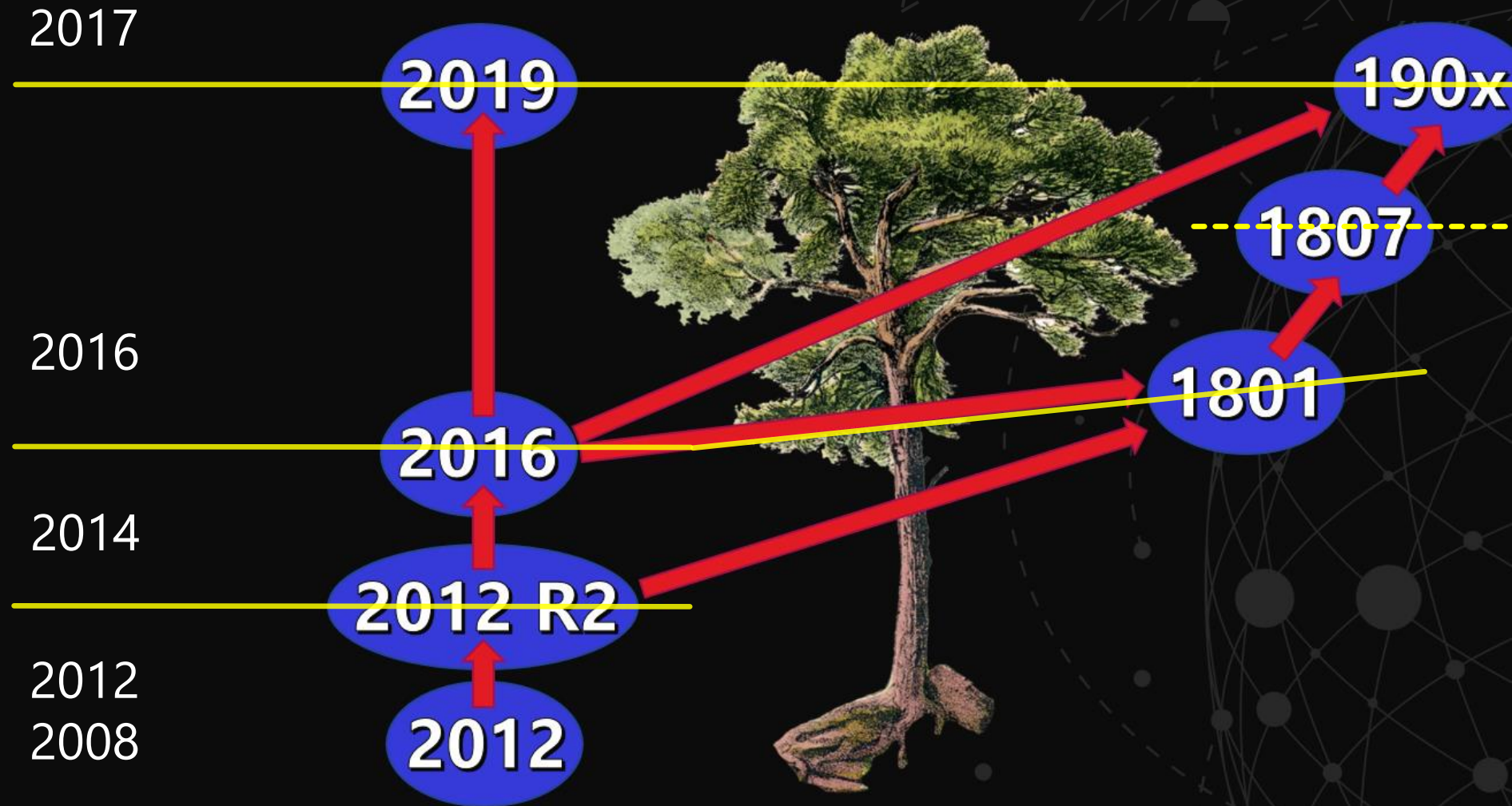
# OTHER DECISION POINTS - WINDOWS

Windows Server  
Version



# OTHER DECISION POINTS - SQL

SQL Server  
Version





# IN-PLACE VS SIDE-BY-SIDE



Thong  
Dam

## In-place

### Pros

- Less configuration work
- Everything gets migrated and can immediately start using new features

### Cons

- Prefer to not perform when upgraded before!
- Anything wrong with the previous setup stays and increases

Only do this for a Healthy management group!

Be prepared to return to backup of all management servers and SQL databases involved when anything goes wrong.

# IN-PLACE VS SIDE-BY-SIDE



Panda

## Side-by-side

### Pros

- Fresh environment
- Implement and finish configuration without interrupting service
- Transform to monitoring teams after configuration is finalized
- Easier to also move to new Windows and SQL versions at the same time

### Cons

- Double number of servers / storage required
- Agents need to be multi-homed for a while
- Loss of historic data
- More configuration work

# UPGRADE PATHS MULTIPLE SC PRODUCTS

- ▶ Upgrade from previous version: System Center 2012 R2 with UR9 or later
- ▶ Upgrade sequence:
  - ▶ Service Management Automation
  - ▶ Orchestrator
  - ▶ Service Manager
  - ▶ Data Protection Manager
  - ▶ Operations Manager
  - ▶ Virtual Machine Manager
  - ▶ Service Provider Foundation
  - ▶ Windows Azure Pack

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Example for the  
2012R2 -> 2016  
migration



NongSaai

# IN-PLACE UPGRADE



# BEFORE YOU UPGRADE

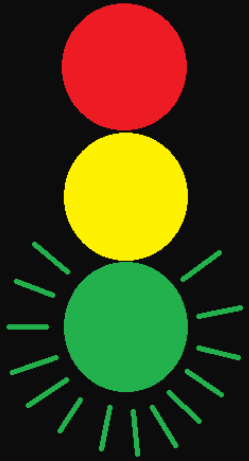
- ▶ Use an account with local administrator rights on the:
  - ▶ *SQL Server (both cluster or always-on scenarios)*
  - ▶ *SCOM Management Servers*
  - ▶ *SCOM Web and Reporting Servers*
- ▶ The account must be a member of the Sysadmin role on the SQL Server
- ▶ The account must be a SCOM Administrator

Tip: Often the SDK/DAS account would have these rights



ChaowKuai

# BEFORE YOU UPGRADE



- ▶ SCOM infrastructure is **healthy**, including management servers, SQL servers and the health of gateways and other SCOM infrastructure components before continuing!
- ▶ SCOM infrastructure is at 2012 R2 with UR9 or higher (UR11-UR14 is preferable). For 1801 Minimally 2012R2 UR12.
- ▶ Windows and SQL versions (Windows 2012 R2, SQL 2012 SP2). For 1801 - SQL 2016 is preferred.
- ▶ Clean up the EntityTransactionLog Table (ETL Table) using a script

Kot



# BEFORE YOU UPGRADE (MORE...)

- ▶ The OperationsManager database must have 50% free space
- ▶ Change the size of the transaction log for the OperationsManager database to 50% of the size of the database size
- ▶ Remove agents from Pending Management
- ▶ Disable Notification Subscriptions
- ▶ Disable the IIS Web Console site in IIS
- ▶ Disable Connectors

# BEFORE YOU UPGRADE (MORE...)

- ▶ Optional: Increase the cache size on agents, so they can buffer data while the SCOM management servers are down for the upgrade.
- ▶ Check an additional 2 times if you have complete backups of your management servers, and all of your databases!
- ▶ First step in upgrading is to upgrade the management servers 1 by 1 starting with the RMSe and while upgrading each MS make sure ALL SCOM services are stopped on all the other MS.

Cha-Om  
Are we there yet!





# PERFORM IN-PLACE UPGRADE

- ▶ Disable all SCOM services on all management servers except the one running an upgrade
- ▶ Start upgrading the RMSe management server
  - ▶ Microsoft CLR types for SQL Server 2014
  - ▶ Microsoft Report Viewer 2015 runtime
    - ▶ You can use the prerequisites script mentioned earlier
  - ▶ Upgrade of SCOM components installed on this server
  - ▶ Credentials of service accounts needed!
- ▶ Upgrade the next management server(s) including those with ACS collectors installed



TamLung

# PERFORM IN-PLACE UPGRADE

- ▶ Let the management servers initialize for half an hour OR MORE and next implement the latest SCOM Update Rollup on all management servers, including running the SQL script(s) and importing of management packs. Same for 1801->1807.
- ▶ **Check if everything is still healthy!**
- ▶ Upgrade all SCOM gateway servers and apply the latest UR
- ▶ Upgrade Web Console Server(s)
- ▶ Upgrade Report Server
- ▶ Upgrade SCOM Consoles installed on other servers/machines
- ▶ Upgrade agents (they will get the latest agent version that way)



Champa

# PERFORM IN-PLACE UPGRADE

## ► Post-Upgrade tasks

- Enable Notification Subscriptions
- Enable and start Connector services
- Re-Enable ACS for the agents
- Check the health of SCOM again
- Often there are remaining consoles and agents to upgrade, do not let a few of those halt the process of getting SCOM fully functional again with the post-upgrade tasks



NamLiak

# SIDE-BY-SIDE UPGRADE



Mohk  
You still there?



# PERFORM SIDE-BY-SIDE UPGRADE

- ▶ Install SCOM 2016 environment. Or 1801 and upgrade to 1807.
- ▶ Configure SCOM default settings (like [enable Proxy](#) for all agents)
- ▶ Multi-Home agents by pushing the agents from the SCOM console, or to install SCOM agents by other means (ConfigMgr?), and multi-home them to both management groups.

Mohn



# PERFORM SIDE-BY-SIDE UPGRADE

ThaoDam



- ▶ Import Management Packs bit by bit and configure them
- ▶ Bring the override management packs which are good from the old SCOM and import them
- ▶ Setup other components, like ACS, AEM, Dashboarding, OMS connection, Reports, Subscriptions, Connectors etc.

# PERFORM SIDE-BY-SIDE UPGRADE

## Retire old SCOM

- ▶ Clean out the old SCOM by first removing the multi-homing to only talk to the new SCOM.
- ▶ Next old SCOM server infra can be broken down if no access to the old data is needed.

TaaLieuw  
Done!





# Charity!

Safety, food, water, health,  
blankets, shade, love, fun

**\$15 = 1 month food**



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   [info@houseoftails.org](mailto:info@houseoftails.org)

Dutch bank IBAN: NL87INGB0006669920



70 dogs!!!



**#MMSGiveBack**