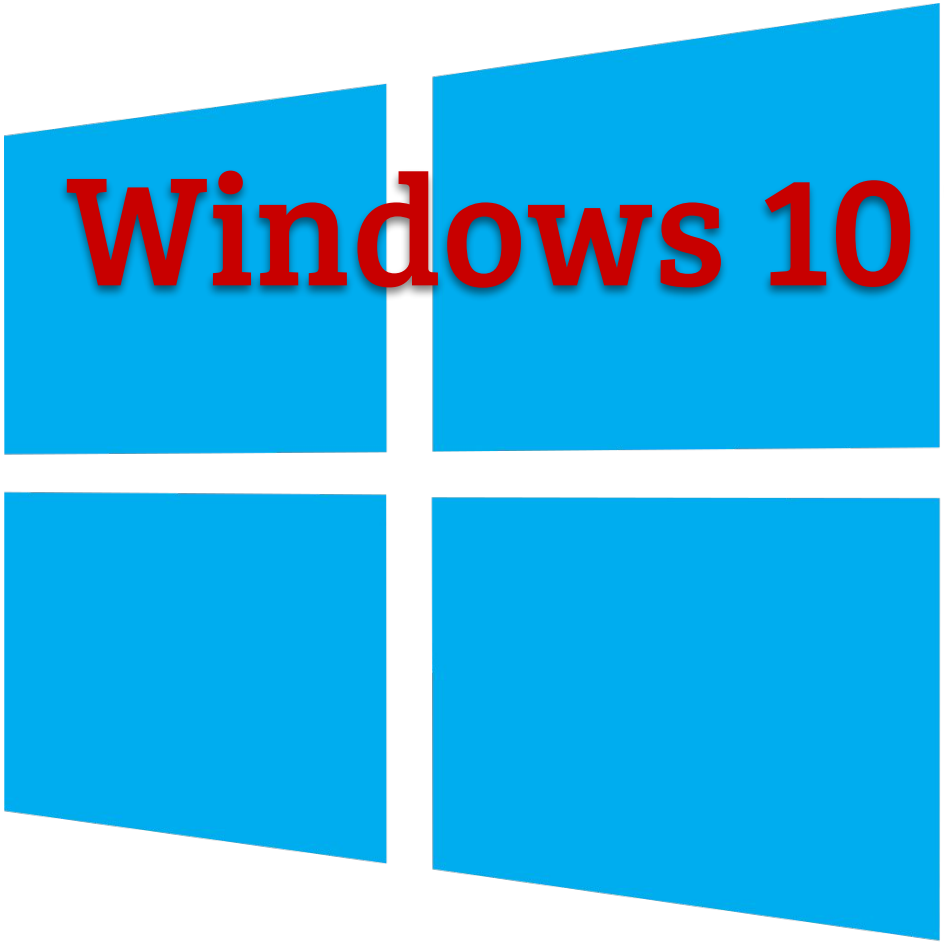

Windows 10 Upgrade

No money? Not enough staff? Still need to upgrade Windows 7 machines before their end of life while keeping your clients happy? Here's how we are doing it.

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What were our goals while planning this upgrade project?

What groups of users or computers had distinct requirements we needed to consider?

What could we offer these unique groups to best accommodate their needs?

What methods could we use to upgrade computers to Windows 10? Which did we choose and why?

What challenges or changes did we encounter with windows 10 that were new issues for us coming from a Windows 7 environment?

What other changes did we implement in conjunction with the operating system rollout ?

What were our goals while planning this upgrade project?

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What were our goals?

- Minimal Downtime for Clients- Due to our time frame, these upgrades needed to take place on a rolling basis.
- Automate when possible - With the sheer number of upgrades that needed to happen, the changes to the out-of-box OS that we required, and the implementation of new user environments at the same time, we couldn't have techs spending hours per machine.
- Minimal User configuration changes- As we needed to do rolling upgrades mid-semester with faculty and staff in full swing, we needed to not interfere with their work, timelines, or class schedules anymore than was absolutely necessary.
- Avoid work duplication by combining upcoming hardware upgrades with this process when applicable- Again, we wanted to reduce staff time touching computers and reduce interruption to our faculty and staff. If a computer would be upgraded in the next 6 months as part of our standard life cycle, we accelerated the upgrade.

What groups of users or computers had distinct requirements we needed to consider?

What could we offer these unique groups to best accommodate their needs?

What methods could we use to upgrade computers to Windows 10? Which did we choose and why?

What upgrade options did we come up with?

Physically walk around campus with cd's and pen drives and manually perform upgrades

Approve OS Upgrades through WSUS for all clients (either at once or rolled out sequentially via update groups)

Physically pick up computer then drop it back off (after in office data backups and reload with data restore)

Deliver brand new or "same model" replacements with new windows 10 loads without data

Leverage MDT for in place upgrades

Leverage MDT for user initiated in-office self backups, then prep new/replacement hardware at the Helpdesk and deliver after data restore

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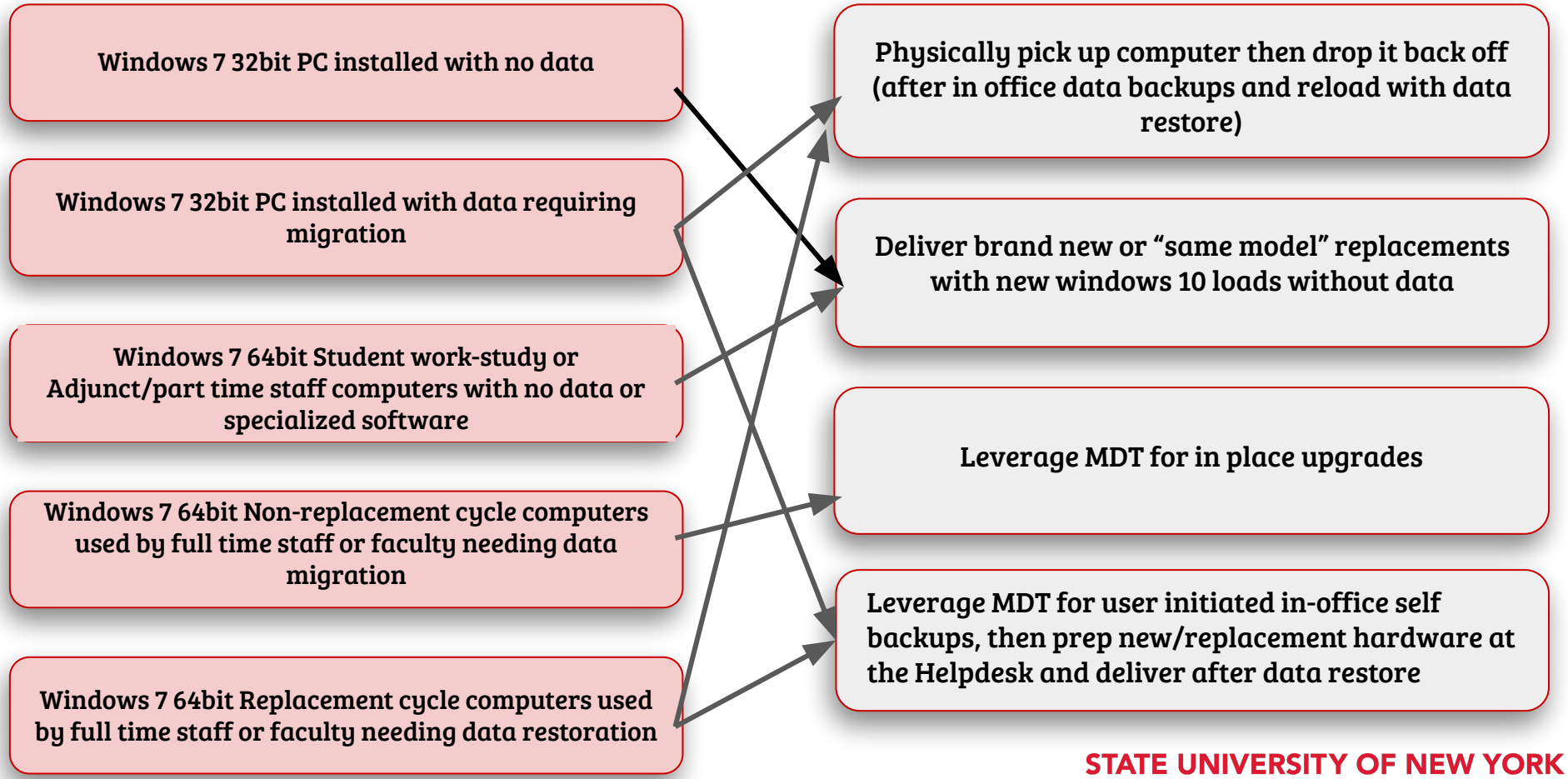

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What new challenges did we encounter with Windows 10 that weren't issues for us in a Windows 7 environment?

Windows Apps Clutter

- Removing the apps pre-deployment is tricky.
  - If certain apps are removed before sysprep the sysprep task will fail.
  - Other apps will return after sysprep and for each user logon anyway.
- Just deleting the apps on the admin user after deploy doesn't work because the apps respawn per user unless removed correctly.
- App removal is done through Powershell
- To avoid these issues and others we use a script called Decrapifier from a user csand on Spiceworks
  - This allows us to automate the removal during deployment or upgrade tasks in MDT
  - Along with built in app removal, this script can disable Cortana, One Drive, Windows Search, Privacy settings, and more.
  - It's important if you are going to use it to really dig through and understand all it can do so it doesn't disable features unintentionally
  - Specifically beware of disabling app permissions under privacy. This functions much like disabling through Group Policy and can't just be re-enabled by the end user.

.net 3.5 in Windows 10

- .net 3.5 is not installed by default in Windows 10
- It will fail if you try and install from the features menu due to a missing source directory
- Options Include:
    - Install .net3.5 during deployment for all users
    - Copy SxS folder from CD/DVD or network share and run a DISM command to install
    - Enable a Group Policy to globally redirect all .net 3.5 installation requests to look at a network share for the SxS files.
- We originally chose to do this via Group Policy
- Later we changed and just deployed to everything since our Malware suite required .net3.5

Remote Desktop User Changes

Chrome Remote Desktop access changes a bit with Windows 10

- Many of our users have desktops and Chromebooks for remote access. We use curtain mode on all of our desktops for security.
- Curtain mode changes the remote access method from VNC style to one that uses RDP
- In Windows 10 when using curtain mode users must be added to the Remote Desktop Users group if they are not an admin on the PC
- We chose to script this and the curtain mode together. First a batch file installs curtain mode then it copies users from our logon group and adds them to the Remote Desktop Users group.

What other changes did we implement in conjunction with the operating system rollout ?

Security and Inventory Control

Cost-effective Hardware Component Upgrades

Security and Inventory Control

- Removing Administrative Privileges
- SimpleHelp Remote Service
- Creation of a “Local Logon” group with local policies on all of our machines.
- Configuring and Leveraging LAPS, Microsoft Local Administrator Password Solution

Cost-effective Hardware Component Upgrades

- Upgrade old mechanical hard drives to SSD's in all hardware.
- Upgrade RAM to at least 4GB or 8GB depending on hardware.

These 2 changes that often cost less than $50 per computer, machines that are 7 years old are out performing machines that are 2 years old.

Some link and info you might be interested in.

Decrapifier script url:
https://community.spiceworks.com/scripts/show/4378-windows-10-decrapifier-1803-1809

Curtain Mode for CRD
https://support.google.com/chrome/a/answer/2799701?hl=en

SimpleHelp
https://simple-help.com/

LAPS - Local Administrator Password Solution
https://www.microsoft.com/en-us/download/details.aspx?id=46899

MDT - Microsoft Deployment Toolkit
https://docs.microsoft.com/en-us/sccm/mdt/

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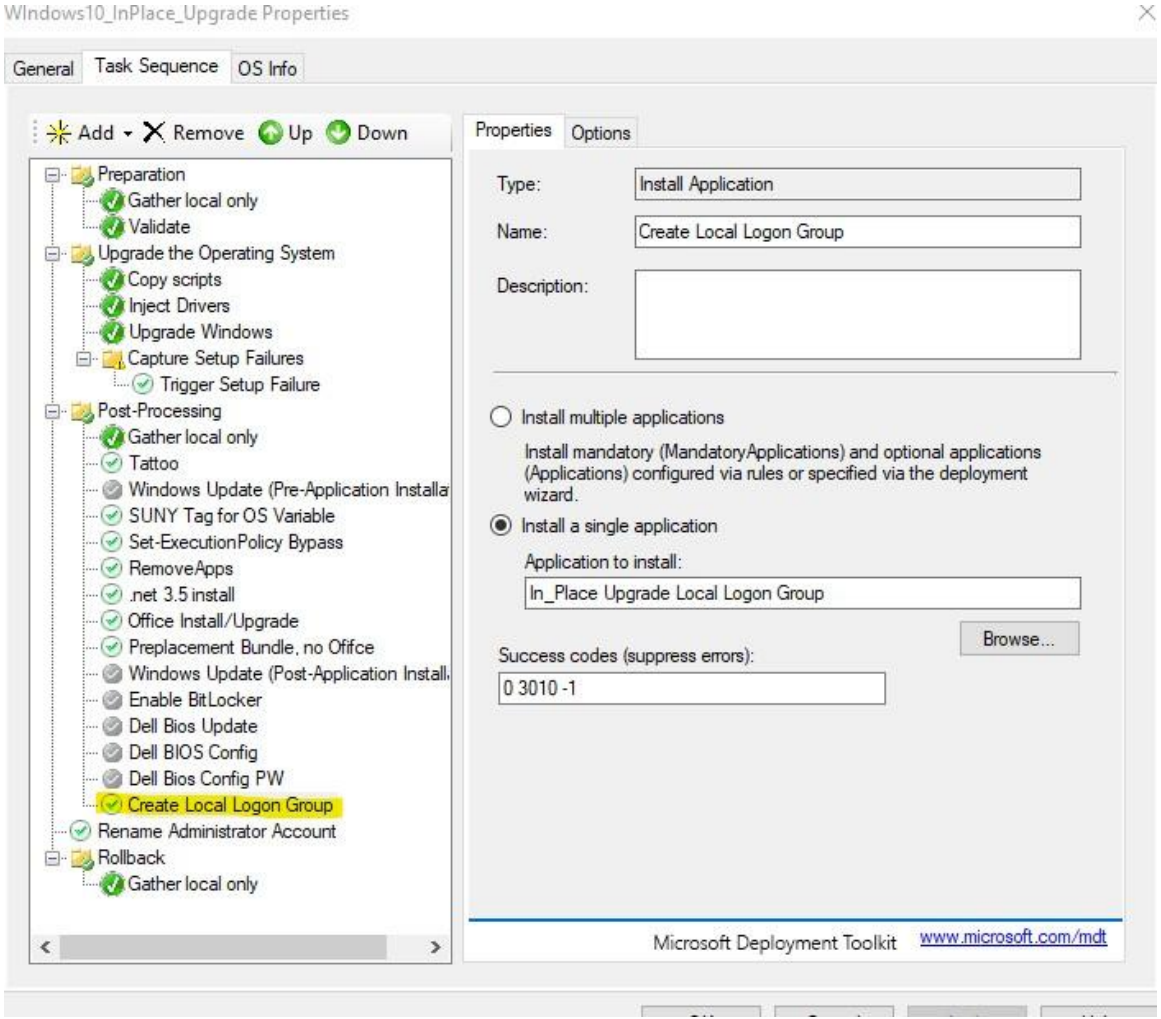
CRD Curtain Mode for Win10 .bat file

```
@ECHO OFF

reg.exe add "HKEY_LOCAL_MACHINE\SOFTWARE\Policies\Google\Chrome" /v "RemoteAccessHostRequireCurtain" /d 1
/t reg_dword /f /reg:64

reg.exe add "HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Terminal Server" /v "fDenyTSConnections"
/d 0 /t reg_dword /f /reg:64

reg.exe add "HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Terminal Server\WinStations\RDP-Tcp" /v
"UserAuthentication" /d 0 /t reg_dword /f /reg:64

reg.exe add "HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Terminal Server\WinStations\RDP-Tcp" /v
"SecurityLayer" /d 1 /t reg_dword /f /reg:64

powershell.exe -command "Set-ExecutionPolicy Bypass"

powershell.exe -file "\\software.plattsburgh.ntds\Public\Google Tools\RDPUsersforCRD.ps1"
```

Local Logon Group batch file

```
@ECHO OFF
net localgroup locallogon /ADD

powershell.exe -command "Set-ExecutionPolicy Bypass"

powershell.exe -file "\\cmsimages2012.plattsburgh.ntds\HelpdeskSharedItems\Scripts
\AddAccountToLogonLocally.ps1"

powershell.exe -file "\\cmsimages2012.plattsburgh.ntds\HelpdeskSharedItems\Scripts\Set-
AD_Group_to_locallogon.ps1" -Computer localhost -Trustee "psu
\ntds.plattsburgh.sysadm.helpdesk_students_tier2"

powershell.exe -file "\\cmsimages2012.plattsburgh.ntds\HelpdeskSharedItems\Scripts
\cleanLocalAdmin_InPlace.ps1"
```

Local Logon Group MDT



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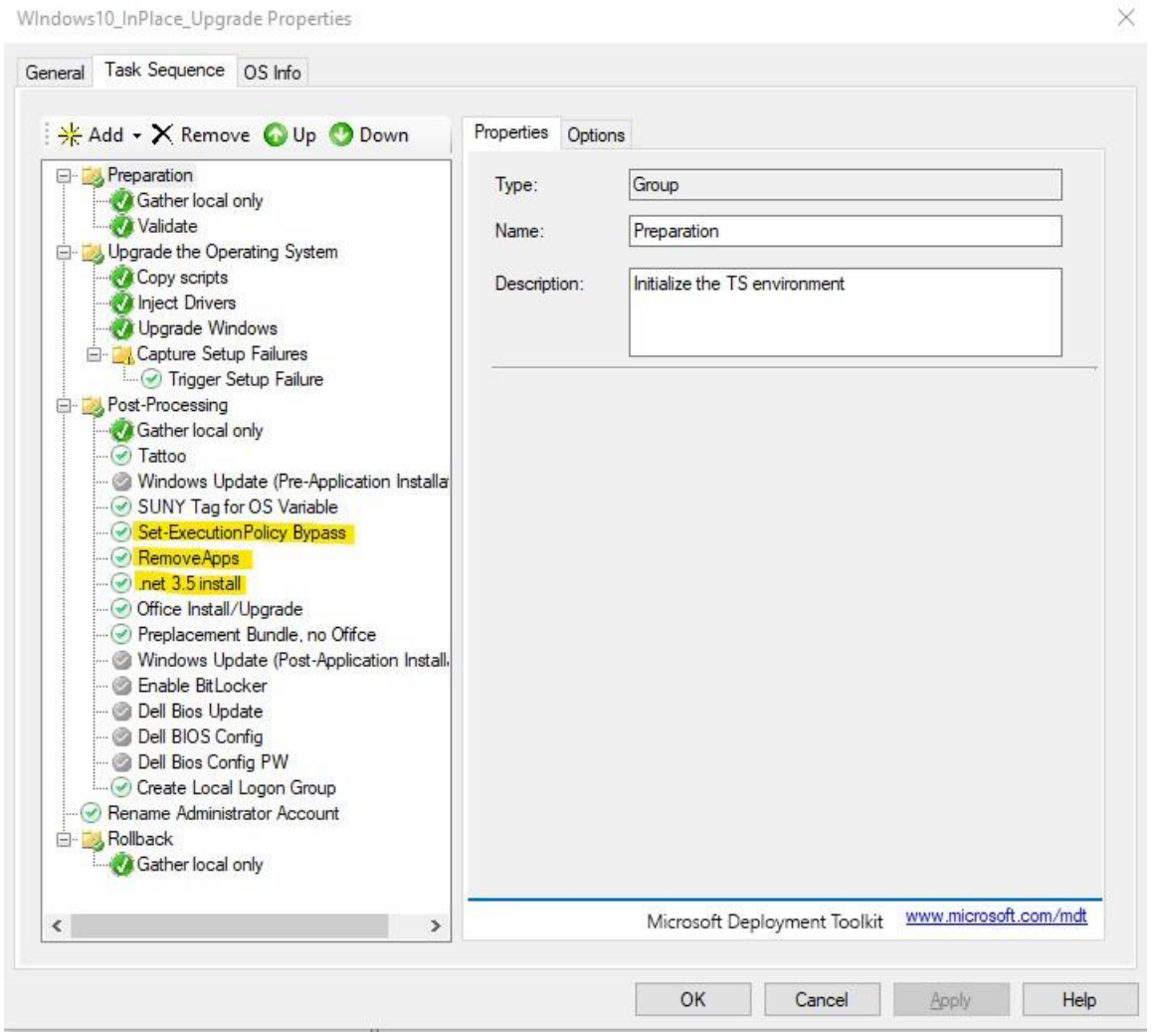
MDT Task Sequence Screen Shots



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