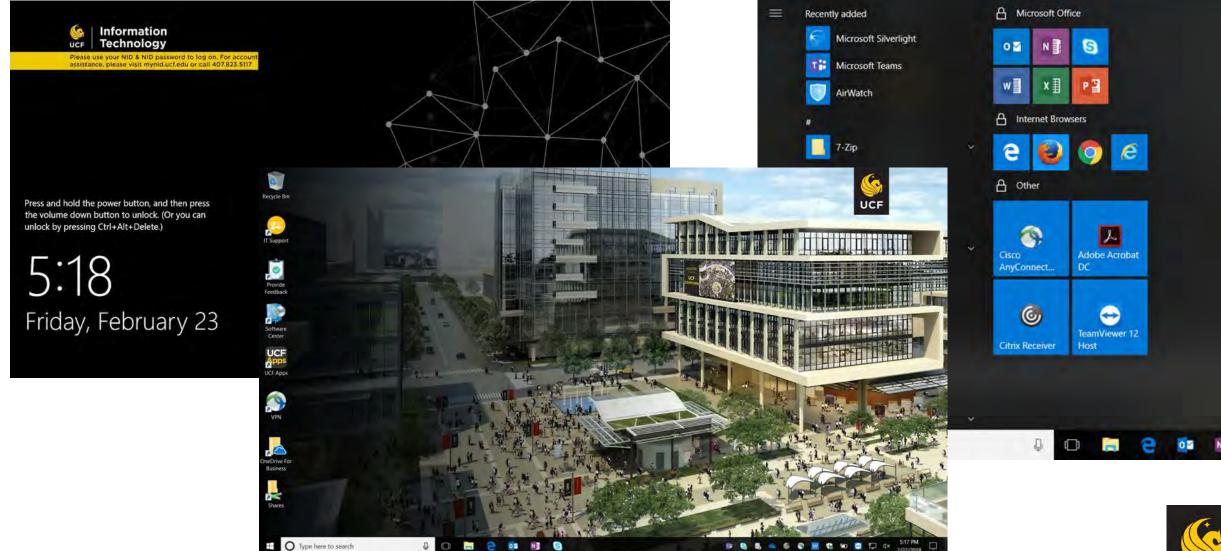
### All content on the following slides are for technical reference and are not part of the Kickoff Meeting Presentation

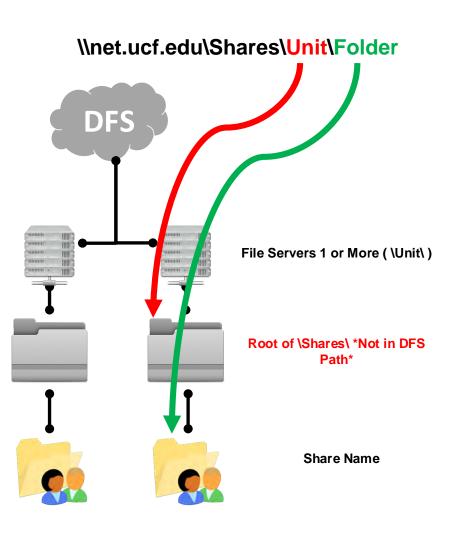


# **Branding Example**



UCF

# **File Structure for Shares**

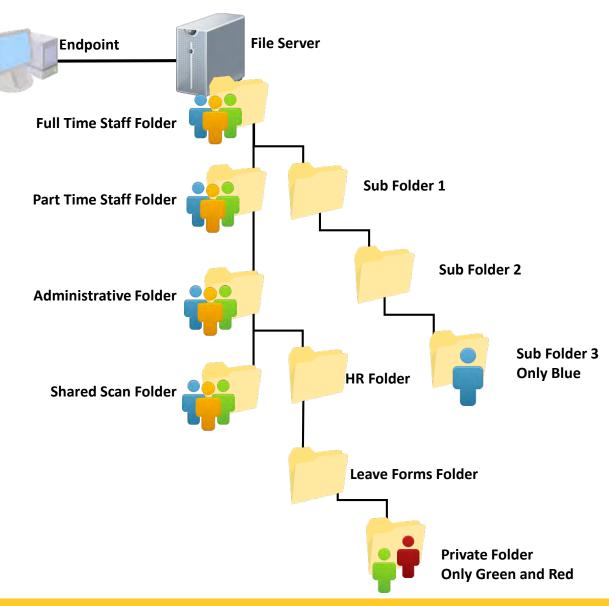


#### **Technical Specifications**

- \\net.ucf.edu\Shares\Unit\Dept Prefix Folder Share
  - Department Prefix can be omitted in the folder if it is for multi-departmental use
  - Inter-unit shares will be under a "UCF" namespace.
     '\\net.ucf.edu\Shares\UCF\Project or Folder Name'
- Permissions will only exist at root of each Folder Share
- Single, Shared GPO can be used that creates Desktop Shortcut to "\\net.ucf.edu\Shares"
  - Desktop Shortcut Name will be "Shares"
- No Mapped Drives unless approved
- Default Quota Size will be 50GB per root level share
  - Can be adjusted as desired by Unit that is financially responsible for the storage being used.
- Quota Warnings and Email Messages will be automatically to Engineering team for follow up action
- Access Based Enumeration will be enabled by default
- Quota and Usage Reporting can be requested at any time, or set to automatically be sent via email at desired intervals
- VSS options will be available (cost permitting) for self-service data recovery by the client
- Only inherited permissions on subfolders and files
- Default Security Groups will be Created : "Read Only" and "Read, Write, Delete"
- No 'Full Control' rights to clients (Deny ability to change permissions)



### File Structure for Shares - Existing

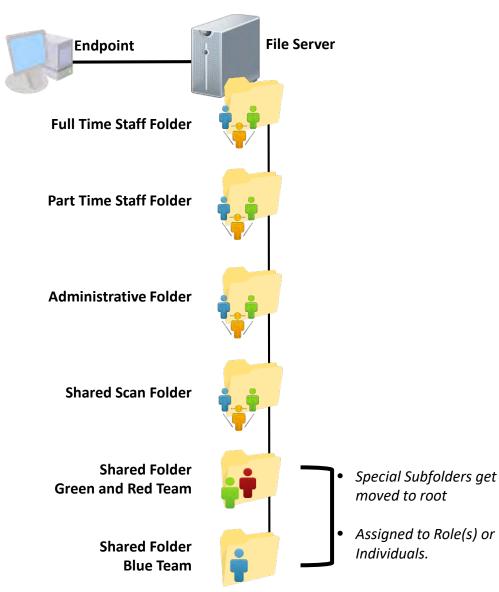


Some of the concerns for Existing Shared or Group Folder structures include:

- Complex and Undocumented user permissions
- Unstructured and individually provisioned folders
- Higher likelihood of duplicate data.
  - Occupying additional storage incurs additional cost
- Lack of standardization in the method used to implement the shared environments results in increased response time for any related incidents or request tickets submitted.



## **File Structure for Shares - Recommended**



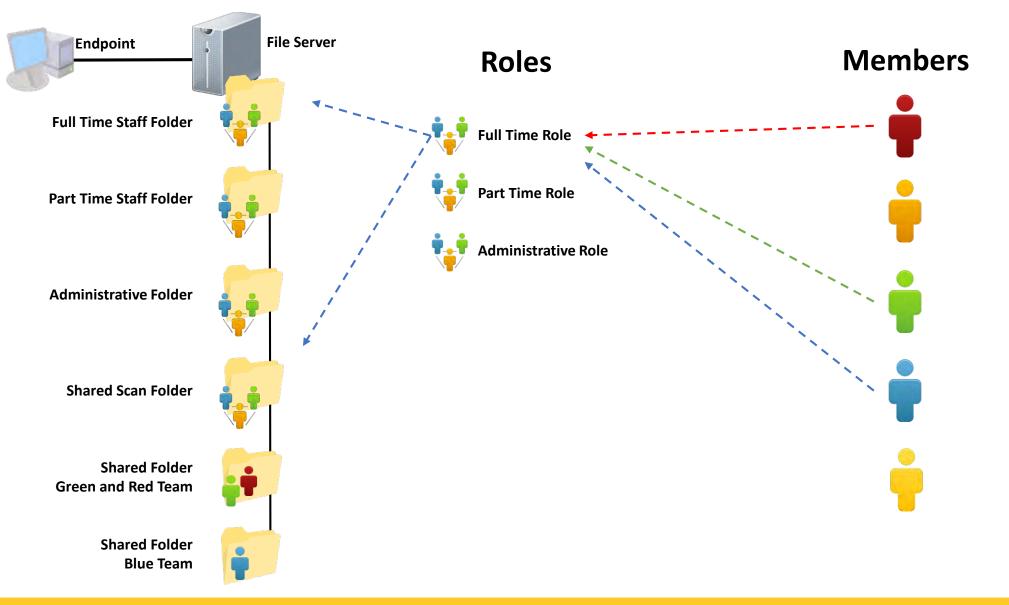
Some of the benefits for the recommended Shared or Group Folder structures include:

- Simplified and Flat Permission Structure
  - Role-Based Access (Role Names Defined by the Business)
    - "Role-First" approach. Increases efficiency when hiring new staff or adding new root-level folders
    - Individual Folder Access (Read/Write,Read Only) can still be given if a role doesn't apply.\*
- Structured and Automated Provisioning
- Self-Documenting based on Security Group Descriptions
- Standardized method will lead to increased response time with a new request or incident is submitted.
- Access Based Enumeration (ABE)
  - You will only see the folders you have access to.



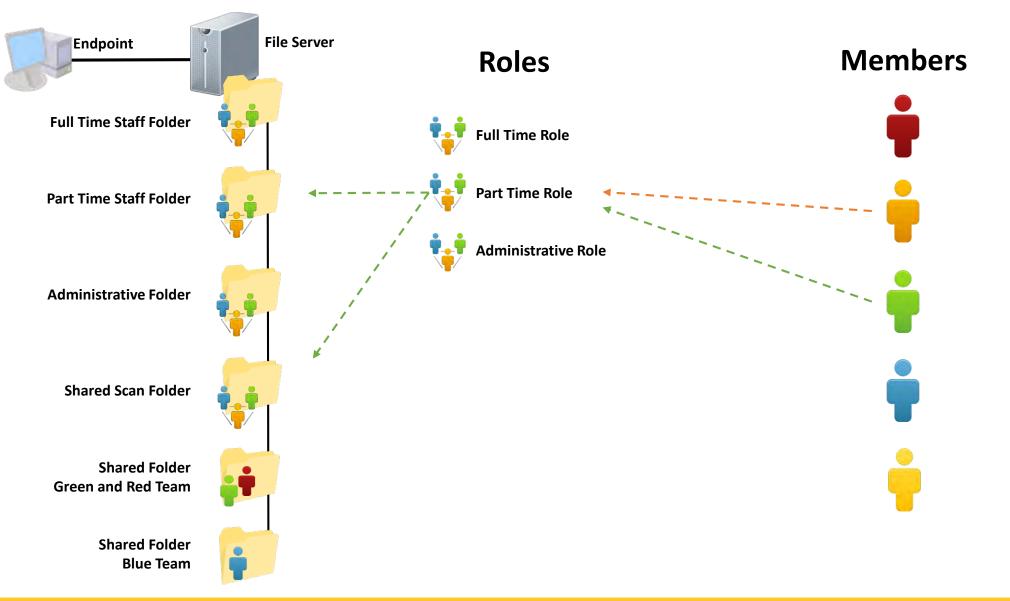
\*Enough Individuals assigned to a folder may get transitioned into a role

## Full Time Role Example



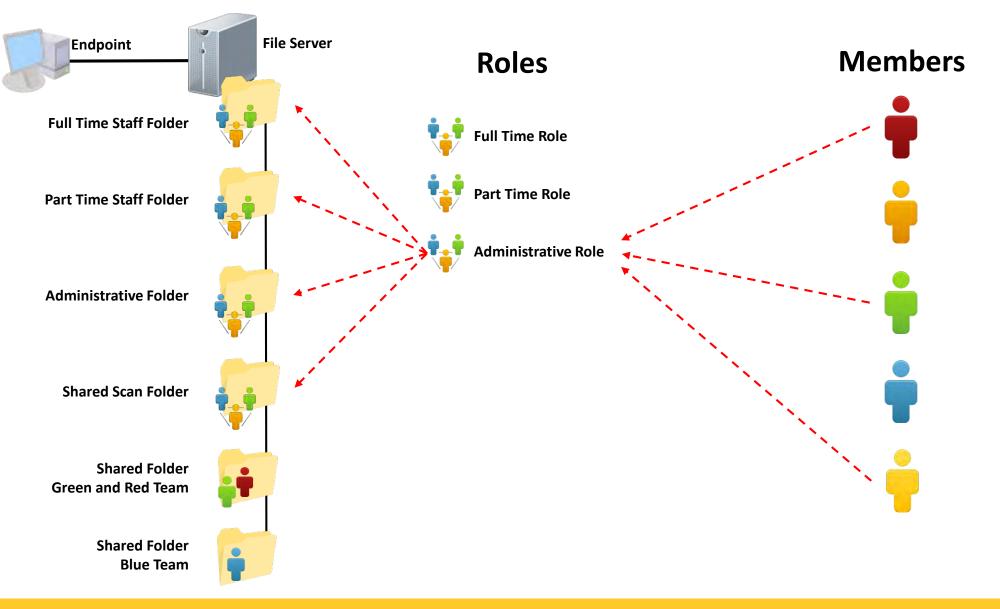


## Part Time Role Example



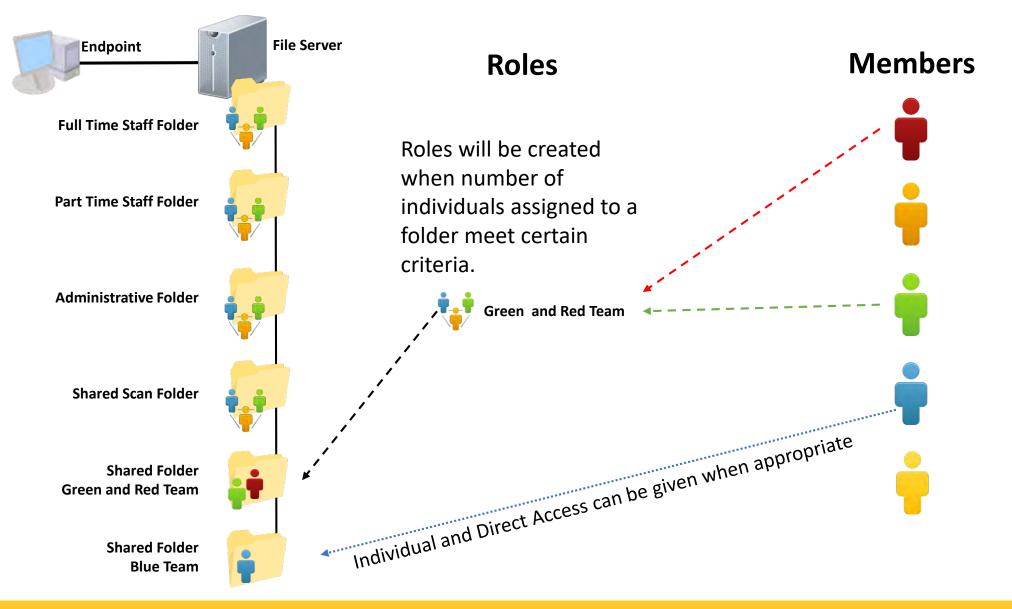


### Administrative Role Example





### Individuals or New Roles Example





### **Roles & Resources Info Capture**

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	<b>Demo Role Description</b>		ple 1		dept\server\share\1	printer		orintershare1	Test	Resource 1
ample Role 02	<b>Demo Role Description</b>	Exam	ple 2	\\net.ucf.edu\	dept\server\share\2	printer	2	orintershare2	1 ( ) <u>-</u>	
ample Role 03	Demo Role Description	Exam	ple 3	\\net.ucf.edu\	dept\server\share\3	printer	3 1	orintershare3		
ample Role 04 🔪 🛛 I	Demo Role Description	Exam	ple 4		dept\server\share\4	printer	4	orintershare4		
ample Role 05	Demo Role Description	Exam	ple 5	\\net.ucf.edu\	dept\server\share\5					
		Exam	nple 6	\\net.ucf.edu\	dept\server\share\6					
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	5 User F		rd985872		Example 1		Read-Write	and the second se	and the second se	Quota Access
	6 User E	Blue	bl4932243		Example 2			print	ter 2	
	7 User (	Green	gr8392245		Example 3		Read-Write	e print	ter 3	Monochrome On
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	5 9				Example 5					
	10				Example 6		Read Only			
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### Migration Options (Preview)



### **Option 1 - User Based Migration**

- Can be done by the user (manually)
- SharePoint Migration Tool availability for semi-auto migration
- Not Scalable
- Assistance may not be immediately available
- If Scheduled with Technical staff, can take years to complete

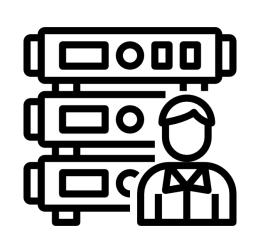
### **Option 2 - Device Based Migration**

- Automated
- Little-to-no user interaction required
- Ideal for Non-Redirected Data
  - Hardware Storage Requirements on Endpoint
- OS Version Requirements on Endpoint
- Risk of Data loss in Transfer from File Server back to Endpoint



### Proof of Concept (Preview)





#### **Option 3 – Server Based Migration**

- SharePoint Migration Tool
- Direct from Source Migration
- Scalable and Sustainable
- Will Require Workflow to be Developed Internally (UCF IT)
- Permission Changes will be required
- Requires Testing and POC for Validity



### **Streamlined Client Experience Project**

- Unified Task Sequence (SDP) (R1)
- DHCP Reservations / Dynamic Areas (SDP) (R1)
- Microsoft Office Click-to-Run (C2R) (R1)
- Jamf Management for macOS (R1)
- Print Server Naming Standards & Papercut (SDP) (R2)
- Hardware Refresh Plan or Implementation (SDP) (R2)
- Software Refresh Plan or Implementation (SDP) (R2)
- Remote Support Tool Implementation (SDP) (R2)
- "Mobile First" User Experience when possible (R2)
- AD Reorg or Move (Moran) (R3)
- File Redirection for Desktop and Docs (SDP) (R3)
- Baseline DDS Managed GPOs (SDP) (R3)
- Baseline DDS Managed SCCM Client Settings (R3)

- MDM management for iOS devices when possible
- PST Migration to Exchange Online
- Standardized DFS paths Users & Shares (SDP)
- Removal of non-approved client admin access (SDP)\*
- Migrate Data to Secret Server
- Migration to SCCM U08
- Import all Zone Specific Information into Knowledge
- All new hardware from UCF IT Product Catalog (SDP)
- Service Now Catalog Item Consolidation
- \*Minimum .25 FTE commitment to DDS



### **Streamlined Client Experience Project**

#### Round 1

- 1. Unified Task Sequence (SDP) (R1)
- 2. DHCP Reservations / Dynamic Areas (SDP) (R1)
- 3. Microsoft Office Click-to-Run (C2R) (R1)
- 4. Jamf Management for macOS (R1)

#### Round 2

- 5. Print Server Naming Standards & Papercut (SDP) (R2)
- 6. Hardware Refresh Plan or Implementation (SDP) (R2)
- 7. Software Refresh Plan or Implementation (SDP) (R2)
- 8. Remote Support Tool Implementation (SDP) (R2)
- 9. "Mobile First" User Experience when possible (R2)

#### Round 3

- 10. AD Reorg or Move (Moran) (R3)
- 11. File Redirection for Desktop and Docs (SDP) (R3)
- 12. Baseline DDS Managed GPOs (SDP) (R3)
- 13. Baseline DDS Managed SCCM Client Settings (R3)

#### Established Standard / Already Approved

- 14. MDM management for iOS devices when possible
- 15. PST Migration to Exchange Online
- 16. Standardized DFS paths Users & Shares (**SDP**)
- 17. Removal of non-approved client admin access (SDP)\*
- 18. Migrate Data to Secret Server
- 19. Migration to SCCM U08
- 20. Import all Zone Specific Information into Knowledge
- 21. All new hardware from UCF IT Product Catalog (SDP)
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#### **SDP Alignment**

- Supported OS (p.19)
- Data Encryption (p.38)
- Software Delivery Methods (p.20)
- Software Lifecycle (p.17)
- Automated Software Deployment Criteria (p.21)



#### **UTS Onboarding Process**

- DDS presents the onboarding unit with information about the UTS
  - Summary of UTS and it's limitations
- Information is gathered from the unit
  - Qualtrics Survey
    - Brief description of onboarding unit's entire deployment process
    - Staging OU for onboarding unit
    - Onboarding unit's software requirements (3 tiers)
    - Other Unit/zone/departmental specific post OS deployment steps

- Automated information Gathering (SCCM report or PowerShell Script)
  - List of PC models to be managed
  - Software titles (supplemental to survey)
- Onboarding unit action required
  - Grant DDS team access to current task sequences
- DDS makes appropriate changes to begin managing the unit's OSD
  - DDS Internal Checklist



#### **Software and Driver Deployment**

- 3 Tiers
  - Tier 1 Required for all UCF IT
    - Adobe Acrobat Pro DC 2018 , Microsoft Office 365 Pro Plus C2R
    - Cisco AnyConnect VPN Client for Mobile Devices
  - Tier 2 Required for onboarding unit
  - Tier 3 Optional for support zone (Software catalog)
    - Recommended Required Deployments to Staging or All Unit Device Collection
- Auto Apply Drivers in conjunction with Dell Command Update
- User State Migration Tool (USMT)



Host Name:	
Computer:	
Serial #:	
BIOS UUID:	
Processor:	
System RAM:	
IPv4 Address:	
MAC Address:	
Network Cards:	
Fixed Disk Mod	el (Size):

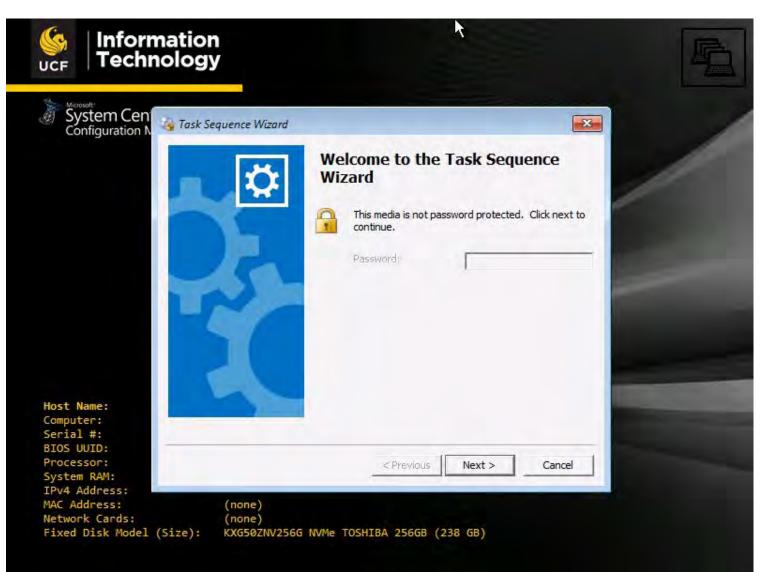
MININT-79H9VKM Dell Inc. OptiPlex 7060 (1.0.20)

J8MLCP2 4C4C4544-0038-4D10-804C-CAC04F435032 Intel(R) Core(TM) i5-8500 CPU @ 3.00GHz 8192 MB

54:BF:64:5C:E1:43 Intel(R) Ethernet Connection (7) I219-LM KXG50ZNV256G NVMe TOSHIBA 256GB (238 GB)



## End Task Sequence (SDP) (R1)





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Name UCF Unified Task Seque UCF Unified Task Seque	
st Name: mputer:	



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	ing Task Sequence Depe	ndencies		
Wait	while the policy is downloade	d and content locatio	is verified	11
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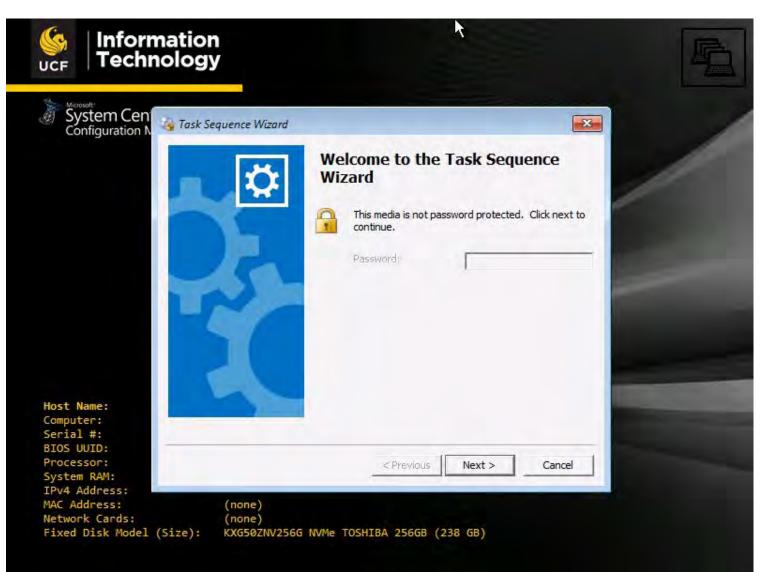




UCF Information	ו ע		
System Center Configuration Manager			
lasta	CCM OS Deployment A		
		Deployment Authenticator d FQDN, hit Submit to continue, or hit Cancel to	quit
	Username:	nidadmin	
Run	Password:		_
•	Domain:	net.ucf.edu	
		Submit Cancel	
Host Name: Computer:	Dell Inc OntiP	lex 7060 (1.0.20)	
Serial #:	J8MLCP2	IEX 7000 (1.0.20)	
BIOS UUID:		D10-804C-CAC04F435032	
Processor: System RAM: IPv4 Address:	Intel(R) Core(T 8192 MB	M) 15-8500 CPU @ 3.00GHz	
MAC Address:	54:BF:64:5C:E1:	43	
Network Cards: Fixed Disk Model (Size):		et Connection (7) I219-LM Me TOSHIBA 256GB (238 GB)	



## End Task Sequence (SDP) (R1)



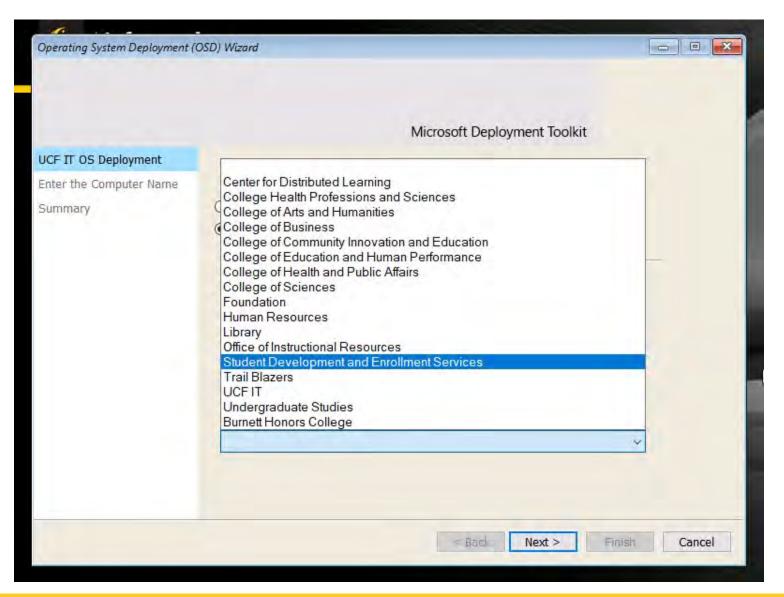


UCF Information	on gy
System Center Configuration Manager	
Inste	llation Progress
Ru	University of Central Florida Running: UCF Unified Task Sequence - DEV
Do	nloading ServerManager.xml (2% complete)
Host Name: Computer: Serial #: BIOS UUID: Processor: System RAM: IPv4 Address:	MININT-79H9VKM Dell Inc. OptiPlex 7060 (1.0.20) J8MLCP2 4C4C4544-0038-4D10-804C-CAC04F435032 Intel(R) Core(TM) i5-8500 CPU @ 3.00GHz 8192 MB
MAC Address: MAC Address: Network Cards: Fixed Disk Model (Size)	54:BF:64:5C:E1:43 Intel(R) Ethernet Connection (7) I219-LM KXG50ZNV256G NVMe TOSHIBA 256GB (238 GB)



<u></u>	
Operating System Deployment (	OSD) Wizard
	Microsoft Deployment Toolkit
UCF IT OS Deployment	
Enter the Computer Name	
Summary	○ 0S Refresh
	O New Computer (Bare-metal deployment or computer does not exist in AD)
	Use USMT to backup/restore user data
	OS Only (Do not install any applications)
	Enable BitLocker
	Select your support zone:
	~
	< Back Next > Finish Cancel







Operating System Deployment (	OSD) Wizard					
	Microsoft Deployment Toolkit					
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	Use USMT to backup/restore user data OS Only (Do not install any applications)					
	Select your support zone:					
	Student Development and Enrollment Services					
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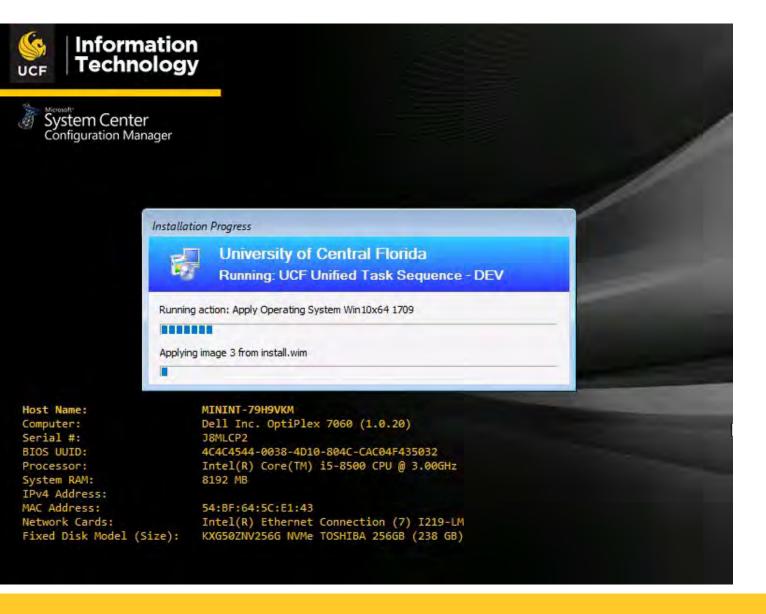
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Operating System Deployment (OSD) Wi	zard	
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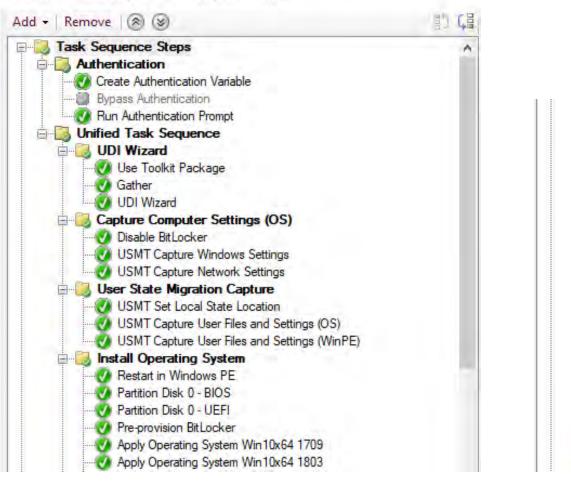


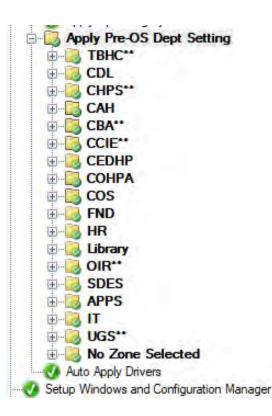
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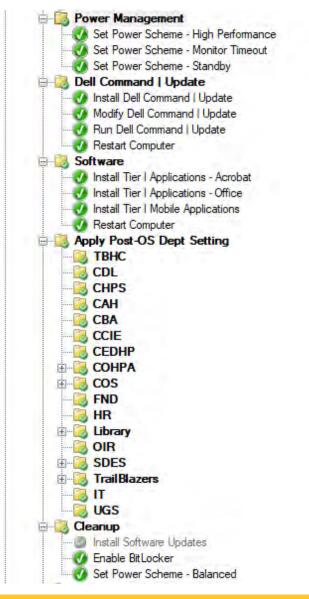


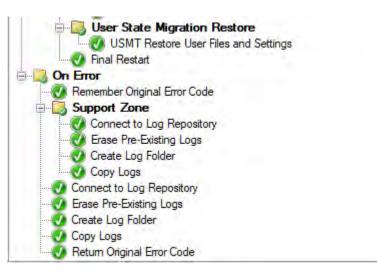
#### UCF Unified Task Sequence Task Sequence Editor















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### **SDP Alignment**

- Section IX, File, Print and Network Access (p.35)
- Network Access (p.42)



### **Data Collection**

- List of scopes?
- Is the area already reservation only? Why?
- Do you have any exception areas or areas with static IP addressing?
- Are you fully migrated to NET DHCP (No local DHCP servers)?
- What information is in the description field of your reservations? Why?



### **Migration Process**

- Reserve all existing IPs (Convert leases to reservations)
- Provide tools/access for deskside zones to create reservations
- Reconfigure identified areas to dynamic-only VLAN
- Determine standard convention for reservation descriptions



### **IPAM Tool**

- Granular, role-based access to individual scopes
- Logging/Auditing/Reporting
- Extendable, can add data fields
- Current DHCPMgr access group copied to IPAM



### **Clean Up**

- How long should a reservation be unused before deletion?
- Can/should we automate that process?
- Can we leverage IPAM reporting for automation?

### Considerations

- Should we wait for IPAM?
- What data would be helpful in description field?
- Special considerations for BYOD?



## **€ Round 1**

#### 1. Unified Task Sequence (SDP) (R1)

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## Hicrosoft Office Click-to-Run (SDP) (R1)

### **SDP Alignment**

• Software Lifecycle (p.17)



## 

### **Data Collection**

- Prerequisites
- Onboarding unit provides a brief description of their Office application needs.
- Will help identify any part of the process that is beyond the scope of the "base" installation.

### **Participating Units**

- Burnett Honors College
- College of Sciences
- College of Health and Public Affairs
- College of Nursing
- CREOL
- Foundation
- Human Resources

- International Affairs and Global Strategies
- International Services Center
- Library
- Rosen College of Hospitality Management
- Student Development and Enrollment Services
- UCF Global
- UCF IT –IT Zone / Tech Commons









# Hicrosoft Office Click-to-Run (SDP) (R1)

### Which version is right for us ?

- Office 2016 ProPlus (MSI)
  - Require stable feature set (classic track).
  - Require Offline Use > 30 Days.
  - Run older Office MSI or C2R side-by-side.
  - Windows 7/8.1 legacy support until January 14, 2020.
  - Require à la carte transform (MST) pre/post-installation options.\*
  - Require granular control of quality updates.\*

### • Office 365 ProPlus (C2R)

- Nothing from first column.
- Desire latest features.
- Require future cloud connectivity.
- Modern servicing "Set it and forget it" (Continuous track).

365		
Name		
UCF Microsoft Office 365 ProPlus (x64) - Default Programs		
m		
Microsoft Office 365 ProPlus (x64) - Default Program		

Microsoft

Manufacturer:

- Results May Vary!
- <u>Not Compatible</u> with specific installs of Office
- Will Automatically Uninstall all previous versions



## Microsoft Office Click-to-Run (SDP) (R1)

### **Additional Recommendations**

• Monthly Channel Updates

Update channel	Primary purpose	How often updated with new features	Default update channel for the following products
<u>Monthly Channel</u>	Provide users with the newest features of Office as soon as they're available.	Monthly	Visio Pro for Office 365 Project Online Desktop Client Office 365 Business, which is the version of Office that comes with some Office 365 plans, such as Business Premium.
Semi-Annual Channel	Provide users with new features of Office only a few times a year.	Every six months, in January and July	Office 365 ProPlus
Semi-Annual Channel (Targeted)	Provide pilot users and application compatibility testers the opportunity to test the next Semi-Annual Channel.	Every six months, in March and September	None



## Microsoft Office 2019 & 365 Pro Plus

### Is Microsoft Office 2019 Right for us?

- Will not operate on Windows 7.
- Will only come in "Click-to-Run" installation method
  - No offline install media
  - This also applies to Visio and Project
- Will receive security patches but **no feature updates**
- Will support MAK and KMS Activation
- Will **not** require an active internet connection post activation.
- Will be supported on LTSC / LTSB Windows Releases

Microsoft Office 365 Pro Plus is still our **Recommended** version for both Windows 10 and *(Now Available)* Windows 7 in the Majority of use-cases.





## **€ Round 1**

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### **SDP Alignment**

- Section III. Methods of Support
- Section IV. Desktop and Mobile Devices
- Section VI. Supported Operating Systems (P.19)



### **Current State**

- 1 On-Prem Production JAMF Pro Instance
- 1 On-Prem Development JAMF Pro Instance
- 618 Enrolled Mac Devices
- 6 Colleges/Departments
- 55 Active Policies
- 161 Packaged Applications
- First attempt to streamline with UCF branded packages and scripts available to everyone 12 UCF scripts, 24 UCF packages



### **Data Gathering**

- Are they on the NET domain?
  - If not what domain are they on?
- Are their macs currently domain bound?
  - If their macs are domain bound, in what OUs are their macs bound?
- Do they have a service account for binding computers into those OUs?
  - What is the username and password to those accounts?
- Do they use security groups to allow their technicians admin access to their mac or PC computers?
  - What are the names of those security groups?
- What buildings fall within their area?
- What departments fall within their area?
- What VLANs (Starting + Ending IPs) are within their area?
- Do they have any areas with metered or limited internet connections?
  - Where are these areas?
  - Are there any opportunities where large amounts of data can be pushed such as overnight or on the weekends?

- What Applications do they push to their macs?
  - Are any of those applications licensed?
  - Do any of those applications have restrictions on when they can be updated?
  - Are any of those applications purchased through the Mac App Store with a VPP or Personal Apple Account?
- On what VLANs does Netboot need to be available?



### **Windows Environment Parity**

- Folder redirection Possible/ Needs Testing
- Shortcuts for shared folders Possible
- Device encryption with centrally managed keys Possible
- Access to sign in restricted to department/unit level Needs Testing
- Limited access to guest accounts Needs Testing
- Remote access permissions by user Possible
- Block installation of cloud storage clients. Possible

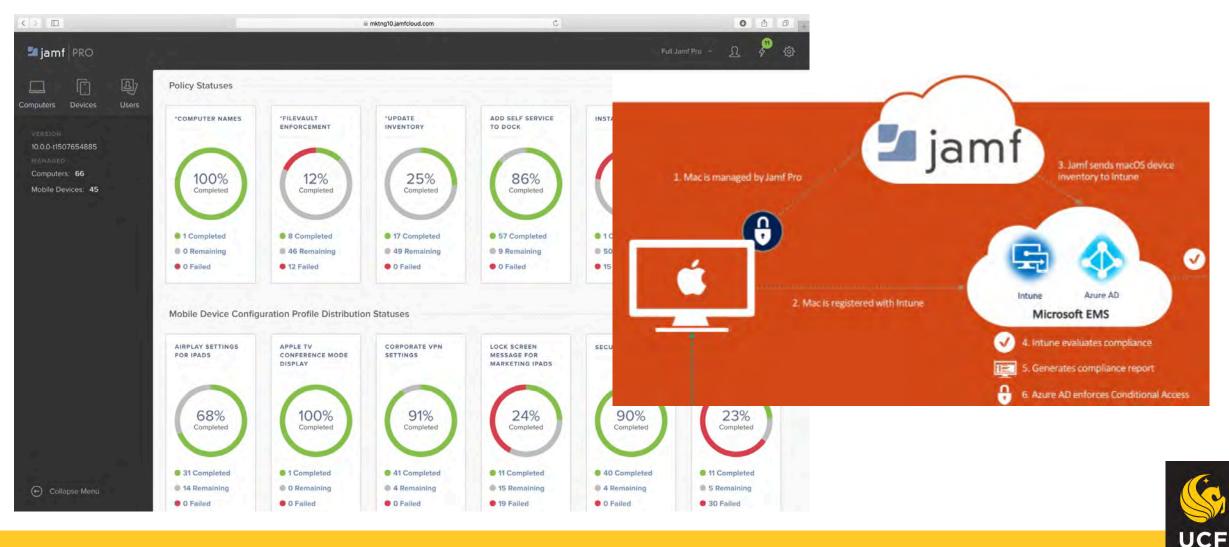


### **In Progress Projects**

- JAMF Cloud
  - 24/7 support
  - AWS cloud instance with all updates handled by JAMF
  - 99.9% uptime
  - DP with unlimited storage
  - Daily backups
  - Live service monitoring
  - Fully scalable
  - Out of band management
- DEP
  - Faster imaging using Apple internet recovery
  - Streamlined first time setup
  - Auto enroll to JAMF



### **Future State**



## **∂ Round 2**

#### 5. Print Server Naming Standards & Papercut (SDP) (R2)

As services continue to merge, Endpoint Print Services will need to have a standard naming convention and configuration when being run
via a Windows Managed Print Server. Additionally, the creation of centralized print servers that will be DDS managed has to be
established to eliminate redundancy currently located at each of the deskside area and Cohort 1 and 2 units. Papercut deployment
standards and eventually the Papercut Printing Service would be co-managed by its current service owners and DDS

#### 6. Hardware and Software Refresh Plan or Implementation (SDP) (R2)

• Per the SDP, establishing healthy software and hardware lifecycles will be very important in keeping out endpoint fleet current, healthy and productive. As a result, it will be important that we propose a customized hardware and software plan that will suit the needs of each of the Cohort 1 and Cohort 2 units. Adopting and implementing a plan would be ideal, but simply being able to identify what would be needed both logistically and financially should be sufficient at this stage of the UCF IT and IT 2020 initiative.

#### 7. Remote Support Tool Implementation (SDP) (R2)

 As it relates to the geographic centralization of the different support zones, each deskside area is responsible for a larger geographic footprint than many of the individual colleges and units were prior to the formation of UCF IT. As a result, a standardized tool with expected behaviors, features and ease-of-use for both the technician and the client are required to achieve efficiency and effectiveness with what will eventually become our primary method of support.

#### 8. "Mobile First" User Experience when possible (R2)

 As part of the UCF Downtown Trailblazers POC and the Service Design Package, this project will help us coordinate the architecture, engineering, testing and deployment of a single, generic-use mobile experience that will help maximize use ability while decreasing complexity. This is a result of the "mobile-first" initiative being advertised for the UCF Downtown campus and if successful, can service as our standardized method of deploying and configuring our windows and macOS based mobile devices.



### **SDP Alignment**

- Supported OS (p.19)
- Data Encryption (p.38)
- Software Delivery Methods (p.20)



### **Current State**

- Management
  - PaperCut, PRTG, No Management
- Printer Models
  - Toshiba, Dell, Brother, HP, Lexmark
- Quotas
  - Quota and Non-Quota Printing
- Naming Standards
  - Various
- Printer Settings
  - No setting standardization
- Network Printer Setup
  - Direct IP + Manual, Print Server + GPO



### **Data Gathering**

- What printers are in your environment
  - Location
  - IP
  - Name
  - Model
  - Use Case (Standard Printing, Pay for Print, Large Format Printing, Prescriptions)
  - Restrictions (FERPA, HIPPA, PCI, CJIS, Research)
  - Friendly Name for Each Printer
  - Services Used (scan to file server, Scan to email, wireless printing)
  - Password to Printer Admin Pages
  - Userbase for Printer
  - Release Procedures

- What is the name of the print server used in your area
- What VLAN are printers added to
- Is this a non NATed VLAN
- Is this a VLAN specifically for printers
- What management tools are in use for managing printers?
- i.e. Papercut, SCOM, PRTG
- How are consumables like ink and paper being funded
- Do you have any printer agreements with business services
- Who purchases supplies
- What security groups are in use for delegating printer access



### Recommendations

- Naming Scheme : Building\_Room\_Friendly\_Type
  - Ex. TC2\_117\_StudentLab\_BW, CNH\_202\_HPLaserJet\_CL
- All Networked printers get added to centralized print server
- All Networked printers are added to non-NATed VLAN
  - Noted exception may be public printing such as KIC scanners in library
- All unused services turned off
- UCF time server
- SNMPv3 enabled if managed
- Scan to email using UCF SMTP with TLS and SSL
- Local hard drive saving disabled or set to delete after completion
- Windows and AD sharing disabled

- Networked printers with >5 users are added via GPO with role-based access
- Fault tolerant centralized print server
  - Azure or Clustered
- Papercut is standard for managed printing. Strongly recommended but not required.
- Quotas are handled by departments through onboard quota management (Toshiba) or through Papercut (delegated access)
- All printers will use a non-default password for any admin functions/web portals



### **Future State**

- Papercut
  - Where does PaperCut live
  - Split PaperCut Server
    - Student, SGA, and Staff/Faculty management servers
- Build Central Print Server
  - Determine best structure
    - Redundant Local, Azure
    - 1 Centralized, 1 for Each Zone
    - WPA2 Availability





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### **SDP Alignment**

- Section IV Desktop and Mobile Devices Lifecycle (p.8)
- Section VI Client Desktop Software Lifecycle (p.17)
- Section VIII Technical Consultation (p.28)



### **Onboarding Process**

- Initial Information regarding Hardware and Software Refresh (HSR) Guidelines
  - 5 Year / Warranty Aligned
  - UCF IT Product Catalog
- Unit Discovery
- Deliverables
  - Hardware Report
  - Software Report
  - Software Updates Schedule



### **Data Gathering**

- Qualtrics Survey
- Automated Information Gathering
  - SCCM Reports
  - AD Reports via Powershell
  - Telemetry
- Access to existing software license storage
  - Usage
  - Basic Compliance
  - Version Analysis



### **Data Gathering Cont.**

- How is refresh done today (Qualtrics?)
- How long? (Years, Until Dead)
- Funding? (Dept/IT/Grant/Tech fee)
- Replacement like for like?
- Peripherals?(Monitor, printer, etc)
- Current budget?
- Non-standard devices?
- Secondary, tertiary?
- Tablets?
- Loaners?

- Hot swap?
- Where is it from?
- Dominos replacements?



### Data Gathering Cont.

- Work with the Enterprise Application Support Team (Terry Wheeler)
  - Utilize already gathered information
- Examine possible consolidation of similar products
- Coordinate with departmental liaison and Business Relationship Manager for accuracy
- Identify cycle categories
- ServiceNow Software management import\*
- Environment Compatibility



### Recommendations

- Develop 5-year plan and present
- Create average cost per year
- Possible ramp up strategy
- Move to Monthly/Yearly plan
- Limitations
- Funding
- Staff Consideration to do the replacements
- Space for storage/set-up



### **Future State**

### Hardware as a Service (HaaS)

- Possible Leasing Model
- 5 year or newer machine
- Like-for-like based on need
- On demand refresh each year
- Only pay for what you need
- Hot swap or loaner during repairs
- Long term plan to wrap overhead into cost per unit



## **∂ Round 2**

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### **SDP Alignment**

• Section IV Desktop and Mobile Devices Methods of Support (p.9)



## **Remote Support Tool**







### **Feature Overview**

- Cross-Platform Access (Windows, macOS, Linux, iOS, Android)
- Video Auditing (Session Recording)
- Comprehensive Reporting
- Host Pass (Vendor Access)
- Screen Annotation
- Two-Factor Authentication (IdP SAML 2.0)
- Unlimited Chat Support
- End-to-End Encryption / Security (HIPAA)
- Custom Branding
- Firewall-Friendly
- Granular Access Controls

- Inactive Session Timeout
- Lock Keyboard & Mouse
- Command Shell, Scripts, and SSH Integration
- Exit Surveys
- Team Chat
- Session Sharing & Transfer
- Reverse Screen Sharing & Presentations
- Wake Up, Restart, and Install



### Security

- AES-256 bit end-to-end (FIPS 140-2 Level 2 NIST<sup>\*</sup>)
- Session Recording (Can be disabled by tech in CW)
- Application Sharing
- Privacy Screen (Blank Guest Monitor)
- Two-Factor Authentication
- Team Chat
- Granular Permissions
- Inject Credentials (Vault)



### Integrations

- Pre-Built Service/System Management/CRM (ServiceNow)
- We must purchase this integration separately from both Bomgar software and your ServiceNow solution.
- Customization & Branding
- Security Information and Event Management (SIEM)



### Web-Enabled

- Firewall-Friendly
- Supports Closed Networks
- vPro Integration (Bomgar)
- Wake on LAN
- One-Click Customer Client
- Click-to-Chat
- Unattended Access
- Supports Native Protocols (RDP & SSH)



### Collaboration

- Team Chat
- Session Sharing & Transfer
- Vendor Access (Bomgar)
- Reverse Screen Sharing
- Screen Annotation
- Remote Camera Access



### Management

- Client Policies
- Identity Management (LDAP, Kerberos, SAML, AD)
- Session Reports
- Session Queuing
- Automatic Routing
- Canned Scripts
- Mass Deployment (MSI)



### **In-Session Tools**

- File Transfer
- Multi-Monitor Support
- System & Registry Actions
- Command Shell

### Licensing

- TeamViewer based on concurrent support sessions (channels).
- Bomgar Remote Support licensed per concurrent representatives.
- ConnectWise Control Premium limited to 1 "attended" connection per technician (Unlimited "Unattended" sessions).



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## **Mobile Device Experience**

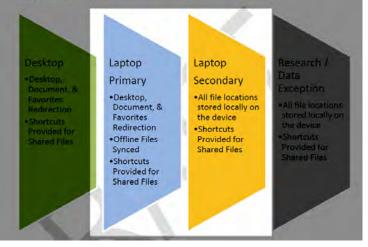
### **SDP Alignment**

- III. Methods of Support
  - All Available Methods when Managed / University Owned
- IV. Desktop and Devices
  - Subject to 5 year lifecycle and Warranty Length Dependent levels of support
- VI. Client Desktop Software
  - Subject to the same Software Evaluation Criteria / Lifecycle (N-2 Stable/Supported Versions of Applications.)
- VII. Elevated Access
  - Subject to same approval process for administrative access. (This will be a radical shift for some deskside zones)
- IX. File, Print, Scan and Network Access
  - Subject to specifically the Laptop Primary, Laptop Secondary access guidelines.

#### FILE ACCESS

#### Device File Access Structure

UCF IT will store client device data and provide access as outlined below per device category. All file storage locations UCF IT uses will be reachable from the UCF wired, secure campus wireless, and outside networks with VPN authentication.





## **Mobile Device Experience**

### **Data Gathering**

- How many Mobile Devices Total?
- Of those how many are PC?
- How many of the PC are still under warranty?
- of those how many are macOS?
- How many of the macOS are still under warranty?
- Do you have Mobile Devices not Dell / Apple or Consumer Model Line?
- Do the clients have Privileged Access to their mobile device?
- Are the devices Domain Joined?
- Are the devices Managed via SCCM?
- Are the devices accessible via Remote Support Tool?
- How many of the devices are Primary Users Devices (Single Device)?

- Do you have Offline / Out of the Country Mobile Devices?
- Do you have Special Case or Research Mobile Devices?
- Have your mobile users migrated to OneDrive?
- Besides File and Print Resources, are there any other network based resources that mobile users would need access to?



### **Mobile Device Experience** Recommendations

#### **Operating System & Management**

- Microsoft Windows 10 1709 Required
  - Bitlocker Enabled by Default
  - .NET Framework 3.5 Installed by Default
- MDM Platform Managed
- Domain Joined
  - AzureAD or NET Domain
- SCCM Managed
  - Co-Management with MDM if Possible
- Windows Updates via Microsoft CDN

#### Network & Virtualization Resources

- VPN Client
  - Pre-configured via XML
  - Desktop Shortcut by Default
- Remote Support
  - Default Tool Pre-installed
  - Configured for Unattended Support / Prompt for Permission when in use
- Citrix / UCF Apps
  - Citrix Receiver installed by Default with SSO Enabled

- Wireless Profiles
  - WPA2 and WPA2 Backup Profiles Installed by Default
  - SSO Enabled for WPA2 Primary

#### File, Data & Print

- OneDrive for Business
  - Personal User Data primary location
  - On-Demand Feature Required
  - Default Storage Location Required
  - Disable use of Personal MS Accounts
  - Enable Folder Redirection
    - Default Environment Variable (%onedrivesync%)
    - Desktop , Documents, Pictures, Videos, Music, Favorites Folders
- Shared Folder Access
  - No Change to Current Storage Location (Shared Service VM)
  - VPN Connected to Access Resource Required
  - Default DFS Path (\\net.ucf.edu\Shares) Required
    - New Shares and Targets will be added and filtered via Access Based Enumeration (ABE)
- Printing
- VPN Connected to Access Resource Required
- GPO Deployed

#### **Customization & Settings**

- Branded Lock screen with IT Support contact information
- Support Center Icon on Desktop to Self Service Portal
- Software Center Icon on Desktop for application catalog
- Cortana will be Disabled by Default
- Microsoft Store will be enabled only for Free Purchases
  - Ability to Add Personal Accounts Disabled





#### 9. AD Reorg or Move (Moran) (R3)

• Work with Infrastructure / Brian Blum on some initial design input as well as provide some initial proof of concept environments / VMs in DEV or QA. Work with Chris and the Enterprise Directory Governance, as well at Roll Based Access POC

#### 10. File and Data Migration (SDP) (R3)

• Work to Define settings for SharePoint Migration Tool, POC overriding OneDrive Security Temporarily (Ideally Script) to allow for Mass Import of Data from File Servers as well as Standardize OneDrive Adoption / Implementation.

#### 11. Baseline DDS Managed GPOs and SCCM Client Settings(SDP) (R3)

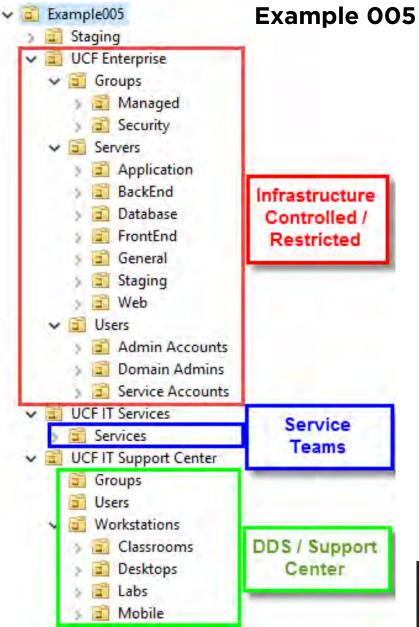
• Work to create baseline Policy in GPO and Intune (if Possible) to be least intrusive but still secure. ISO will need to be involved to determine policy minimums as well as SCCM Client or Intune Baselines. Intune related items if available.



### UCF

## **Round 3 – Active Directory**

- Create Proof of Concept for RBAC in DEV or QA
- Work with Infrastructure Team and Working Group to determine Viability of Example 005 (vetting)
- Work with the Enterprise Directory Governance to provide feedback and show research already performed
- Suggest any missing roles that our team may need over time, as well as deskside zone specific roles that support staff would need (Zones)
- Suggest Naming Standards for Groups, Devices and any additional SubOU classifications or guidelines



## **E** Round 3 – File and Data

- Default SMT Settings for all use cases
- Create POC for script that would allow us temporary comanagement of individual's OneDrive locations for as-scale deployments of files into the cloud from File Servers
  - Present findings to ISO for approval
  - Work with UC Team with ISO Approval on working on a procedure for getting it completed
- Create POC for at-scale upload of Department Shares to SharePoint / Teams from File Servers
- Manual One Drive Adoption Requirements and SOP
- Manual SharePoint Adoption Requirements and SOP

Settings	×
Only perform scanning Off	
Enable incremental migration	
Migrate file version history	
Keep all versions	
Do not migrate hidden files Off	
Do not migrate files created before Only applies to SharePoint on-premises files Select a date	
Do not migrate files modified before Applies to both SharePoint on-premises files and local file shares Select a date	
Do not migrate files with these extensions Use "" to separate multiple extensions, e.g. mp4:avitmky	N
Do not migrate files and folders with invalid characters Off	Νζ
Save Ca	ancel



## **Round 3 – Baseline Endpoint Configuration**



Req (High-Level)

Min

- BIOS / UEFI
- Secure Boot
- PXE Stack
- Auto-on Timer
- Passwords
- **TPM**
- Raid Config
- Legacy Boot
- USB Boot
- Access to the Domain "UCF Domain Policy" Object
- Baseline GPOs  $\rightarrow$

• Power Config •AppLocker • Firewall ategorie •SCCM / RC •Azure / Intune •RDP / Remote Assist / Bomgar • PSEXEC • Ping •NESSUS • Application Specific Settings •MS Store •MS Office / S4B •Trusted Sites / Site Zones •IE Ent. Mode • Default Apps •Browser Settings

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Baseline Categories Cont.	<ul> <li>Branding (Logon Screen \ Wallpaper)</li> <li>Resources (File/DFS/Print)</li> <li>"IT" Items</li> <li>Powershell</li> <li>Exclusion for IT Admins</li> <li>BG Info</li> <li>Windows Update</li> <li>OS Specific Settings</li> <li>MS Win 10 Security</li> <li>Star Menu Layout</li> <li>Cortana/Modern Features</li> <li>Telemetry</li> <li>"@ Work Accounts"</li> <li>Local Admin Groups (LAPS)</li> <li>Mobile Specific Policy</li> <li>WPA2 SSO</li> <li>VPN XML</li> <li>Windows Defender</li> <li>SCCM Client Settings</li> </ul>	

olicy • Logon Banner • Lockout Times • Display Last User Δ • Encryption • Ctrl+Alt+Del Q • Policy or Already Φ documented Guildeine quire • Other ISO Recommendations Ð Ň Ο S

