TECHNICIAN PROCEDURES

INTRODUCTION

The Information Technology technician team provides a range of IT services to all departments and computer classrooms at Jacksonville University. This includes the following:

- Effective customer support to all staff, admin and faculty.
- Technical support for events and projects that are held at the University.
- Research, testing and development to better improve the university's technology.
- Hardware and software technical support to all staff, admin and faculty with university owned computer equipment.
- Hardware and software technical support for all university owned computer classrooms. Extra support to technician assigned computer classrooms. This does not include AV equipment.
- Assist the staff, admin and faculty with any technical questions.

In order to provide these IT services the technician team may be required to do the following:

- Interact with computer hardware and software vendors to assist in the purchasing of new equipment for the university.
- Provide status reports to their respective supervisors every week, unless notified.
- Assist the network administrators with any tasks necessary.
- Work closely with the current student IT technicians. Training them and guiding them when necessary.

OVERVIEW OF THE CURRENT TECHNOLOGY BEING USED AT JACKSONVILLE UNIVERSITY

System Center Configuration Manager (SCCM): System Center Configuration Manager is responsible for collecting the only inventory, remote assistance, software pushes, configuration changes, and compliance checks at Jacksonville University. This software will install an agent onto all computers that are joined to the "ju.edu" domain and have a supported Microsoft operating system. The deployment of the agent will take place everyday at **12:00PM** for all computers found in the "JU Computers", "Orthodontics" and "MACINTOSH" Organizational Unit in Active Directory. A successful installation of the agent will show up in the "control panel" of the operating system. It will show icons for the agent as "System Center Configuration Manager Agent".

Windows Update Services (WSUS): Responsible for pushing windows updates to all computers with a supported Microsoft operating system installed. WSUS is setup to only deploy updates to the computers found in the "JU Computers", "Orthodontics" and "Sodexho" organizational units in active directory. The software updates are set to deploy at **4:00PM** everyday and any updates not installed in 15 days will be applied immediately. A status icon will come up in the taskbar showing how many updates are applied and if a reboot is needed.

Network managed antivirus: System Center Endpoint Protection antivirus is installed on all the University owned computers on campus and Kaspersky is installed on Apple computers. SCEP is set to update every computer on campus in a 2 hour interval. Laptop computers, which should have an "L" at the end of their computer name, are setup with an alternate source for updates. All laptops will also download updates directly from the internet if not on campus. Apple computers which should be labeled with an "M" at the end of the computer name are set to update with different credentials.

Active Directory (Domain, OCEAN, ju.edu): All computers on campus should be on the "ju.edu" domain, unless it is determined that the computer will be used for other purposes. By adding computers to the domain, all policies that are set by the network department are sent out to the new clients, and all network resources become automatically available to all the clients. This includes the installation of "SCCM", "WSUS", "Network Drives", "Network scripts" ,"Permissions to any printers" and many other resources.

Network Drivers (H, G, and others): 98% of the network drives on campus are setup to map through a login script, once joined to the "ju.edu" domain. The user is added to a group by the network administrators and the drives will map automatically on the users computer. No manual mapping is necessary, unless there is a special case with a user that will need two drives with the same drive letter.

Network Printers: The network printers that are setup at Jacksonville University are housed on our main print server **GULF or BAY**. All network printers need to be mapped through the server in order for all security policies to apply. Any secured printers will have groups in "Active Directory" which only users in the list will be allowed to use. In order for these security policies to apply, the computer must be joined to the "ju.edu" domain.

Exchange e-mail server: The main mail server on campus is called "FLOUNDER". Once a computer is joined to the "ju.edu" domain, it can be setup to open a user's mailbox through "Microsoft Outlook". All user mailboxes are created automatically by the networking group. This process should be semi-automatic and should only require the user to login with their domain account in order to access it. In special cases where computers cannot be added to the "ju.edu" domain, the network team offers e-mail on the web at https://email.ju.edu.

LanSchool: This piece of software is used by the faculty and employees in several classrooms around campus. It allows the faculty to share their computer screen and control other computer screens in the classroom. It requires the LanSchool agent on all the client computers and the LanSchool agent for the "main teacher station".

Computer Imaging: The tech team uses the Windows Deployment Services (WDS) via SCCM 2012 in order to clone and image all computers with the Microsoft operating system. Workstations PXE (network boot) to the imaging server (DELTA) via WIN PE where the windows Images are stored (\\Delta\captures$). Apple computers required little configuration therefore they are not imaged out of the box. Imaging Macs are done by booting from an external drive and restoring the .dmg file using Disk Utility or copying image from the external drive using a third party software (i.e. Super Duper, Carbon Copy Cloner, etc...) All current images for both Apple and Microsoft are updated and maintained by the Senior Technician.

NetRequests(netrequests.ju.edu): This web page is used by the tech team and the network team in order to process requests. For any computer deletions from the "ju.edu" domain, Sophos, WSUS and SCCM, the techs must login and submit a request. A follow up e-mail will be sent with the completion of the task.

Tech Login Window: The tech login window is only displayed for the users that are part of the "DesktopAdmins" group in active directory. It is a window that provides hardware information, allows the technicians to add a description to the computers and also has buttons to install the most common software needed on a new or re-imaged computer. This is only supported on computers that have the Microsoft operating system installed.

BGINFO: BGINFO is an informational piece of software that is runs from a network share via Group Policy on all University owned computers that have the Microsoft operating system installed. It provides the user with many details about their computer directly on the right hand upper side of their screen. This helps the user provide the Helpdesk with any required information about their computer prior to initiating a work order.

VPN software: Currently the University uses the Cisco VPN client. This allows users to login from home and access the Jacksonville University network. This piece of software must be installed on computers that are setup for telecommuting. The network team must be contacted in order to enable access for user to login from home.

E-mail and data archiving: The network team currently uses a product created by Commvault to handle all the university's archiving needs. No client software is required for data archiving, however, any archived data will also show up as a windows "offline file" with a black clock on the bottom right side of the icon. E-mail archiving in the other hand needs a client piece of software installed in order to access any archived mail. The e-mail archiver is setup automatically on computers that are joined to the "ju.edu" domain. In order to identify that it is installed correctly two little icons will show up in outlook on the right top side and it also can be verified under "add and remove programs". It will show up as "Commvault outlook add-in". This software should not be removed or installed manually, since there are certain configurations that are only setup when it is installed through group policy on the domain.

Network tester (Fluke): The tech team is provided with a network tester in order to test possible jacks for any kind of failures and to help users verify if network jacks are live or not. The network tester is semi-automatic and is easy to read. Technicians that need training with this tool should contact the network administrators.

PROCEDURES

NEW EQUIPMENT AND SOFTWARE

ALL COMPUTERS WILL HAVE A TECH SHEET ATTACHED TO IT AND SIGNED BY A TECHNICIAN.

Current equipment renewal procedure: The CIO has set for renewal the equipment that falls under these categories:

- Student facing technology equipment, 2 years.
- Staff, admin and faculty facing, 4 years.

New desktops, laptops, monitors: All newly purchased desktops, laptops and monitors will be brought to the "tech work area" currently Founders 15. The computers will be unpacked, asset tagged and entered into the inventory (SHAREPOINT) with no status assigned to it yet. All matching monitors will also be unpacked asset tagged and assigned to its respective station in inventory. This will happen no later than 3 days from the day the equipment arrives. All new equipment must be locked in either the tech storage room in Founders 15, a large shipment of computers & monitors will be stored on the shelves and under the tables in Founders 15. All accessories will be in a centralized location in one of the locked storage rooms.

New printers, docking stations, scanners, special computer equipment: All this equipment will be unpacked and asset tagged in the "tech work area" currently Founders 15. Once asset tagged it will be entered into inventory under the appropriate category. All newly purchased equipment will be stored in locked storage in Founders 15.

New Software: Newly purchased software is to be unpacked copied onto the network (SPLASH) with its appropriate license and stored in the storage cabinet in Founders 13 with the amount of licenses available and the department that purchased it.

EQUIPMENT IN FOR REPAIR

Equipment will only be worked on in the "tech area" in Founders 15. Computers that cannot be repaired will be evaluated and disposed of no later than 5 days from the day it came in. Equipment that is under warranty can be stored in the Founders 15 storage rack until repaired. It must be labeled with the day it came in or with the tech sheet. Support must be contacted 10 days from the day it was determined that the computer was damaged. Once the equipment is repaired it can be stored in the main storage area in Founders 15 under the "REPAIRED SECTION", unless the equipment is to be of high value or importance and needs to go in a locked storage area. The data on a hard drive

is also to be considered if it's of high value or importance. All computers that were repaired must have a sheet attached to them stating that they are in good condition and are ready to go out when needed.

REPLACEMENTS

Replacement equipment due to a failure: Equipment that is needed for replacement due to a computer failure will be replaced with the same technology, unless the equipment is due for a new equipment replacement within six months from the date of the failure and new equipment is available. There will be equipment that will be ready for replacement available in Founders 15 storage area. All computers will be held for a maximum of 15 days for the user to retrieve data. After this, the data is considered to be unrecoverable.

Replacement equipment that is part of the new equipment deployment: Old equipment that returns to IT due to the new equipment deployment will be evaluated by the technicians to be in good condition for donation or in damaged condition and ready for disposal. This will happen no later than 15 days from the day the equipment came in. The equipment will be placed in the Founders 15 storage closet. If there is an overflow of computers, the storage shelves in Founders 15 to be utilized completely. If the equipment is good as a donation, and if applicable (if it is a computer), the data must be wiped from the drive or simply re-imaged with a donation image. This will be determined by the equipment renewal time the CIO has set, **please view the "NEW EQUIPMENT AND SOFTWARE" section.** All computers will be held for a maximum of 15 days for the user to retrieve data. After this, the data is considered to be unrecoverable.

LOANER EQUIPMENT
JU's IT Department provides computer and A/V equipment to checked out for a maximum of 2 weeks for special events such as: graduation, student elections and other events held on campus. The A/V equipment is handled by the Communications Technician and computer equipment that is loaned to users must first be approved by the Senior Technician. Both Computer & A/V equipment must be checked out using IT EQUIPMENT LOANER FORM and signed by user or approved student worker.

EQUIPMENT DISPOSAL

Equipment that is determined to be disposable will need to go through certain steps.

1. If it is a computer, remove the hard drive and store it in Founders 15 with the hard drives to be wiped. Also remove any usable parts and store in the Founders 15 storage closet.

2. Submit an inventory removal form sheet online at http://netrequests.ju.edu . If there are many computers, a sheet can be handed to the Senior Technician.
3. Remove the asset tag from the equipment.
4. Equipment can be placed on storage shelves until which time it will be scheduled for pickup by a local recycling company PC LIQUIDATORS otherwise it can be placed outside of Founders 15 where it will picked up by PHYSICAL PLANT.

NOTE: ALL EQUIPMENT MUST BE CLEANED WHEN GOING OUT TO THE USERS.

OPERATING SYSTEM AND SOFTWARE INSTALLATION PROCEDURES

COMPUTERS WITHOUT AN IMAGE AVAILABLE

Image creation: Computers without an image will need to have an image created and uploaded to the imaging server (DELTA). **The use of an OEM operating system will not be allowed in the image creation process. The image will always be built from loading our operating system.**

COMPUTERS WITH AN IMAGE AVAILABLE

Imaging for the first time

PC (Microsoft OS): Delta is setup for PXE booting via Win PE. You will need to get the computer to give you the boot options and then select the network card as the boot up device. Then you will be able to hit F12 when prompted to initiate the Windows Deployment Service software. **Before imaging make sure you send a net request at http://netrequests.ju.edu and put in the name/asset tag of the computer to be deleted from the network. You can image the machine; however, you may not do any post setup till you get a confirmation from the senior tech or network administrator that it is deleted. Confirmation will always be sent through e-mail.**

How to capture Operating System images for deployment with SCCM 2012

Last edited 10/09/2013 by David Donnelly

- Configure workstation
  - o Install Operating System
  - o Update drivers if needed
  - o Install and configure additional applications
  - o Install Windows updates
  - o DO NOT join to domain. Join to a workgroup. Workgroup name doesn't matter.
  - o Create local tech account with normal password and add to Administrators group
  - o Make sure Guest account is disabled.
  - o No need to disable Administrator account, sysprep will do it during image capture.
  - o Delete any other user accounts. Only accounts should be Administrator, Guest and tech.
  - o Restart workstation, log into tech account.

- Insert SCCM 2012 Capture Media into CD drive. Browse to My Computer > CD drive > run LaunchMedia.cmd by double clicking.

- "Welcome to the Image Capture" screen. → click "Next"

- "Image destination" screen
  - o "Destination" field, browse to \\delta\captures$. Authenticate with your network credentials when prompted.
    - ▪ Create a name for the .wim file. Naming convention is model_name_windows_version_bit_department (if department needs to be specified. (e.g. Optiplex_9010_Win7_Pro_32_CS)
  - o Enter your network credentials (ocean\username) for the network path.
  - o Click "Next"

- "Image Information" screen
  - o "Created by:" field → your full name
  - o "Version:" field → today's date (MM/DD/YYYY)
  - o "Description:" field → can leave blank. Name of .wim file should tell us what we need to know.
  - o Click "Next"

- "Summary" screen
  - Click "Finish"
- The rest is automated. The wizard will run sysprep, reboot into the PE and capture the image to the server. When it's done you can remove the CD and power the system off.

- Let the admin team know so we can update/create a task sequence for deployment.

How to deploy Operating System images with SCCM 2012 via PXE
Last edited 10/09/2013 by David Donnelly

- Power workstation off

- Press Power button

- Start pressing F12 button for a list of boot devices

- Select Network Boot

- When "Press F12 for network service boot" appears, press F12

- When prompted for a password, enter "Deploy2ME".

- Select the appropriate Task Sequence from the list. The naming syntax of the Task Sequence will help you find the right one.

- Click "Next".

- The Operating System will install and when the install is complete the workstation will reboot. At this point the part with SCCM is done.

Post setup for a PC (Microsoft OS): Join the computer to the "ju.edu" domain with the proper name. Always name the computer by its asset tag, if it has zeros add the zeros, if it does not have zeros do not add them. Also, if it is a laptop always make sure to add an "L" at the end of the name. Once this is done and you reboot you will get the "tech login window". Make sure to select the correct description and apply it. Install the following software:

- Antivirus
- Windows Updates
- Any special software if applicable

The computer should now be ready for deployment.

NOTE: It is not recommended adding the computer to the domain if it will not be deployed within a month.

APPLE (MAC OSX OS): Apple computers can be imaged by Booting to an external drive

Post Setup Apple(OSX): Bind**/**Join the computer to the "ju.edu" domain with the proper name. Always name the computer by its asset tag, if it has zeroes add the zeroes, if it does not have zeroes do not add them. Also, if it is a MAC computer always make sure to add an "M" at the end of the name. When you login to the domain on a MAC computer you will not get the tech login window/HTA Window. Install the following software:

- Antivirus
- Apple Updates
- Any special software if applicable
- Configure VNC settings for remote access

The computer should now be ready for deployment.

NEW NETWORK PRINTER INSTALLATIONS AND MOVES

New printers: When a new network printer needs to be installed the technician will can ask for the assistance of the Network team. The fastest way of setting up the printer, is to setup the printer in the location where it will be deployed at, connect it to the network and print out a configuration page. Be sure that the page has an IP address. You may hand this document to the Network team and the Network Administrator will setup the printer IP and install the drivers on the print server "Gulf or BAY". After this process the Network Administrator will send the name of the printer to the technicians.

Replacement printer: Use the same steps above to deploy the printer. When the old printer comes in to IT, it will be evaluated within 2 days of its arrival. The IP address and printer name will be given to the Network Administrators for proper removal from the server. If it is to be disposed of "**please view the equipment disposal section".** If it is considered good equipment, please place the printer in the "REPAIRED SECTION" this will be understood that it is ready to go out if needed. In both cases the IP address and name must be given to the Network Administrators for proper removal from the network.

NOTE: Technicians can work closely with the Network Administrators in order to deploy or replace a network printer.

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COMPUTER NAMING CONVENTION

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When renaming Sodexho machine on the network:
1. Prefix Sodexho computer names with "*SDX*"
2. Append the last 6 digits of MAC address.
3. The format of the computer name should look like: "*SDX-2B-6B-20*"

When renaming Millar Wilson Lab machine on the network:
1. Prefix MWL computer names with "*MWL*"
2. Append the last 6 digits of MAC address.
3. The format of the computer name should look like: "*MWL-2B-6B-20*"

When naming a master image machine on the network:
1. Prefix image computer names with "*IMG*"
2. The format of the computer name should look like: "*IMG-XPIMAGE*"

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STUDENT IT WORKERS

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The student tech II workers are hired to help the technician team with any basic troubleshooting or request submitted by the user. In order to assign work orders to the student techs you will need to do the following:

- Make sure a work order is created under your name.
- Add the "Student tech" to the work order. Do not remove yourself.
- Monitor the status and the student workers will be instructed to update the description of the work order and never close it.
- Once you feel the issue is solved, you may close the work order.

Remember that student workers are also studying, so any tasks that need to be completed immediately may not be a good job for a student worker. All technicians will use their own judgment to assign a student worker a work order. Also remember that the technician is always responsible for the job done by the student worker.

COMPUTER CLASSROOMS

Each tech will have several computer classrooms assigned to them. They will have to check the status of their classrooms every 2 weeks to make sure everything is in order. Also, they will have to be proficient with the software that is installed for the assigned labs. An e-mail every year must be sent out to the appropriate professors and staff of the intentions to image the classroom and any additional software needed. This e-mail is an additional e-mail to the one sent out by Lois Becker and approved by Tom.

STATUS REPORTS

All technicians will need to provide status reports to their direct supervisor. The PC Technicians will send the status reports every week before 5PM on Wednesday to the Senior Technician. The Senior Technician will provide a status report to the Senior Network Administrator every week before 12PM on Thursday. These status reports will be e-mailed to the respective person.

STATUS REPORT FORMAT

E-mail subject: Technicians Status Report

Major Accomplishments

Any important accomplishments.

Next Week's Objectives

All the objectives you have planned for next week.

Issues

Any issues encountered during the week

CALL PRIORITIES AND SERVICE LEVELS

Priority	Description	Target response time	Target fix/work around time
Critical	User unable to work	15 Minutes to respond to the call	4 Working hours to resolve or provide a workaround solution
		1 working hour to initiate diagnosis	
High	User unable to perform key tasks	30 Minutes to respond to the call	8 Working hours to resolve or provide a workaround solution
		4 Working hours to initiate diagnosis	
Medium	Intermittent problems. User is still able to perform key tasks	2 Hours to respond to the call	3 Working days to resolve or provide a workaround solution
		12 Working hours to initiate diagnosis	
Low	Information request or scheduled event. No impact to the user	4 hours to respond to the call	1 Working week to provide update or information to the user.
		2 Working days to provide an update	

MASTER KEYS

The IT Department has a 1 set of master keys that are kept in the server room in a lock box. The keys will unlock most of the offices, labs, & closets around campus, any doors that can't be unlocked with the master keys can be opened by calling Campus Security. The keys **must** be signed out using the sign out form next to the lock box be sure return the keys to the lock box before lunch or at the end of the work day. Student workers are not permitted to sign out the master keys so do not give student worker master keys unless authorized by a manager or supervisor.

HOW WORK ORDERS ARE ASSIGNED AND MOVED AROUND FOR THE TECH AREA

Work orders are assigned to the technicians with the "round robin" method in the IT Helpdesk software. The software will rotate the work orders as the calls, e-mails and web work orders come in. If a technician is not present because he or she is affected by an illness or because he or she has requested days off for a planned vacation, the work order will be assigned to the technicians that are available. The Helpdesk will always try to rotate the work orders manually when a technician is out for the day.

All technicians are expected to work as a team; therefore, if many work orders were assigned to a technician a certain day, the technician can always ask for help from a coworker and re-assign the work order.

No work orders will be re-assigned without the proper consent of the technician or supporter.

HOW WORK ORDERS SHOULD BE HANDLED BEFORE CLOSED

Work orders are to be closed when the job the user requested is complete. Even when a work order is complete, the technicians will always be required to add a description stating that the job is done and also explaining to the user that they can always re-open the work order by replying to it through e-mail.

All techs will always be required to contact users with these three forms of communication.

1. **Telephone:** Speak to the user and see if you can arrange to get the work order done. If the user is not there or is busy, always leave a message stating the work order number and asking them to get back to you. Once the call is over with, make sure to go and update the description in Footprints, just state that you spoke to the user or left them a message.
2. **Footprints Helpdesk E-mail:** By adding the information requested to the work order and selecting the "contact" check box. This will send an e-mail directly to the user that is in the contact information for the helpdesk work order.
3. **Direct e-mail:** User must be e-mailed from your Jacksonville University e-mail address in order to try to get the details from the user. After e-mailing the user, copy the e-mail with the sent information from outlook and add it to the description in the work order.

No communication from the user: If **3 weeks** have passed and all 3 forms of communication have been used and there is no user communication, a tech may close the work order. However, a note like the following must be added to the description:

Dear user,

We have tried to contact you through the helpdesk system, e-mail and phone. However, we have not heard back from you for three weeks. We will close this work order for now and if further assistance is needed with this issue, please reply to this e-mail and it will re-open the work order automatically.

Sincerely,
Tech name

TECHNICIAN TEAM PROCESS WHEN HANDLING WORK ORDERS

Technician receives a work order.

Check the priority and asses the impact to the user.

Can the tech resolve it?
Yes
No

Update the work order with the intentions to work on the problem.

Need assistance in solving the problem?
Yes
No

Does the problem involve the Network Team or the Systems and Planning team?
Yes
No

Contact the network or systems and planning team for help.

Ask the Senior Technician for assistance with the problem

Update the customer on the progress of the work order

Has the problem been resolved?
No
Yes

Record and close the work order. Make sure the user agrees.