

Operating System Deployment Assessment and Improvement

Monday

- ❖ Systems Center Configuration Manager's (SCCM) Operating System Deployment (OSD) review and assessment.
 - No major issues with current OSD environment. Driver handling only needed a few tweaks. Our driver handling is not optimal but considering the number of computer models and the variety of drivers those models require, our method is serviceable.

Tuesday

- ❖ Built a self-contained test SCCM/ Microsoft Deployment Tool (MDT) environment including a domain controller.

Wednesday

- ❖ Installed MDT and integrated it into SCCM and began tweaking MDT.
- ❖ Stood up deployment frontend (version 1).
- ❖ Implemented deployment boot image tweaks (trace32.exe, log settings, RDP client, etc)
- ❖ Tested frontend and the domain computer creation process.

Thursday

- ❖ Discussed many of the log files and learned how to troubleshoot deployment problems.
- ❖ Learned about how drivers are applied, why a specific driver was or was not installed (driver ranking).
- ❖ Learned about many of the common variables that MDT has available and how we might be able to leverage those variables to perform tasks on the fly without having to create multiple sequences.
- ❖ Continued to tweak Deployment Frontend, specifically the OU sorting.

Friday

- ❖ We continued to troubleshoot why log files are not being copied to server.
- ❖ We continued to troubleshoot OU sorting for the deployment frontend.
- ❖ Created semi-automated image creation sequence. This still needs to be flushed out and tested.

Recommendations/ Comments

- ❖ OSD can be automated with the addition of MDT. Frontend for deployments that will allow Deskside Services Group (DSG) members to begin the OS install by using pull down boxes and NOT have to use Active Directory (AD) or SCCM. As long as the hardware address is registered with MISCOMP, the DSG tech can name or rename a computer, determine where to put it in the domain, and what application packages (roles) the computer needs all from the frontend.
- ❖ Task sequence versioning may be of use. Currently when a task sequence is modified all previous settings are lost. Task sequence version would capture the old settings and who made the change to the sequence. If the sequence does not work, it can be rolled back to a previous state.
- ❖ Windows Server Update Services (WSUS) currently patches computers after the OS is deployed, often while users are first logging in. This can cause issues since patching may require rebooting. MDT can initialize a WSUS scan and allows patching to be done as part of the deployment. When the deployment is complete, there are no more patches required.
- ❖ All deployment log files moved to a server to ease troubleshooting.
- ❖ Add remote desktop feature to deployment process. If there are issues with builds, SCCM engineers could RDP into the deployment to see what is happening and troubleshoot.
- ❖ Increase default log size so the logs do not fill up and begin deleting oldest entries. (1 MB increased to 10MB)
- ❖ Change timeout for errors to one day instead of 15 minutes. This extra time will allow SCCM engineers to RDP into the deployment to troubleshoot before the computer reboots and restarts the process.
- ❖ Remove wireless drivers from deployment boot media to reduce potential conflicts.
- ❖ Add troubleshooting tools to deployment boot image such as Trace32.exe.
- ❖ Build an automated image creation process using a special task sequence.
- ❖ The OSD process MUST have access to DHCP or the sequence will break. There is no way to hard code the IP Address due to how the process works. The process can set the IP AFTER the OS is deployed.
- ❖ New hard drives being shipped from major vendors (Dell, Toshiba, Lenovo, etc.) have a new configuration that can cause major performance issues. The new drives are configured to use 4KB sectors instead of the old 512 byte sectors. There is a hotfix from Microsoft to allow Win7 to install using the native 4KB and not default to the old 512 byte. Any computers with the new advanced format drives running Win7 not using the hotfix could see as much as a 30% performance drop. The Win7 images should have the patch integrated. Any currently deployed Win7 systems will need to run a special program to “fix” the issue. Dell has a tool that only works on Dell systems. This will need more research to determine how to proceed.

Things Left To Do

- ❖ RDP log info sent to server to allow SCCM Engineers to RDP into the deployment process without interaction or intervention from DSG technicians.

- ❖ Refine the OU sorting for the deployment Frontend. Currently the OU sorting is done based on the distinguished name (Windows7/Computers/CD) and not the conical name (CD/Computers/Windows7).
- ❖ Troubleshoot script for log files being copied to the server
- ❖ Remove the default action to delete old SCCM record as part of the deployment process.
- ❖ Define roles from MDT frontend.
- ❖ Refine and test automated image creation sequences.
- ❖ Discuss what applications to add to “roles”.
- ❖ Discuss how Service-Now’s shopping cart can be leveraged to automate the installation of licensed software (Visio Pro, Adobe Acrobat Standard, etc.). Can Service-Now handle multiple approvals and then add a computer account to an Active Directory group? SCCM can then install these applications nightly without ever having a DSG tech get involved.
- ❖ Bitlocker can be enabled within the sequence. Do we want to work on getting Active Directory ready for Bitlocker? Do we want to offer this for VIP and/or PII people?
- ❖ Rebuild Windows 7 images to include 4KB Sector hotfix.