

Sharpdesk

V3.5

*Push Installation Guide
for system administrator
Version 3.5.01*

SHARP®

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Chapter 1

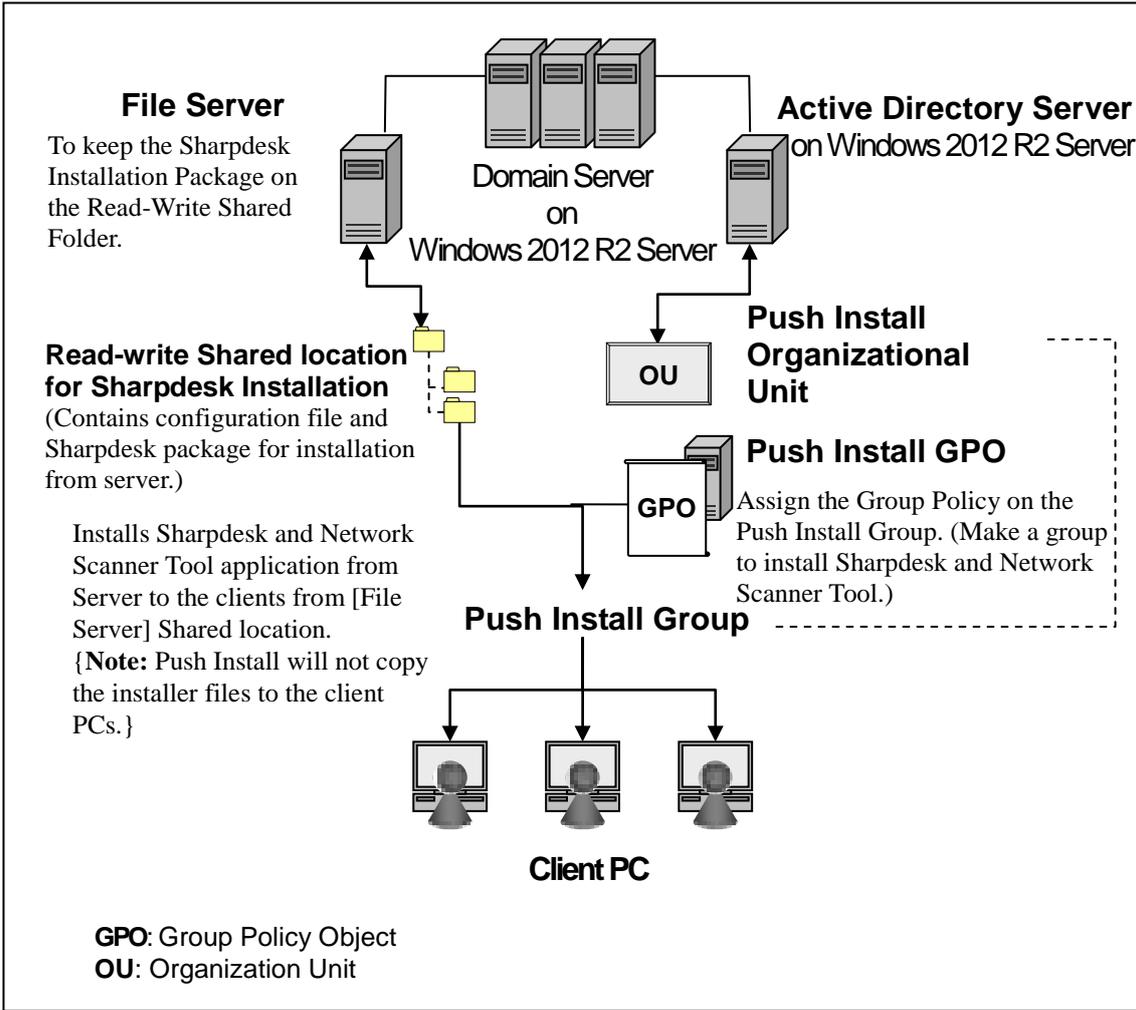
Introduction

Overview

Push Install helps the system administrator to do silent installation for one or more client computers. PUSH installation essentially has 3 parts.

- Configuring the initial details into the Config.ini file using the “PUSH Install Configuration tool”.
- Doing the PUSH operation using Microsoft Active Directory. This will deploy the software into client PCs.
- The Sharpdesk and Network Scanner Tool will be installed in client PC by the Installer.

Since installation package requires a serial number, the configuration tool in the Sharpdesk and Network Scanner Tool installation package will embed the appropriate serial number in the package prior to “pushing” it to the Client PCs.



Chapter 2

Setup for Push Installation

Sharpdesk and Network Scanner Tool may also be installed on Microsoft Windows 7, Windows 8.1 and Windows 10 PCs using the “push install” feature of Windows Server 2012 R2 Active Directory. In order to perform an Active Directory software push install, some setup is required. This Chapter describes the steps necessary to accomplish a Push Install for Sharpdesk and Network Scanner Tool. The person performing the Push Installation is expected to be familiar with Active Directory administration and concepts. Experience with creating and managing group policies in Windows Server 2012 R2 is also required.

Minimum System Requirements

To deploy Sharpdesk and Network Scanner Tool with push installation, the required system network configuration must contain:

- Microsoft Windows Server with Microsoft Active Directory
- Network Share folder
- PC “targets” (Clients)

Administrator stores one installable copy of Sharpdesk and Network Scanner Tool on the Network Share, and the Server handles the administration of the push installation to the Client PCs.

Minimum Server Requirements

The following are the minimum server requirements to successfully push install Sharpdesk and Network Scanner Tool.

Server	Windows 2012 R2 Server (or compatible)
Processor:	1.4 GHz, 64-bit processor
Memory:	2 GB RAM

Available disk space:	160 GB
Network hardware:	10Base, 100Base or 1000Base Ethernet card
Network software:	TCP/IP network software
Network	Windows Networked environment
Active Directory	The Active Directory domain containing all Client PCs

Minimum Network Share Requirements

The network configuration must contain a Network Share folder with Write permission for all authenticated users.

Minimum Target Client Requirements

To successfully install and use Sharpdesk, Composer and Network Scanner Tool, your PC must meet the following minimum requirements:

Operating System Attribute:	Windows 7 Professional/Enterprise/Ultimate	Windows 8.1 Professional/Enterprise	Windows 10 Professional/Enterprise
Processor:	1GHz 32-bit/64-bit		
Memory:	1 GB RAM/2 GB RAM (64-bit)		
Available disk space:	800MB		
Graphics capability:	Direct X 9 support with 128 MB video RAM		
Internet Explorer:	V8.0 or later	V10.0 or later	V11.0 or later
Network hardware:	10Base, 100Base or 1000Base Ethernet card		
Network software:	TCP/IP network software (WinSock2 installed on all platforms)		
Internet connection:	Necessary to access Sharp Internet product support site		

Microsoft .NET Framework (in advance)

“XPS File Format Support” requires portions of .NET Framework 3.0 or later. (.NET Framework 3.0 is recommended)

If “XPS File Format Support” is needed with Sharpdesk, please install .NET Framework in advance of installing Sharpdesk.

Microsoft reference for .NET Framework Deployment:

[http://msdn.microsoft.com/en-us/library/aa964979\(VS.85\).aspx](http://msdn.microsoft.com/en-us/library/aa964979(VS.85).aspx)

<http://msdn.microsoft.com/en-us/library/aa480217.aspx>

No prior version of Sharpdesk and Network Scanner Tool (in advance)

Any prior versions of Sharpdesk and Network Scanner Tool must NOT exist on the Client PCs. You must manually uninstall the prior version of Sharpdesk and Network Scanner Tool from all Client PCs before starting the push installation. If a prior version of Sharpdesk and Network Scanner Tool is detected on a Client PC during the push installation, the software will not be installed on that Client PC. A message will be sent to the Client PC’s Event Viewer stating this version is not supported for upgrade. Uninstall Sharpdesk and Network Scanner Tool from the Client PC and try the push install again.

Note: Please refer to the “Error logs with Event Viewer” in detail.

Server Preparation

The following instructions assume the following conditions have been met:

- Windows Server 2012 R2 Active Directory has been installed.
- Group Policy Management Console Tool has been installed.
- Configuration of the push installation will be performed on a domain controller. The shared folder containing the installation package can reside on the domain controller or on a file server.

Push installation may be possible in other environments. The intent of these instructions is still valid, but the details will need to be modified to fit the context of the server configuration.

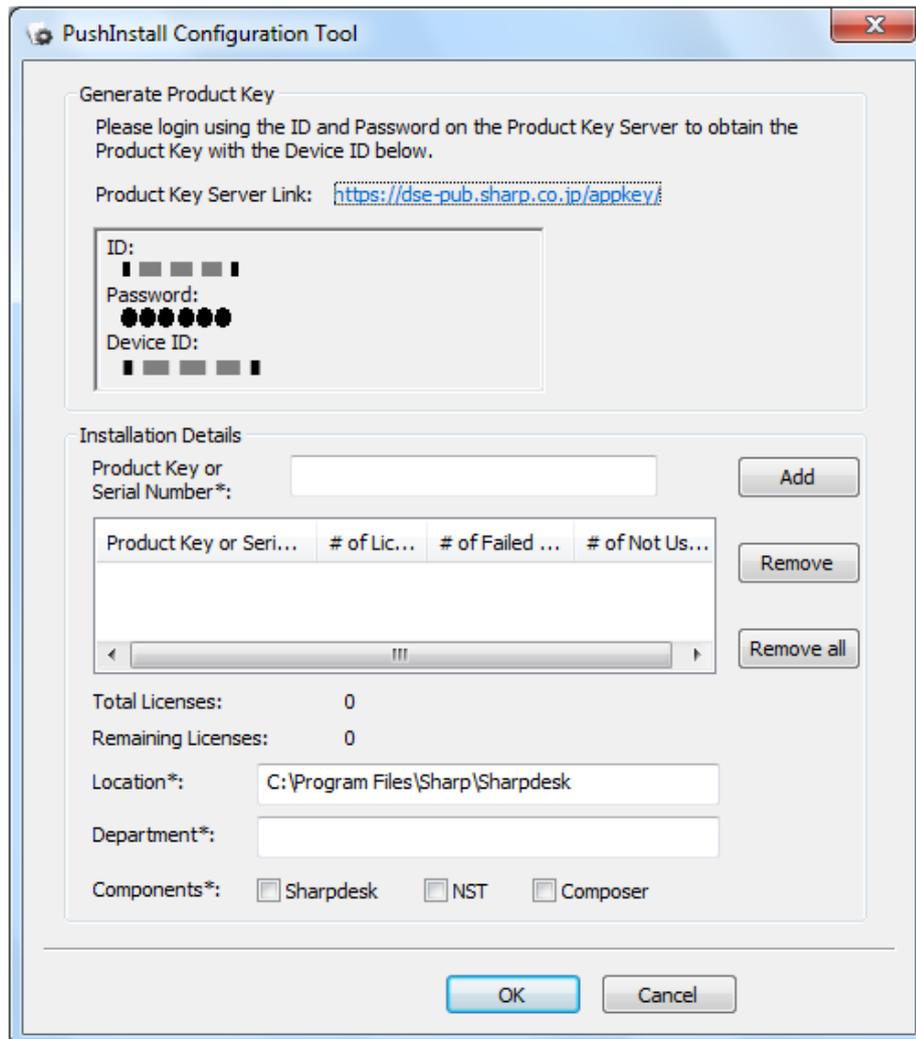
Network Share Preparation

Create a folder on a file server or domain controller that will hold the Sharpdesk, Composer and Network Scanner Tool push install package. Share the folder, ensuring that authenticated users have read and write permissions for the share. Copy the installation package into the folder and make sure its files are accessible from the network share.

Assign Serial Numbers to the Client PCs

Each instance of Sharpdesk and Network Scanner Tool on a Client PC contains a valid serial number. The configuration tool in the Sharpdesk and Network Scanner Tool installation package will embed the appropriate serial number in the package prior to “pushing” it to the Client PCs. The configuration tool accepts all serial numbers that are valid for Sharpdesk and Network Scanner Tool and assigns one to each copy of Sharpdesk and Network Scanner Tool as it is pushed to a Client PC. Note that some serial numbers can be used for more than one activation; the configuration tool will keep track of each use and select a new serial number when its valid license count is exhausted. When all of the authorized serial numbers have been used, the push installation process will stop. You must have sufficient serial numbers/licenses to cover all the Client PCs you are going to install. The following steps walk you through the operation of the configuration tool.

1. Navigate to the Network Share Folder containing Sharpdesk installation package.
2. Make sure that the Network Share Folder has “Read-write” permission.
3. Double click on the “PushInstallConfigTool.exe” tool in the Network Share Folder and the following screen appears:



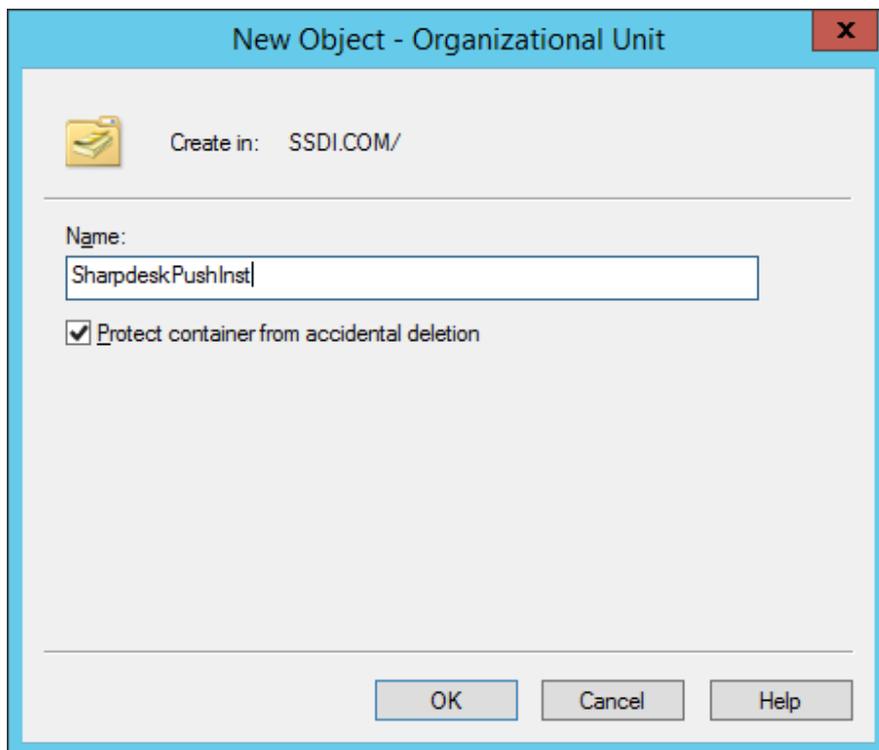
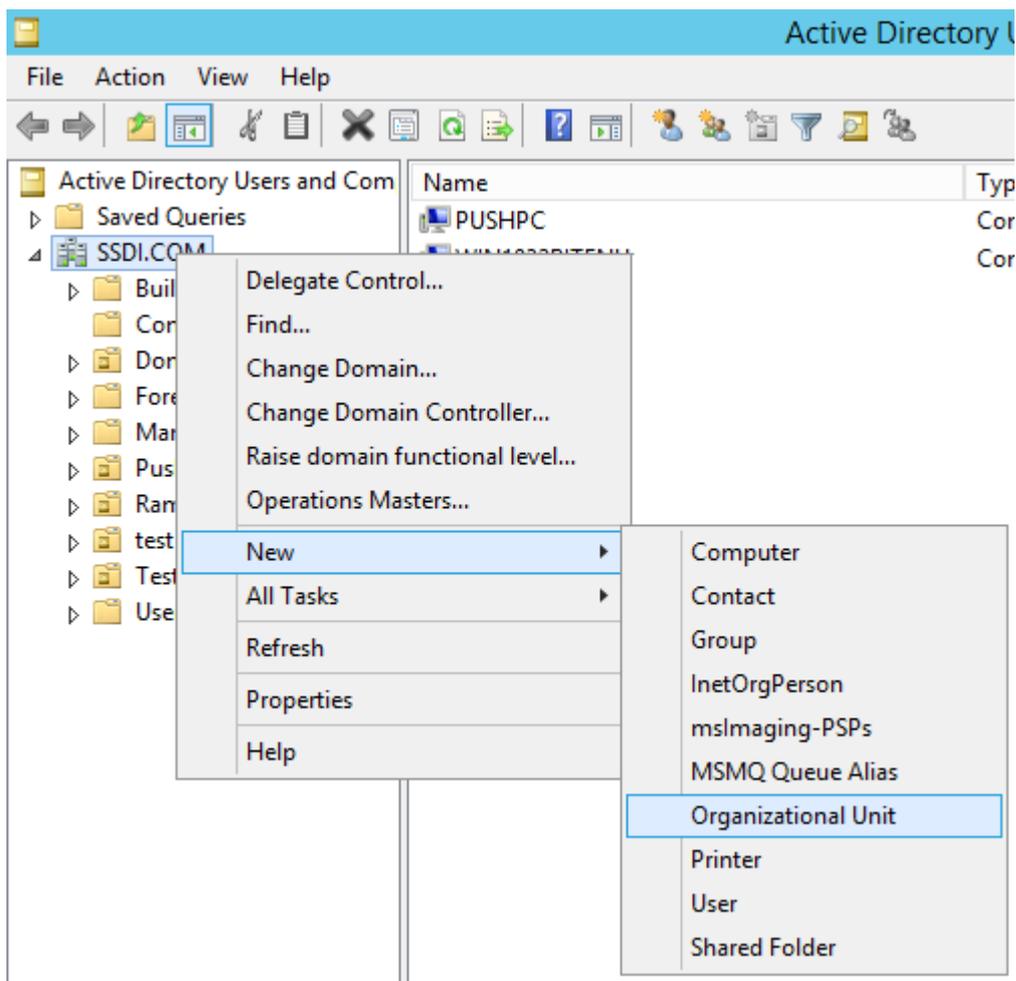
4. Enter a Sharpdesk and Network Scanner Tool serial number/product key and click the “Add” button. Enter enough valid serial numbers/product keys to cover all the Client PCs you want to install, clicking the “Add” button after each one. The list of all serial numbers/product keys and the number of users they cover will be displayed in the window.
5. Enter the Location that will be used on each of the Client PCs to store the Sharpdesk and Network Scanner Tool software. The Location should conform to Windows folder naming conventions and may not be a mapped network drive. The Location may not contain any of these characters:
`/ , ; # * ? \ < > | % $`
The default is: “C:\Program Files\Sharp\Sharpdesk”.
6. Enter the Department that the end users of the Client PCs belong to.
7. Finally, select which software components (Sharpdesk, Network Scanner Tool, and/or Composer) you want installed on the Client PCs.
8. Click the “**OK**” button to create the configuration file (“config.ini”) in the Network Share folder and exit the configuration tool. The serial numbers/product keys have been assigned for the Client PCs.

Create the Organizational Unit

If an Organizational Unit (OU) containing the Client PCs does not already exist, use Active Directory Users and Computers to create a new OU that contains the target Client PCs for the Sharpdesk and Network Scanner Tool push installation. The group policy will be applied to this OU.

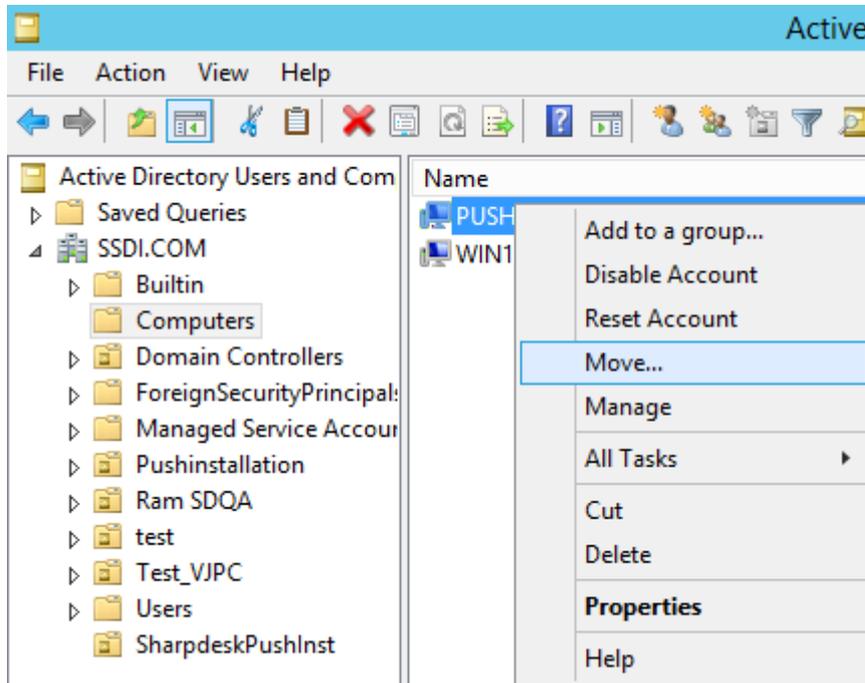
Open “Active Directory Users and Computers” from the Administrative Tools in control panel.

1. Right-click on the root of where you want the Organizational Unit to reside.
2. Select “New” and then “Organizational Unit”.
3. Give a name (e.g. “SharpdeskPushInst”).

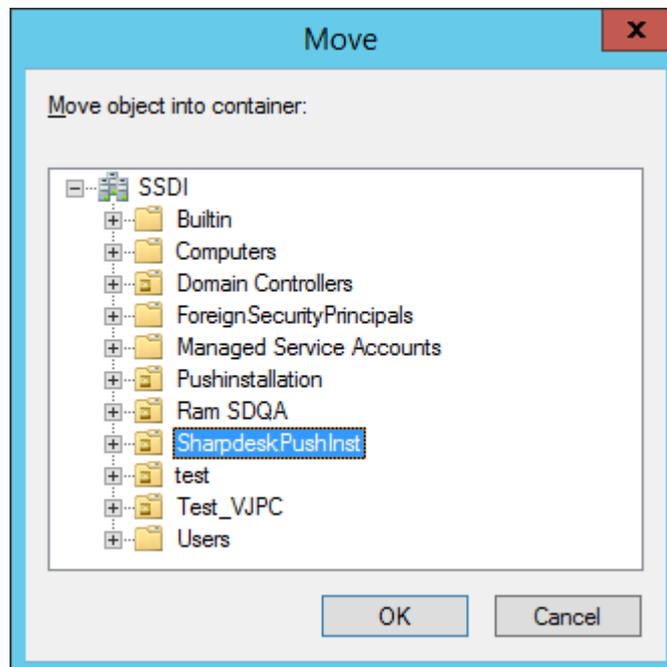


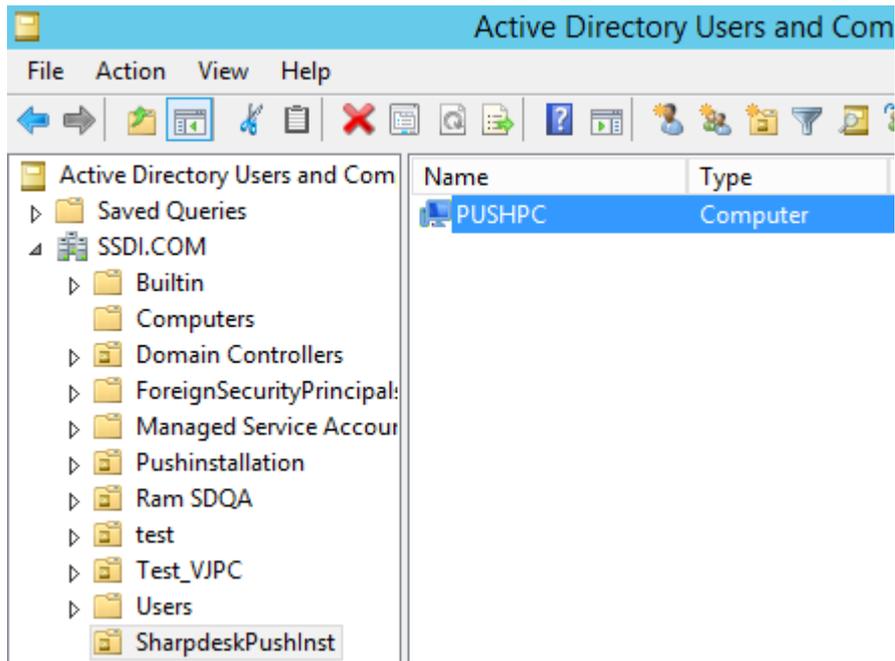
Populate the Organizational Unit with target computers

1. Open Computers in the tree view; it lists every computer in the domain.
2. Right-click on the machines to be pushed to and select “Move”.



3. Move them into the new OU (e.g. “SharpdeskPushInst”).

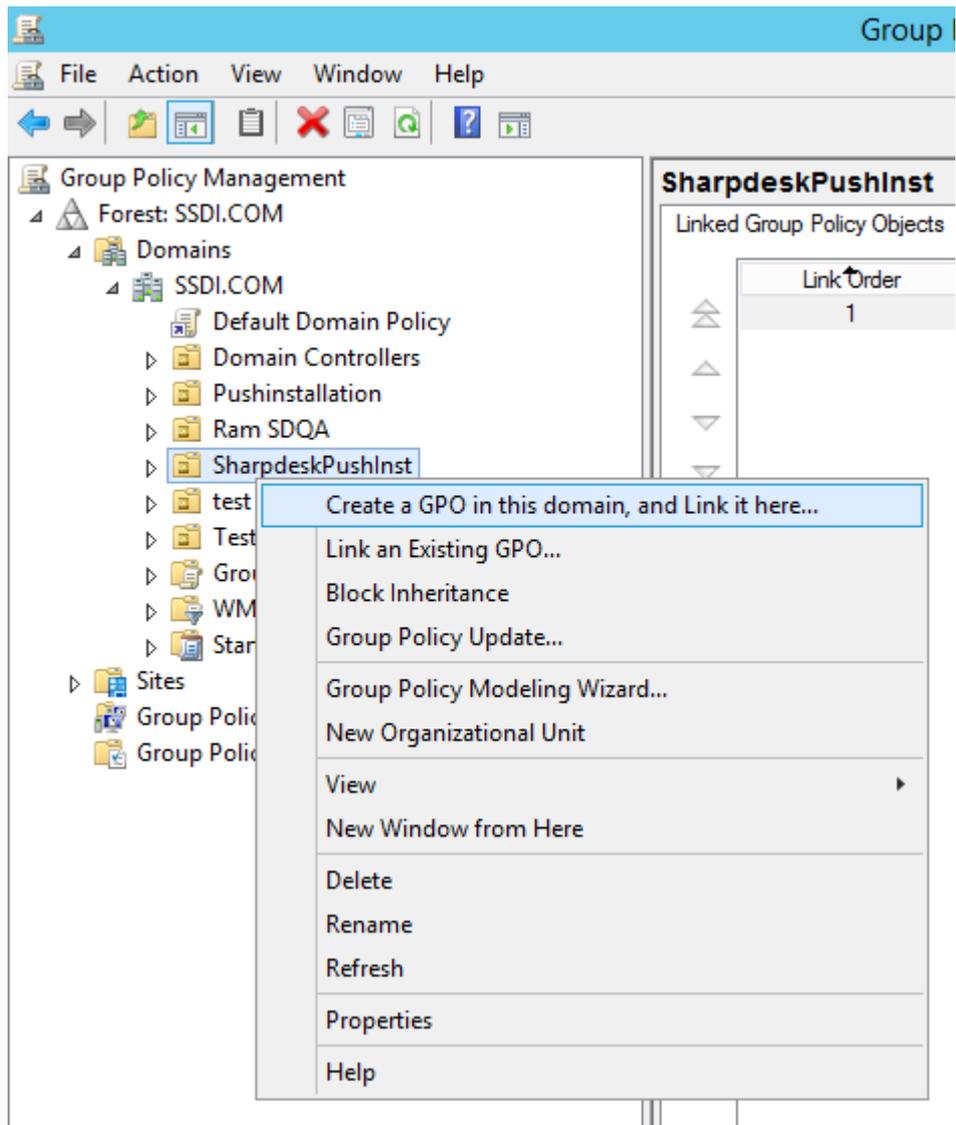




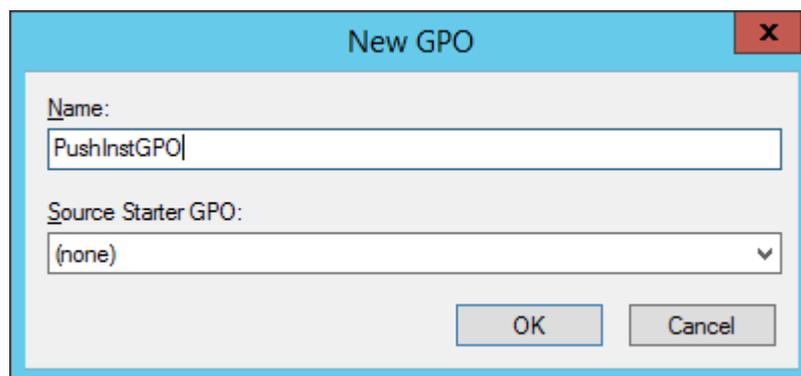
Create and link the Group Policy Object

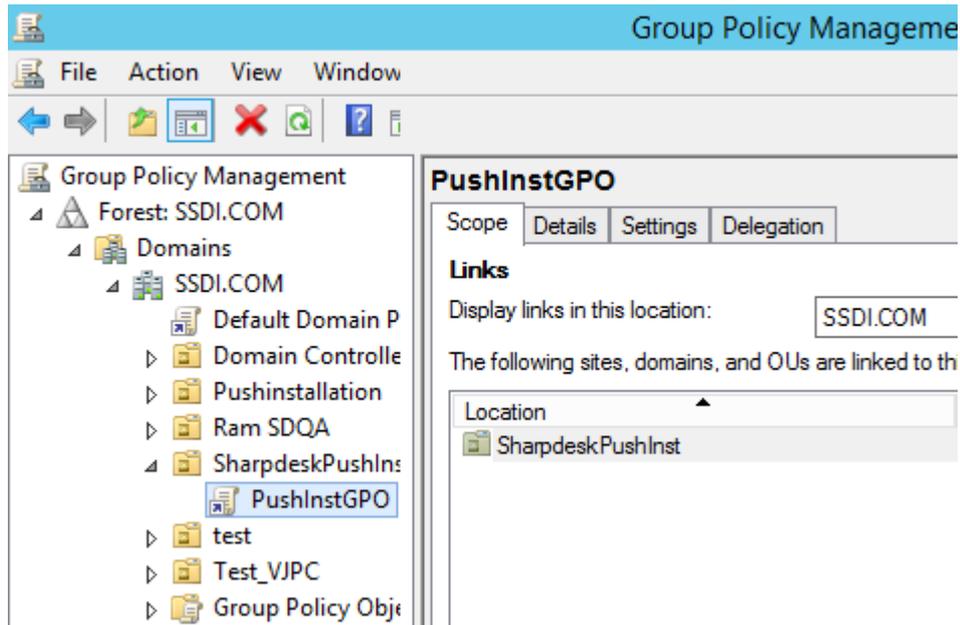
Use the Group Policy Management Console (GPMC) to create and link a new Group Policy Object (GPO) to the OU that contains the target Client PCs. The GPMC can be opened using the Administrative tools menu or through the Group Policy tab of the properties dialog box for the OU.

1. Right-click on the new OU (i.e. "SharpdeskPushInst") and select "Create a GPO in this domain, and Link it here..."

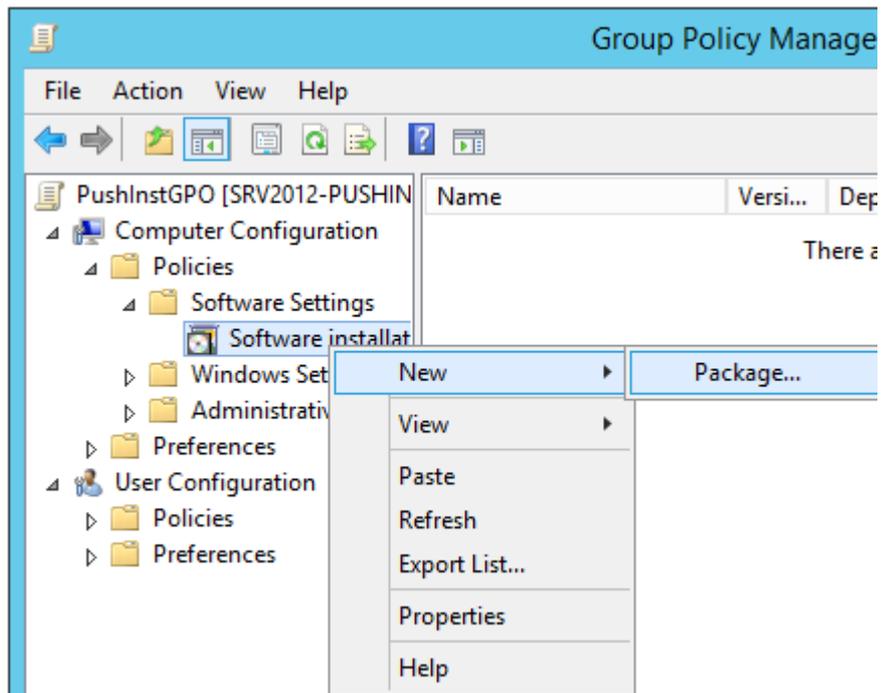


2. Give a name (e.g. "PushInstGPO").

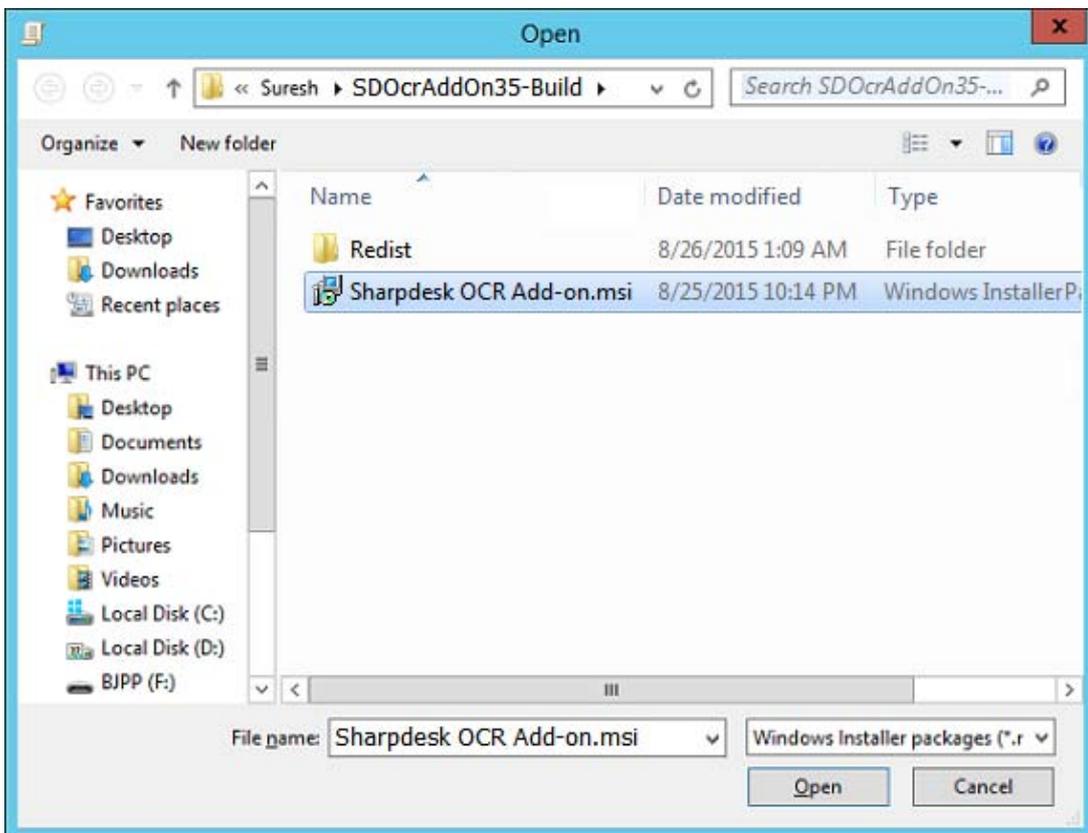
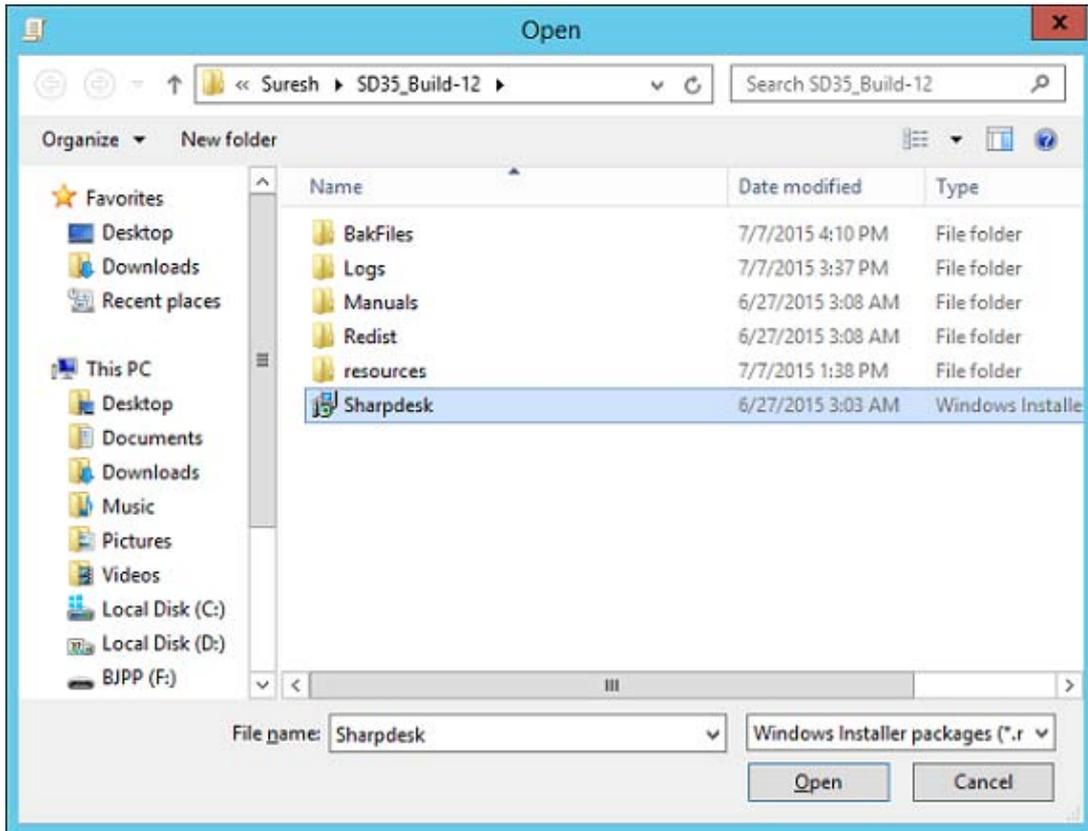




3. In the tree view, right-click on the new GPO (i.e. “PushInstGPO”) and select “Edit”. This opens the Group Policy Object Editor.
4. Under “Computer Configuration”, select “Software Settings”.
5. Right-click “Software installation” and select “New” and then “Package”.

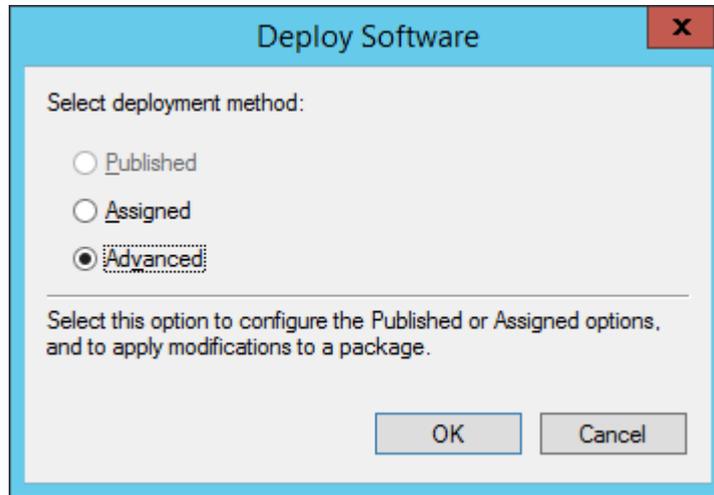


6. Browse to the shared network distribution point folder that contains the MSI package. Go through the My Network gate to ensure that the path will be a network rather than a local path.
7. Locate and select the MSI package in shared folder through network path. Do NOT select it as local package.
e.g.: \\<Servername>\SHARE\Sharpdesk\Sharpdesk.msi

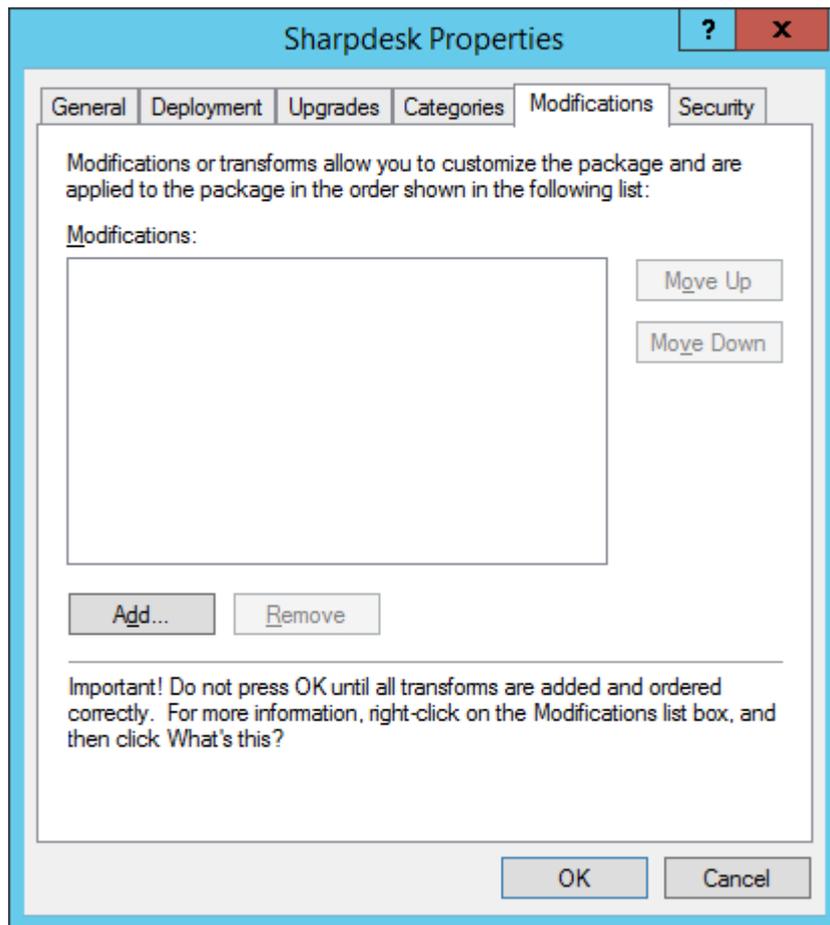


8. Select the "Open" button.
9. Selecting "Radio" button in "Deploy Software" dialog.

- i) If the targeted installation is English (US), select the Assigned radio button on the “Deploy Software” dialog (this will keep the server ready to push the installation to the client after the client has rebooted).
- ii) Select the “**OK**” button.

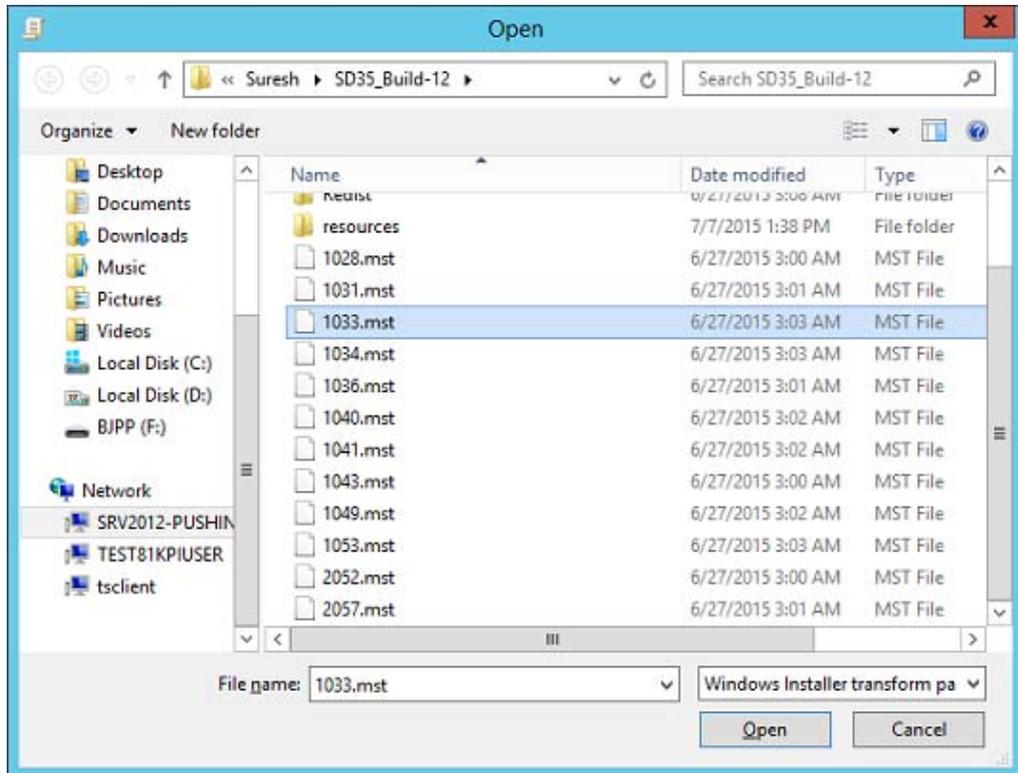


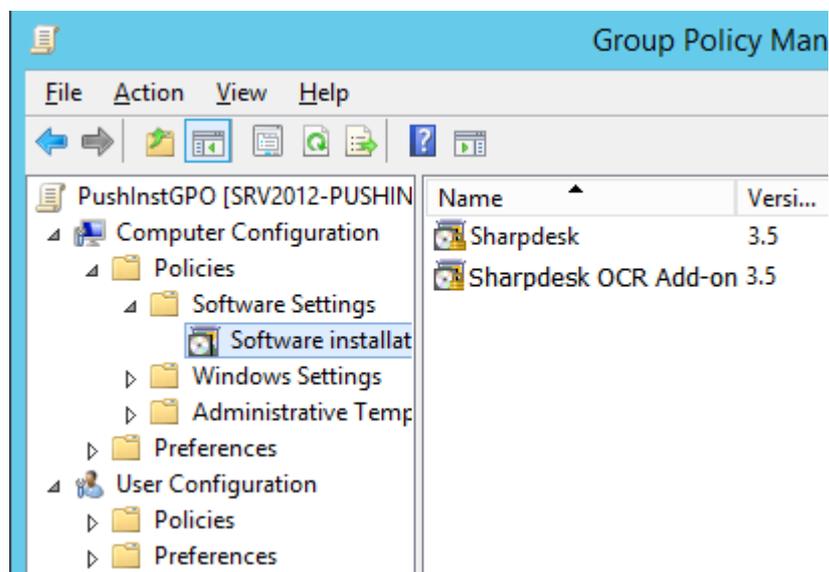
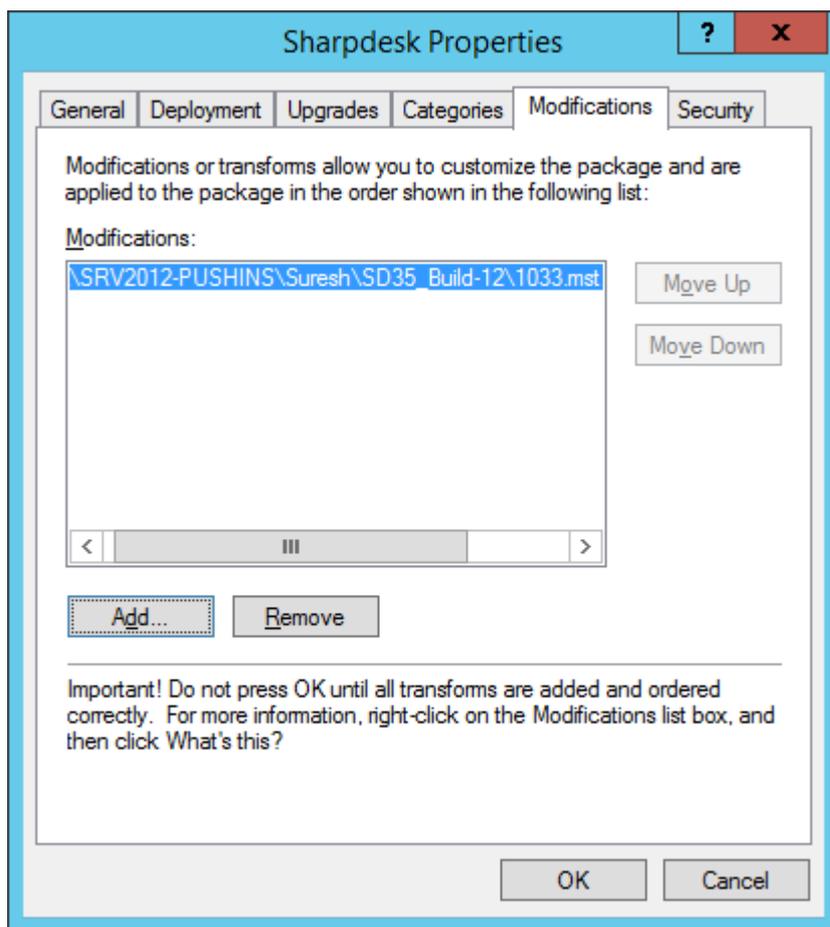
10. If the targeted installation is any other language other than English (US), Select advance radio button.
 - i) Select the “Modifications” tab.
 - ii) Click the “Add” button.



- iii) Select the transform file (.mst) from the disk location as listed in the below table for the respective language.
- iv) Select the “**OK**” button.

S.No	Transform File	Language
1	1028.mst	Chinese (Traditional)
2	1031.mst	German
3	1033.mst	English (US)
4	1034.mst	Spanish
5	1036.mst	French (France)
6	1040.mst	Italian
7	1041.mst	Japanese
8	1043.mst	Dutch
9	1049.mst	Russian (Cyrillic)
10	1053.mst	Swedish
11	2052.mst	Chinese (Simplified)
12	2057.mst	English (UK)

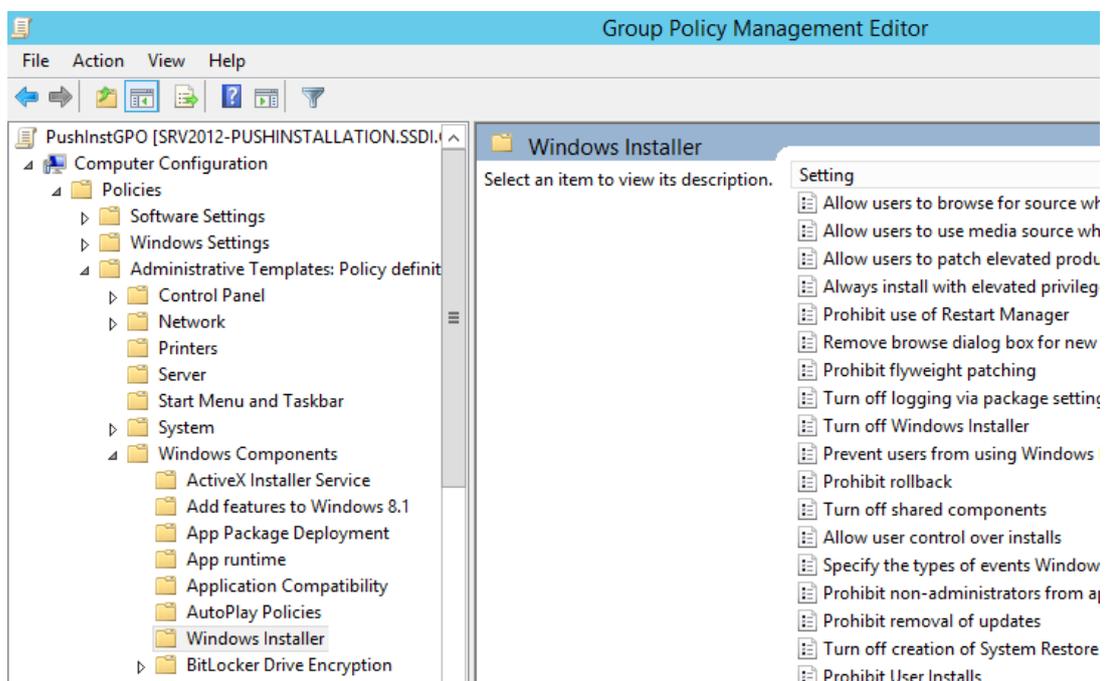




Edit the Group Policy Object

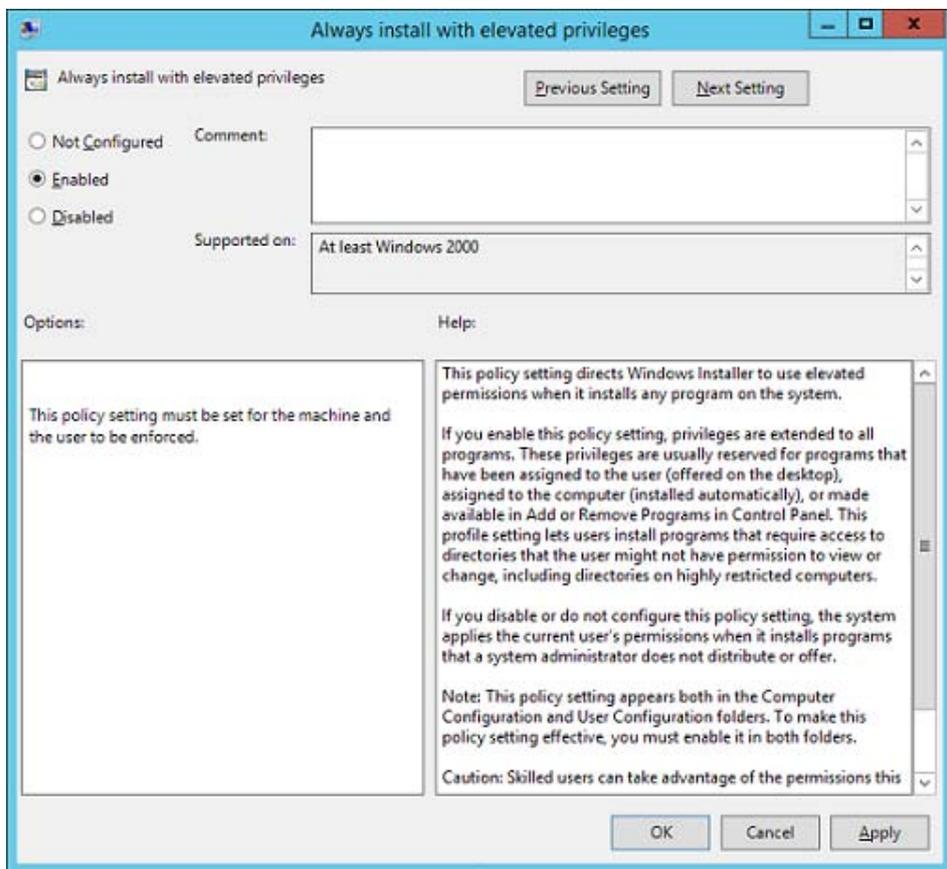
After you have created the GPO, use the Group Policy Object Editor to configure the GPO for the push install. When creating the install package, make sure to select the “Assign to Computers” option in the “Deploy Software” dialog box. Make sure that the software installation package points to the network share containing the installation files and that the following items are **enabled** in the Windows Installer section for the software package in the GPO:

1. Right click on the OU and select Properties.
2. Select the Group Policy tab.
3. Select the GPO and right click and select the “Edit” button.
4. Click on “Computer Configuration” → “Administrative Templates” → “Windows Components” → “Windows Installer”.



5. Set the following Group Policy items to “**Enabled**”:
 - i) Always install with elevated privileges.
 - ii) Enable user control over installs.

Allow users to browse for source while elevated	Not configured
Allow users to use media source while elevated	Not configured
Allow users to patch elevated products	Not configured
Always install with elevated privileges	Not configured
Prohibit	Not configured
Remove	Not configured
Prohibit	Not configured
Turn o	Not configured
Turn o	Not configured
Prevent	Not configured
Prohibit	Not configured
Turn on shared components	Not configured
Allow user control over installs	Not configured
Specify the types of events Windows Installer records in its tr...	Not configured



6. Refresh the domain server's security policy in any one of the following ways:
 - i) Reboot the domain server.
 - ii) At the command line, enter gpupdate.exe.

```
C:\ Command Prompt
Microsoft Windows [Version 5.2.3790]
(C) Copyright 1985-2003 Microsoft Corp.

C:\Documents and Settings\Administrator>gpupdate.exe
Refreshing Policy...

User Policy Refresh has completed.
Computer Policy Refresh has completed.

To check for errors in policy processing, review the event log.

C:\Documents and Settings\Administrator>
```

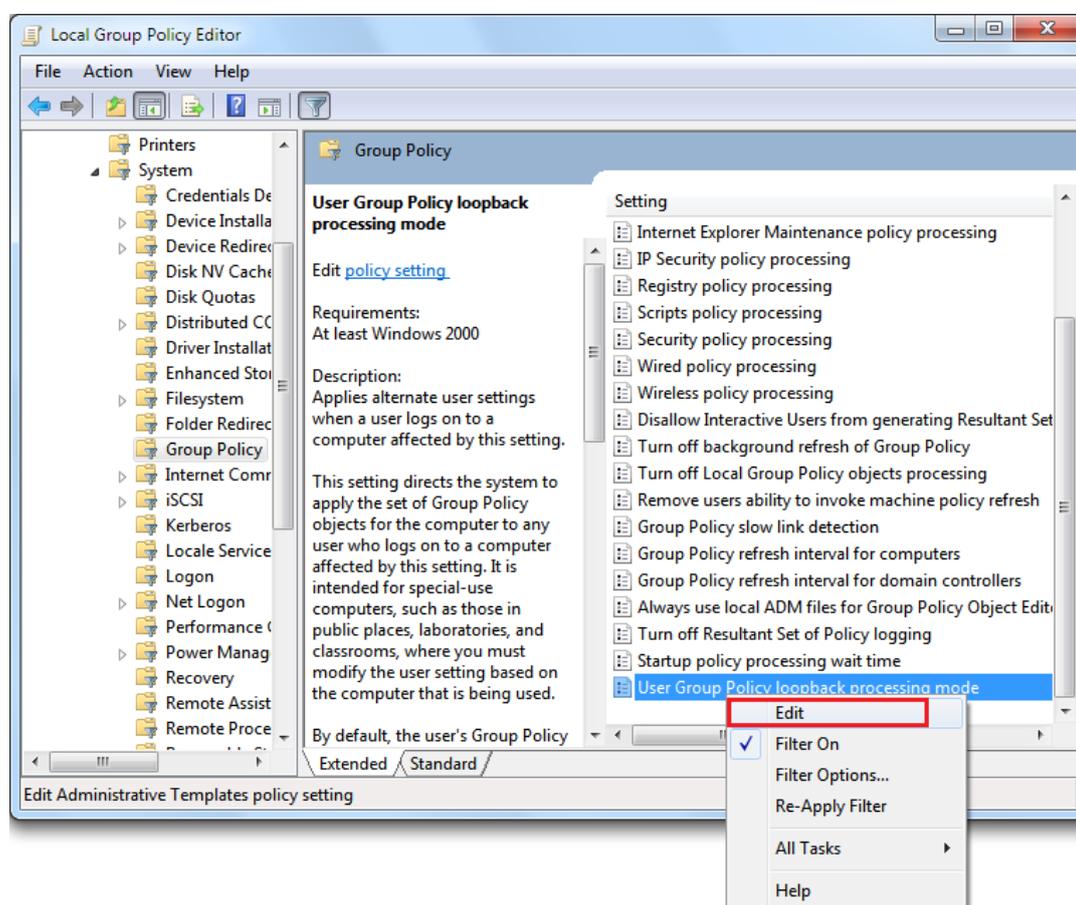
You are ready to begin the push installation process from the Server.

At each Client PC

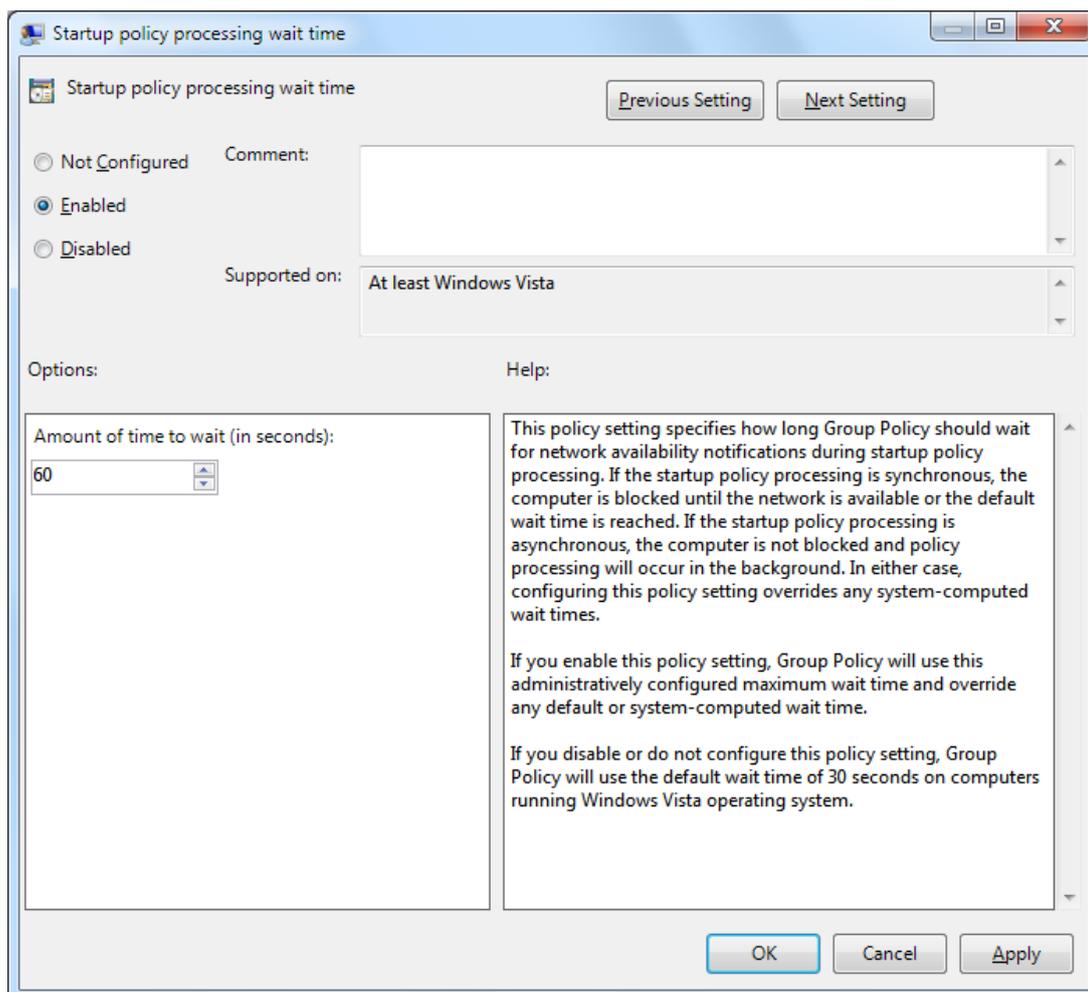
Each Client PC needs to be rebooted in order to start the Sharpdesk and Network Scanner Tool installation. Nothing happens until a reboot occurs. It is not sufficient to simply log off and then log back in again. Note that the Client PC may need to be rebooted more than once; the Windows startup process may delay the automatic installation of Sharpdesk and Network Scanner Tool until the second reboot.

Before rebooting the Client PC, the value of the “Startup policy processing wait time” drop-down box should be configured. To do this, follow the below steps:

1. Click “Start”. In the Start Search box, type the command: “gpedit.msc”. Click “gpedit.msc” from the Search results.
2. Under the “Computer Configuration” section, select “Administrative Templates” → “System” → “Group Policy”.
3. Right-click on “Startup policy processing wait time” and click “Edit”.



4. Select the “Enabled” radio button. Enter the value 60 (or above) in the “Amount of time to wait (in seconds):” drop-down box. Click “Apply” button and then “OK” button.



5. Now, reboot the Client PC twice.

On Windows 7, Windows 8.1 and Windows 10 Clients, a spinning icon should be displayed while the software package is being downloaded from the Server. The download could take as long as two hours, depending on network speed and load. This is a positive indication that the push install is taking place.

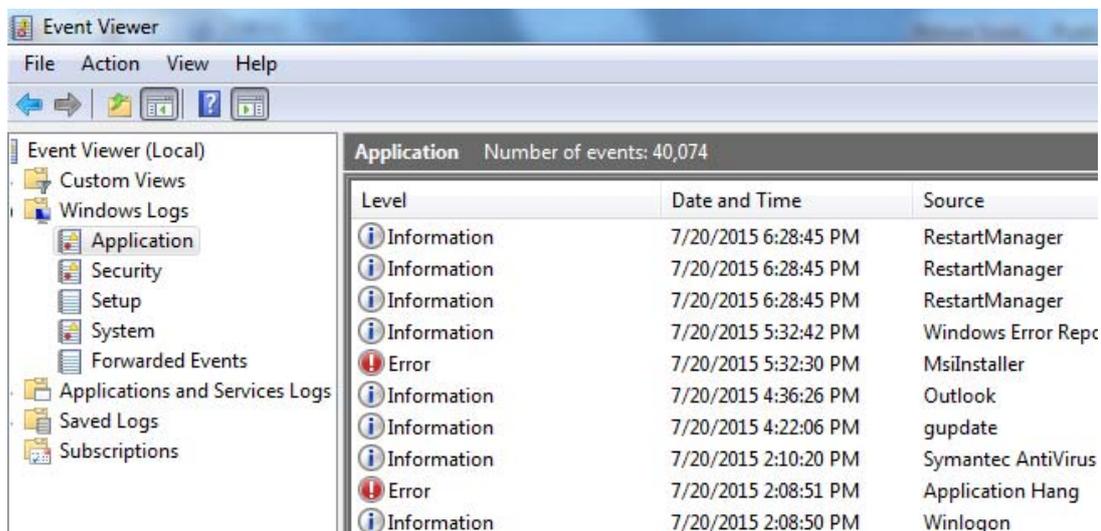
Note: The software package download occurs before the user is asked to log on. If the login screen appears quickly after the reboot, without either the message or spinning icon described above appearing, the push installation process has not engaged. If this happens, reboot and try again. Once the files have been downloaded from the Server to the Client PC, the silent Sharpdesk and Network Scanner Tool installation process will begin and finish before user login.

After user login, Network Scanner Tool wizard will show a message to configure the default profiles. Follow the instructions shown in the message. See Network Scanner Tool User's Guide for a brief overview of the Network Scanner Tool Wizard.

If the software is not installed even after two reboots, inspect the "Event Viewer" for any errors on each Client PC. Correct those errors and reboot again.

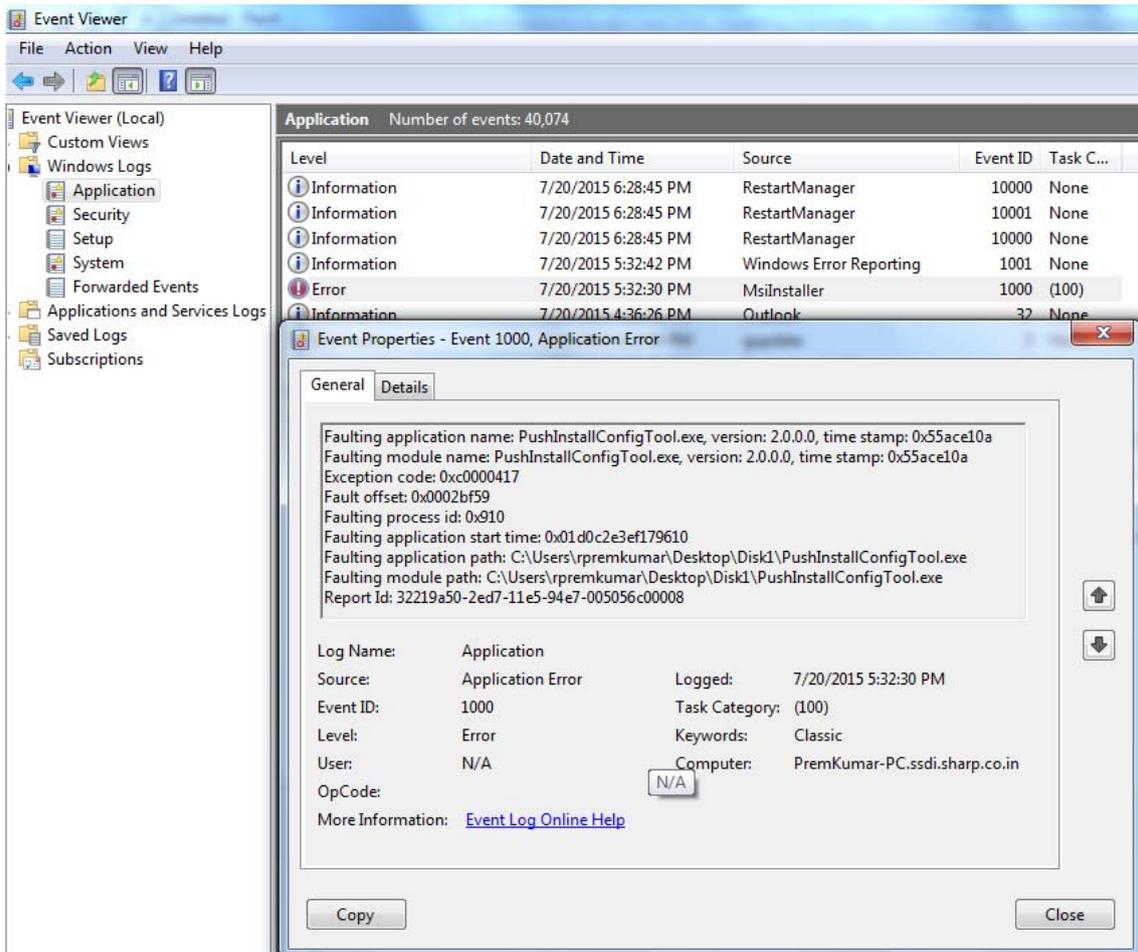
Error logs with Event Viewer (only in the case of failure)

You can see the error logs on Client PC with “Event Viewer”. Through “Control Panel” → “Administrative Tools” → “Event Viewer”, the following window is displayed.

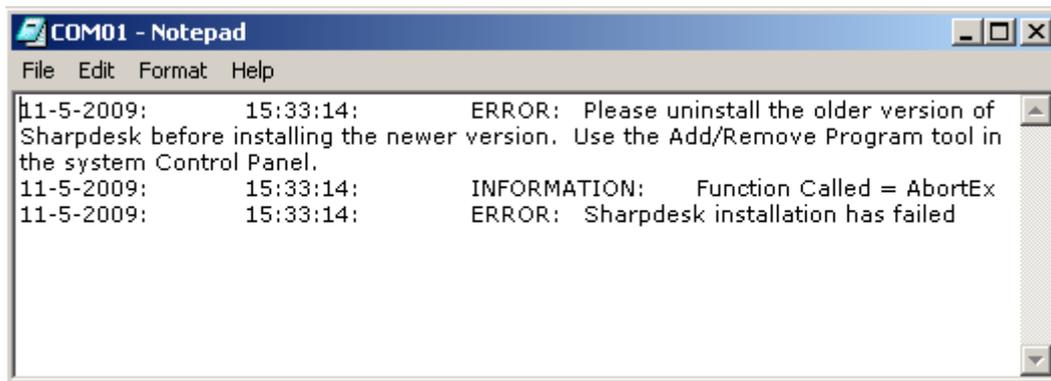


And, selecting “Application” shows the error logs in detail.

(e.g. Older version exists on Client PC)



In this case error logs are also saved on Server. (e.g. "\\<Servername>\SHARE\Sharpdesk\Logs")



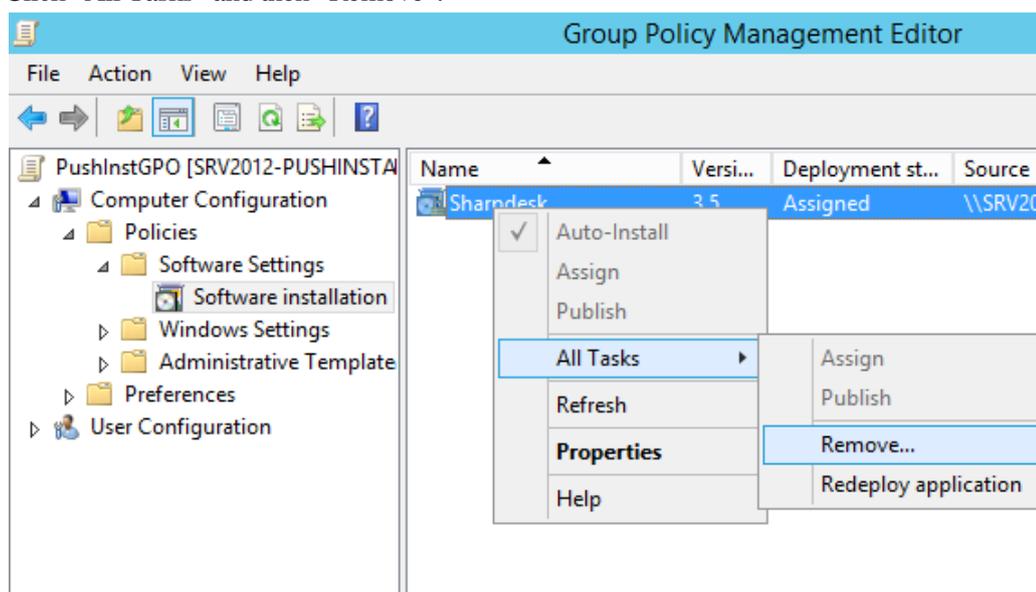
Note: Please refer to "Appendix".

Uninstalling Sharpdesk and Network Scanner Tool through PUSH

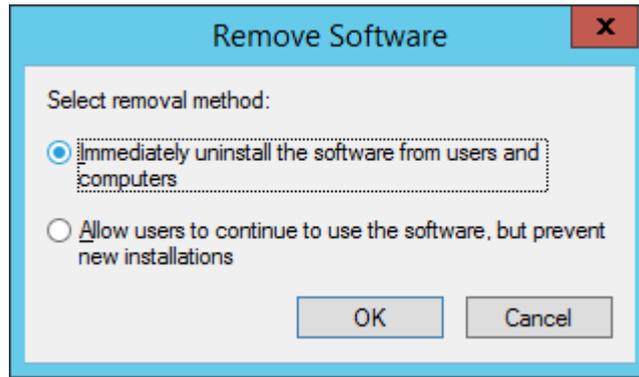
If Sharpdesk is installed through PUSH then it is advisable to un-install through PUSH. Don't manually un-install the Sharpdesk and Network Scanner Tool installed through PUSH Install.

Follow the below steps to Uninstalling Sharpdesk and Network Scanner Tool through PUSH , use the Active Directory Users and Computers Microsoft Management Console (MMC) snap-in:

1. Right-click the domain, Organizational Unit (OU), or object with the policy that contains the deployed software, and then click Properties.
2. Click the “Group Policy” tab.
3. Click the policy that contains the program that was patched.
4. Click “Edit” button to open Group Policy Editor for the deployed package.
5. Browse through the “Computer Configuration” → “Software Settings” section to the location in which the software package is deployed.
6. Right-click the deployed package in the right pane.
7. Click “All Tasks” and then “Remove”.



8. Prompts a dialog with two options:
 - i) Immediately uninstall the software from Users and Computers.
 - ii) Allow users to continue to use the software, but prevent new installations.



9. Select the first option to uninstall Sharpdesk from OU.

Note: Don't manually un-install the Sharpdesk and Network Scanner Tool installed through PUSH Install.

If Sharpdesk is installed through PUSH and un-installed manually from control panel then it may produce undesired results in installing future version of Sharpdesk. There may be chances of displaying warning message like "The setup will perform an upgrade" or "No feature is selected". Please ignore this message by clicking "**OK**" and continue the installation. If Sharpdesk is installed through PUSH then it is advisable to un-install through PUSH.

Appendix

Information sent to Log file and Event Viewer

This discusses about Push Install Failure cases where installer can log the information into a log file.

- Older version exists:
Where older versions such as Sharpdesk 3.2 or older exist on the PC, Installer will write the error message to the Read-write shared location Log folder and event viewer.
- Invalid Serial Number:
If the given serial number is invalid, Installer will write the error message to the Read-write shared location Log folder and event viewer.
- No License available:
If the system administrator is trying to PUSH to more PCs than allowed in the serial number, Installer will write the error message to the Read-write shared location Log folder and event viewer.
- Invalid Destination path:
If the given Installer destination path is invalid, Installer will write the error message to the Read-write shared location Log folder and event viewer.

Information sent to only Event Viewer

This discusses about Push Install Failure cases where installer cannot log the information: (“Event Viewer” will have this information)

- Share Folder does not have Read-write permissions:

If media (software package) for Push install is not available in a shared location having Read-Write permissions, Installer will write the error message to event viewer because installer cannot write the information to the Log folder which is also present in the shared location.

- PC removed from the network:

While installation is going on the Network PC, if anybody removes it from the Network, Sharpdesk Installer cannot write the information to the Read-write shared location Log folder.

- Unexpected power failure:

While installation is going on the Network PC, if power failure occurs, Sharpdesk Installer cannot write the information to the Read-write shared location Log folder.

Glossary

- Organization unit: Group of computer which falls under a common category of Users. Sharpdesk will be PUSHed only to this set of Computers. [Microsoft Reference](#).
- [Group Policy Management Console](#).
- FQDN: Fully Qualified Domain Name.
- [Kerberos Principals](#).