

Data Sheet B: Snap Client Deployment Overview

Key Statistics

- Size of program files when installed = 4.0MB.
- Default client-server polling frequency is 180 seconds (this can be changed if requested).
- Bandwidth utilized when the Snap Client pings the Snap Server is approximately 700 bytes, return.

System Requirements

- **Windows operating system** – the Snap Client is compatible with the following Windows operating systems:
 - Windows 2000 with SP3 and above
 - Windows XP with SP1 and above
 - Windows Vista
 - Windows 7
 - Windows Server 2003 with SP1 and above
 - Windows Server 2008
- **Internet Explorer 6.0 or above**
- **MSXML 3.0 and above** – MSXML 3.0 is already present on machines running Windows XP and above.

Active Directory Integration

- **Active Directory (AD) integration** – the Snap solution integrates with Active Directory (LDAP query of the AD servers) to replicate the organization's user group structures within the Snap Content Manager where they are used for communications targeting purposes. If Active Directory is not utilized or is not appropriately structured for targeting purposes, other mechanisms for establishing targeting groups can be made available upon request.
- **Group Policy Screensaver Settings** – the Snap Solution provides the means to utilize screensavers as a communications channel. Installation of the Snap Client overwrites the existing screensaver settings on the machine to point to the Snap screensaver SCR file. As Group Policy screensaver settings take precedence over local screensaver settings on each machine, Group Policy screensaver settings will need to be altered to point to the Snap screensaver SCR file (if the Snap screensaver communications channel is to be enforced) or existing Group Policy screensaver settings will need to be deleted to allow the local screensaver settings to take effect.

Network Connectivity Requirements

- The Snap Client periodically initiates connections with the Snap Servers to check for new content to download (default poll frequency is 180 seconds). Depending on where the Snap Servers are hosted, this can occur by way of secure connectivity to the internet (Snap hosted solution) or across the corporate LAN or WAN to Snap Servers hosted in-house (Locally hosted solution).
- The essential network connectivity requirement is for the Snap Client to be able to connect to the Snap Server on port 80 (HTTP) and port 443 (HTTPS).

Network Connectivity Requirements – Snap Hosted solution

The network connectivity requirements for the Snap Hosted solution (Snap Servers hosted in SnapComms' data center) are:

- **Internet Connectivity** – internet connectivity is required, at least periodically, for the Snap Client to connect to the Snap Server.
- **Firewall Ports 80 and 443** – traffic destined to the Snap server on ports 80 (HTTP) and 443 (HTTPS) must be allowed at the firewall. (The server addresses for the Snap hosted solution are listed below).
- **Proxy Server Access Rules** – if Web Proxy Servers are used to manage access to the internet then the Snap server addresses must be added to the list of permitted websites to allow the Snap Client to connect to the Snap Server. (The server addresses for the Snap hosted solution are listed below).

- **Proxy Server Authentication** – the Snap Client supports HTTP proxy server authentication. If proxy server authentication is required, the Snap Client will display a proxy server credential prompt dialog box every time the proxy server credentials are required by the proxy server. Proxy server credentials are cached in an encrypted data file and will be re-used for subsequent authentication requests.
- **Snap hosted server addresses:**

Hostname = svc.snapcomms.com	IP address = 210.48.77.30
Hostname = content.snapcomms.com	IP address = 210.48.77.29
Hostname = contentmanager.snapcomms.com	IP address = 210.48.77.28

Network Connectivity Requirements – Locally Hosted solution

The essential network connectivity requirement for the Locally Hosted solution (Snap Servers hosted in-house) is for the Snap Client to be able to connect to the Snap Server on port 80 (HTTP) and port 443 (HTTPS, optional).

The following options may be considered for the Locally hosted solution:

- **HTTP / HTTPS** – by default the Locally Hosted solution uses HTTP on port 80 for the Snap Client to connect to the Snap Server. If desired, the Snap Client and Server can be configured to use HTTPS.
- **Port Numbers** – if desired the port numbers used for HTTP (default port 80) and HTTPS (default port 443) can be configured to different values.
- **Firewall and Proxy Server Access Rules** – if firewalls or HTTP proxy servers sit between the machines running Snap Client and the Snap Servers then access rules must be configured to allow HTTP and/or HTTPS connections between the Snap Client and the Snap Server on the appropriate ports.
- **WAN links and VPN connections** – remote workers and remote branch offices may use WAN links or VPN connections to access the Snap Server so long as the hostname of the Snap Server is resolvable by the client and access rules are configured to allow HTTP and/or HTTPS connections between the Snap Client and the Snap Server on the appropriate ports.
- **Hosting on an internet-facing host** – the Snap server can be deployed on an internet-facing host which allows remote workers and remote branch offices to connect to the Snap server via the internet rather than by corporate WAN or VPN links. In this case it is strongly recommended to enable HTTPS for connections between the Snap Client and the Snap Server.

Snap Client Installation

The Snap Client, which needs to be installed onto users' PCs, is delivered as a pre-packaged MSI file (Windows Installer).

- **Installation of the Snap Client** is performed by installing the MSI package onto PCs using any centrally managed application deployment tool such as Group Policy, SMS, Radia, Altiris etc. Some deployment tools may require users to restart their machines to run the install program.
- **Unattended/silent installation** can be performed by 1) passing the appropriate command-line switches to the msixec.exe program (the Windows Installer engine for installing MSI files): `msiexec /qn /i snapclient_3.0.xxx.msi` or 2) setting the appropriate option in the application deployment tool to run the installation unattended.
- **Upgrades to the Snap Client** as they are released, can be 1) applied using the same application deployment tools stated above or 2) can be deployed from the Snap Server using the auto-update feature of the Snap Client.
- **Un-installation of the Snap Client** is performed via the Control Panel Add/Remove Programs applet as it is known in Windows XP or the Programs & Features applet as it is known in Windows Vista & 7.
- **Hiding the un-installation option** - an option can be set within the MSI package to disable the ability to uninstall the Snap Client from the Control Panel, which has the effect of hiding the 'Remove'/'Uninstall' command to prevent users from casually uninstalling the Snap Client. It is still possible to administratively uninstall the MSI package using the msiexec.exe program.

Snap Client Behaviour

- The Registration Key, specific to the organization, is embedded within the MSI file and is stored in the registry at installation time.
- The Snap Client is available to all users on the PC. All per-user data files are stored within the non-roaming section of the users profile directory, meaning that content delivered by Snap is specific to each user, even when multiple users share the same PC.
- Snap Client installs a Windows service process (SnapClientService.exe) which is responsible for initiating instances of the SnapClient.exe into each login session on the machine and other management tasks.
- Snap Client is designed to be compatible with all standard execution scenarios found in Windows environments such as running as a non-admin-user, running on a multi-user-machine, running on a terminal-server-machine, use of roaming-user-profiles, use of temporary-user-profiles and use of mandatory user profiles.
- There are no known conflicts of the Snap Client with any third party application.

Terminal Services and Citrix Environments - Refer to data sheet C for specific requirements for installing Snap Client in these environments.

Elements created/modified by the Snap Client

- **Program files** – Snap Client program files (.EXE and .DLL files) are written to the installation directory which is by default located under the Programs Files directory - C:\Program Files\Snap Communications Client. (Refer below for a list of all files installed and their location).
- **Snap Screensaver file** – the Snap screensaver executable file (.SCR) is written to the Windows directory: C:\WINDOWS.
- **Snap Client Service** – the Snap Client Service process (SnapClientService.exe) is installed as a Windows service on the machine and set to start Automatically. This service process is responsible for initiating instances of the SnapClient.exe into each login session on the machine and other management tasks.
- **Screensaver Settings** – if the Snap Screensaver is enabled in the options set when the MSI package was created then the Snap Client overwrites the per-user screensaver settings to point to the Snap Screensaver .SCR file, updating the SCRNSAVE.EXE and ScreenSaveActive Values in the HKEY_CURRENT_USER\Control Panel\Desktop registry key.
- **Per-machine registry Settings** – per-machine registry settings are stored in the following registry key:
HKEY_LOCAL_MACHINE\SOFTWARE\Snap Communications Client
- **Per-user registry settings** – the per-user registry settings are stored in the following registry key:
HKEY_CURRENT_USER\SOFTWARE\Snap Communications Client
- **Per-user data files** – the per-user data files are stored in the user profile non-roaming application data section:
On Windows XP: C:\Documents and Settings\Use\Local Settings\Application Data\Snap Communications Client
On Windows Vista & 7: C:\Users\Use\AppData\Local\Snap Communications Client
- **Per-user log files** – per-user log files are created in the TEMP directory and rotated as they age:
On Windows XP: C:\Documents and Settings\Use\Local Settings\Temp\SnapClient\Use\Logs
On Windows Vista & 7: C:\Users\Use\AppData\Local\Temp\SnapClient\Use\Logs
- **Per-machine log files** – per-machine log files are created in the installation directory and rotated as they age:
C:\Program Files\Snap Communications Client\Logs
- **Temporary files** – temporary files are created in the TEMP directory and deleted when no longer required:
On Windows XP: C:\Documents and Settings\Use\Local Settings\Temp\SnapClient
On Windows Vista & 7: C:\Users\Use\AppData\Local\Temp\SnapClient

Installed Files and Registry Keys

List of files installed to the Program Files directory - C:\Program Files\Snap Communications Client\Client

SnapClient.exe	SnapRSS.exe	msvcr80.dll
SnapClientHelper.exe	dbghelp.dll	SnapRes.dll
SnapClientService.exe	Microsoft.VC80.CRT.manifest	SnapRSSRes.dll
SnapDiagUtil.exe	msvcp80.dll	SnapScreensaver.dll

List of files installed to the WINDOWS directory - C:\WINDOWS\

SnapSCR.scr

List of Registry Keys modified -

HKEY_LOCAL_MACHINE\SOFTWARE\Snap Communications Client
HKEY_CURRENT_USER\SOFTWARE\Snap Communications Client
HKEY_CURRENT_USER\Control Panel\Desktop\ - SCRNSAVE.EXE and ScreenSaveActive Values