Version:	2.0	Date:	Aug. 21 2013
Status:	**APPROVED FOR RELEASE**		

Introduction

ShotSpotter Flex data is delivered to law enforcement and public safety agencies through one of two browser-based software clients the *Alerts Console* and the *Investigator Portal*. Both clients are browser-installable Microsoft® Silverlight® applications. The applications run "out of browser" (in their own window). The *Alerts Console* requires Microsoft Silverlight version 4 or later; the *Investigator Portal* delivers more advanced functionality which requires Microsoft Silverlight version 5.

Other Useful Documents
for IT Administrators

- **ShotSpotter Flex System Requirements**
  FED-72-02

- **Hosts and Services Required to Use ShotSpotter Flex Clients**
  FED-72-01

- **IT Administrator Tips - Group Policy Application Permissions for ShotSpotter Flex Alerts Console and Incident and Reports Portal**
  FED-72-03

There are three ways to install these two ShotSpotter Flex Silverlight OOB apps:

1. Individual computer users can perform a "one click" install from a secure website. The application is downloaded and installed inside the secure Microsoft Silverlight Out-of-Browser environment.
2. Administrators can install the ShotSpotter Flex Up-to-Date utility on a computer (which includes pre-downloaded, cached copies of the Silverlight OOB apps), and it will install the Flex Silverlight OOB apps (Alerts Console and Investigator Portal) for each user on that computer.
3. Domain administrators can deliver the ShotSpotter Flex Up-to-Date utility .MSI file from an internal network share as part of a Windows Domain Group Policy Object (GPO) to ensure that all computers in a specific Active Directory container (or throughout the domain) have the latest software.
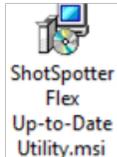
(You can also use any other software deployment management system you may already have in place, such as Microsoft System Management Server to deploy the Flex Up-to-Date utility.)

The full list of System Requirements for ShotSpotter Flex Client Applications can be found on the SST website. In addition, a web-based tool called the ShotSpotter Flex Compatibility Checker can provide an automated assessment of whether a particular computer is running the necessary software. Please contact SST Customer Support for instructions and access to this web-based tool[1].

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[1] As with any "cloud-based" (Internet) software application, ShotSpotter Flex client software also requires network access to certain host names or IP addresses, services, and protocols. Further details can be found in the SST document *FED-72-01 Hosts and Services Required to Use ShotSpotter Flex Clients*, available from SST Customer Support.

Choose Your Installation Method

Depending on your IT environment, one of the three installation methods with likely turn out to be preferable. All three methods are supported by SST, although Group Policy Objects (GPOs) can be complex IT initiatives and should not be undertaken unless you are familiar with your Windows Active Directory domain and the tools for modifying group policies within it. The following table summarizes the pros and cons of each method:

		Advantages	Limitations
1	**Individual User Installation**	- No administrative (elevated) permission required - Good for *ad hoc* use on a new computer - Can be done anywhere - Silverlight OOB apps are automatically updated by the Silverlight auto-update mechanism - Works on Windows or OS X	- Must be performed by each individual user - Client application (.XAP) can take a long time to download on slow connections
2	**Up-To-Date Utility** `setup.exe` (Interactive Installation)	- One visit per computer by administrative user - No download time required for installation; apps are installed from local installation media - Silverlight OOB apps are automatically updated by either the Silverlight auto-update mechanism or the Flex Up-to-Date utility	- Requires interactive login by an administrative user (one time) - Windows only (no OS X)
3	**Group Policy Object-Based Installation** of `ShotSpotter Flex Up-to-Date Utility.msi`	- No visits to any computer which is part of the Active Directory OU subject to the GPO - No download time required for installation; apps are installed from local installation media - Silverlight OOB apps are automatically updated by either the Silverlight auto-update mechanism or the Flex Up-to-Date utility	- Requires domain administrator privileges - Requires knowledge of Windows Active Directory and Group Policy Objects (GPOs) - Windows only (no OS X)

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Prerequisite: Ensure the Computer is Running Microsoft® Silverlight®

This step is required **only one time per computer**.

Flex *Alerts Console* requires Silverlight 4 or higher to run. Flex *Investigator Portal* requires Silverlight 5 or higher. If the target computer does not already have Silverlight installed, you must download and install the correct version from Microsoft's website: http://www.microsoft.com/silverlight/.

Note: User must have Administrator or Power User privileges to install Microsoft Silverlight. Silverlight installation is only required once per target computer.
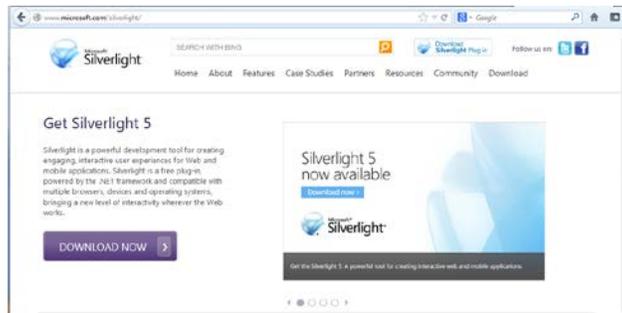
Technique 1: Individual User Installation

If you choose this technique, this step will be required **one time per Windows user (Windows login) on each computer**, *but it does not require administrative of power user privileges.*

The ShotSpotter Silverlight applications (*Alerts Console* and *Flex Investigator Portal)* are easily installed via a browser-based single-click interface at the ShotSpotter Flex website assigned to your account. Please ask your SST Support representative for the name of your server, and then follow the link below to install:

Server	Install Link
US1	https://us1.shotspotter.net/flex
US2	https://us2.shotspotter.net/flex
US3	https://us3.shotspotter.net/flex
US4	https://us4.shotspotter.net/flex
US5	https://us5.shotspotter.net/flex
PN1	https://pn1.shotspotter.net/flex
ZA1	https://za1.shotspotter.net/flex
Demo	https://demo.shotspotter.net/flex

Note: If you use this technique, each Windows user on a computer (i.e. unique Windows login and password) must download and install Flex on every computer they intend to use. If multiple users share a Windows login, only one installation is required for that group of users. Admin privileges are not required to install the Flex applications. Once

the ShotSpotter Flex application is installed for a given Windows user, the software will run and the user may log in to the ShotSpotter Flex software using any valid ShotSpotter username and password. The Windows username and the ShotSpotter username are not related.
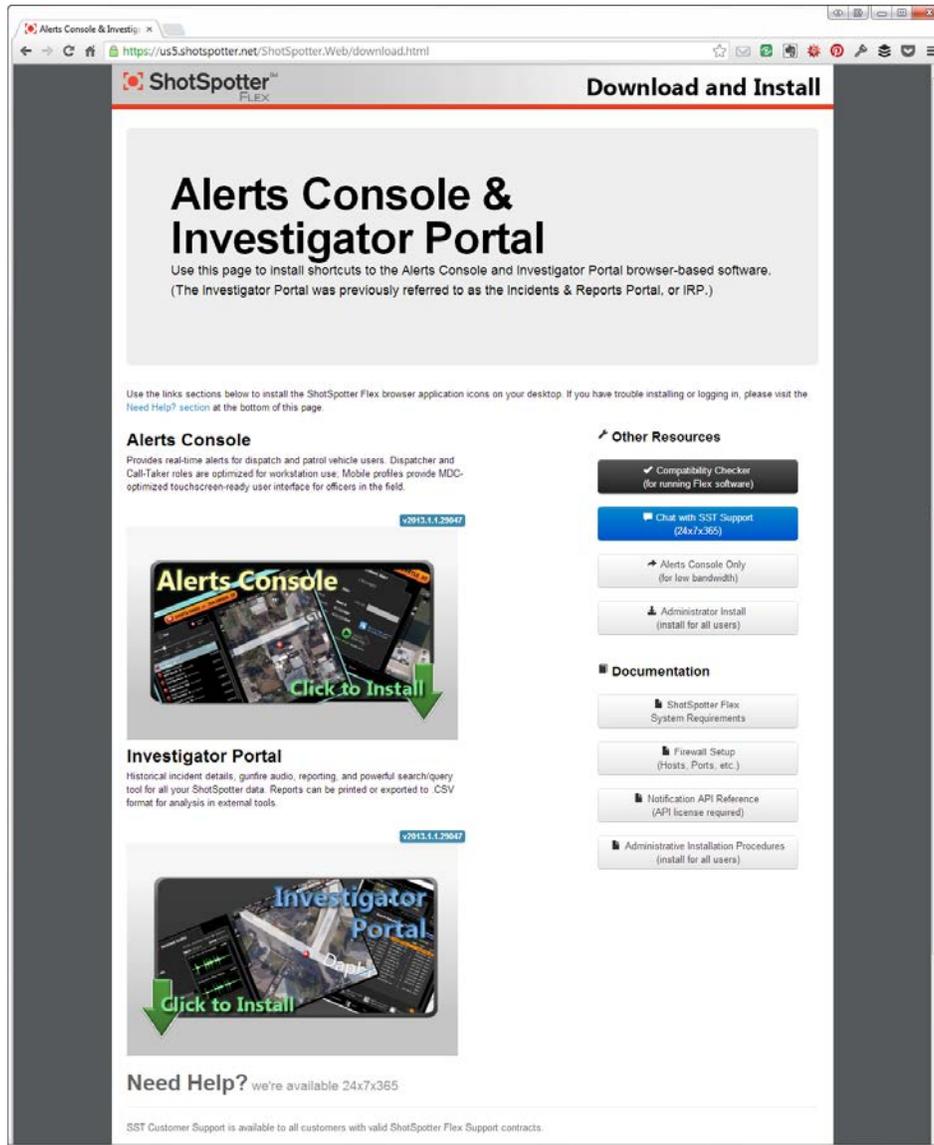
On this page, users simply click on the green arrows labelled "Click to Install" for either the Alerts Console or the Investigator Portal (or both). In each case, they will see a security confirmation warning such as the following:

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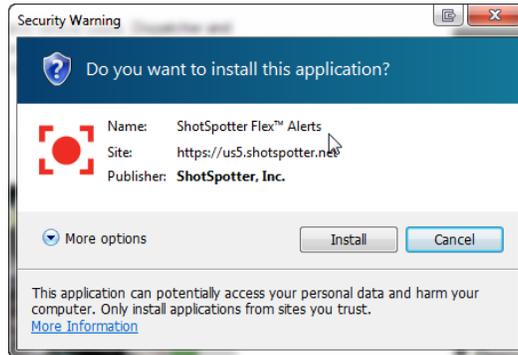
This *is not* the normal Windows User Account Control (UAC); it *does not* require administrative privileges for installation. After the user clicks the **Install** button, the application will run immediately:
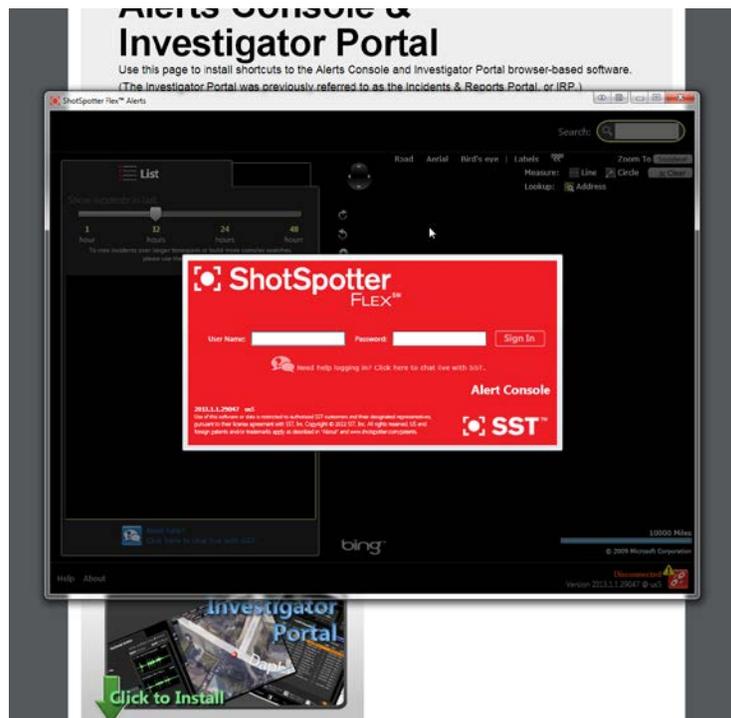
Other Resources, Documentation, and Support Links

The right column on the installation page contains several links which may be useful during the installation process or subsequently.
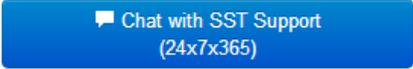
Other Resources

Use the **Compatibility Checker** to make sure this computer has the necessary network and internet site access to run ShotSpotter Flex.

24x7x365 chat with our Incident Review Center is available, who can initiate Support tickets, escalate to Customer Support, and answer questions about usernames and passwords.

On low-bandwidth connections, this page contains only the one-click installer for the Alerts Console. (Useful for mobile data computers on limited bandwidth in patrol vehicles.)

The download page for administrative installers; see the sections on Techniques 2 and 3 below.

Documentation
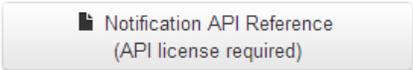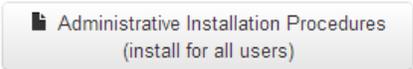
Computer requirements for running the ShotSpotter Flex Silverlight OOB apps

Detailed firewall setup information for IT departments, including the specific host names and ports (HTTP and HTTPS) which must be made accessible.

API reference information.

This document.

The ShotSpotter Flex Up-to-Date Utility

Microsoft Silverlight OOB apps can only be installed on a *per user* basis. SST received feedback from our customers that this limitation created undesirable installation workload, and starting with Release 2013.1, SST introduced the ShotSpotter Flex Up-to-Date utility. The utility installs as a regular Windows application (executable) accessed through a system tray icon:
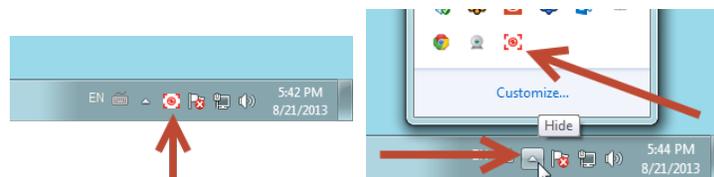
(Remember, Windows Vista and Windows 7 automatically hide most system tray icons. You likely will have to click the "expand arrow" to see the entire contents of the system tray.)

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The utility performs two basic functions:

1. When a user logs on to a Windows computer, it checks to see if that user has the most recent version of the Flex Alerts Console and Investigator Portal currently downloaded to a cache location[2] on the computer. If the user does have the most recent version, it proceeds to the next step. If the user does not have the most recent versions, the utility automatically installs them. (The installation *does not* require administrative privileges and is performed silently and without any user action required.)

2. After installing the currently cached version, the utility checks with the ShotSpotter Flex server to see if there are any further updates. If there are, those are downloaded in the background and will be installed the next time any user logs in.

Throughout the process, the utility advises the user of what it is doing with small gray alert panels in the lower right-hand corner of the screen. A typical sequence for a new user appears below:

After this sequence, the ShotSpotter Flex Silverlight OOB app icons will appear on this user's desktop:

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[2] The cache is located at the Windows path `%PROGRAMDATA%\ShotSpotter\ShotSpotter Flex Silverlight OOB apps\`. On Windows 7, this path variable commonly expands to `C:\ProgramData\ShotSpotter\ShotSpotter Flex Silverlight OOB apps\`. On Windows XP, the path commonly expands to `C:\Documents and Settings\All Users\Application Data\ShotSpotter\ShotSpotter Flex Silverlight OOB apps\`.

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System Tray: Context Menu

Clicking on the Up-to-Date Icon in the system tray provides a short menu which may be useful for administrators or users:
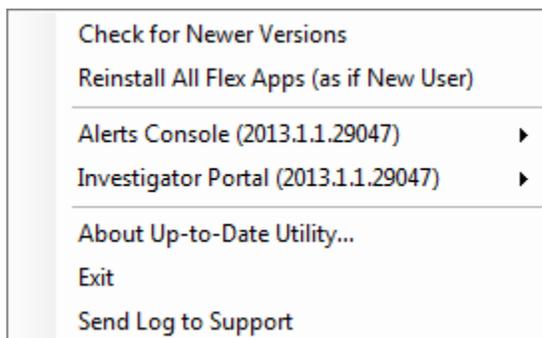
Should a user lose the shortcut icons for his or her Alerts Console or Investigator Portal, you can use this menu to easily re-install a specific app by selecting the appropriate menu item:
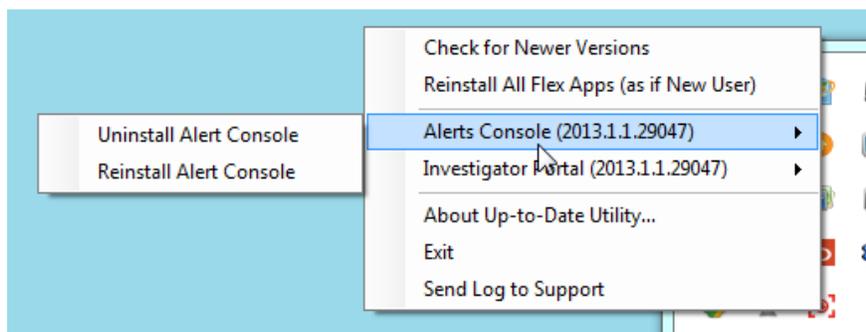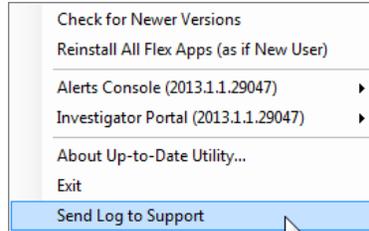

Or, if you wish to reset a user's entire installation, you can choose "Reinstall All Flex Apps (as if New User)":
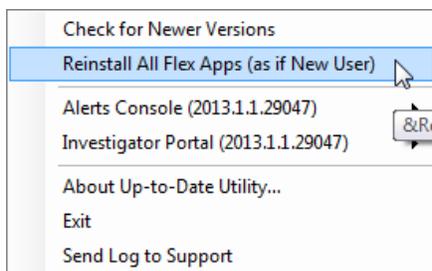
Log Files

The Up-to-Date utility maintains log files which may be helpful for debugging any problems encountered. If the Up-to-Date utility encounters a problem, it automatically uploads this diagnostic log to your ShotSpotter Flex server. Obviously, if the nature of the error is that the server itself is unreachable, the upload will fail. In

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this case, you may subsequently wish to manually send the log file. You can do so simply by selecting "Send Log to Support" from the bottom of the context menu:

You can also open the log file for inspection[3]:

Network or File Errors

Should the Up-to-Date Utility encounter errors, either because files are missing or because the network connection to the ShotSpotter Flex server is temporarily unavailable, the popup message will turn red and explain the nature of the problem:

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[3] The log file is located at the Windows path `%PROGRAMDATA%\ShotSpotter\ShotSpotter Flex Silverlight OOB apps\up-to-date.log`. On Windows 7, this path variable commonly expands to `C:\ProgramData\ShotSpotter\ShotSpotter Flex Silverlight OOB apps\up-to-date.log`. On Windows XP, the path commonly expands to `C:\Documents and Settings\All Users\Application Data\ShotSpotter\ShotSpotter Flex Silverlight OOB apps\up-to-date.log`.

Technique 2: Administrative Install of the Flex Up-to-Date Utility (Interactive Session)

Techniques 2 and 3 install the ShotSpotter Flex Up-to-Date utility described in the preceding section. Installation follows the normal process for installing an application as a system administrator:

1. Obtain the `setup.exe` file.
    a. You can download the file from your ShotSpotter Flex server (follow the links above) by clicking on the **Administrator Install** button following the instructions
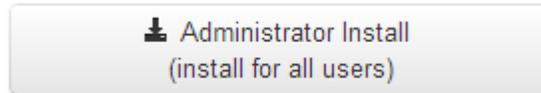
    b. Or you can request the `setup.exe` file directly from SST support.

2. You can use the `setup.exe` file as you would any other Windows installer: copy it to a USB memory stick or thumb drive, burn it to a CD or DVD, make it available over a network share, or zip it and email it (not advised).

3. When you are ready to install, double-click on the setup.exe file:

4. The installer wizard will walk you through a typical Windows installer process. (Note the User Account Control, requiring administrative privileges, in the second image.)

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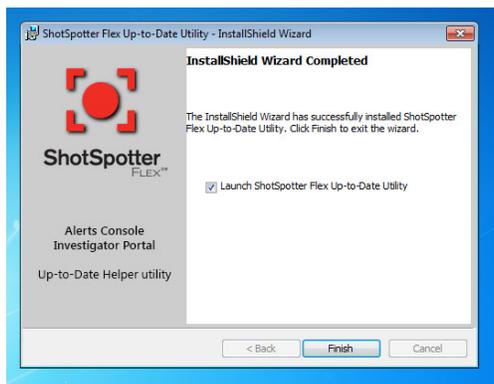
5. When you are done, log off and log back on or restart the computer. ShotSpotter Flex Up-to-Date will automatically start when the next user logs in.

Technique 3: Group Policy Object-Based Installation

Please note: Group Policy Objects, and Windows Active Directory and domain administration in general, are techniques requiring IT "domain administrator" rights and appropriate skills. Please do not undertake this technique if you have not performed similar activities in the past.
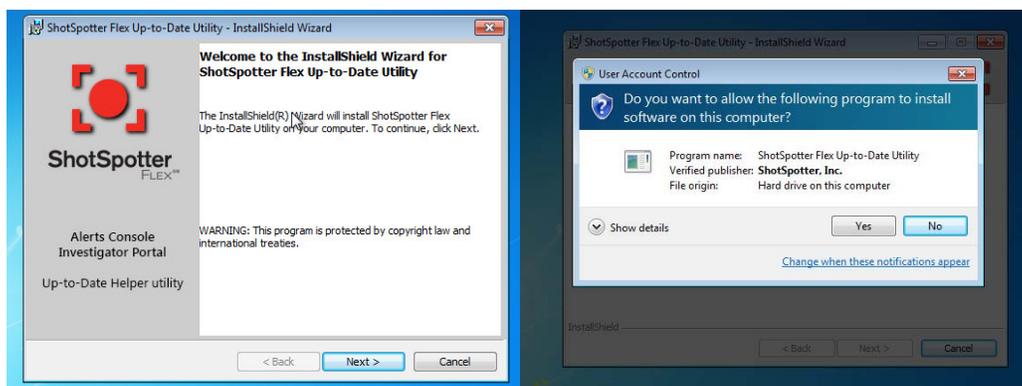
1. Obtain the `ShotSpotter Flex Up-to-Date Utility.msi` file.
    a. You can download the file from your ShotSpotter Flex server (follow the links above) by clicking on the **Administrator Install** button following the instructions


    b. Or you can request the `ShotSpotter Flex Up-to-Date Utility.msi` file directly from SST support.
2. Make the `ShotSpotter Flex Up-to-Date Utility.msi` file available on a network share. For the purposes of this documentation, let's say that share is `\\myfileserver\mydirectory\ ShotSpotter Flex Up-to-Date Utility.msi`.
3. Make sure the directory is readable by all Domain Computers:
    a. Right-click the `mydirectory` folder, select "Share with" → "Specific people".
    b.   Add the name "Domain Computers" with read permissions and click "Share".
4. Open or install Group Policy Management (GPM)
    a. Open Group Policy Management from "Start" → "Administrative Tools" → "Group Policy Management".
    b. If it is not installed, do this:
        i. Go to the "Server Manager" (also in Administrative tools).

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     ii.   Go to the "Features" tab on the left hand side; click "Add Features" in the pane on the right.

     iii.   Check the box in the new window that says "Group Policy Management".

     iv.   Click through the next few screens.

     v.   GPM will be installed; you can open it as described above.

5. Go to the existing policies
   a. Navigate to "Forest: YOURDOMAIN" → "Domains" → "YOURDOMAIN" → "Group Policy Objects". This is where your Group Policy Objects (GPO) s are stored.

6. Create a new Group Policy Object (GPO) for Flex installation:
   a. Right click the folder "Group Policy Objects" and click "New".
   b. Type in a name for your GPO such as "Flex Up-to-Date Installation".
   c. Click on the new GPO.
      i. In the right pane on the bottom, there is a box that says "Security Filtering".
      ii. Click on and remove the "Authenticated Users" entry.
      iii. If you want this program deployed on certain computers for this server, add all of the specific computer names that you want.
      iv. Otherwise, if you want it on all computers, add the group "Domain Computers".
      v. Navigate back up to the "YOURDOMAIN" folder and right-click it.
      vi. Click "Link an existing GPO". Click your new GPO's name from (7.band click OK.

7. Add your MSI: Now go back to the GPO under "Group Policy Objects", and right-click it.
   a. Click on "Edit".
   b. Navigate to "Computer Configuration" → "Policies" → "Software Settings" → "Software installations" in the new window.
   c. Right click inside the empty pane on the right and select "New" → "Software Package".
   d. Navigate to the share that you created earlier, i.e., `\\myfileserver\mydirectory\`, *(note: not the local physical folder on the server)* and select your MSI.
   e. Click the "Assigned" bubble and then select OK.

8. Close and reboot your PCs to start the installations

9. When your clients restart, they will install Flex before the computer allows users to logon.
   a. Note that you will see the Windows banner "Please wait" as the stations are coming up, that this may be for a fairly long time as the flex applications are being installed.

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Tips for IT Administrators

Trusted Silverlight Applications

ShotSpotter Flex runs as a so-called "trusted" (elevated trust) Silverlight application so that it can export data, interact with the clipboard, and access data from multiple network-based resources. For more information about the security sandbox for Silverlight applications, and the domain Group Policy settings which can be used to control the installation and use of such applications, please see *FED-72-03 IT Administrator Tips - Group Policy Application Permissions for ShotSpotter Flex Alerts Console and Incident and Reports Portal.*

Support

SST Customer Support is available to all customers with valid ShotSpotter Flex Support contracts. You may contact SST Customer Support:

Via Live Chat:

From either the ShotSpotter Flex Alert Console or the ShotSpotter Flex Investigator Portal, look for the chat links:

Or by following this link in any web browser:

https://chat.shotspotter.com/chatrequest

Via Phone:

Phone support is available Monday-Friday, 8:00 am to 5:00 pm Pacific Standard Time. Please contact our support team during these hours at: **+1 (888) 274–6877**, then dial option **4**.

Via Email:

Email support@shotspotter.com. Please include as much detail as possible so we may better serve you quickly.

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