Installing AutoSCAN Monitor.

Selecting the Host Server

AutoSCAN Monitor service can be installed on any windows computer, however in practice, the server which runs the Media Server is generally the best option.

By default the service requires only access to the AutoSCAN UDL file located in the "Program Data" folder and the SQL server itself. Again this is not strictly required as the service configuration file can be updated to use an alternate connection string.

Installation

Download the Monitor Service folder from:

https://www.galkam.com.au/autoscan/Monitor/ASMonitor.zip

Unzip the Monitor folder to the Autoscan Program files directory. The "Monitor" folder should now be present in the AutoscanNG programs folder.

NOTE: if not installing onto the same computer as an existing Autoscan, the folder can be located anywhere as there are no dependencies.

Check that the Monitoring Service application is not blocked. Right click and "unblock" if necessary as it typically the case with downloaded zip files.

Installing the service.

The Steps required to install the AutoSCAN Monitor Service are:

- 1. Create a Domain Service account suitable for use with the service
- 2. Provide suitable SQL server access for the service
- 3. Create a HTTP access control list reservation for the service's REST endpoint
- 4. Install the service using the service registration script
- 5. Enable permissions on the *monitor\webroot* folder
- 6. Enable permissions to the <program data>\autoscanNG\autoscan.udl file (if required)
- 7. Enable Firewall access to the service.

Service User

The service should be installed as a specific "service" user.

Importantly:

- a) The password should not expire for this user
- b) The user must have permission to access network resources

c) The user should have at least DB Reader access to the AutoSCAN Database. Initially, the service will automatically check for and add additional stored procedures if required. Allowing the service user to have DB admin during the setup phase is suggested.

Service HTTP Ports and URL Access Lists

The AutoSCAN Monitor service is a stand-alone REST based web service. It requires permission to establish a HTTP listener.

As an administrator user, you need to add a specific access control list reservation for the AutoSCAN Monitoring service for the Service user.

On windows servers, http services are controlled using Access control lists and when self-hosted (not inside IIS), the **NETSH** command line tool is used to grant rights to establish specific port bindings and URLs as specific windows users.

The Default HTTP port for AutoSCAN Monitoring service is port 9000. This port can be changed by altering the BINDING Expression (*bind_expression*) in the AutoSCAN Monitoring Service Configuration file (*AsMonitorSvc.exe.config*)

	Program Files (x86) Galkam PTY LTD Auto	scan Monitor 🕨
Organize 🔻 🔟 Open 🔻 Burn	New folder	
🏭 OS (C:) 🔨	Name	Date modified
SWINDOWS.~BT	길 webroot	7/01/2018 2:29 PM
	🙆 AsMonitorSvc.exe	7/01/2018 12:06 PN
Alltaik	AsMonitorSvc.exe.config	15/10/2017 2:02 AN
AlltaikServer	AsMonitorSvc.InstallLog	7/01/2018 1:06 PM
anthem	ASWorkstationMonitor.data.dll	7/01/2018 12:06 PN
July AutoScanNG	Autoscan_SCV_1.ico	15/10/2017 3:14 PN
🎍 bin		10/10/2017 1.E4 DM

To change the binding expression, open the Config file in your preferred text editor and locate the "Bind_expression" field.



The binding expression follows the format as described in the Reference <u>https://docs.microsoft.com/en-us/dotnet/framework/wcf/feature-details/configuring-http-and-https</u>

netsh http add urlacl url=<bind_expression> user=<DOMAIN>\<Service user>

For example, for a Domain user MyDomain\AsMonitorUser for the default binding:

C:\> netsh http add urlacl url=http://*:9000/ user=MYDOMAIN\AsmonitorUser

Enable Read Permissions on the \Monitor\webRoot folder

Ensure that the service user has read access ONLY to the Monitor\Webroot folder. Having higher privileges may have security implications.

AsMonitorSvc.exe Owin.dll System.Net.Htt System.Net.Htt System.Web.Ht System.Web.Ht Webroot Group c Group c	Date modified Type Size 8/01/2018 7:44 AM Application 29 KB perties 5 KB ssions for webroot 22 KB 461 KB name: C:AutoScanNG\monitor\webroot
Owin.dll webroot Pro System.Net.Htt webroot Pro System.Net.Htt Ge System.Web.Ht Ge System.Web.Ht Ge System.Web.Ht Object webroot Group c	ssions for webroot SS 22 KB 461 KB name: C:\AutoScanNG\monitor\webroot
System.Web.Ht System.Web.Ht System.Web.Ht webroot Group C	461 KB 61 KB 91 KB
Group	
88. AL 88. SY 88. Ar	or user m Select Users, Computers, Service Accounts, or Groups @ uthentice YSTEM Select this object type: Users: Groups. or Built-in security principals Object Types
T SE Us	From this location:
Permis	sions for Arto Scapel Jack
Users Full o Mod	control
	Permis Users Full Rea Fillist Rea

Running and Register the Service

The Autoscan Monitoring service is a .NET application that can run as a foreground or service application.

The normal operating mode is as a windows service. As an Administrator user, install the service using the service user by double clicking the script and enter the username and password for the service user.

C:\Windows\system32\cmd.exe	
Microsoft (R) .NET Framework Installation utility Version 4.7.2053.0 Copyright (C) Microsoft Corporation. All rights reserved.	• E
Running a transacted installation.	
Beginning the Install phase of the installation. See the contents of the log file for the C:\Program Files (x86)\Galka utoscan Monitor\AsMonitorSvc.exe assembly's progress. The file is located at C:\Program Files (x86)\Galkam PTY LTD\Autoscar MonitorSvc.InstallLog. Installing assembly 'C:\Program Files (x86)\Galkam PTY LTD\Autoscan M nitorSvc.exe'. Affected parameters are: logtoconsole = logfile = C:\Users\glenk\AppData\Local\Temp\AsMonitorSvc.InstallLo assemblypath = C:\Program Files (x86)\Galkam PTY LTD\Autoscan MonitorSvc.InstallLo	m PTY LTD\A Monitor\As Wonitor\AsMo Monitor\AsMonit
Or Svc.exe Set Service Login Username:	-
W Text In OK Cancel Microsoft.Owin.HileSystems.d	ener.dll 5/04/2017 11:5:

After completion of the install process, the Monitoring service will be visible in the Services window.

Services (Local)					
Autoscan Monitor Service	Name	Description	Status	Startup Type	*
	🙀 Autoscan Monitor Service	A Remote		Automatic	
Start the service	🎑 AutoScanNG Storage Manager			Disabled	
	🌼 Background Intelligent Transfer S	Transfers fil	Started	Automatic (D	=
Description:	鵒 Base Filtering Engine	The Base Fil	Started	Automatic	
A Remote Monitoring Service For	鵒 BitLocker Drive Encryption Service	BDESVC hos		Manual	
Autoscan	🍓 BlackfishSQL	CodeGear B	Started	Automatic	
	🖄 Plack Lovel Packup Engine Convice	The MIDENIC		Manual	

Confirm the service is functioning.

Start the service and Confirm that the service is active by navigating to the Service's Endpoint. Assuming default binding this is:

http://<serverName>:9000/api/autoscancluster

You should see a JSON response similar to:

```
{"Clusters":[{"workstations":[],"id":1,"name":"AutoScan","awaitingLI
S":1071,"transferring":0}]}
```

Trouble Shooting the Service.

Initial Investigations

The Monitoring service can be run as a foreground application. Stop the service and browse to the Monitor Folder.

SHIFT-RIGHT-CLICK the ASMonitorSvc.exe and select "run as different user" and enter the Monitoring service User credentials. The service should start and display a detailed error message if there are any.

The most common issues are:

Existing Binding

The service may be trying to operate on a port already used for another service.

```
---> System.Net.HttpListenerException: Failed to listen on prefix 'http://localhost:9000/' because it conflicts with an existing registration on the machine.
```

In this case, change Examine the binding in the configuration file and select an alternate binding (using the instructions above)

Binding Permissions

The service user may not have permissions to create the binding specified in the configuration. Access to HTTP ports on modern Windows Machines is strictly controlled by binding permissions – see the section above on Access Control Lists.

```
Service cannot be established on http://*:9004/ -
System.Reflection.TargetInvocationException: Exception has
been thrown by the target of an invocation. --->
System.Net.HttpListenerException: Access is denied
```

SQL Connection String and SQL server Permissions

The service must have access to the Autoscan SQL server databse. There are two key steps in the process. Firstly the connection string in the Service Configuration should (by default) point to the Autoscan.UDL file in the ProgramData File. The service user may not have access to the file, it may not exist (if Autoscan is not installed on the machine) or the service user may not have the required access to the database.

Stored Procedures updated.

When starting the Monitoring service checks for the existence of stored procedures required for normal function. Depending on the permissions, the Service MAY NOT be able to create these procedures if they do not exist. Use the SQL management studio to determine in the stored procedure "UpdateWorkstationTable" is present. If not, temporarily give the service user DB admin rights and restart the service. After confirming that the stored procedure is present, the service user's permissions can be reduced to DB Reader.

Installing the client application

The Monitoring service can be accessed using the ASMonitor client application (windows EXE).

On any workstation, browse to

http://<monitoring_service_computer>:9000/asMonitor.exe

This will download the client application (to the "downloads" folder. Place this exe onto the workstation in a suitable location. For a single user computer the %appdata% folder) or on a shared computer, a new folder in the "Public folder" root.

Double click the ASMonitor.exe and the application will start.

Autoscan Monitoring
Configure URL Border
Waiting for server

It will not know the location of the server, so click on the "Configure URL" menu option and enter the URL. Only the server and port is required, the client application will add the additional pathway itself.



When the URL is entered correctly the client should connect successfully as shown:

🗾 Autoscan Monitoring		-	F121	
Configure URL Border				
AutoScan				
Transferring 0				
Awaiting LIS 1071				

The view above is typical when there are no outstanding images to process. The Service will dynamically fill the screen with workstation information as they become available.

For example:

🖊 Autoscan Monitoring 🛛 🚽 🗆					
Configure URL Border					
RWH					
Transferring 0	RCHMICRO	001		001	
Awaiting LIS 2	RWHLAB	002		002	
	G1	001		001	

Entering the URL incorrectly will result in an on screen error message such as:

🖊 Autos	Z Autoscan Monitoring			
Configur	Configure URL Border			
URL	http:glen-hp.galkam.local:9004/api/autoscancluster	Apply		
REST request failed: Invalid URL: "http://http:glen- hp.galkam.local:9000/api/autoscancluster"				

Create a shortcut

If the Application does not remember the URL between restarts, then use a shortcut including the URL as the first parameter.

Move this shortcut to the desktop for easy Access.

🜠 asMonitor.exe - Shortcut Properties					
Security General	Details Shortcut	Previous Versions Compatibility			
asi	asMonitor.exe - Shortcut				
Target type:	Application				
Target:	vebroot\asMonitor.exe "ht	ttp://autoscanserver.gall			
<u>S</u> tart in:	C:\AutoScanNG\monitor	\webroot			
Shortcut key:	None				
<u>R</u> un:	Normal window	•			
Comment:					
Open <u>Fi</u> le Lo	cation Change Icon	A <u>d</u> vanced			
	ОК	Cancel <u>A</u> pply			