ERICOM
BE CONNECTED, BE SECURE

Ericom AccessNow™

HTML5 Access for Microsoft Remote Desktop Protocol (RDP)

Administrator's Manual

Version 10.0

EMPOWER ENTERPRISE-WIDE APPLICATION ACCESS

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1. ABOUT THIS DOCUMENT

This manual provides instructions on how to install and use Ericom AccessNow to connect to virtual desktops and Terminal Servers from within HTML5 compatible web browsers. Follow the instructions in this manual and start enjoying the benefits of Ericom AccessNow within minutes!

This manual includes the following information:

- Overview of Ericom AccessNow
- Preparation and installation procedures
- Usage instructions
- Troubleshooting and FAQ

This manual assumes that the reader has knowledge of the following:

- Enabling RDP on Windows operating systems
- Firewall configuration
- Web server administration

Important terminology used in this document:

- RDP – Remote Desktop Protocol. A remote display protocol developed by Microsoft. RDP is a standard component of Microsoft Windows.
- RDP Host – a Windows system that can be remotely accessed using Microsoft RDP, such as a Terminal Server (RDS Session Host) or Windows workstation with remote access enabled.
- HTML5 – a new update to the HTML specification. Extends HTML with new features and functionality for communication, display, etc.
- WebSocket – a bi-directional, full-duplex communication mechanism introduced in the HTML5 specification.
- SSL – Secure Sockets Layer is a cryptographic protocol that provides communications security over the Internet.

2. OVERVIEW

Ericom AccessNow provides end-users with remote access to Windows desktops and applications from any HTML5 compatible web browser. Any browser that supports HTML5 canvas can be used as the client. HTML5 WebSockets is typically required for AccessNow, however, this requirement is removed when AccessNow is used in conjunction with the Ericom Secure Gateway.

AccessNow provides the following benefits:

- End-users can access and interact with Windows desktops and applications from any device that has an HTML5 compatible web browser
- No need to install or configure any software on the end-point device
- No need to perform updates or patches on end-point devices
- Works on platforms that only support web applications, and do not allow application installation, such as Google Chrome OS
- Consistent look-and-feel on any platform that has a HTML5 compatible browser
- Remote Windows desktop and applications can be seamlessly integrated with other web-based applications and portals
- As of version 3.0, Access Server includes Ericom PowerTerm™ WebConnect’s Terminal Server component package: Load balancer agent, Remote browser agent and Terminal Server agent

Ericom AccessNow is comprised of three installable components:

- Ericom Access Server (*WebSocket serv*er) that is installed on, or next to the RDP hosts
- (Optional) A collection of web resources (HTML files, CSS, JavaScript, images, etc.), which are installed on a web server
- (Optional) Ericom Secure Gateway enables access from outside the organization

RDP Compression and Acceleration

Ericom AccessNow contains Ericom’s technology for RDP compression and acceleration. This enhances remote desktop performance over the Internet. There are three main features in this technology:

- Image compression
- Packet shaping

- Whole frame rendering

Image compression compresses images before transmitting them to the browser for rendering. The level of compression is dependent on the acceleration/quality level selected by the user (a default value can be configured by the administrator).

Packet shaping optimizes the network messages to improve network utilization and performance.

Whole frame rendering means that the display is updated as a whole rather than in blocks, as performed by standard RDP. This is especially noticeable when watching video or over slow network connections. Coupled with the other optimization features, it results in a smoother display that more closely resembles the functionality on local desktops.

Getting Started in 5 Minutes

Ericom AccessNow is a feature rich and flexible application. The manual covers all available features in detail to help customers best configure AccessNow to fit their environment.

The AccessNow application is very quick and easy to install. The basic installation will take approximately five minutes and will make a Windows RDP host (server or workstation) accessible from most HTML5 compliant web browser. Here are the steps to install and use AccessNow in about five minutes:

1) Download the Ericom Access Server MSI installer from the Ericom website (since download speeds vary, the time to download the MSI is not counted in the five minutes)
2) Verify that the system that Access Server will be installed on is not using port 8080. If it is, either reconfigure the current application or Ericom AccessNow to use a different port to avoid a conflict.
3) Run the MSI installer and click *Next* through all the dialog boxes and then *Finish* at the last one
4) Configure (or disable) the Windows Firewall for use with AccessNow.
    a. Go to the Windows *Control Panel* and open *Windows Firewall*
    b. Click "Allow Program or Feature …"
    c. Click "Allow another program …"
    d. Click *Browse* and navigate to <drive>:\Program Files (x86)\Ericom Software\Ericom Access Server\AccessServer32.exe
    e. Click *Add* and then *OK*

5) Once the Access Server is installed, it is ready for use. The Access Server contains a built-in web server to allow users to connect its URL: **http://machineaddress:8080/**

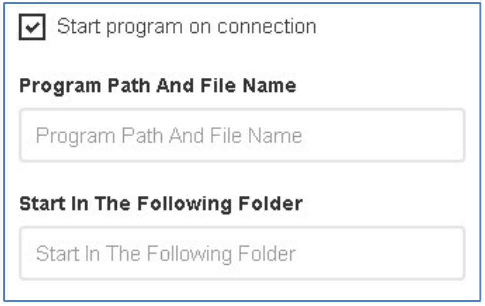
   This URL will automatically redirect to the full URL: **http://machineaddress:8080/accessnow/start.html**

   The AccessNow port must be specified in the URL to tell the browser to use the web server that is built-in to the Access Server service. HTTPS may also be used.

6) Once the AccessNow web page appears, click the *Connect* button to connect to the desktop where the Access Server is installed. The empty fields will automatically use the address of the server specified in the URL. Enter the user credentials if desired and it will be passed to the RDP session.

7) The connection dialog will appear momentarily while the web browser connects to the RDP host where the Access Server is installed.

   To launch an application (instead of the desktop) click the three dots for the Settings button before clicking the *Connect* button and check *Start program on connection*. Enter the path to the desired application under *Program path and file name*.



☑ Start program on connection

Program Path And File Name

Program Path And File Name

Start In The Following Folder

Start In The Following Folder

8) Click *OK* and *Connect* to use AccessNow to connect just to an application.

3. ERICOM ACCESS SERVER

Ericom Access Server provides AccessNow HTML5 access and Blaze RDP compression and acceleration features. All features are enabled during the trial period, and each feature is unlocked using an activation key after the trial period ends. The host may be any Windows system that has RDP access enabled, such as a Windows Terminal Server or a Windows workstation. The Access Server uses a customizable port – by default this is port number *8080*. Port *3399* is also enabled for backward compatibility with installations using older versions of Blaze.

The Access Server may be installed on the RDP host or on a dedicated system to serve as a proxy. It is recommended to install the Access Server on the RDP host directly. Some features such as file transfer may only available when the Access Server is installed on the RDP host directly. The Access Server has a small footprint and will have minimal impact on the RDP host's performance and scalability.

Ericom Access Server Requirements

- Windows operating system (7/2012 and higher)
- Incoming RDP connections enabled on the Host OS (e.g. Terminal Server)
- 80 MB of free Hard-Disk space
- MMX and SSE2 capable CPU
- Firewalls are configured for Access Server traffic 8080 (or 3399) port

The Access Server should be installed on *each* server/host that requires accelerated or HTML5 access. Terminal Servers only require one installation to accelerate all user sessions. Each workstation / desktop (physical or virtual) requires an installation. It is possible to include Access Server as part an image that will be deployed using Microsoft® Sysprep or Symantec® Ghost.

Bind Service to All Network Interfaces

In a virtual network environment - it is recommended to bind the Access Server to use *all* virtual network interfaces, rather than just one virtual NIC. Always ensure that the network interface(s) that Access Server is using is accessible by the desired group of end-users.

Host Firewall Configuration

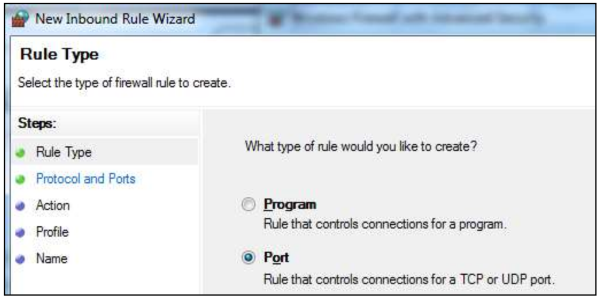
Make sure to allow traffic communication from the end-user device to the Ericom Access Server host. Firewall configuration may be necessary.

On Windows operating systems, ensure that the Windows Firewall is configured to allow traffic to the Access Server port (by default 8080). This port value may be changed using the Access Server Configuration utility.

NOTE	Disable the Windows Firewall temporarily to troubleshoot any connectivity issues. If the connection is only successful with the firewall disabled, then there may be a rule that is blocking the Access Server port.

To add a rule to allow the Ericom port, perform the following

- Go to Control Panel and then Windows Firewall. Select *Advanced settings* and select *Inbound Rules*. Click *New Rule*.



New Inbound Rule Wizard

Rule Type

Select the type of firewall rule to create.

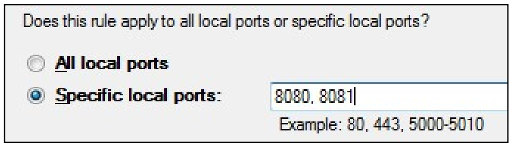
Steps:
- Rule Type
- Protocol and Ports
- Action
- Profile
- Name

What type of rule would you like to create?

○ Program
Rule that controls connections for a program.

● Port
Rule that controls connections for a TCP or UDP port.

- Select *Port* and click *Next*. Enter the specific port: *8080*



Does this rule apply to all local ports or specific local ports?

○ All local ports
● Specific local ports: 8080, 8081
Example: 80, 443, 5000-5010

- Click Next and select Allow the connection
- Click *Next* and select the networks to apply the rule (Select All)
- Click *Next* and give the rule a name (Ericom) and click *Finish*.

Port Forwarding Configuration

When configuring a firewall for port forwarding to a Blaze enabled host, make sure that it is directed to the Access Server port (default: 8080). Do not forward to 3389 (default RDP port).

If a custom port is being used, configure the firewall to forward to the port value configured under the Communication page.

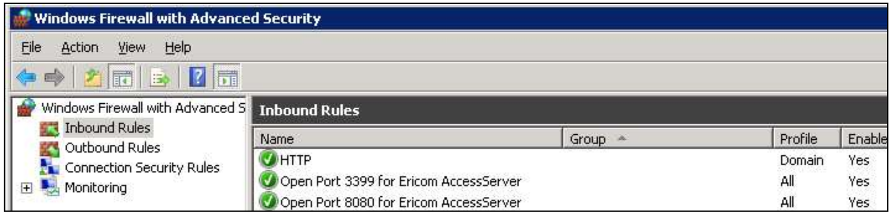
Installing Ericom Access Server

- Run *EricomAccessServer.msi* using **Administrator** privileges and follow the instructions of the installation wizard.
    i. EricomAccessServer may be installed with non-Administrator privileges, however, the auto-restart service and the Windows

firewall will not be automatically configured (this should only be performed as an upgrade from a previous version).

- Review and accept the License Agreement.
- Click *Install* (if prompted, accept the security elevation request). Click *Finish* at the last screen to complete the installation

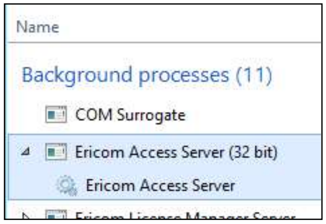
- Verify that the Access Server port is available and accessible to the host system. Access Server will automatically add the necessary rules to Windows firewall, however additional firewall configuration may be necessary on the network.


Windows Firewall with Advanced Security
File
Action
View
Help
Windows Firewall with Advanced S
Inbound Rules
Outbound Rules
Connection Security Rules
Monitoring

Inbound Rules

Name	Group	Profile	Enable
HTTP		Domain	Yes
Open Port 3399 for Ericom AccessServer		All	Yes
Open Port 8080 for Ericom AccessServer		All	Yes

- Once installed, the Access Server will run as a service on the system.


Name
Background processes (11)
COM Surrogate
Ericom Access Server (32 bit)
Ericom Access Server
Ericom License Manager Server

  - The service is configured to run automatically on system startup.
  - If the service is stopped or is unable to listen on its default ports (8080), the client will not be able to connect to that host. Verify that there are no other applications using the same port.

Access Server can be automatically and silently installed using a management application such as Microsoft System Center.

- To perform a silent install run: msiexec /I "**EricomAccessServer.msi**" /q
- **EricomAccessServer.msi** represents a valid path to the .msi file
- This command may need to be performed with elevated Administrator credentials.
- Run MSIEXEC without any parameters to view the help dialog.

NOTE Access Server may not be compatible with certain systems where the hostname contains non-English characters.

Using Ericom Access Server

To modify Access Server settings: Go to *Start* | *Programs* | *Ericom Software* | *Access Server Configuration.* On systems that do not have a Start menu, the GUI may be launched using the command line:

<drive>:\Program Files (x86)\Ericom Software\Ericom Access Server\ServerConfiguration.hta

NOTE Access Server is used by **both** the AccessNow HTML5 and Blaze RDP Acceleration products.

Access Server Configuration

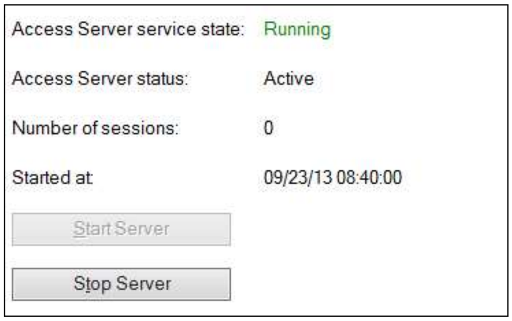
The *Server Configuration* console presents a series of tabs that allow the administrator to configure various settings for the server service.

HINT When installing Access Server on a Terminal Server, it is recommended to block access to the Server Configuration application from end users to prevent unexpected changes to the configuration settings.

General

This page provides functions to restart and stop the Access Server service. For certain configuration changes, a service restart is required. This page also displays the number of active Blaze sessions to this system.

NOTE When the Access Server service is restarted, all AccessNow and Blaze sessions on the server will be disconnected.



Access Server service state: Running

Access Server status: Active

Number of sessions: 0

Started at: 09/23/13 08:40:00

Licensing Information

This page displays licensing information for AccessNow and Blaze. The *Connected to licensing server* field indicates the license server that is currently in use.

NOTE In a production VDI or Terminal Server environment, the licensing server must be **centralized** on a robust system. See the section on Central Server Configuration for additional details.

By default, Access Server uses DNS lookup to locate the Licensing Server. The DNS entries used are *ericom-license-server.<domain-name>* or *_ericom-license-server._tcp.<domain-name>*. If the DNS entries do not exist, the Access Server attempts to connect to a Licensing Server that is running on the same computer as itself.

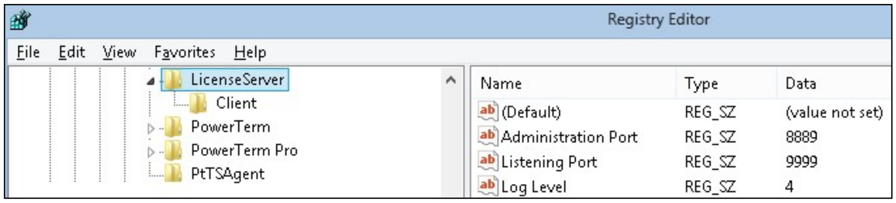
The other option is to explicitly specify the address of the Licensing Server in the *Access Server Configuration* under: *Licensing server address*. After changing the Licensing Server address, restart the Access Server service using the *General* tab.

If no valid license is found, Access Server will continue to run if the grace period has not expired. Once the grace period expires, Access Server will not allow user sessions. A "grace period" lasts up to 10 days within a 30 day period.

Changing the License Server Port

The license server communicates over port *8888* by default. If there is another application on the same system already listening on port 8888, the license server port value may be changed in the Registry.

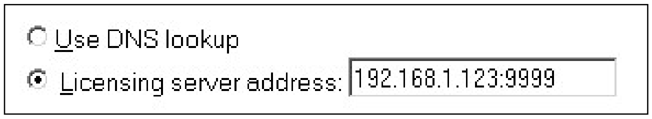
Use the Registry Editor and navigate to HKLM | SOFTWARE | Ericom Software | LicenseServer | *ListeningPort*



Name	Type	Data
(Default)	REG_SZ	(value not set)
Administration Port	REG_SZ	8889
Listening Port	REG_SZ	9999
Log Level	REG_SZ	4

If this key does not exist, create a new 'String Value' named 'ListeningPort'.

In the example above, the port has been changed to 9999. Once the value is set, restart the *Ericom Licensing Server* service. For each Access Server that will be connecting to the central license server on a custom port, the custom port value must be specified after the address with a colon. For example:



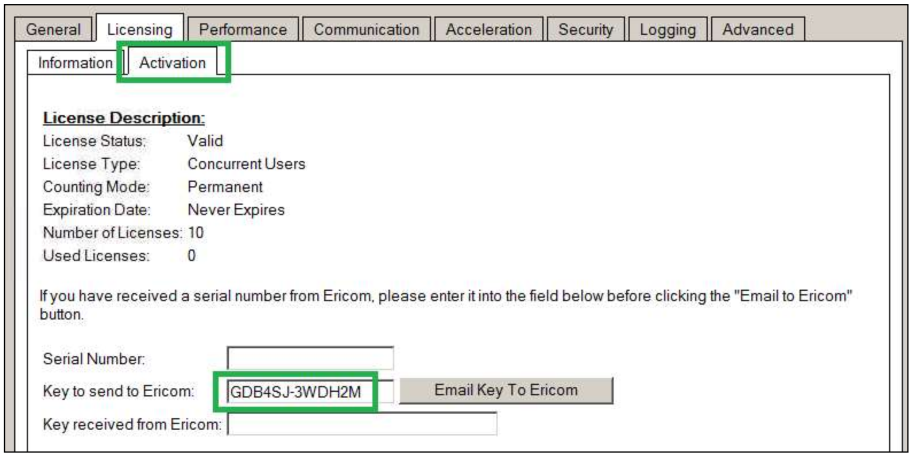
○ Use DNS lookup

● Licensing server address: 192.168.1.123:9999

Licensing Activation

Click on: *Licensing* | *Activation* to enter the serial number and activation key into the product's configuration. To activate an installation from an evaluation, send the "*key to send to Ericom*" along with the serial number to ca@ericom.com for processing. An activation key will be returned. Once the activation key is entered, click on the *Activate License* button. The Access Server does not have to be restarted for the license to take effect.

To extend an evaluation, send the "key to send to Ericom" to an Ericom sales representative for processing. A standard two week extension key will be returned once the request is approved.



License Description:

License Status:	Valid
License Type:	Concurrent Users
Counting Mode:	Permanent
Expiration Date:	Never Expires
Number of Licenses:	10
Used Licenses:	0

If you have received a serial number from Ericom, please enter it into the field below before clicking the "Email to Ericom" button.

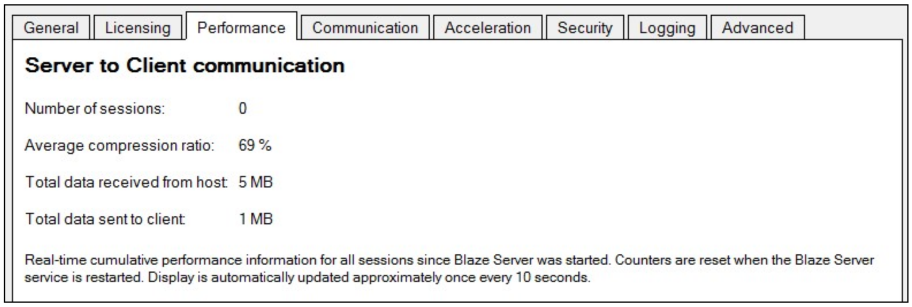
Serial Number:

Key to send to Ericom: GDB4SJ-3WDH2M

Key received from Ericom:

Performance

This page displays current Server performance statistics.



Server to Client communication

Number of sessions:	0
Average compression ratio:	69 %
Total data received from host:	5 MB
Total data sent to client:	1 MB

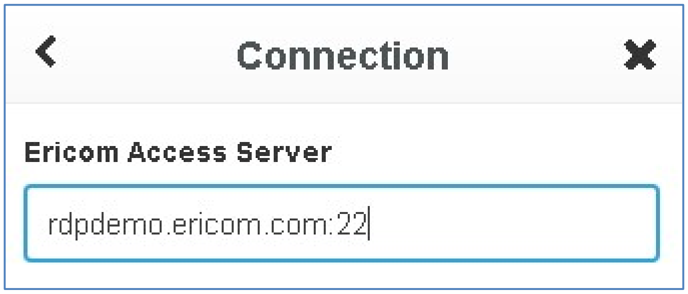
Real-time cumulative performance information for all sessions since Blaze Server was started. Counters are reset when the Blaze Server service is restarted. Display is automatically updated approximately once every 10 seconds.

Communication

This page provides functions to change the Access Server listening port and the address of the host running RDP.

When using a listening port other than the default (8080), the port number must be explicitly specified in the *Access Server* address or the Blaze Client *Computer* field (e.g., rdpdemo.ericom.com:22).

AccessNow web client:

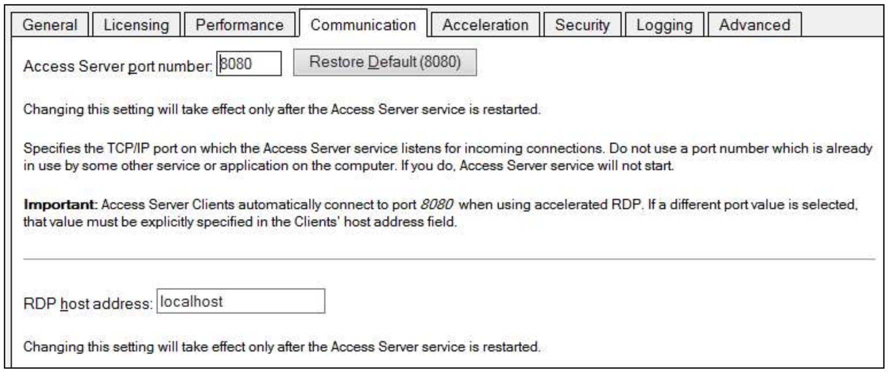


Ericom Access Server

rdpdemo.ericom.com:22

The RDP host address is used when the destination system is not the system running Access Server. In this scenario, the Access Server is acting as a *gateway* proxy between the end user and the destination host system. This type of configuration is not recommended as it may adversely impact AccessNow and Blaze performance.

Changes to both settings require a service restart (under General tab).



Access Server port number: 8080

Changing this setting will take effect only after the Access Server service is restarted.

Specifies the TCP/IP port on which the Access Server service listens for incoming connections. Do not use a port number which is already in use by some other service or application on the computer. If you do, Access Server service will not start.

Important: Access Server Clients automatically connect to port *8080* when using accelerated RDP. If a different port value is selected, that value must be explicitly specified in the Clients' host address field.

RDP host address: localhost

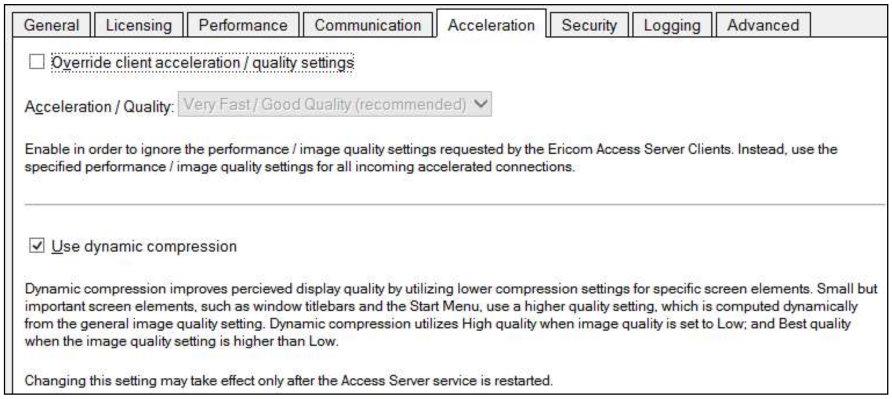
Changing this setting will take effect only after the Access Server service is restarted.

When running Access server on a machine with multiple network cards, change the RDP host address from *localhost* to the IP or DNS address of the network card that has RDP access to the system.

Acceleration

This page provides functions to force the Acceleration/Quality level and disable dynamic compression. When the *Override client acceleration / quality settings* checkbox is checked, all sessions will use the configured setting, and all client settings will be ignored. When checking or unchecking this setting, the service must be restarted for the change to go into effect. When the setting is enabled, changing the acceleration level does not require a service restart, but active users must reconnect to use the new setting.

Dynamic Compression identifies small graphical objects on the screen (such as toolbar icons, taskbar icons, Start Menu icons, etc.) and compress them using *High* quality when the Blaze Quality setting is *Low*; and at *Best* quality when the Blaze Quality setting is higher than Low. All other graphical objects are compressed at the chosen quality. This provides the visual impression of a high quality remote desktop session. By default, this feature is enabled. To disable, uncheck the “Use dynamic compression” box.



□ Override client acceleration / quality settings

Acceleration / Quality: Very Fast / Good Quality (recommended)

Enable in order to ignore the performance / image quality settings requested by the Ericom Access Server Clients. Instead, use the specified performance / image quality settings for all incoming accelerated connections.

☑ Use dynamic compression

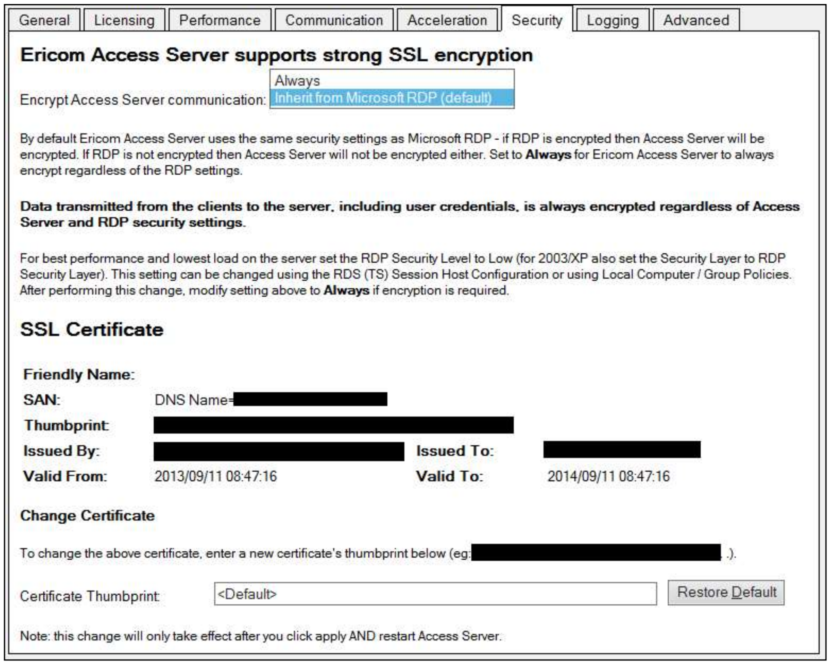
Dynamic compression improves percieved display quality by utilizing lower compression settings for specific screen elements. Small but important screen elements, such as window titlebars and the Start Menu, use a higher quality setting, which is computed dynamically from the general image quality setting. Dynamic compression utilizes High quality when image quality is set to Low; and Best quality when the image quality setting is higher than Low.

Changing this setting may take effect only after the Access Server service is restarted.

For sessions that require true accuracy with no compression, add this setting to the blaze.txt file: **true lossless type:i:2**

Security

This page configures the Access Server security settings.



Ericom Access Server supports strong SSL encryption

Encrypt Access Server communication: Inherit from Microsoft RDP (default)

By default Ericom Access Server uses the same security settings as Microsoft RDP - if RDP is encrypted then Access Server will be encrypted. If RDP is not encrypted then Access Server will not be encrypted either. Set to **Always** for Ericom Access Server to always encrypt regardless of the RDP settings.

Data transmitted from the clients to the server, including user credentials, is always encrypted regardless of Access Server and RDP security settings.

For best performance and lowest load on the server set the RDP Security Level to Low (for 2003/XP also set the Security Layer to RDP Security Layer). This setting can be changed using the RDS (TS) Session Host Configuration or using Local Computer / Group Policies. After performing this change, modify setting above to **Always** if encryption is required.

SSL Certificate

Friendly Name:			
SAN:	DNS Name=[redacted]		
Thumbprint:	[redacted]		
Issued By:	[redacted]	**Issued To:**	[redacted]
Valid From:	2013/09/11 08:47:16	**Valid To:**	2014/09/11 08:47:16

Change Certificate

To change the above certificate, enter a new certificate's thumbprint below (eg: [redacted]).

Certificate Thumbprint: <Default>

Note: this change will only take effect after you click apply AND restart Access Server.

Ericom Access provides integrated *128-bit SSL* encryption. For better performance, set the host's RDP Security Encryption level to Low and change the *Encrypt Blaze communication* to *Always*. Using this configuration, Ericom SSL encryption will be used instead of the RDP encryption. See the *Ericom Optimization* chapter in this document for more details.

To use a custom or trusted certificate, enter the thumbprint ID into the *Certificate Thumbprint* field and click the *Apply* button. The certificate's properties will be displayed in the GUI, represented by the black boxes in the image above. Restart the service to apply the changes. If the certificate is not valid on the system, the Access Server service will not start (starting in 8.4).

NOTE When installing a trusted certificate, the DNS address of the Access Server must match the certificate name. If a wildcard certificate is being used, the domain must match. For example, if the certificate is for **.acme.com* the server name must end with *acme.com.*

Logging

This page provides functions to enable/disable certain logging features. Ericom Support may request a debugging log for diagnostic purposes. The debugging log is enabled here.

Starting in version 9.2, AccessNow no longer produces any console output by default. Console output can be enabled by adding localStorage variable "EricomLogging" with the value "true".

Advanced (For Administrator Use Only)

This page provides access to advanced Ericom Access Server settings that are stored in the system's Registry.

Export Settings – exports the Access Server Registry key to the user's home folder (i.e., My Documents).

Import Settings – imports previously saved Registry settings.

Advanced Configuration – Launches regedit.exe and opens the Access Server registry keys. By default, only settings that are changed from the default value are saved into the Registry.

Keep Alive Settings

Blaze Setting	Description	Usage	Default
session heartbeat seconds:i:	The interval in seconds where the	AccessServer uses the heartbeat to identify a client disconnect and	3

	client sends heartbeats.	offset any third-party idle settings. Works with load balancers and secure gateways. (Requires AccessServer 7.3 or higher)	
session heartbeat probes:i:	The number of missing heartbeats where the server considers the client as disconnected.	AccessServer uses this setting to determine when to classify a connection as Disconnected. (Requires AccessServer 7.3 or higher)	5

Blaze settings are saved in C:\Program Files\Ericom Software\Ericom Access Server\WebServer\AccessNow\resources\blaze.txt

Gateway (Jump) Architecture

Access Server may also be deployed as a 'gateway' server where the destination (RDP) host is separate from the system running Access Server. Several gateway servers may be configured behind a load balancer for high availability. The benefits of using AccessServer as a gateway are:

- Nothing to install on the RDP host
- AccessServer overhead is offloaded from the RDP host

Installing the Access Server in a gateway architecture is the same as in an on-host deployment.

Windows Core Containers

Starting in version 8.3, Access Server has been tested on Windows 2016 Core with Docker containers.   To deploy Access Server on a container, perform the following:

- Copy EricomAccessServer64.msi to c:\build\msi folder on Windows Server 2016 core container.
- Create c:\build\Dockerfile where the contents of the Dockerfile are:

```
FROM microsoft/windowsservercore
ADD MSI /MSI
```

```
RUN msiexec /i msi\ericomaccessserver64.msi /qn
```

- Create an image named **as-dockerfile** based on windowsservercore with Access Server installed in it: **docker build -t admin/as-dockerfile c:\build**
- Create and run a container: **docker run -d --name ascontainer -p 8080:8080 admin/as-dockerfile ping -t localhost**
- Test the connection by connecting to the container using: **<container-address>:8080**

Known Limitations

It is recommended to install Access Server on the RDP host whenever possible. When Access Server is used as a Gateway to RDP hosts, it becomes a point of failure for multiple users. The following features may also not be available:

- File Transfer Upload and Download
- Keyboard Auto-Sensing is unavailable on mobile devices
- Per-Named Licensing (TSAgent is required on the RDP Host)
- TSAgent auto-logoff detection
- AccessNow printing if the Lexmark driver is not installed on the target host

Built-in Login Scripting

This product includes the PowerTerm TSagent. The TSagent supports the ability to launch a .vbs script during certain RDP session events. This adds an additional layer of functionality to run certain commands when an application is launched or when a session is connected/disconnected.

Post-Startup Login script (_login)

Create a file named *_login* with the appropriate extension, for example a script file called _login.vbs or an executable called _login.exe, and place this in a folder named *scripts* under the Access Server installation folder. If this folder does not exist, create it. This script will execute when a new session starts, after the TS/RDS session processes the *Startup* folder.

Pre-Startup Login script (__login)

Similar to _login, __login is executed at session startup, but it is executed before the TS/RDS session processes the *Startup* folder.

Session connection script (_connect)

Create a file named *_connect* with the appropriate extension, and place this in a folder called *scripts* under the Access Server installation folder. If this folder does not exist, create it. This script will execute upon connection into an existing TS/RDS session.

Session disconnection script (_disconnect)

Create a file named *_disconnect* with the appropriate extension, and place this in a folder called *scripts* under the Access Server installation folder. If this folder does not exist, create it. This script will execute upon disconnection from a TS/RDS session.

Sample VB Script to create a new file

```
Set objFileToWrite =
CreateObject("Scripting.FileSystemObject").OpenTextFile
("newfile.txt",2,true)
objFileToWrite.WriteLine("hello world")
objFileToWrite.Close
```

Whitelist RDP Host Access

Starting in v9.4 a registry configuration in Access Server configures a whitelist of RDP hosts that can be connected to:

HKEY_LOCAL_MACHINE\SOFTWARE\Ericom Software\Access Server\SERVER Side**AllowedDestinationsInNonManagedMode**

This is a semi-colon separated list of machines that can be connected to a (optional) port value (default is 3389). Use a * for any port.

Machine names can have a * in the middle of their names to represent a wildcard. The value is read at every use. If this value is missing, then it allows for localhost. Configuring this feature will prevent against unauthenticated SSRF.

For example:

```
localhost;127.0.0.1;192.168.1.2:3389;*.ericom.com
```

Under HKEY_LOCAL_MACHINE\SOFTWARE\Ericom Software\Access Server\SERVER Side an optional string value called **AllowedClientAddresses** is a semi-colon separated of list of machines can connect to AccessServer. The value is read at start time, so restart the service whenever the value is changed. If the value is missing or not configured, then all hosts are allowed. Only IP addresses are supported.

Headers for web requests and security

For enhanced security, optional headers in HKEY_LOCAL_MACHINE\SOFTWARE\Ericom Software\Access Server\SERVER Side\CustomHttpHeaders will be added to all web requests and headers under HKEY_LOCAL_MACHINE\SOFTWARE\Ericom Software\Access Server\SERVER Side\CustomCacheControlHeaders are added to cacheable requests.

Value for CustomCacheControlHeaders:

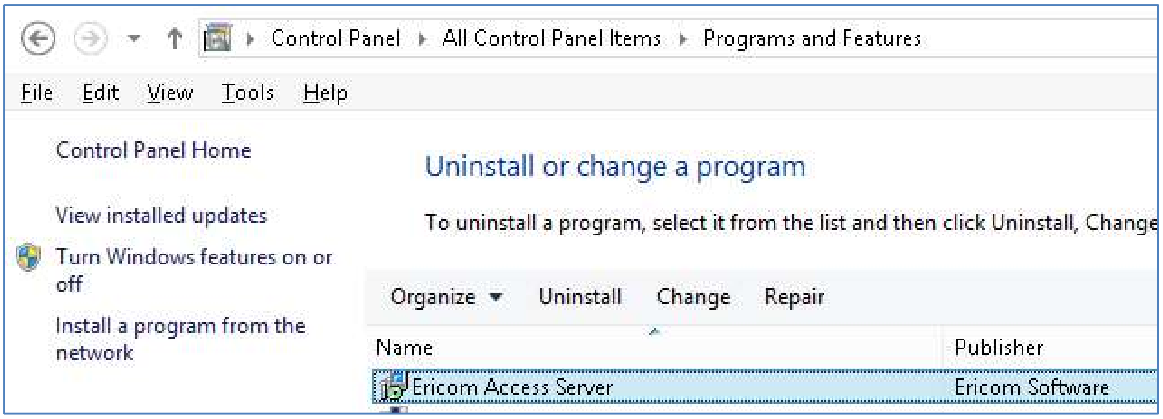
- Cache-Control: no-cache, no-store, must-revalidate

Values for CustomHttpHeaders:

- X-Content-Type-Options: nosniff
- X-Frame-Options: SAMEORIGIN
- X-XSS-Protection: 1; mode=block

Uninstalling AccessServer

Uninstall Ericom Access Server using Control Panel | *Add/Remove Programs*


Control Panel ▸ All Control Panel Items ▸ Programs and Features
File Edit View Tools Help
Control Panel Home
View installed updates
Turn Windows features on or off
Install a program from the network
Organize ▾
Uninstall
Change
Repair
Name
Publisher

Uninstall or change a program

To uninstall a program, select it from the list and then click Uninstall, Change

Name	Publisher
Ericom Access Server	Ericom Software

Select Ericom Access Server and click *Uninstall* to begin the uninstall process.

4. LICENSING OVERVIEW

Evaluation (Demo) Period

Each Access Server installation includes a Licensing Server that is installed on the same device. By default, the license server includes an evaluation period of 30 days. During this period, the Licensing Server allows up to 50 Concurrent User licenses. The evaluation period can be extended by contacting an Ericom sales representative.

Licensing Modes

The Ericom License Server service manages licensing for Ericom AccessNow and Blaze. Any connection made with an Ericom Blaze Client or AccessNow HTML5 requires an Ericom license. A single licensing server can manage licensing for multiple Ericom Access Servers.

There are two modes of licensing:

<u>Concurrent User</u> – Ericom licenses are counted based on the number of active users that are currently connected to all the Access Servers utilizing the same Licensing Server. In this licensing mode:

- There is no licensing limit on the number of Ericom sessions that the same user can open concurrently on a single client device. Only one license will be consumed regardless of the number of sessions the user opens on the device.
- The same user opening Blaze sessions concurrently from several devices will consume the same number of licenses as the number of devices used.`
- Several users using the same device (i.e. using Fast User Switching) will take the same number of licenses as the number of users that have active Blaze sessions

<u>Named User</u> – Ericom licenses are counted based on the number of names registered that *have ever* connected to any Access Servers utilizing the same Licensing Server. In this licensing mode:

- A license is allocated for a name when it is first used by any user
- The license is automatically released after a period of 14 days during which the name has not been used for running Blaze Clients at all. A license allocated to a name cannot be released prior to the end of the 14 day period

- The Access Server must be installed on the RDP host (as the TSagent is also required for this method). If the Access Server is used as a Gateway, then only the Concurrent license will be available.

Central Server Configuration

The Access Server can be configured to use a remote Licensing Server so that a single pool of licenses may be shared among multiple Access Servers.

For example, a 10-user license would be activated once on a central server. All Access Servers on the network would then be directed to use the pool of licenses on the central server. Ericom recommends that in an environment with more than two RDP hosts (Remote Desktop Servers, Terminal Servers, VDI, etc.) that a dedicated server is assigned to host the licenses to prevent disruptions and conflicts. Guidelines for the central license server are as follows:

- The central license server must be hosted on a server that is highly available so that it can distribute licenses.
- In a VDI environment, do not install the license server on a cloned desktop or the gold image template. It should be installed on a static machine that does not experience system changes.
- In a TS/RDS environment with two or more servers, avoid installing the license server on the Terminal Server if possible.
- Minimize the amount of reboots and disruptions on the server. Apply updates only during off-peak times.

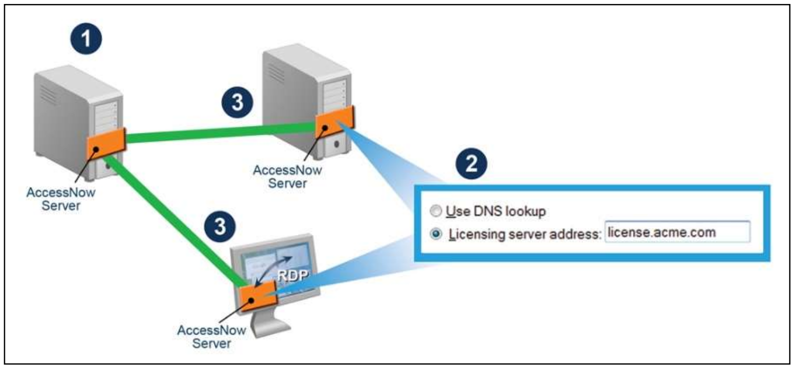
When no valid license is found, Access Server will continue to run if the grace period has not expired. Once the grace period expires, Access Server will not allow user sessions. A "grace period" lasts up to 10 days within a 30-day period. When there is an issue with the license server, it should be rectified before the grace period expires.

Implementation

Step 1: Install Access Server on the desired system and activate it (using the *Licensing* | *Activation* tab). Although Access Server will be running, the main role of this installation is to create a central license server. Enable the incoming port 8888 on the Windows firewall of this system. Verify that this port is available over the network between the central license server and the any Access Servers that will connect to it.

Step 2: Configure all Access Servers to use the central license server address for licensing. There are two methods to configure the address of the central license server, see the next section for details.

Step 3: Once the Access Server service starts, it will connect to the configured central license server to obtain a license when an Ericom AccessNow or Blaze session is established.



○ Use DNS lookup
● Licensing server address: license.acme.com

There are three methods to use a central license server:

Use DNS Lookup

Use DNS lookup

When using this setting, Access Server will always attempt to find a centralized Licensing Server before using the local one that was installed along with it. If a central license server is found and used, the local one will be ignored. When the Ericom Access Server service starts, it looks for the central licensing server address (IP or DNS name) in the following order.

1) **DNS-SRV** Entry
Access Server will look for the Licensing Server address in a DNS-SRV entry: *_ericom-license-server._tcp.<domain>*
For example, *_ericom-license-server._tcp.ericom.local*

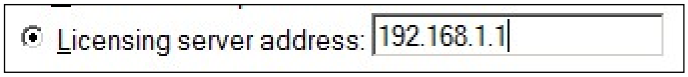
2) **DNS** Entry
If the DNS-SRV record does not exist, Access Server will look for the Licensing Server address in a DNS entry: *ericom-license-server.<domain>*
For example, *ericom-license-server.ericom.local*

3) Localhost
If the DNS entry does not exist, the locally installed Licensing Server will be used (i.e. localhost will be used as the address of the Licensing Server).

Manual Entry

Licensing server address

The administrator may also explicitly specify the license server that will be used at the Licensing page in the Access Server Configuration application.



● Licensing server address: 192.168.1.1

Use with Managed Ericom Broker

When the Ericom Connect® or PowerTerm™ WebConnect broker is used, all licenses are obtained from the *broker*. Access Server licensing is ignored; expiration messages will not apply to brokered connections.

5. AccessNow Web Client

The web component contains the resources that are used by the web browser to display an interface for users to use to connect to their remote application or desktop. These resources include HTML pages, JavaScript and CSS files and graphic images. Review the chapter on *Advanced Configuration* to modify the appearance and behavior of the web component interface.

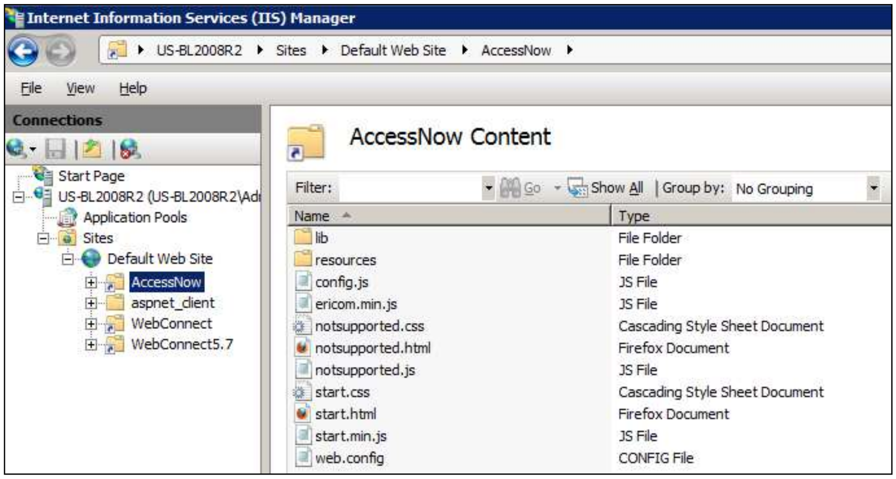
Installing the AccessNow Web Client Component

Included with the Access Server

The AccessNow web components are automatically installed along with the Access Server (Windows edition). The web components may be found in the Access Server folder:
<drive letter>:\Program Files\Ericom Software\Ericom Access Server\WebServer\AccessNow

Installation on Microsoft IIS web server

The web server component for IIS servers is provided as an installer named **EricomAccessNowWebComponent.msi**. During the installation, a virtual directory named *AccessNow* will be automatically created in IIS. The *Start.html* page will be set as the default document for this virtual directory, so there is no need to explicitly enter the file name in the URL. The actual pages will be placed into C:\Program Files (x86)\Ericom Software\Ericom AccessNow Web Component\.



Name	Type
lib	File Folder
resources	File Folder
config.js	JS File
ericom.min.js	JS File
notsupported.css	Cascading Style Sheet Document
notsupported.html	Firefox Document
notsupported.js	JS File
start.css	Cascading Style Sheet Document
start.html	Firefox Document
start.min.js	JS File
web.config	CONFIG File

Once the web server files are installed, direct the users the appropriate URL: http://webserver/accessnow or http://webserver/accessnow/start.html

Installation on web server

The web server component is also provided as a zip file named ***EricomAccessNowWebComponent.zip***.

On the target web server, create a virtual directory and extract the contents of the zip to that location. Once the web server files are installed, direct the users the appropriate URL. (i.e. http://webserver/accessnow/start.html). Some web servers are case sensitive so make sure the correct URL is provided to the end users.

6. HTML5 USER ACCESS

With Ericom AccessNow, users can access remote Windows desktops and applications from HTML5 compatible web browsers. To start a session, users browse to the *start.html* file that is installed in the *AccessNow* virtual directory. This virtual directory is included with every Access Server installation and may also be installed separately on a third-party web server.

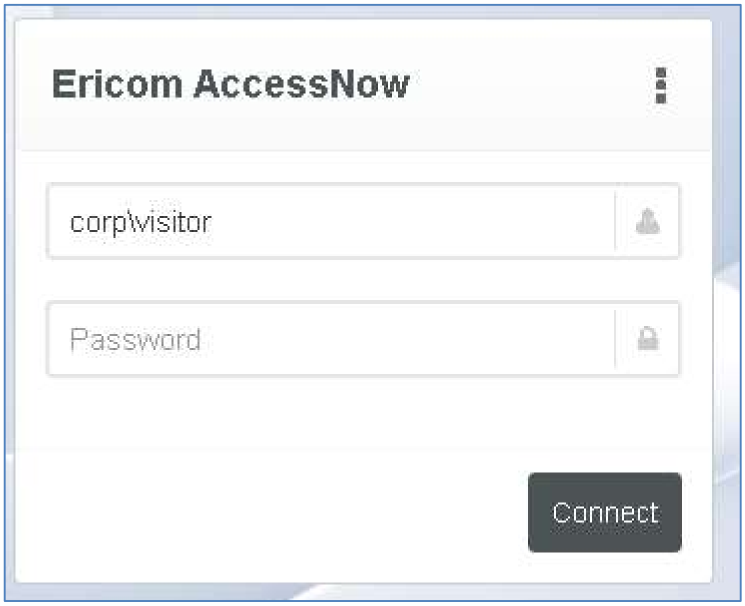
Supported Browsers

Supported browsers include HTML5 compliant web browsers such as Google Chrome, Apple Safari, Firefox, Microsoft Edge, and Microsoft Internet Explorer 11. Older versions of Firefox and Opera require WebSocket support to be manually enabled in the browser configuration.

Multiple AccessNow sessions may be opened in different tabs within the web browser, or in different browser windows. When a session is not in use (its tab or window is not displayed) it will reduce its CPU and memory utilization.

Connection Web Page

When the user navigates to the URL, a login form will be displayed.



corp\visitor

Enter the connection parameters and press the *Connect* button to initiate the connection.

Main Page Components

Function	**Description**
User name	The user’s credentials to login to the RDP host. Can optionally contain domain specification, e.g. domain\user. When using Ericom Secure Gateway this field is mandatory. Otherwise this field is optional – if not specified then user will be prompted for credentials by the RDP host.
Password	Corresponding password for the user name. For security reasons, this value should not be saved for future connections. When using Ericom Secure Gateway this field is mandatory. Otherwise this field is optional – when not specified then user will be prompted for credentials by the RDP host.
Connect button	Starts the connection based on the entered parameters. When the user clicks the Connect button, all configured settings are saved for future sessions.
Settings button	Press the Settings button to configure various session settings.

Settings

Press the three dots (settings) to configure various session settings.

⋮

Function	**Description**
Connection	
Ericom Access Server	The address (host name or IP address) of the Access Server. If not specified, the web server host address (as it appears in the browser address line) will be used. When connecting on a non-default port, it must be specified by appending a colon and port number. For

	example, 192.168.1.1:8585. The default port is defined by the *wsport* value in *config.js*.
RDP Host	The address of the destination system that has RDP enabled. Leave this field blank if the Access Server is installed on the RDP host itself.
Connect to Console	Connect to the remote system's console session.
Start program on connection	Select this to only launch the specified application upon connection to the RDP host. The remote desktop will not be displayed.
Program path and file name	Full path to the desired application to be launched. Only the application will appear and desktop access is disabled. Requires "Start program on connection" to be enabled.
Start in the following folder	Specifies the "Start In" folder for the application specified in "Start program on connection"
Security	
Enable SSL encryption	When checked, the client utilizes SSL encrypted WebSocket communication to the Access Server.
Use Secure Gateway	Select this to use the Ericom Secure Gateway to connect to the RDP host.
Gateway Address	Enter the address and port for the Ericom Secure Gateway(s) in this field. To specify a custom port, add a ':' and the port number to the address (i.e., gateway.com:4343). If no port value is specified, 443 with be used by default. Multiple ESG's can be specified for failover. Separate each address with a comma (,) or semicolon (;). An asterisk (*) will shuffle the items after it. For example, if the following is specified: aaa;*;bbb:4433;ccc:4343 ESG aaa on port 443 is used to initially connect. If aaa is unavailable, then bbb:4433 is used followed by ccc:4343 OR ccc:4343 followed by bbb:4433.
Language & Audio	
Display Language	Changes the language used by the AccessNow start page

Keyboard locale	Select the keyboard region to be used in the AccessNow session (keyboard_locale)
Keyboard scan-codes	Enables scan codes. Certain applications use scan codes and will require this setting to be enabled.
Remote Audio Playback	Configure where the session's sound will play at: local computer, remote computer, or do not play. Audio playback is not supported with IE 10 and 11. AccessNow supports audio compression for improved performance.
Display	
Acceleration Quality	Controls the degree of acceleration that is enabled in the session. Faster acceleration will result lower quality images.
Screen resolution	Display resolution for the session. If the remote desktop is larger than the browser window then scrollbar will be displayed, the browser window will not be resized. Select "fit to browser window" (default) to utilize the current browser window size. Select "fit to screen" to create a session that can cover the entire local screen; enable the browser's full screen mode to cover the entire local display.
Automatic session resize	Enabled by default, this setting will resize the displayed application or desktop to fit the browser window upon resize. Supports full-screen mode. Note: Automatic session resize is only enabled if the "Screen resolution" is set to "Fit to browser window".
Click Animation	Enables the click animation for the mouse pointer on touch devices
Use Client Time Zone	Check this box to enable local time zone redirection (the remote session will use the time of the user's "local" system.
Open links on client (URL Redirection)	Will open URL links launched in the RDP session to open using the local browser.

Force Virtual Keyboard	(Default: Auto) Manually configure the enablement/disablement of the virtual keyboard feature for the session. Added in version 8.3.
Force Touchscreen	(Default: Auto)Manually configure the enablement/disablement of touchscreen related features for the session. Added in version 8.3.
Reset All Settings	
	Will reset all settings in all categories back to factory defaults
About	
Version	The version number of the version

Moving Settings to Root Level

> NOTE: Customizations to the start.html page are not supported by Ericom engineers. When technical support is required, Ericom will use the original files to diagnose reported issues.

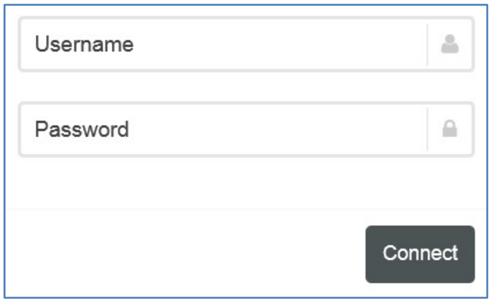
Settings under the 'Settings' menu may be moved to the root level where the username and password fields are located. The following instructions will move the 'Address' field to the root level:

- Backup the original start.html file
- Open the start.html file and search for the desired field. For example, search for address and look for this line:
  <input id="address">. This setting is part of a <section> block.
- Cut the entire <section> ... </section>, for example:

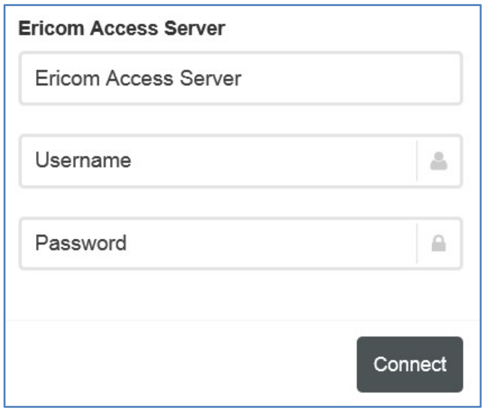
  ```
  <section>
  <label class="label">STR_ERICOM_ACCESSNOW_SERVER</label>

      <label class="input">

      <input type="text" name="address" id="address"
      placeholder="STR_ERICOM_ACCESSNOW_SERVER"
      autofocus="autofocus" spellcheck="false" autocapitalize="none"
      autocomplete="off" autocorrect="off" >

      </label>

      </section>
  ```
- Search for ` name="username" `. This is an <input> block also part of a <section> block and has a <fieldset> parent. A <fieldset> contains multiple <section> blocks.

- Paste the <section> that was copied above the username <section> (and just below the <fieldset> tag).
- Refresh the browser to see the changes.
- Alternatively, paste copied <section> at the end (after the "password" section, just before the closing </fieldset>)
- Optional, if the section that was copied has a <label class="label"> element this can be removed.

Start.html before changes:



Start.html after changes:



Connecting to a Desktop

The default configuration of AccessNow connects the end-user to a desktop session based on the parameters that are entered into the *start.html* page. As long as the setting *Start program on connection* under the *Advanced* button is unchecked, the *Connect* button will start a desktop session.

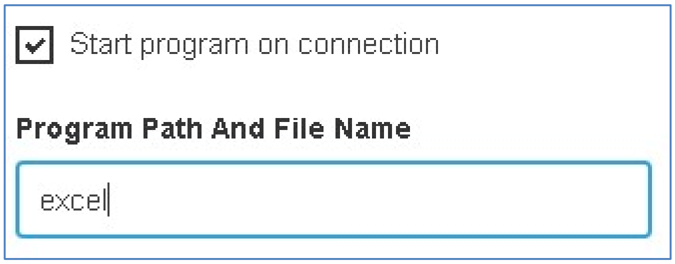
After a successful login, the user is connected to the specified desktop; the content of the remote/virtual desktop is displayed within the browser window.

To **disconnect** the session, close the browser tab. To **log off** the session, use the Windows Start menu *Log off* function.

If the user closes the launched application (by pressing the application's 'X' button), and the logoff session is non-responsive, the TSagent will automatically terminate the session if there is no activity on the screen for three (3) seconds.

Connecting to an Application

If an application is enabled and configured under *Start program on connection,* only the application will appear once the session is connected, covering the entire session area. The remote desktop will not be displayed.

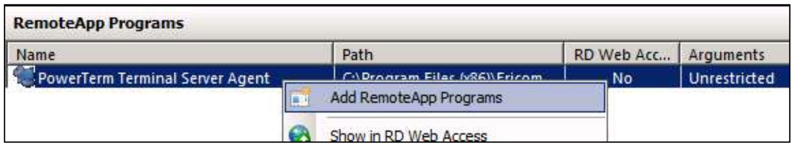


☑ Start program on connection

Program Path And File Name

excel

On 2012, 2016, and 2019 RDS, the RemoteApps feature needs to be enabled to allow seamless windows (this is not available in versions prior to 2012). However, Access Server launches requested applications using its built-in TSagent component, so these applications do not need to be manually added to the RemoteApp list.



RemoteApp Programs

Name	Path	RD Web Acc...	Arguments
PowerTerm Terminal Server Agent	C:\Program Files (x86)\Ericom	No	Unrestricted

NOTE When launching applications using AccessNow, on Windows Remote Desktop Server, the RDS RemoteApps role should be enabled (recommended) **before** installing Ericom AccessNow.

Applications can also be defined using the *alternate_shell* variable in the *config.js* file. In this example, Internet Explorer is launched in kiosk mode (-k) with a URL (http://www.ericom.com) as the parameter:

alternate_shell: '"C:\\Program Files\\Internet Explorer\\iexplore.exe" -k ***http://www.ericom.com***',

Connecting to an Application in Kiosk Mode

Applications may be displayed in a kiosk mode such that it will cover the entire monitor (in multi-monitor configurations only the primary monitor is covered). To create a kiosk mode application using AccessNow and Google Chrome, perform the following:

1) Configure AccessNow to launch an application in “Full Screen” mode:

Edit the *config.js* file. Uncomment then modify the following parameters:

autostart: true, // sets the session to auto start

address: "rdphost_address" // sets the address of the RDP host

remoteapplicationmode: **true**, // sets the session to use application mode

alternate_shell:
'**"C:\\Program Files\\Ericom Software\\My App.exe"**', // sets the application path

Other parameters may also be modified as desired.

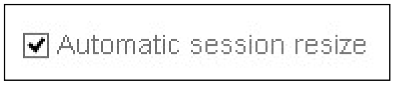
2) Create a shortcut to the Chrome browser (chrome.exe). Edit the shortcut properties to launch chrome.exe in kiosk mode with the URL to AccessNow:

chrome.exe -kiosk *http://accessnowserver/accessnow/start.html*

The shortcut may be placed in the system’s *Startup* folder to launch it each time the system is started.

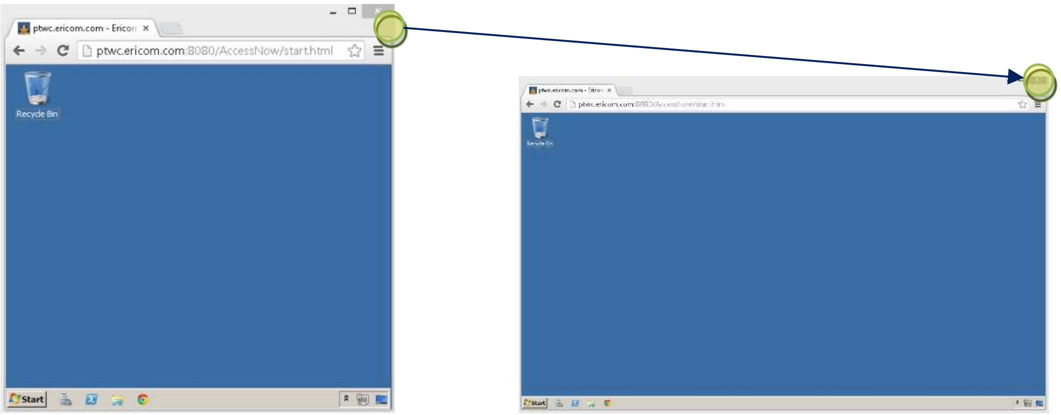
Automatic Session Display Resize

AccessNow supports automatic display resize. This setting is enabled by default, and is configured under the AccessNow *start.html Settings* | *Display* dialog:



☑ Automatic session resize

Whenever the browser is resized, the AccessNow session will automatically adjust itself for the new dimensions. To resize a browser window, drag any corner of the browser window and release the mouse when the desired dimensions are reached. If the browser is placed into full screen mode, the AccessNow session will automatically adjust for the full screen dimensions.



NOTE This registry key will affect the resize feature: *HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Terminal Server\WinStations\RDP-Tcp\MaxDisconnectionTime*. AccessNow will not resize if the value of this key is between 1 and 10000 milliseconds.

After a session is resized, AccessNow printing may be unavailable for a few seconds.

Special Key Handling

While it is connected, AccessNow intercepts mouse button and keyboard events and transmits them to the RDP host. As a result, various keyboard keys and mouse buttons that are usually handled by the browser will behave differently. For example, clicking the F5 button usually causes the browser to reload the current page. When using AccessNow, F5 will not reload the page. Instead it will be transmitted to the remote application or desktop. Other function keys, such as the Windows *Start* key will not be transmitted to the AccessNow session, but handled by the local system.

Clicking the Back, Forward or Reload browser buttons will cause AccessNow to display a message asking the user if he/she wishes to leave the current page. If the users decides to proceed, the remote session will be Disconnected from the RDP session (not logged off).

Supported RDP Shortcut Keys

AccessNow also supports most RDP hotkey combinations:

http://msdn.microsoft.com/en-us/library/aa383500(v=vs.85).aspx

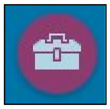
Except ALT+DEL and CTRL+ALT+MINUS SIGN (-)

Key combination	**Description**	**Supported Modes**

ALT+PAGE UP	Switches between programs from left to right.	Remote Desktop session only
ALT+PAGE DOWN	Switches between programs for right to left.	Remote Desktop session only
ALT+INSERT	Cycles through the programs in the order they were started.	Remote Desktop session only
ALT+HOME	Displays the **Start** menu.	Remote Desktop session only
CTRL+ALT+END	Brings up the **Windows Security** dialog box. Similar to CTRL+ALT+DEL on a local system.	Remote Desktop session and Application Launch modes
CTRL+ALT+PLUS	Captures a screenshot of the entire session screen.	Remote Desktop session and Application Launch modes

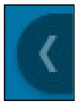
AccessNow Toolbar

Ericom AccessNow provides a touch friendly toolbar to access built-in features.



Tap or click on the feature once to expand the vertical bar which provides commonly used function such as file transfer and clipboard.

Tap the horizontal arrow to expand the bar which provides access to additional features such as system keys and the disconnect feature.



System keys

The horizontal bar provides access to keys that may not be available on tablets and lightweight keyboards. The following functions are supported:

- ESC
- TAB
- Windows key

- CTRL+ALT+DEL
- ALT+Tab (tap icon again when highlighted to cycle through the active windows, tap selected window to bring into focus)

NOTE Holding down on a function button will not repeat it. Key combinations, such as Windows+R to open the Run dialog, are currently not supported. These may be added to a future version.

Clipboard Support

Ericom AccessNow provides the ability to copy and paste text between the local device and the remote RDP session using a built-in clipboard.

Clipboard redirection functionality is limited to only text content in the current version.

NOTE When using *Internet Explorer (MSIE) 9, 10*, 11, and Chrome the Clipboard feature is integrated, so *there are no AccessNow clipboard icons*. Simply copy and paste text between the local device and AccessNow session using the traditional copy/paste commands (i.e. CTRL+C and CTRL+V).

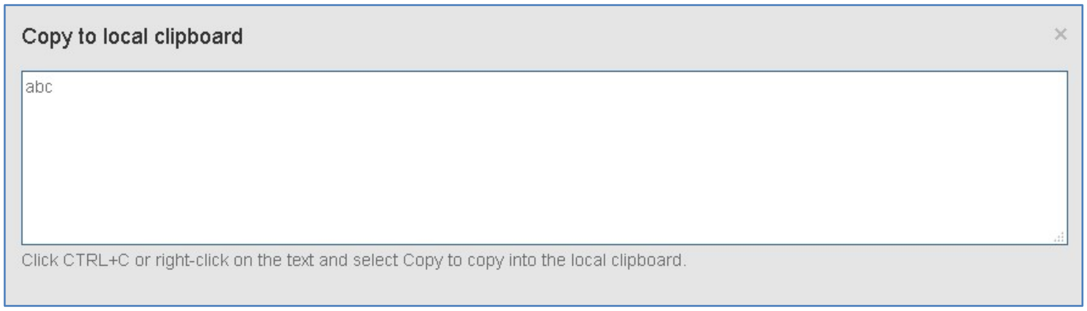
Copy Text from Remote to Local

Steps to copy text from the AccessNow remote session to the local desktop:

1) In the remote selection perform a copy function (i.e. CTRL-C) on the desired text.

2) With Microsoft Internet Explorer and browsers that have Flash enabled, the text will automatically be copied to the clipboard buffer.

   With all other browsers the following dialog will be displayed with the highlighted text automatically entered:



Copy to local clipboard

abc

Click CTRL+C or right-click on the text and select Copy to copy into the local clipboard.

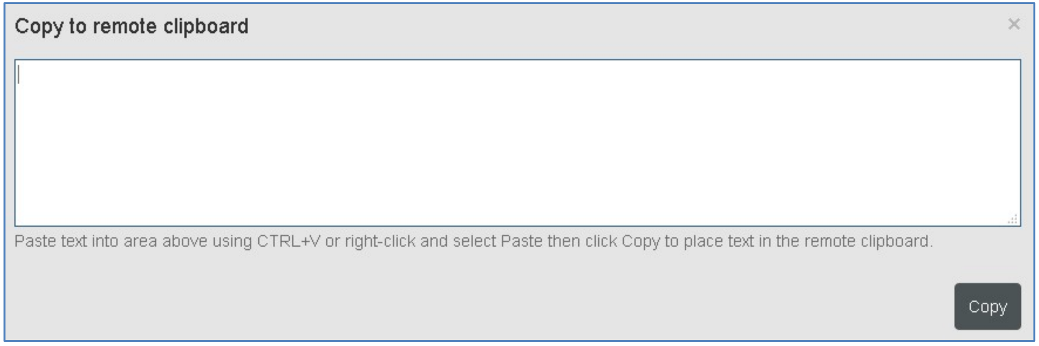
   Press CTRL+C to copy the text to the clipboard buffer.

3) Once the data is copied to the local clipboard, execute a *Paste* operation (i.e. CTRL-V) to paste the text to the local application.

Copy Text from Local to Remote

Steps to copy text from the local desktop to the remote AccessNow session:

1) From the local application, perform a copy function on the desired text.
2) Click on the Copy icon.
3) Paste the copied text into the AccessNow clipboard



Paste text into area above using CTRL+V or right-click and select Paste then click Copy to place text in the remote clipboard.

4) Click the *Copy* button
5) Once the data is copied to the remote clipboard, execute a *Paste* operation to paste the text to the remote application in the AccessNow session.

File Transfer

Ericom AccessNow provides the ability to transfer files between the local device and the remote RDP session. When downloading files, ensure that the Access Server service has permission to read the desired files. When uploading files, ensure that the Access Server service has permission to write files to the desired location.

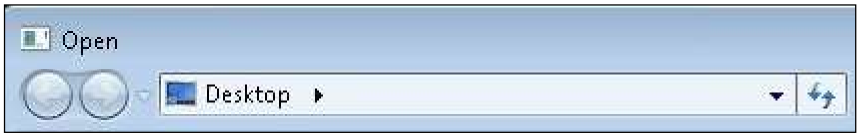
- File transfer with local and mapped drives are supported.
- If the Access Server detects that the File Transfer feature cannot be used in the session, the icons will be automatically hidden.
- File names with Unicode characters may not be supported.
- File transfer functionality requires that the Access Server be installed on the RDP host; do not use Access Server as a gateway.
- File transfer not available when Access Server is used as a gateway.

Download files from Remote to Local

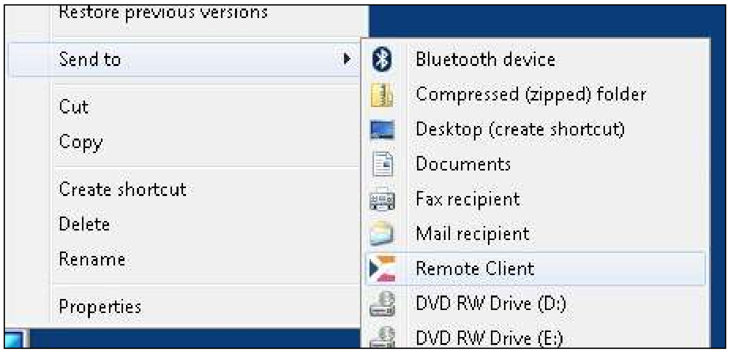
There are two methods to download files from the remote AccessNow session to the local device.

Method 1: Press the *Download* button in the AccessNow session.

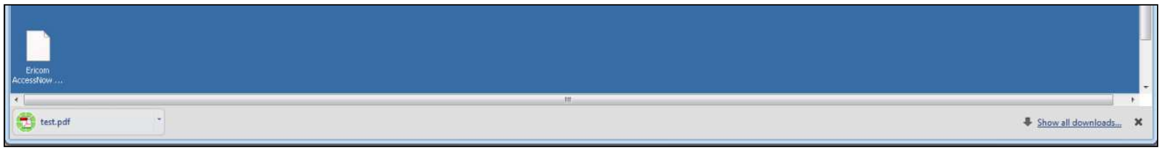
The *Open* dialog will then appear so that the user can select the desired file(s) to download.



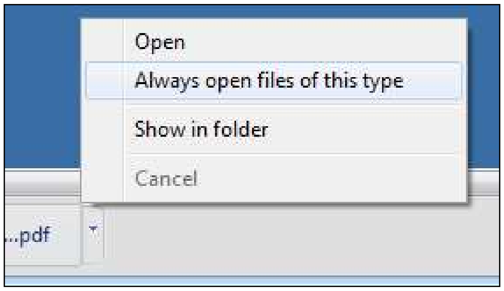
Method 2: Right click on the desired file(s) and select *Send To* and *Remote Client.*



After using either download method - the selected files will be downloaded to the browser’s configured *Downloads* folder.



Open the *Downloads* folder to view the file. The method to display the *Downloads* will vary depending on the browser being used. The *Downloads* folder location will also vary based on the path that is configured in the browser.



Download Multiple Files to Local

To download multiple files from the Windows session

- Select the desired files (hold CTRL key while selecting files)
- Right click on a selected file to open the menu
- Select “Send To” | “Remote Client” and all the selected files will be downloaded.

Multiple file download is not supported by the AccessNow Toolbar download button.

This feature is supported on Google Chrome, Firefox and Microsoft Edge. Microsoft Internet Explorer does not support this functionality.

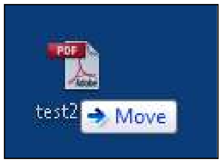
Upload files from Local to Remote

There are two methods to upload files from the local device to the remote AccessNow session.

Method 1: Press the Upload button in the AccessNow session.

The *Save As* dialog will then appear for the user can select the desired file(s) to upload.

Method 2: Drag the desired file(s) from the local device over the browser where the AccessNow session is running.



After using either upload method - the selected files will be uploaded to the selected folder. A file transfer progress dialog box will appear.

NOTE	Apple Safari browser only supports uploading one file at a time, and not multiple files in one operation.

Built-in Universal Printing

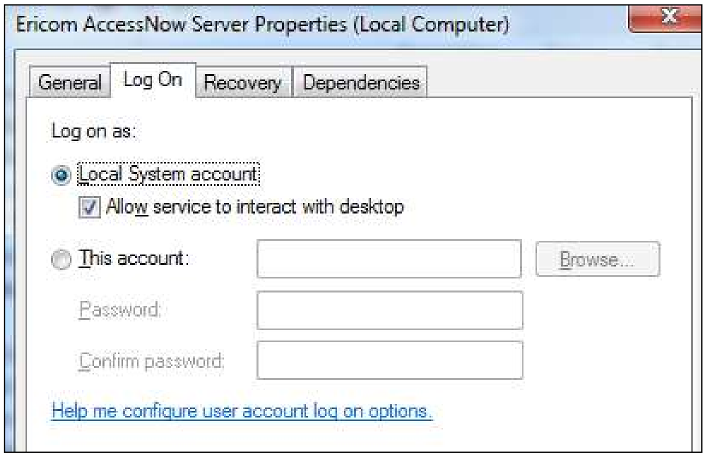
Ericom AccessNow includes a built-in universal printer for redirecting remote print jobs to the local web browser. Once the print job is received by the web browser, it can be saved or printed.

AccessNow may also be configured to bypass the PDF verification steps and send the print output directly to the local browser's print preview function. See the section on *Direct Print Mode* later in this chapter for more details.

NOTE	The built-in AccessNow Universal Printer driver users a generic driver and may not work in certain scenarios. The print output may also differ than that of one from a native driver.

Requirements

In order for the AccessNow Printer to be added to the remote sessions, the Access Server Service must have rights to add a printer to the session. In most cases the *Local System* account has sufficient rights. If it does not, go the *Access Server Properties* and enter a user account that has the rights.


Ericom AccessNow Server Properties (Local Computer)

Log on as:

● Local System account

☑ Allow service to interact with desktop

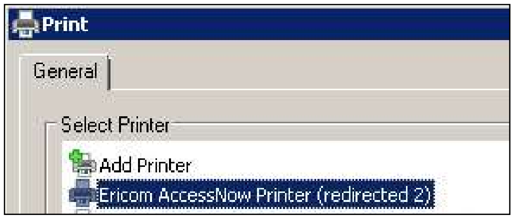
○ This account:

Password:

Confirm password:

Usage

The Ericom AccessNow printer is added to the remote RDP session upon connection. The AccessNow printer will appear as an available printer while the session is active. To print to the *AccessNow Printer*, the user simply selects it when prompted at the *Print* dialog window.

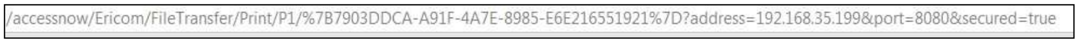


The AccessNow printer will be set as the default printer in the AccessNow session. To prevent the AccessNow printer from being the default printer, enable the following Group Policy setting: *Do not set default client printer to be default printer in a session*

Once the print operation is executed, AccessNow will send the print output to the local web browser. A ready status dialog will appear when the print output is ready for viewing and printing with the web browser.

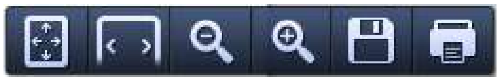
When the user presses the *View* button to see the print output, the contents will be displayed in a new browser tab using a one-time use URL. This URL should not be bookmarked for future use.

Sample printout URL:



```
/accessnow/Ericom/FileTransfer/Print/P1/%7B7903DDCA-A91F-4A7E-8985-E6E216551921%7D?address=192.168.35.199&port=8080&secured=true
```

Once the print output is displayed, it can be sent to the device's local printer or saved as a local PDF file using the web browser. The web browser may have shortcut buttons for both functions. Here is an example from Chrome:



NOTE	If the AccessNow printer is not appearing as an available printer, verify that the user has permissions to add a printer to the session.

Using AccessNow Printer on Windows 8, 10, 2012, 2016, 2019

Windows 8, 10, 2012, and higher do not include the necessary built-in drivers to support the AccessNow Printer. This functionality can be added by installing the Lexmark Universal Postscript (PS) Printing Driver. Download the appropriate driver from the Lexmark website or Ericom's Update Center website.

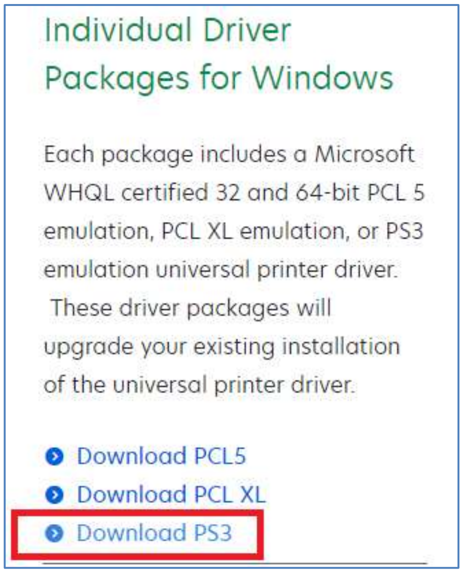
During the installation, when prompted for the *Installation Mode*, choose *Dynamic Mode*. Use default settings for all other selections.

Using AccessNow Printer in Lexmark Mode

https://www.lexmark.com/en_us/support/universal-print-driver.html

Note: this is a third-party link that may change unexpectedly. If the link does not work, perform a Google search for Lexmark Universal Print driver to search for the updated link.

Download the "PS"/"PS3" version.



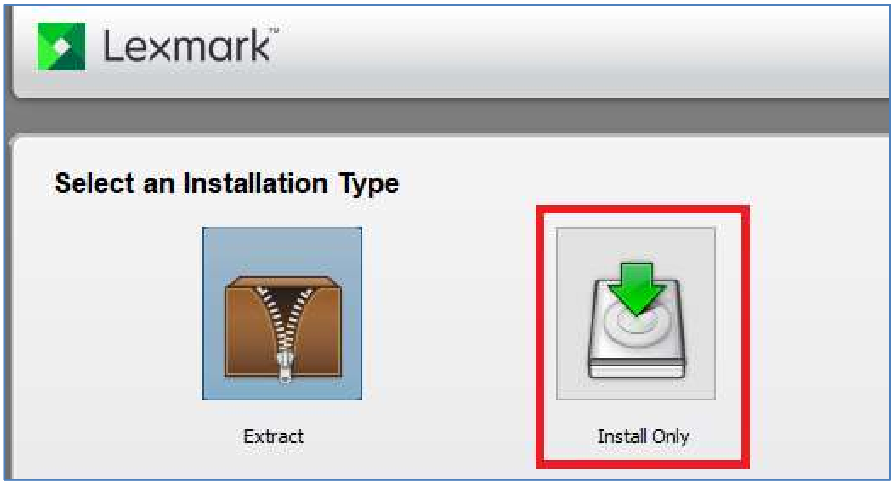
Individual Driver Packages for Windows

Each package includes a Microsoft WHQL certified 32 and 64-bit PCL 5 emulation, PCL XL emulation, or PS3 emulation universal printer driver. These driver packages will upgrade your existing installation of the universal printer driver.

- Download PCL5
- Download PCL XL
- Download PS3

Install it on the RDP host(s).

When prompted, select "Install Only"



Direct Print Mode for faster Printing

To speed up the print process, the user verification and option to save as PDF may be removed by enabling Direct Print Mode.

In the config.js file, set: *directprint:* ***true***

When Direct Print mode is enabled, the print output sent to the AccessNow printer will automatically appear in the browser's local *Print Preview* dialog.

Modifying the AccessNow Printer name

The AccessNow printer name may be modified with a custom string.

Open the blaze.txt file under *C:\Program Files\Ericom Software\Ericom Access Server\WebServer\AccessNow\resources*

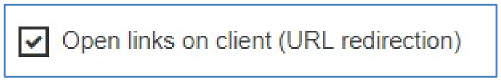
Add and configure the setting: *AN Printer name:s:<custom printer name>*

URL Redirection

URL Redirection allows HTTP and HTTPS URL links that are selected (clicked) on the remote RDP desktop to be opened using the local web browser. This enables redirected websites to use the local resources rather than remote resources to achieve better performance.

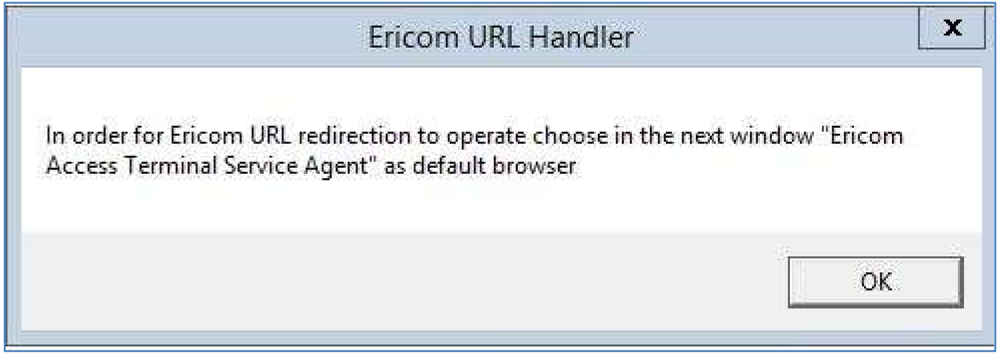
URL's should only be redirected when the local device has access to the website. If the URL is only viewable from the RDP session, then it should not be redirected.

To enable URL redirection, click on the AccessNow *Settings* button (three dots), *Display* button, and check Open browser links on client.



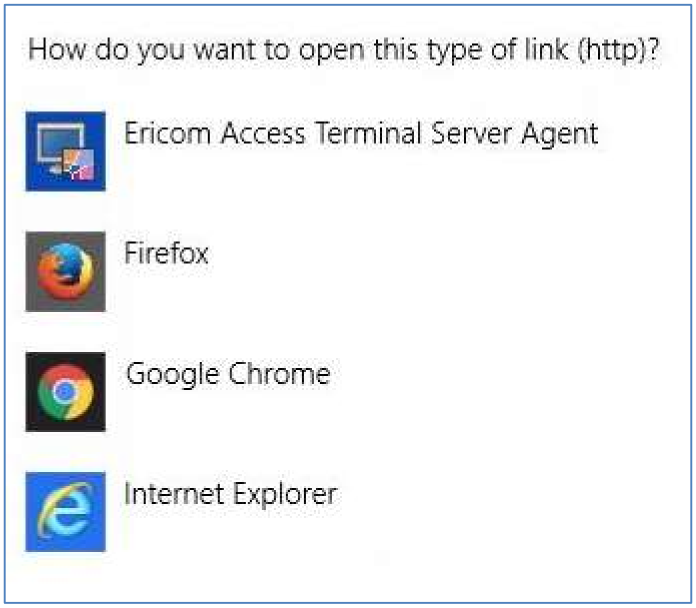
☑ Open links on client (URL redirection)

When a user logs into a session where URL redirection is enabled, Ericom AccessNow will instruct the user to select "Ericom Access Terminal Service Agent" as the default browser.



In order for Ericom URL redirection to operate choose in the next window "Ericom Access Terminal Service Agent" as default browser

In order to use URL Redirection, the Ericom Agent must be configured as the default browser. This will allow it to intercept URL addresses and redirect it to the local system.



How do you want to open this type of link (http)?

During a session where URL redirection is enabled, if the user launches a URL, a prompt will be displayed to ask the user where to launch the URL from:

On Client – Opens the URL on the local device in a new browser tab

On Server – Opens the URL in the remote RDP session

Cancel – Cancels the request

The URL redirection setting may also be configured via *config.js* under “**redirect**: false,”.

If AccessServer is uninstalled, the original default browser will not be restored; the operating system will prompt the user to select a new default application for web usage.

Ending a Session

After the user logs out or disconnects, a “Session ended” message appears. The browser returns to the connection dialog after the user clicks *OK*.

No trace of the session will remain on the device once it is ended. For additional security, close the browser tab or window that previously ran the AccessNow session.

Disconnect button

Users may manually disconnect from the remote session by pressing the Disconnect button.

Session Idle Auto-logoff

Remote desktop sessions are explicitly logged off using the *Log Off* option in the remote desktop's *Start Menu*.

Application sessions are logged off when the application is closed. In some cases the session is not closed immediately or is non-responsive. AccessNow includes an auto-logoff feature where if nothing is displayed on the screen for a specified duration of time, the session will be automatically logged off. The default value is three (3) seconds, this value may be changed by editing the *blaze.txt* file in *Resources* folder and adding the line:
RDP_LogoffDelaySeconds:i:*n* *(n* is the duration, default = 3.)

Automatic Reconnect

Active AccessNow sessions will automatically attempt to recover from temporary network outages by reconnecting to the user's session. The user may experience a slight delay during the reconnect attempt, but once the session is re-established, the user may continue working without having to log back into the session.

This feature may be disabled by configuring the config.js value:
reconnectOnDropped: ***false***,

Fixing Typing Issues (Enable Scan code Input)

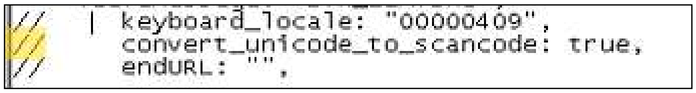
In some cases, while typing within an AccessNow session the keyboard input will be incorrect or missing in certain applications. The affected applications may require scan-code input rather than Unicode (which is the default). To enable scan-code input, click on the AccessNow web page's Settings button (three dots). Then check the "Use keyboard scan-codes" setting, click the three dots again, and test.

Scan-code may also be enabled in the config.js file by modifying this setting:

convert_unicode_to_scancode	**false** (default), set to **true** when using certain applications that send characters as scancodes (i.e. VMware vSphere Client, Ericom Blaze Client, any application where

	you may have issues typing text). This setting will generate scancodes based on the selected locale.

NOTE Remember to remove the "//" in the beginning of the line (in the config.js file), these signify "comments" which tell AccessNow to ignore the line. Once they are removed, the content of the line will become active.



```
//    | keyboard_locale: "00000409",
//      convert_unicode_to_scancode: true,
//      endURL: "",
```

Google Chromebooks

Ericom AccessNow operates on Google Chromebook and Chromebox just like it does with a Google Chrome browser. Here are some tips to keep in mind when using AccessNow on a Chromebook or Chromebox:

Function	**Description**
Mouse Left-click	Click the Chromebook trackpad with *one* finger
Mouse Right-click	Click the Chromebook trackpad with *two* fingers
Scrolling a document or website	Drag *two* fingers on the Chromebook trackpad up or down to scroll
Configure Chromebook	Enter into the address field: *chrome://settings*

Most Chromebook shortcut key combinations (i.e. CTRL+T to open a new tab) are supported during an active AccessNow session. Configured Modifier keys are also supported within the AccessNow session.

Chromebook Keyboard

The Chromebook keyboard lacks several keys that are used by Windows. ChromeOS provides standard mappings that use existing keys with the ALT button to represent certain missing keys. AccessNow supports these key combinations:

Windows Command	**AccessNow Key combination**
Delete (DEL)	ALT+Backspace
Page Up	ALT+Up
Page Down	ALT+Down
Home	CTRL+ALT+Up

End	CTRL+ALT+Down

In addition, AccessNow provides special non-standard mappings for additional key combinations on ChromeOS.

Windows Command	AccessNow Key combination
F1, F2, …	CTRL+1, CTRL+2, …
ALT+TAB	ALT+`
ALT+SHIFT+TAB	ALT+SHIFT+`
CTRL+Home	CTRL+ATL+Left
CTRL+End	CTRL+ALT+Right

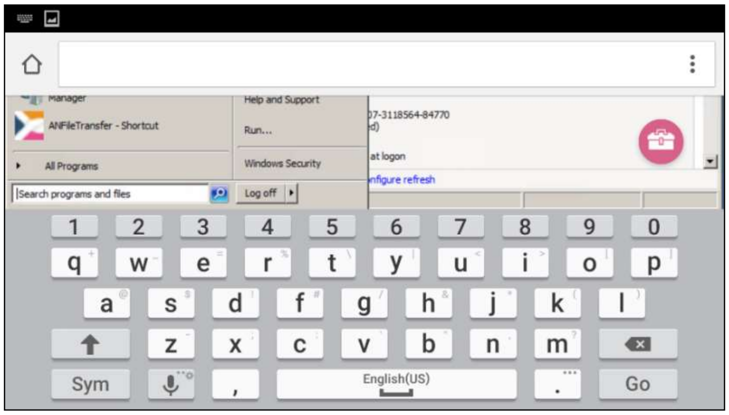
Touch Devices (Tablet/Smartphone)

Ericom AccessNow will operate on any tablet or smartphone device if used with an HTML5 browser (i.e. Android Chrome). AccessNow will automatically detect if the device is touch capable and automatically use the built-in virtual keyboard for text input and gesture support for display navigation.

The built-in Click Animation feature helps users see where their finger tap gesture is being applied in the session.

Keyboard Auto-Sense and Display

AccessNow will automatically sense when the mouse focus is in a text entry field and automatically display the devices virtual keyboard.



To disable this feature, expand the AccessNow toolbar and tap on the "Auto Keyboard" button until the background highlight is disabled.

Disabled:

Enabled:

Enable Default Keyboard

To enable the device's default keyboard for text input, tap the *Keyboard* button

AccessNow Gestures Support

AccessNow supports built-in gesture support when used on a touch device.

This mode is Enabled when "Multi-touch Gesture Redirection" is Disabled:

To use native Windows multi-touch gesture redirection, disable the AccessNow gesture support.

Tap the *Gestures* icon in the Toolbar to see the full list of supported AccessNow gestures.

Windows Multi-touch Gesture Redirection

Starting in version 8.3, AccessNow supports Windows® multi-touch gesture redirection. All multi-touch gestures are redirected natively into the Windows session for use by the application(s) inside the AccessNow session. This feature operates similar to the multi-touch gesture redirection found in the native Microsoft (mstsc.exe) and Ericom (EricomRDP) clients.

The multi-touch gesture redirection feature is enabled using the AccessNow Toolbar button or by config.js setting.

Activation Criteria

AccessNow multi-touch gesture redirection is enabled and activated based on the following criteria:

The feature is **enabled** if all of the following are true:

- Touch is supported by the remote host
- Touch is supported by the client device
- Touch redirection is set to true

The feature is **activated** if all of the following are true:

- Touch feature is enabled
- Toolbar icon is set to active
- Touch is not suspended by the RDP host

Toolbar button

The Windows multi-touch gesture redirection feature is enabled by default. The functionality is enabled and disabled by toggling the gesture button in the AccessNow toolbar:

(Enabled state)

When Windows® multi-touch gesture redirection is disabled, AccessNow gesture support is enabled.

(Disabled state)

Config.js Settings

The following config.js settings are used to configure the multi-touch redirection feature:

rdpTouchEnabled	True (default) - Enable remote touch. On the Server: enable the feature and send RDP client touch events. On the Client – enable the feature, process the incoming server touch messages.
rdpTouchActive	False (default) – Sets the default activation state (ignored when not enabled.) On the **Client** this is the initial state of the toolbar button. If active, send touch events.
rdpTouchAction	0 (default) - Action to be taken if multi-touch is enabled, but is not supported by the server or client

	device. Action values: 0 - no action 1 - display an error message 2 - display an error message and disconnect 3 - ask for user confirmation to continue without touch

Conflict with Local Gesture Usage

When multi-touch redirection is enabled, all gestures are redirected to the remote session. However, the user may need to use gestures locally on the device to pan and zoom around the session. When local gesture functionality is required, disable multi-touch redirection temporarily, and re-enable it when it is needed again.

7. ADVANCED CONFIGURATION

Ericom AccessNow provides flexible methods to set predefined values and accept custom values that are passed to it. These values can either be displayed in the AccessNow start page or trigger an automatic connection without allowing the user to change any settings (for an example of this, visit Ericom AccessNow online demo at http://demo.ericomaccessnow.com).

Ericom AccessNow may also be integrated with third-party web sites and portals. Ericom AccessNow can accept configuration settings from external pages or directly from a web server. These settings may be displayed in the AccessNow start page for the user to view and modify, or used for an automatic connection.

Modifying the AccessNow interface

Certain built-in images may be modified to provide a custom look. The path to the *resources* folder where the images are stored is similar to:

C:\Program Files\Ericom Software\Ericom Access Server\WebServer\AccessNow\resources

NOTE Backup the *resources* folder before making any modifications. To roll-back to the original files, simply copy the original *resources* folder back to the original location.

Any customizations will not be supported by Ericom support as they are beyond the scope of a standard implementation.

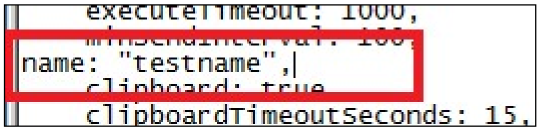
Modifying the connection's name

The AccessNow connection name uses the *RDP Host's* address by default. This label may be modified to a custom string.

To change the connection's name:

Open the *config.js* file and add the *name* setting if it does not exist.

Set the *name* setting to the desired string. In this example, *testname* will be used as the new connection name when the user starts the session:



```
    executeTimeout: 1000,
    minSendInterval: 100,
name: "testname",
    clipboard: true
    clipboardTimeoutSeconds: 15,
```

The *name* setting may also be set using the following cookie: *EAN_name*.

Once the *name* parameter is set, the new label will appear in the connection's browser tab and in the *Establishing connection* dialog box.

Static Configuration of *Config.js*

An administrator can modify configuration settings for AccessNow by editing the **config.js** file that is installed as part of the AccessNow web component. This is a JavaScript file that can be modified using any text editor, such as Windows Notepad. Most settings in the file have the following format:

name: value,

The value can be a number, a flag (**true** or **false**), or text enclosed in quotes. Some settings are prefixed by a double slash // which means they are disabled. Remove the double slash in order to set a value for the setting. Javascript rules apply in this file, certain characters need to be escaped (i.e. backslash). Once the settings are configured, save the file and the next user will have the new settings applied.

Refer to the *Settings Table* for a description of each setting.

NOTE Backup the original *config.js* file before saving any changes. This will ensure easy rollback to the original configuration.

Passing URL Query Strings

AccessNow supports the ability to pass custom settings as parameters in the URL. For example, the following URL will instruct AccessNow to just launch the Notepad application from the RDP host, rather than display the entire remote desktop:

http://app.ericomaccessnow.com/accessnow/start.html**?**remoteapplicationmode=true**&**alternate_shell=Notepad.exe

To start a URL parameter string add the '?' character to the end of the URL.

Separate each parameter using the '&' character.

If a value contains special characters that cannot be placed in a URL, such as the space key, these character must be represented using an escape string. For example, the space character is encoded as %20.

Common variables used in a query string	
autostart=	(true, false) Starts a session automatically without the need to press the Connect button
address=	(string) Address of the Access Server
full_address=	(string) Address of the RDP Host
username=	(string) Username to pass into the RDP session

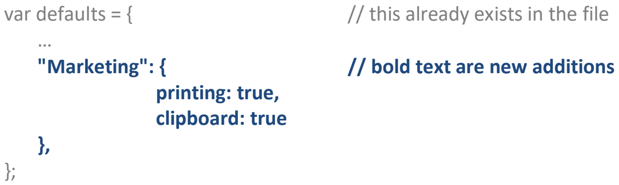
password=	(string) Password to pass into the RDP session (Warning: unencrypted in the URL)
domain=	(string) User's domain if not specified in the username
remoteapplicationmode=	(true, false) Launches just the specified application
alternate_shell=	(string) Path of the application when using application mode (i.e. Notepad.exe)

NOTE Passing parameters in the URL is very simple and easy to use, but is inappropriate for passing sensitive data such as user credentials. For secure transmission of AccessNow parameter values, use browser cookies.

Define Configuration Groups

All users share the configuration settings defined in the config.js configuration file. It is possible to specify special settings that will override the global settings for certain groups of users. Multiple configuration groups are defined in the configuration file.

For example, if the *Marketing* group will have clipboard redirection and printing enabled, change config.js as follows:



```
var defaults = {                    // this already exists in the file
    …
    "Marketing": {                  // bold text are new additions
                    printing: true,
                    clipboard: true
    },
};
```

NOTE The double quotes surrounding *Marketing* **must** be identical. It may be necessary to delete them and re-type them if the text was copied from another source.

Also, the last setting of the configuration group should not have a ',' at the end. This comma will be placed after the closing bracket '}'.

In the URL to be used by the Marketing group, add the *settings* parameter:

http://www.accessnow.com/accessnow/start.html**?settings=Marketing**

Passing settings using Cookies

Ericom AccessNow Cookies uses the same settings as the config.js file, but with an additional **EAN_** prefix. For example, the *gateway_address* setting is set using the cookie *EAN_gateway_address*. Ericom AccessNow erases the session cookies immediately after reading them.

When using cookies, remember to perform the following:

- Use HTTPS to encrypt the cookies so that they can contain sensitive data, such as user credentials.
- Set the *Secure* option to the cookies to ensure that they are never transmitted over unencrypted communication.
- Do not use *HttpOnly* cookies because Ericom AccessNow requires JavaScript access to the cookie values.
- Use the *Path* option to limit addresses to which cookies might be sent from (Ericom AccessNow cookies should not be sent to any host-side address.)
- Use Session cookies that expire as soon as the session ends and/or specify a very short expiration duration.

Passing Encrypted Parameters

AccessNow supports the ability to pass multiple settings using a single base-64 encoded parameter. This is useful when passing settings in the URL in a fashion where the user cannot easily understand what is being transmitted.

For example: instead of:
http://myserver:8080/?username=me&password=secret

The encrypted base-64 encoded parameter appears as:

http://myserver:8080/?params=dXNlcm5hbWU9bWUmcGFzc3dvcmQ9c2VjcmV0

NOTE The same base-64 encoding mechanism may be used with Cookies as well, using the cookie EAN_ parameters.

Settings Precedence

When the Ericom AccessNow client starts, it reads configuration information from a variety of sources. If two or more sources contain different values for the same setting, the value that Ericom AccessNow will use is determined by the following precedence order: →

Lowest Precedence **Highest Precedence**

config.js | *saved settings from previous session* | *cookies* | *URL parameters*

For example: if the gateway_address is specified to be "server1" in config.js but "server2" in a cookie (EAN_ gateway_address), then the value "server2" will be used.

If the setting *overrideSaved* is set to *true* in *config.js*, any settings predefined in the config.js file will override previously used settings. Precedence order:

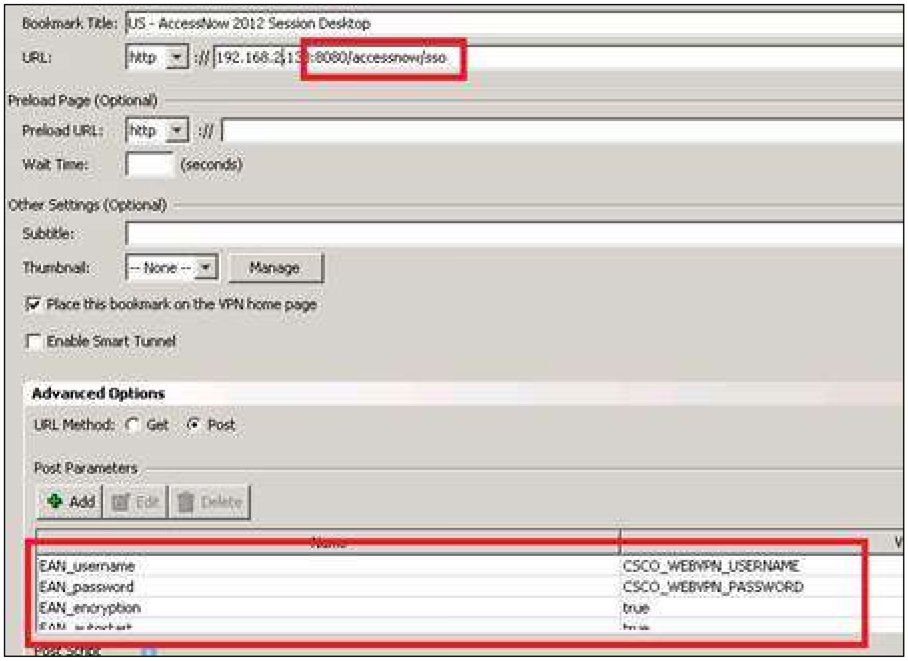
Lowest Precedence → **Highest Precedence**

saved settings from previous session | *config.js* | *cookies* | *URL parameters*

Passing settings using Form POST

Ericom AccessNow supports the passing of variables using Form POST. This is useful when using a third-party portal to pass credentials and settings to AccessNow.

To pass desired values to AccessNow, POST the variables to the path "/accessnow/sso". Use the EAN_ Cookie prefix to define the settings that will be passed using POST. Here is an example of passing the username, password, and encryption setting using POST in a Cisco® ASA SSL VPN:



Bookmark Title: US - AccessNow 2012 Session Desktop

URL: http ://192.168.2.1[illegible]:8080/accessnow/sso

Preload Page (Optional)

Preload URL: http ://

Wait Time: (seconds)

Other Settings (Optional)

Subtitle:

Thumbnail: -- None --

☑ Place this bookmark on the VPN home page

☐ Enable Smart Tunnel

Advanced Options

URL Method: ○ Get ● Post

Post Parameters

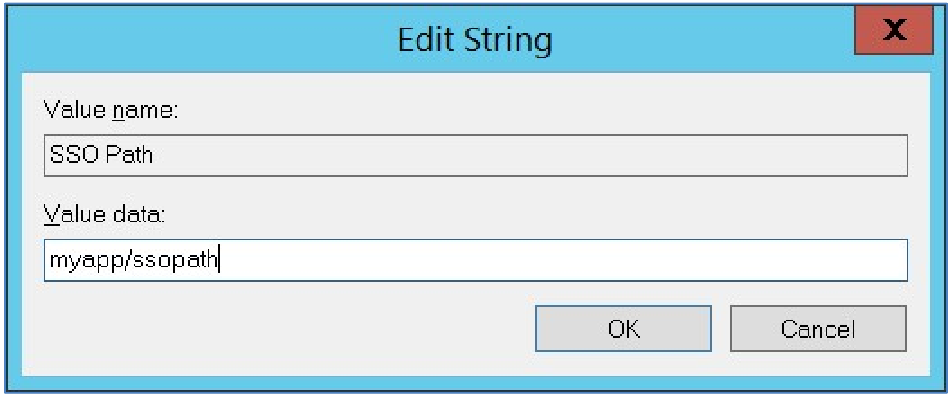
Name	V
EAN_username	CSCO_WEBVPN_USERNAME
EAN_password	CSCO_WEBVPN_PASSWORD
EAN_encryption	true
EAN_autostart	true

Post Script

Modifying the SSO path

Starting in version 8.1, the default SSO path "/accessnow/sso" may be configured with a customizable value. To change this path, perform the following:

- After installing AccessServer, a custom SSO path may be configured via the Windows Registry.
- Navigate to HKLM\Software\Ericom Software\Access Server\SERVER Side
- Add a STRING key and label it "**SSO Path**"
- Enter the desired value in the form: "**myapp/ssopath**"



Value name:
SSO Path

Value data:
myapp/ssopath

- The SSO URL will now be: http:<host>:<port>/myapp/ssopath

  (not required to restart the AccessServer)

Settings Table

The config.js file contains the following configuration settings. Setting names are *case sensitive*. When settings are specified using cookies, their names are prefixed by **EAN_**.

Setting Value	**Description**
overrideSaved	**false** (default), settings that the user changes are preserved between sessions and override values set in config.js. Change to **true** for config.js to override previously used settings.
noSaved	**1** (default)**,** 0 - always use saved settings; 1 – disable save in SSL VPNs; 2 - never use saved.
ignoreURLparameters	**false** (default), set this to **true** to disable the AccessNow URL parameter feature. This is useful to lock down the AccessNow login web page and prevent users from entering custom parameters to AccessNow.
onlyHTTPS	By default, AccessNow first attempts to connect using WebSockets. If the Ericom

	Secure Gateway is used with AccessNow, the connection will fall back to HTTPS when WebSockets is not available. If this setting is **true**, HTTPS is used immediately.
noHTTPS	By default, AccessNow first attempts to connect using WebSockets. If the Ericom Secure Gateway is used with AccessNow, the connection will fall back to HTTPS when WebSockets is not available. If this setting is **true**, only WebSockets will be used and HTTPS fallback will be disabled.
autostart	Set to **true** to force the AccessNow start.html page to connect automatically upon access.
hidden	A comma- or space-separated list of field names as they appear in config.js. For example “username,password,domain”. The listed fields will be hidden so that the user will not be able to modify them. To hide a button, such as the Advanced button, prefix the button text with the word **show**. For example, “showAdvanced,showAbout” *hides* both the Advanced and About buttons. “locale” hides the “Display Language field”. All hidden variables ignore previously saved settings.
settings (URL parameter only)	Name of a Configuration Group to be used
wsport	The default WebSocket port that will be used by the client. The value specified in the file (8080 by default) will be used for both encrypted and unencrypted WebSocket communication. If the Access Server port is changed, this value must also be updated manually. When no port is entered in the *Access Server* value of the *start.html* page, this port value will be used. The user can provide a different value by explicitly specifying the port value after the Access Server address.
gwport	The default gateway port that will be used if it is not explicitly specified in the address field.

dialogTimeoutMinutes	Timeout period, in minutes, after which an inactive dialog is automatically closed and the session is logged off. This is only relevant for dialogs that have a logoff button.
sessionTimeoutMinutes	Timeout period, in minutes, after which an inactive session is disconnected. This timeout is reset whenever user clicks on the keyboard or a mouse button. The default value is 0, which disables this feature.
specialkeys	Enables support for special RDP key combination commands, such as CTRL+ALT+END which starts the Windows NT Security dialog box (similar to local CTRL+ALT+DEL).See http://support.microsoft.com/kb/186624 for the list of key combinations. The following are not supported: Alt+Delete and CTRL+ALT+MINUS SIGN (-)
chromeKeys	**true** (default) support special ChromeOS keys combinations
clipboard	**true** (default) enables clipboard functionality; **false** disables it
clipboardTimeoutSeconds	The delay duration before the clipboard image automatically fades out
clipboardKey	Key to open clipboard paste dialog, set to **false** to disable
console	**false** (default) set **true** to enable RDP console mode
settingsURL	URL of the connection settings file
endURL	URL to open to after the AccessNow session has ended (# value closes window). If there is a prefix with the symbol ^ then this sets the value of window.location instead of top.location. This is useful when the AccessNow session is embedded in a frame. For example "^http://www.ericom.com"
address	address of Access Server
full_address	address of RDP host

username	Username to pass into the AccessNow session
password	Password to pass into the AccessNow session (entered as clear text in config.js file)
domain	Domain to pass into the AccessNow session
	false (default) determines whether the user’s password will be saved in the AccessNow page for future use. Set to **true** to enable password saving (not recommended for kiosk usage).
encryption	**false** determines if encryption will be enabled from the AccessNow client to the server
blaze_image_quality	Sets the quality level using a numeric For example: 40 (fair quality), 75, 95 (best)
resolution	Sets the resolution size of the AccessNow session. The value set must be a valid option under the AccessNow *screen resolution* setting For example: "1024,768"
use_gateway	**false** (default), set to **true** to use an Ericom Secure Gateway for remote access
gateway_address	Defines the address and port of the Ericom Secure Gateway For example: secure.acme.com:4343
remoteapplicationmode	**false** (default), set to **true** to use application-only mode to launch specific applications instead of a full desktop session.
alternate_shell	Defines the path to an application that will be launched instead of a full desktop session. When using a backslash, it must be prefixed with another backslash. When using double quotes as part of a string, the entire string must be denoted using single quotes (and vice versa). Here is an example of a path using backslashes and double quotes: ‘”C:\\Program Files\\notepad.exe”’ For more information on JavaScript language string syntax rules, read:

	http://en.wikipedia.org/wiki/JavaScript_syntax#String
shell_working_directory	Sets the working directory for the application defined in the *alternate_shell* parameter.
useScancodes	No longer in use, see convert_unicode_to_scancode
convert_unicode_to_scancode	**false** (default), set to **true** when using certain applications that send characters as scancodes (i.e. VMware vSphere Client, Ericom Blaze Client, any application where you may have issues typing text). This setting will generate scancodes based on the selected locale.
leaveMessage	The message displayed to the user after he/she navigates away from an active session
printing	**true**, enables the printing feature (default) false, disables the printing feature
fileDownload	**true**, enables the ability to download files (default) false, disables the download feature For Full Screen use “screen”
fileUpload	**true**, enables the ability to upload files (default) false, disables the upload feature
audiomode	**0**, enables audio redirection (default) 1, play audio on remote computer 2, disables audio redirection
name	Defines a custom string for the connection name. By default, the *RDP Host address* is used.
minSendInterval	Specifies the minimum duration between mouse position messages sent from the client when the mouse button is pressed. Units is milliseconds
use_client_timezone	**true** (default) enables local time zone redirection; false disables it

restrictHost	Use this setting to create a list of addresses that the AccessNow will be denied access to. Enter a DNS address, IP address, or IP range (e.g. 127.0.* covers 127.0.0.0 to 127.0.255.255)
reverseMouseWheel	0 - mouse wheel works as usual 1 (default) - mouse wheel direction is reversed only on Mac 2 - mouse wheel direction is always reversed
mouseWheelSpeed	120 (default) – sets mouse wheel speed. Higher value will result in faster scroll.
longPressRightButton	Modifies mouse right click behavior: 0 (default) - long left-click does not generate right-click 1 - long left-click generates right-click only on Mac 2 - long left-click always generates right-click Note that if mouse is moved while holding left mouse button, this causes drag behavior, and will not generate right-click.
fullscreenKeyMode	0 – always pass F11 to remote session 1 – for IE handle F11 locally (enter/exit full-screen). For other browsers pass to remote session 2 (default) – always handle F11 locally (enter/exit full-screen).
disableToolbar	true (default) – displays the toolbar upon login false – disables the toolbar
reconnectOnDropped	true (default) – automatically reconnect to user's session after a network outage is rectified false – disable automatic reconnect
reconnectMaxMinutes	Duration of reconnect for dropped connection
disableToolbar	false (default) – show the AccessNow Toolbar true – disable the AccessNow Toolbar

enableAutoKeyboard	true (default) – auto-sense when the mouse is in a text entry field and automatically display the virtual keyboard false – disable the auto-sense and display feature
touchPad	true (default) - Enable or disable touchpad support for mobile devices.
reverseTouchScroll	false (default) - Reverse two-finger scrolling on touch devices.
noEndDialog	Do not display session disconnect dialog
nameOnly	Display only the connection name in the title
fastLogoff	Enable fast logoff for published apps (remoteapplicationmode must be true)
clipboardSeamlessCopy	true (default) - Enable seamless clipboard redirection (this option only applies to Chrome). With MS IE this is always enabled and cannot be disabled.
MinWidth	Sets the minimum horizontal resolution that the AccessNow session may use (the AccessNow session will never be sized below this pixel value). Default value is 768 when “auto” is used.
MinHeight	Sets the minimum vertical resolution that the AccessNow session may use (the AccessNow session will never be sized below this pixel value). Default value is 600 when “auto” is used.
blockAltOrCtrlCombinations	false (default) - Block any key combination that includes CTRL or ALT.
redirect	False (default) - Enable URL redirection on the host server so that remote URL’s will be launched using the local (default) browser.
defaultErrorMessage	Display the default error message when no matching translation is found
fireFoxProgrammaticFullScreen	false (default) - use FullScreen API on Firefox, will disable ESC key usage while in full screen.

printToNewTab	Opens printed files in a new tab. This allows the user to print multiple files at once. Requires "directprint" to be enabled. Functions best with Chrome.
uploadSizeLimit	Sets the maximum file size that a user may upload with AccessNow
notificationTimeOut	Sets the duration where notifications will be displayed without user interaction (in ms)
rdpTouchEnabled	True (default) - Enable remote touch. On the Server: enable the feature, create RDP dynamic virtual channel, and send RDP client touch events. On the Client – enable the feature, process the incoming server touch messages.
rdpTouchActive	False (default) – Sets the default activation state (ignored when not enabled.) On the **Client** this is the initial state of the toolbar button. If active, send touch events.
rdpTouchAction	0 (default) - Action to be taken if multi-touch is enabled, but is not supported by the server or client device. Action values: 1 - display an error message 2 - display an error message and disconnect 3 - ask for user confirmation to continue without touch
true lossless type	0 (default) true lossless 1 = use jpeg 100 2 = use LZ4 (true lossless, no compression)

These settings only take effect after the user starts a new session.

NOTE In some cases the local browser must be closed and reopened before changes take effect. The browser cache may also need to be cleared.

Embedding AccessNow in an iframe

To embed AccessNow within a third-party web page using the iframe mechanism, simply place an iframe tag within the containing page, and have the iframe's SRC attribute reference the AccessNow URL.

For example:

```
<body>
    <h1>Embedded AccessNow</h1>
    <iframe src="http://127.0.0.1:8080/accessnow/start.html"
style="width:1024px; height:768px"></iframe>
</body>
```

When using iframes AccessNow may access the parent frame. Due of the same-origin policy, make sure the protocol, host, and ports of the parent frame and the iframe src (link to AccessNow) will match.

For example, if the page is accessed at https://example.com:8021/index.html, the iframe src attribute must start with https://example.com:8021.

(Tip: leave off the protocol, host and port and the browser will automatically select the protocol and host, as in http:// or https://).

A known behavior when embedding AccessNow in an iframe is that automatic session resize is not supported.

Post-Session Redirect

When the AccessNow session ends, it can be configured to send the browser to a specified URL using the *endURL* setting.

- Specifying a simple URL will redirect the iframe.
- Prefix the URL with **^** to redirect the iframe's parent (container).
- Prefix the URL with $ to redirect the top-most container.
- Specify # and the URL will close the browser tab.

Sample HTML - Passing Cookies into AccessNow

```
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=utf-8">
<script>
<!--
function createCookie() {
var address = document.forms['cookieform'].address.value;
var fulladdress = document.forms['cookieform'].fulladdress.value;
var username = document.forms['cookieform'].username.value;
var password = document.forms['cookieform'].password.value;
var domain = document.forms['cookieform'].domain.value;
document.cookie = "EAN_autostart=true; expires=0; path=/";
document.cookie = "EAN_address="+address+"; expires=0; path=/";
document.cookie = "EAN_full_address="+fulladdress+"; expires=0; path=/";
document.cookie = "EAN_username="+username+"; expires=0; path=/";
document.cookie = "EAN_password="+password+"; expires=0; path=/";
document.cookie = "EAN_domain="+domain+"; expires=0; path=/";
}
function testCookie() {
document.cookie = "EAN_autostart=true; expires=0; path=/";
document.cookie = "EAN_address=Rdpdemo.ericom.com; expires=0; path=/";
document.cookie = "EAN_full_address=Rdpdemo.ericom.com; expires=0; path=/";
document.cookie = "EAN_username=demo; expires=0; path=/";
document.cookie = "EAN_password=demo; expires=0; path=/";
//document.cookie = "EAN_domain=; expires=0; path=/";
}
function readCookie(name) {
var nameEQ = name + "=";
var ca = document.cookie.split(';');
for(var i=0;i < ca.length;i++) {
var c = ca[i];
while (c.charAt(0)==' ') c = c.substring(1,c.length);
if (c.indexOf(nameEQ) == 0) {
alert( c.substring(nameEQ.length,c.length));
}
}
}
// -->
</script>
 </head>
```

```
<body>
<form name="cookieform" action="#"><p>
address: <input name="address"><br/>
RDP Host: <input name="fulladdress"><br/>
Username: <input name="username"><br/>
Password: <input name="password"><br/>
Domain: <input name="domain"><br/>
</p></form>
<a href="javascript:createCookie()">Set Cookie</a><br/>
<br/>
---------------------------------------------------------------------------------
----------------------------------------<br/>
<a href="javascript:testCookie()">Test Data</a><br/>
<br/>
<!--
---------------------------------------------------------------------------------
----------------------------------------<br/>
<a href="javascript:readCookie('EAN_address')">Read address</a><br/>
<br/>
<a href="javascript:readCookie('EAN_full_address')">Read full
address</a><br/>
<br/>
<a href="javascript:readCookie('EAN_autostart')">Read autostart</a><br/>
<br/>
<a href="javascript:readCookie('EAN_username')">Read user</a><br/>
<br/>
<a href="javascript:readCookie('EAN_password')">Read pass</a><br/>
<br/>
<a href="javascript:readCookie('EAN_domain')">Read domain</a><br/>
<br/>
-->
---------------------------------------------------------------------------------
----------------------------------------<br/>
```

```
<br/>
<a href="/accessnow/start.html">Launch</a>
</body>
</html>
```

AccessNow File Transfer API

AccessNow includes a file transfer mechanism that can support advanced functionality. The file transfer executable, *ANFileTransfer.exe* includes three features to provide enhanced integration with third-party applications.

After enabling any of the three features explained in this section, users with active sessions need to logoff and back on in order to use the feature.

Initiate a download of a file

Within an AccessNow session, launch: ANFileTransfer.exe *file-path*

ANFileTransfer.exe is located in the AccessNow installation folder, e.g. C:\Program Files\Ericom Software\Ericom Access Server. This folder is added to the system path during installation.

The complete path is also available in the registry under: *HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\App Paths\ANFileTransfer.exe*. This allows the executable to be launched directly using ShellExecute.

Here is an example of a use case:

An application always creates an output file in *c:\* named *test.csv*. Since the file will always be in the same location, a shortcut may be created to simplify the download process.

Launch "*ANFileTransfer.exe c:\test.csv*" and test.csv will be downloaded in one step, rather than three (initiate download, select file, click OK). This operation may also be called from a third-party application to automate the download process of an output file.

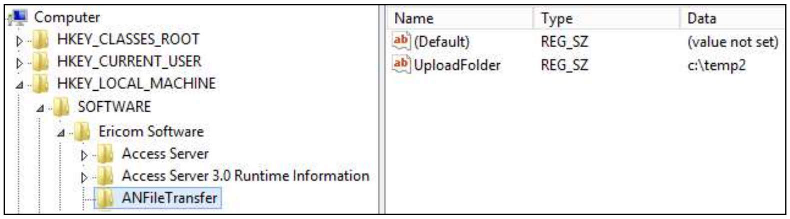
NOTE The download destination cannot be configured ahead of time. The downloaded file will be placed in a folder specified by the web browser.

Specify upload folder

Instead of displaying a dialog to the user, uploaded files will always be placed directly into a pre-configured folder (files with the same name will be overwritten with the latest version).

The folder path is specified using a registry setting. It will be read from either HKEY_LOCAL_MACHINE or HKEY_CURRENT_USER with HKEY_CURRENT_USER taking precedence. Before configuring the upload folder path, verify that users have write access to the specified location. The Registry keys for the Upload Folder setting are:

- HKEY_LOCAL_MACHINE\SOFTWARE\Ericom Software\ANFileTransfer, REG_SZ value UploadFolder
- HKEY_CURRENT_USER\SOFTWARE\Ericom Software\ANFileTransfer, REG_SZ value UploadFolder



```
Computer
  HKEY_CLASSES_ROOT
  HKEY_CURRENT_USER
  HKEY_LOCAL_MACHINE
    SOFTWARE
      Ericom Software
        Access Server
        Access Server 3.0 Runtime Information
        ANFileTransfer
```

Name	Type	Data
(Default)	REG_SZ	(value not set)
UploadFolder	REG_SZ	c:\temp2

On 64-bit systems running previous 32-bit versions of Access Server, and 32-bit systems, the Registry keys are located here:

- HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Ericom Software\ANFileTransfer, REG_SZ value UploadFolder
- HKEY_CURRENT_USER\SOFTWARE\Wow6432Node\Ericom Software\ANFileTransfer, REG_SZ value UploadFolder

NOTE These registry keys may not have been installed with the application. If they are missing, simply add them to the Registry. Create a new Key with the label *ANFileTransfer* and String Key *UploadFolder*.

Here is an example of a use case:

All uploaded files should go to the user's home directory. Set *UploadFolder* to the path or drive of the home directory (e.g. U:\). When users upload files with AccessNow, they will not be prompted for the upload path and all files will be placed in the specified location. It is best practice to hide and prevent access to drives that contain critical system files (e.g. C:\).

Specify executable that is launched with every uploaded file

An executable can be defined to launch with every uploaded file, with the file path as the command-line argument. Batch (.BAT) files are also supported.

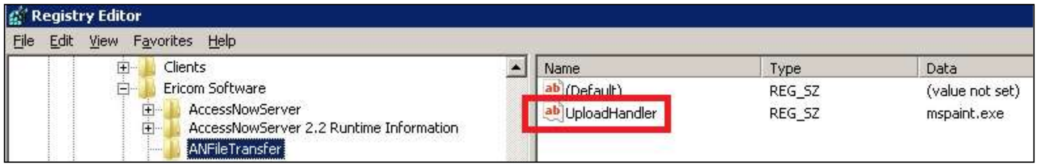
The executable is specified using a registry setting. It will be read from either HKEY_LOCAL_MACHINE or HKEY_CURRENT_USER with HKEY_CURRENT_USER taking precedence. The Registry keys for the Upload Handler setting are:

- HKEY_LOCAL_MACHINE\SOFTWARE\Ericom Software\ANFileTransfer, REG_SZ value UploadHandler

- HKEY_CURRENT_USER\SOFTWARE\Ericom Software\ANFileTransfer, REG_SZ value UploadHandler

On 64-bit systems running previous 32-bit versions of Access Server, and 32-bit systems, the Registry keys are located here:

- HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Ericom Software\ANFileTransfer, REG_SZ value UploadHandler
- HKEY_CURRENT_USER\SOFTWARE\Wow6432Node\Ericom Software\ANFileTransfer, REG_SZ value UploadHandler



Name	Type	Data
(Default)	REG_SZ	(value not set)
UploadHandler	REG_SZ	mspaint.exe

Example Use Case:

Only Microsoft Paint is published to the end user. Set the *UploadHandler* to the path of the published application and this application will be automatically launched each time a file is uploaded. The uploaded file will be used as the parameter for the application so it will be opened automatically (if it is a valid file for the specified application).

NOTE This feature specifies a single handler application and will not verify that the application is able to properly open a file passed to it. If multiple file types need to be supported, use this feature to execute a BAT file that checks file types, and then launches the appropriate application for each type.

Tip: a useful way of using UploadHander is to set it to explorer.exe. Now, when a file is uploaded, the configured helper application on the system will automatically open the file. For example, upload abc.pdf, and Adobe Acrobat will automatically open the file if it is configured as the helper application on the operating system.

Server initiated AccessNow file uploads

A program running on the AccessServer side can request the user to upload a file. The command line arguments for **ANFileTransfer.exe** are:

-t [0,1 allowMultiple] [".txt,.doc" fileTypes] ["…" Destination Folder] [120 timeout in seconds by default]

For example:

start /w "" "c:\Program Files\Ericom Software\Ericom Access Server**ANFileTransfer.exe**" -t 1 ".txt" c:\temp 120

Description of command line parameters

start /w "" - waits for the process to complete

1 - multiple uploads

.txt - for file types (csv without * as prefix, . for all)

c:\temp - for the destination directory

120 - seconds to wait for the upload (120 is the default), from the time that the process is started until the upload is complete

After the operation completes you can look at the return code with

echo %errorlevel%

<u>Description of return codes:</u>

0 – Successful

1 - Error parsing command line

2 - Missing parameter

3 - Error Initializing COM

4 - Failed to connect to the COM server

5 - Missing query parameters (NOT for triggered upload)

6 - Error getting parameter value (NOT for triggered upload)

7- Missing parameter when trying to copy or move a file

8 - Copying to Download directory failed

9 - Failed to move a file

10 - Missing upload parameter (-u file)

11 - Missing upload parameter (-U folder)

12 - Failed to create a directory for an upload

13 - Failed during an upload to return to PtTsAgent that it completed

14 - Failed during a download to return to PtTsAgent that it completed

15 - Error while waiting for a triggered upload to complete

16 - User Cancelled upload

17 - Timeout during a triggered upload failed to complete

18 - Multiple uploads argument for triggered upload is invalid

19 - Timeout argument for triggered upload is invalid

20 - Too few arguments for a triggered upload

21 - Failed to create a directory for the destination of a triggered upload

22 - Upload response has too few parameters

Keyboard Locale Value Table

The following list displays all valid foreign keyboard locale values for the Keyboard Locale setting. Use this table to pass the desired setting with the *EAN_keyboard_locale* cookie.

For example, to set Japanese, use *EAN_keyboard_locale=E0010411*

<option value="00000809" data-lang="en-gb">STR_ENGLISH_UK</option>

<option value="040904090C09" data-lang="en-au">STR_ENGLISH_AU</option>

<option value="0000041C" data-lang="sq">STR_ALBANIAN</option>

<option value="00000423" data-lang="be">STR_BELARUSIAN</option>

<option value="0000141A" data-lang="bs">STR_BOSNIAN</option>

<option value="00010405" data-lang="bg">STR_BULGARIAN</option>

<option value="00000804" data-lang="zh-cn">STR_CHINESE_SIMPLIFIED</option>

<option value="00000404" data-lang="zh-tw">STR_CHINESE_TRADITIONAL</option>

<option value="00000405" data-lang="cs">STR_CZECH</option>

<option value="00000406" data-lang="da">STR_DANISH</option>

<option value="00000413" data-lang="nl">STR_DUTCH</option>

<option value="00000425" data-lang="et">STR_ESTONIAN</option>

<option value="0000040B" data-lang="fi">STR_FINNISH</option>

<option value="0000040C" data-lang="fr">STR_FRENCH</option>

<option value="0000080C" data-lang="fr-be">STR_FRENCH_BELGIUM</option>

<option value="00001009" data-lang="fr-ca">STR_FRENCH_CANADA</option>

<option value="0000100C" data-lang="fr-ch">STR_FRENCH_SWITZERLAND</option>

<option value="00000407" data-lang="de">STR_GERMAN</option>

```
<option value="080708070807" data-lang="de-ch">STR_GERMAN_SWITZERLAND</option>
<option value="00000408" data-lang="el">STR_GREEK</option>
<option value="040DF03D040D" data-lang="he">STR_HEBREW</option>
<option value="0000040E" data-lang="hu">STR_HUNGARIAN</option>
<option value="0000040F" data-lang="is">STR_ICELANDIC</option>
<option value="00000410" data-lang="it">STR_ITALIAN</option>
<option value="E0010411" data-lang="ja-jp">STR_JAPANESE</option>
<option value="E0010412" data-lang="ko-kr">STR_KOREAN</option>
<option value="00000426" data-lang="lv">STR_LATVIAN</option>
<option value="00010427" data-lang="lt">STR_LITHUANIAN</option>
<option value="041404140414" data-lang="no">STR_NORWEGIAN</option>
<option value="00010415" data-lang="pl">STR_POLISH</option>
<option value="00000816" data-lang="pt">STR_PORTUGUESE</option>
<option value="00010416" data-lang="pt-br">STR_PORTUGUESE_BRAZIL</option>
<option value="00000418" data-lang="ro">STR_ROMANIAN</option>
<option value="00000419" data-lang="ru">STR_RUSSIAN</option>
<option value="0000081A" data-lang="sr">STR_SERBIAN_LATIN</option>
<option value="00000C1A" data-lang="sr">STR_SERBIAN_CYRILLIC</option>
<option value="0000041B" data-lang="sk">STR_SLOVAK</option>
<option value="00000424" data-lang="sl">STR_SLOVENIAN</option>
<option value="0000040A" data-lang="es">STR_SPANISH</option>
<option value="0001040A" data-lang="es-ar">STR_SPANISH_SOUTH_AMERICA</option>
<option value="0000041D" data-lang="sv">STR_SWEDISH</option>
<option value="0000041F" data-lang="tr">STR_TURKISH</option>
<option value="00000422" data-lang="uk">STR_UKRAINIAN</option>
<option value="00000452" data-lang="cy">STR_WELSH_UK</option>
```

Auto Keyboard Locale Switching

Ericom AccessServer 7.6.1 added automatic keyboard input locale switching (inside the session) based on incoming input. As characters are typed, Ericom AccessServer checks to see if the character is associated with a specific language. If it is, a message is sent to the RDP Session to change and set the keyboard locale accordingly.

Unicode and scancode input are both supported. This feature works best with languages that are significantly different from each other (e.g. English and Hebrew as one is a left-to-right language and the other right-to-left language)

This feature is disabled by default and is configured using the blaze.txt file. To enable this feature perform the following:

- Open the file *C:\Program Files\Ericom Software\Ericom Access Server\WebServer\AccessNow\resources\Blaze.txt* using a text editor
- Add the line (if it does not exist): keyboard detect languages:s:

The syntax is for this setting is as follows:

keyboard detect languages:s:keyboardId,start-end,start-end, … ; keyboardId,start-end,start-end

Anytime Unicode input is received in the range ‘start-end’, the corresponding ‘keyboardId’ should be set.

For Example:

keyboard detect languages:s:0x04090409,41-5A,61-7A;0xf03d040d,5BE-5F4

Keyboard Id: 0x04090409 = English. US. 41-5A and the characters 'A-Z' and 61-7A are 'a-z'.

Keyboard Id: 0xf03d040d = Hebrew. 5BE-5F4 are the characters: Hebrew Punctuation Maqaf - Hebrew Punctuation Gershayim. This includes all the Hebrew characters (See Unicode and HTML for the Hebrew alphabet: https://en.wikipedia.org/wiki/Unicode_and_HTML_for_the_Hebrew_alphabet

The character ranges are in hexidecimal and the values are unicode character ranges.

If the keyboard is manually changed on the server side, it will be out-of-sync until the language is changed again on the client.

For this feature to function properly, the exact keyboard language must be installed for the current user in the RDP session. There may be multiple variants of a language, such as English.

In the AccessServer installation directory, there is a program named **LangControl.exe**. To see a list of all keyboards installed for the current user run **LangControl /list**

When the language is switched, there is a small delay of 500 milliseconds for the first character typed in the new language to be detected and processed.

8. SECURITY

Using a Trusted Certificate

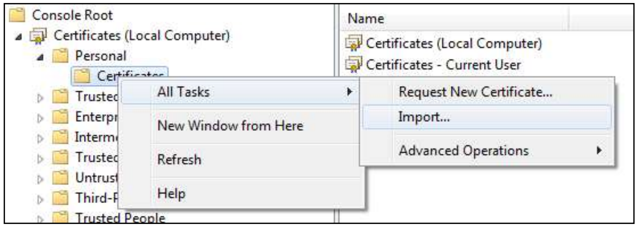
The Access Server installation includes a self-signed certificate for secure SSL connections. Some browsers, such as Google Chrome, allow self-signed certificates for SSL-encrypted WebSocket connections.

Opera browsers will notify the user that the server certificate is not signed and prompt the user to continue.

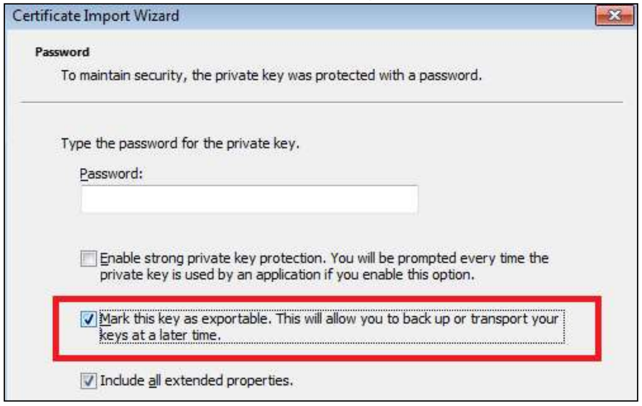
A trusted certificate is also required to establish secured WebSocket connections (wss).

To import a trusted certificate into the Access Server, perform the following:

1. Import the trusted certificate to the *Computer (Personal | Certificates)* store.



2. Mark it as *exportable* during the import:



Certificate Import Wizard

Password

To maintain security, the private key was protected with a password.

Type the password for the private key.

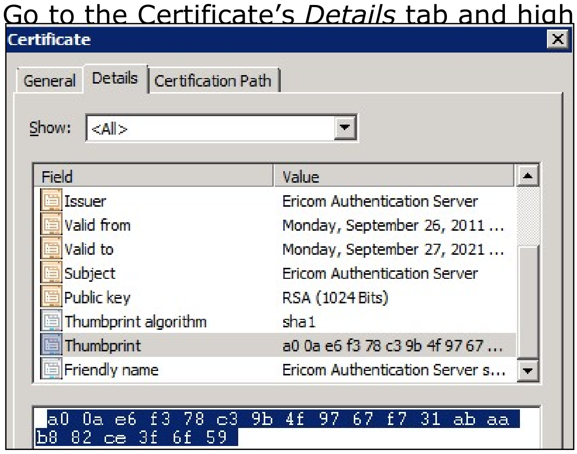
Password:

□ Enable strong private key protection. You will be prompted every time the private key is used by an application if you enable this option.

☑ Mark this key as exportable. This will allow you to back up or transport your keys at a later time.

☑ Include all extended properties.

3. Go to the Certificate's *Details* tab and highlight the Thumbprint.



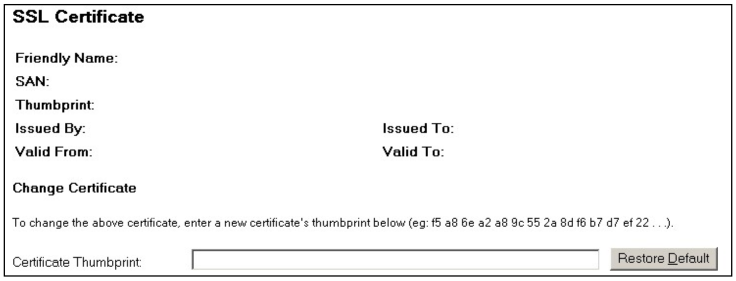
Field	Value
Issuer	Ericom Authentication Server
Valid from	Monday, September 26, 2011 ...
Valid to	Monday, September 27, 2021 ...
Subject	Ericom Authentication Server
Public key	RSA (1024 Bits)
Thumbprint algorithm	sha1
Thumbprint	a0 0a e6 f3 78 c3 9b 4f 97 67 ...
Friendly name	Ericom Authentication Server s...

```
a0 0a e6 f3 78 c3 9b 4f 97 67 f7 31 ab aa
b8 82 ce 3f 6f 59
```

4. Copy the thumbprint (CTRL+c)

5. Open the *Access Server Configuration* console and go to the *Security* tab.

6. Paste (CTRL+v) the thumbprint into the *Certificate Thumbprint* field.



SSL Certificate

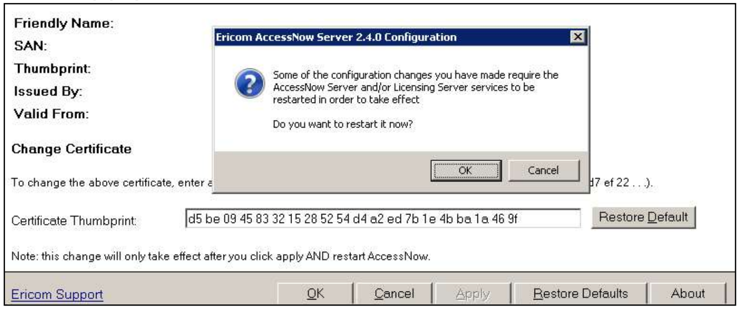
Friendly Name:
SAN:
Thumbprint:
Issued By: **Issued To:**
Valid From: **Valid To:**

Change Certificate

To change the above certificate, enter a new certificate's thumbprint below (eg: f5 a8 6e a2 a8 9c 55 2a 8d f6 b7 d7 ef 22 . . .).

Certificate Thumbprint:

7. Click Apply and then restart the Access Server.



Friendly Name:
SAN:
Thumbprint:
Issued By:
Valid From:

Change Certificate

To change the above certificate, enter a d7 ef 22 . . .).

Certificate Thumbprint: d5 be 09 45 83 32 15 28 52 54 d4 a2 ed 7b 1e 4b ba 1a 46 9f

Note: this change will only take effect after you click apply AND restart AccessNow.

Ericom AccessNow Server 2.4.0 Configuration

Some of the configuration changes you have made require the AccessNow Server and/or Licensing Server services to be restarted in order to take effect

Do you want to restart it now?

8. Start the Access Server service and it will be ready for use.

NOTE	For VDI environments, it is possible to install a wildcard certificate on the gold image and then clone the image with the trusted certificate and Access Server pre-configured.

Benefit of using a Trusted Certificate

When using AccessNow in production, a trusted certificate is strongly recommended (especially if the Secure Gateway is not being used.) Certain browsers, such as Safari on Macs, may deny connections that do not use a trusted certificate. Certain browsers may also require a trusted certificate when connecting using an HTTPS enabled URL. Install a trusted certificate in the Secure Gateway or Access Server to ensure safe and reliable connections from a wide range of web browsers.

Secured connections via Ericom Secure Gateway

When using the Ericom Secure Gateway, the connection between the AccessNow browser client and the Secure Gateway is always secured using SSL. The Ericom Secure Gateway is installed with a self-signed certificate by default, but supports trusted certificates as well. Please read the *Ericom Secure Gateway Administrator's Manual* for full instructions on how to install and configure it for use with Ericom AccessNow and Blaze.

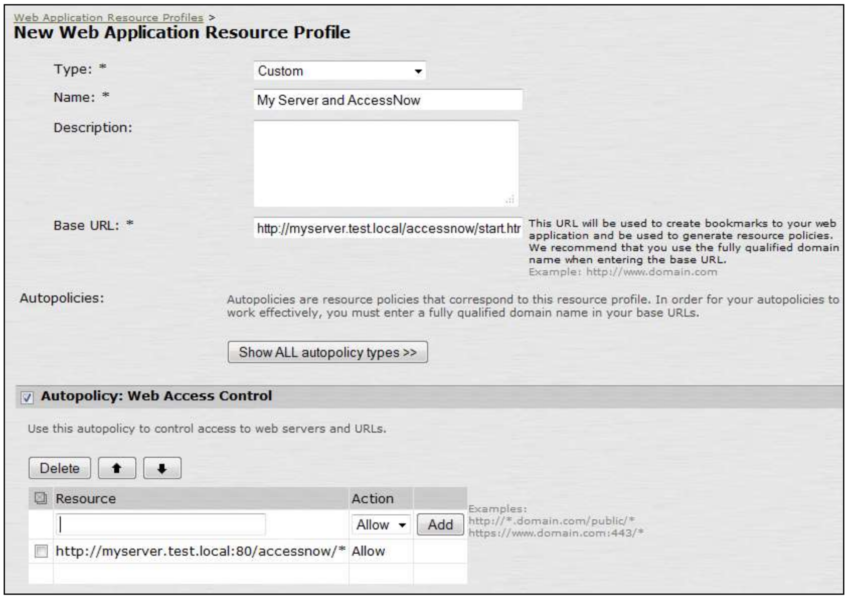
9. SSL VPN CONFIGURATION

Ericom AccessNow is compatible with an SSL VPN that supports HTML5 Websockets. SSL VPN’s that do not support Websockets will require the Ericom Secure Gateway (ESG) for HTTPS access.

Configuring the AccessNow link

AccessNow links are published in the SSL VPN web interface as *web* applications. To publish a new AccessNow connection, go to the SSL VPN Admin page and do the following:

1) Go to Resource Profiles | Web | *New Web Application Resource Profile*
2) Enter the *Name* of the AccessNow connection that the users should see.
3) Enter the AccessNow URL in the *Base URL* field.



Web Application Resource Profiles >

New Web Application Resource Profile

Type: * Custom

Name: * My Server and AccessNow

Description:

Base URL: * http://myserver.test.local/accessnow/start.htr

This URL will be used to create bookmarks to your web application and be used to generate resource policies. We recommend that you use the fully qualified domain name when entering the base URL.
Example: http://www.domain.com

Autopolicies: Autopolicies are resource policies that correspond to this resource profile. In order for your autopolicies to work effectively, you must enter a fully qualified domain name in your base URLs.

☑ Autopolicy: Web Access Control

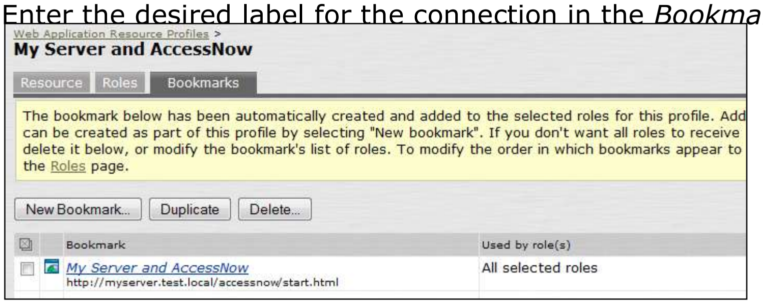
Use this autopolicy to control access to web servers and URLs.

☐	Resource	Action	
		Allow	Add
☐	http://myserver.test.local:80/accessnow/*	Allow	

Examples:
http://*.domain.com/public/*
https://www.domain.com:443/*

4) Click *Save and Continue*
5) At the *Roles* dialog add all roles that should have access to the AccessNow link and click *Save Changes.*

6) Enter the desired label for the connection in the *Bookmarks* tab



Web Application Resource Profiles >

My Server and AccessNow

The bookmark below has been automatically created and added to the selected roles for this profile. Add can be created as part of this profile by selecting "New bookmark". If you don't want all roles to receive delete it below, or modify the bookmark's list of roles. To modify the order in which bookmarks appear to the Roles page.

	Bookmark	Used by role(s)
□	My Server and AccessNow http://myserver.test.local/accessnow/start.html	All selected roles

7) When the user logs into the SSL VPN - the AccessNow link will be displayed under the Web bookmarks section (i.e. My Server and AccessNow). Simply click on the link to connect to an application or desktop published with AccessNow.

SSO Using Cookies

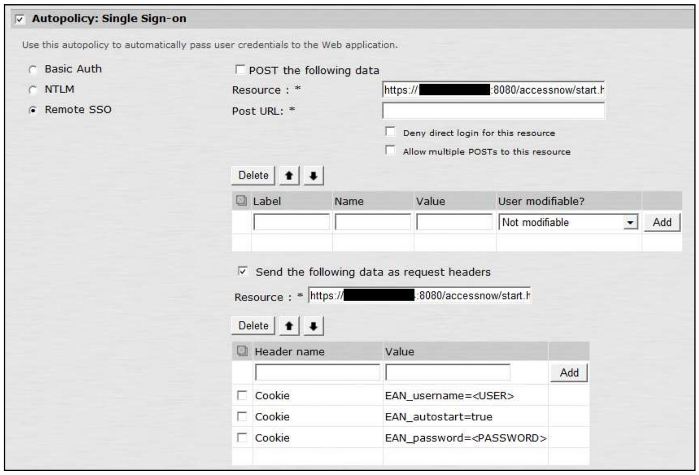
In the Single Sign-on Config, set "Remote SSO"

Set "Send the following data as request headers" to the AccessNow URL.

Set the desired cookies, for example:

- EAN_username=<USER> (this passes the username)
- EAN_password=<PASSWORD> (this passes the password)
- EAN_autostart=true (this auto starts the connection, "bypassing" the start page)
- Other AccessNow parameters may also be passed as cookies.

NOTE: the environment variables <USER> and <PASSWORD> may vary for SSL VPN's, please refer to your device's documentation for the user and password variable syntax.



☑ **Autopolicy: Single Sign-on**

Use this autopolicy to automatically pass user credentials to the Web application.

○ Basic Auth
○ NTLM
● Remote SSO

□ POST the following data

Resource : * https://[redacted]:8080/accessnow/start.h

Post URL: *

□ Deny direct login for this resource

□ Allow multiple POSTs to this resource

	Label	Name	Value	User modifiable?	
				Not modifiable	Add

☑ Send the following data as request headers

Resource : * https://[redacted]:8080/accessnow/start.h

	Header name	Value	
			Add
□	Cookie	EAN_username=<USER>	
□	Cookie	EAN_autostart=true	
□	Cookie	EAN_password=<PASSWORD>	

SSO Using POST

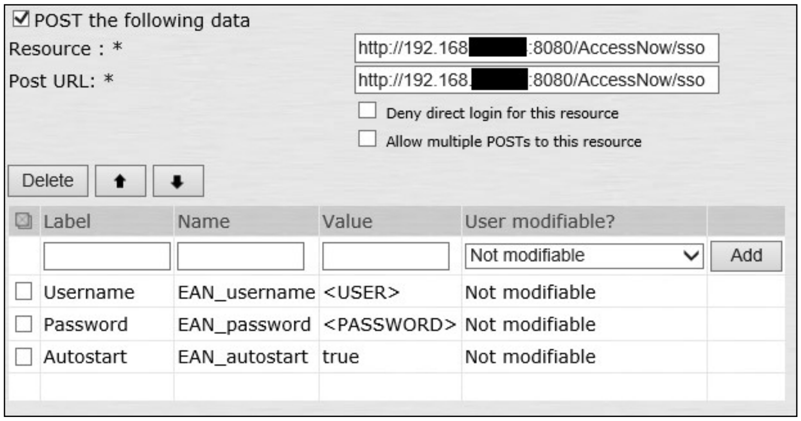
In the Single Sign-on Config, set “Remote SSO”

Set “POST the following data” to the AccessNow SSO URL (/AccessNow/sso).

Set the desired cookies, for example:

- EAN_username=<USER> (this passes the username)
- EAN_password=<PASSWORD> (this passes the password)
- EAN_autostart=true (this auto starts the connection, “bypassing” the start page)
- Other AccessNow parameters may also be passed via POST.

NOTE: the environment variables <USER> and <PASSWORD> may vary for SSL VPN’s, please refer to your device’s documentation for the user and password variable syntax.



☑ POST the following data

Resource : * http://192.168[redacted]:8080/AccessNow/sso

Post URL: * http://192.168[redacted]:8080/AccessNow/sso

□ Deny direct login for this resource

□ Allow multiple POSTs to this resource

□	Label	Name	Value	User modifiable?
				Not modifiable
□	Username	EAN_username	<USER>	Not modifiable
□	Password	EAN_password	<PASSWORD>	Not modifiable
□	Autostart	EAN_autostart	true	Not modifiable

Support for multiple bookmarks in portal

The setting *noSaved* clears any saved setting before initiating the connection (similar to clicking the *Reset* button).

Notes about this feauture:

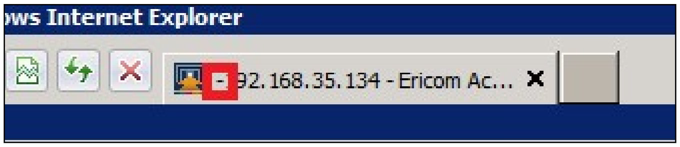
- The default value for this setting is *false*
- This setting can be specified via config.js (settings.js), URL or cookie
- The GUID (license) value is retained when this setting is used

10. HTTPS Mode

For environments where WebSockets support is not available, Ericom AccessNow can work in HTTPS mode such that all communication will be sent via HTTPS only. HTTPS mode will be used if WebSockets is not available. WebSockets will be used when available as it will provide better performance. HTTPS mode is required when using *Microsoft Internet Explorer 9* or with gateways that only proxy HTTPS traffic.

To enable this feature, the *Ericom Secure Gateway* is required. The AccessNow web pages must be delivered using the web server built into the Secure Gateway (files are located under the *Webserver/AccessNow* folder). Perform the following to enable AccessNow for HTTPS support.

1) Install the Access Server on the desired RDP Hosts.
2) Install the Ericom Secure Gateway (this does not necessarily have to be on the RDP Host or Access Server). The Ericom Secure Gateway must be installed on a server that is accessible by the target end-user group(s).
3) To connect to the Access Server using HTTPS - enter the AccessNow URL of the *Secure Gateway* (the Secure Gateway includes the AccessNow web component) https://<securegatewayaddress>/accessnow/start.html
4) Enter the parameters for the target Access Server in the start.html page.
5) Upon connection, if HTTPS mode is active a '-' symbol will prefix the address in the browser tab.



Forcing HTTPS Mode

AccessNow connections may be forced to use HTTPS mode for all connections. To enable HTTPS-only mode, configure this in *config.js* file: *onlyHTTPS*: ***true,***

In the default *config.js* file, this line is commented out; simply delete the comments "//", save the file, and all future AccessNow connections will use this setting (the end-user's browser's cache may need to be cleared as well).

NOTE Forcing HTTPS will speed up the connection process in environments where Websocket is never available. This is because AccessNow does not have to attempt the connection using Websocket and wait for the attempt to fail.

11. TECHNICAL SUPPORT

Release Notes

Starting in Version 9.0, release notes will be listed here in addition to the product download site. Release notes for versions prior to 9.0 can be found on the product download site.

V10.0 (2022)

- Validated on Windows 11, Windows 10 LTSC 2021, Windows 10 21H2, and Server 2022
- Access server generates self-signed certificate with Subject Alternative Name
- Printing stability fixes
- This is the last planned version with support for 32bit Windows 8 and 10 operating systems.

V9.5 (2021)

- AccessServer compatible with FIPS compliant systems
- AccessServer JQuery components updated to latest version
- AccessNow file uploads can be initiated from the Server side

V9.4

- Clipboard can be configured to work in a single direction
  block clipboard host to local:i:1 (0 to allow)
  block clipboard local to host:i:1 (0 to allow)
- Fix for resizing the screen when orientation is changed on mobile devices (25889)
- AccessServer can whitelist RDP host access (via registry key: AllowedDestinationsInNonManagedMode)
- Resolved unauthenticated-SSRF vulnerability
- Deprecated three-finger swipe gesture (31204)
- Fix for typing ‘@’ character with Japanese enabled (31839)
- Improved support for Firefox on Ubuntu 16 (32121)
- Ctrl key code support (25090)

- Deprecate clipboardUseFlash since Flash is disabled in many browsers.
- Deprecate settings: showDownload, remember, and blaze_acceleration

V9.2

- New flag: physical keyboard presence:i: to configure the use of a local keyboard (29939)
  0 - auto detect physical keyboard

  1 - physical keyboard connected

  2 - no physical keyboard connected

  • Optional headers for web requests and security, under CustomHttpHeaders:
  X-Content-Type-Options: nosniff
  X-Frame-Options: SAMEORIGIN
  X-XSS-Protection: 1; mode=block
- Use of touch redirection with hidden toolbar (29332)
- New default behavior: no data is sent to the browser console (29771)
- Enhanced security: reduce activity data displayed to user (32264)
- AnFileTransfer logging (30286)
  Create a string under HKEY_LOCAL_MACHINE\SOFTWARE\Ericom Software\ANFileTransfer called logToFile with a path to a file that should receive log messages
- Setting to block scancodes (29865)
- Whitelabeling feature (29875)
- Disable dragging
- Scroll bar control setting in config.js: scroll_bars_mode
  0 - "auto": if the device has a touch screen then the scrollbars will not be visible

  1 - "always": the scrollbars will be visible at all times except for the dynamic screen resolution under display settings (fit to browser window and fit to screen)

  2 - "never": the scrollbars are hidden at all times
- Added General | DWORD report_thread_stack_sizes, set to 1 to create the file "Access Server Thread Stack Sizes.txt" for troubleshooting.

V9.1

January 2019

- Maintenance version – bug fixes and internal optimization (28123, 28820, 27271)

- Lexmark Universal driver is used by default for printing (29098)

V9.0

November 2018

- Windows 2019 support
- Windows 10 SAC 1809 support
- Version alignment to 9.0
- ESG: TLS 1.0 disabled by default, can be enabled in the configuration if needed.

Warning on using TS/RDS per-Device CAL with AccessNow

Per-Device TS/RDS CALs are not recommended for use with Ericom AccessNow. It is strongly **recommended** to **use per-User TS/RDS CAL's** with AccessNow. AccessNow will connect to Terminal Servers and Remote Desktop Servers using per-Device CAL, however, it will consume another license on top of any previous mstsc connection.

AccessNow operates within the browser. With each connection from a different browser on the same machine, an additional per-Device TS/RDS CAL will be consumed. For example, if a user connects to a Terminal Server first with mstsc.exe, and then connects again with AccessNow on Google Chrome – two per-Device CAL's will be consumed. Furthermore, if the same user connects using Firefox browser from the same machine, another per-Device CAL will be consumed.

Browser Extension Conflicts

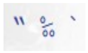
Browser extensions and toolbars may inject JavaScript code into web pages. This can adversely impact the behavior of certain web pages. If AccessNow is not working properly - try disabling or uninstalling any active browser extensions or toolbars. Restart the web browser after uninstalling or disabling an extension to ensure that it is no longer active.

AccessNow Printing with Foreign Languages

When using the AccessNow Printer with content containing foreign characters, the resulting PDF file may show incorrect characters instead.

The fix for this issue is to add the entry **ps2pdf mode:i:0** to *blaze.txt*.

The blaze.txt file is located under the *resources* folder of the AccessNow web component. In an Access Server installation, this is located at *Access Server* | *WebServer* | *AccessNow* | *resources.*

Examples	**Correct**	**Incorrect**
Korean	ㅑ	ß
Russian	Над	 " ‰ `

HTTPS and SSL Encryption

When the AccessNow page is delivered to the web browser using HTTPS - the SSL encryption setting will be checked by default. Modern browsers usually require that WebSocket connections to be encrypted when launched from pages delivered using HTTPS.

Right Click on Mac

To perform a right-click on Mac OSX system: Command+left-click

Blocking Scan Codes

Starting in version 9.2, added registry settings to configure the blocking of certain scan codes on input. This will not impact "unicode characters

In the registry set:

Access Server\SERVER Side

ScanCodesToIgnore REG_SZ

Value is a comma separated list of scan codes. The values are numeric in either decimal or hex, for example: 0x14,17

0x1d hex code for control

0x38 hex code for ALT

0x3d hex code for F3 in us keyboard

PowerShell:

```
Set-ItemProperty -Path "HKLM:\SOFTWARE\Ericom Software\Access Server\SERVER Side" -Name "ScanCodesToIgnore" -Value "0x1d,0x38"
```

```
Set-ItemProperty -Path "HKLM:\SOFTWARE\Ericom Software\Access
Server\SERVER Side" -Name "ScanCodesToIgnore" -Value "0x3d"
```

A list of scan code can be found here:
http://www.philipstorr.id.au/pcbook/book3/scancode.htm

Unicode characters can also be ignored with:

UnicodeCodesToIgnore REG_SZ

Value is a comma separated list of scan codes. The values are numeric in either decimal or hex, for example:

0x2f is / and 0x60 is 0x27

Run: 'Set-ItemProperty -Path "HKLM:\SOFTWARE\Ericom Software\Access Server\SERVER Side" -Name "UnicodesToIgnore" -Value "0x2f,0x27"`

If a DWORD is set to 1 for LogScancode or LogUnicode under HKLM:\SOFTWARE\Ericom Software\Access Server\SERVER Side then the log file will receive a log message for each character. This can help in determining the scancode or unicode for a specific character.

Demo Site to Verify Connectivity

If a user is having trouble connecting to the AccessNow environment that has been installed – ask the user to connect to the Ericom demo site on the Internet using this URL: http://an.ericom.com/

If the demo any of the demo runs, then the browser is compatible with AccessNow. This demo site communicates over port 443 using the Ericom Secure Gateway and a trusted certificate. If it works for the user, verify the following:

- AccessNow port between the user's browser and the AccessNow environment is available. The default port is 8080.
- A trusted certificate may be required for the Ericom Secure Gateway or the Access Server.

Requesting Support

To request technical support from Ericom Software, email CA@ERICOM.COM and provide the following information:

- Which version of Ericom AccessNow are you using (see About)?
- What type of system/operating system are you connecting to (host)? Is it 32 or 64 bit? Is RDP enabled?
- What type of system/operating system are you connecting from (client)? Is it 32 or 64 bit?
- Is port 8080 enabled on the host (is the firewall configured with an exception)?
- What error messages are being displayed?
- How many people/machines/hosts are having this problem (one, all, etc)?

ABOUT ERICOM

Ericom® Software is a leading global provider of Application Access, Virtualization and RDP Acceleration Solutions. Since 1993, Ericom has been helping users access enterprise mission-critical applications running on a broad range of Microsoft Windows Terminal Servers, Virtual Desktops, legacy hosts and other systems. Ericom has offices in the United States, United Kingdom and EMEA. Ericom also has an extensive network of distributors and partners throughout North America, Europe, Asia and the Far East. Our expanding customer base is more than 30 thousand strong, with over ten million installations.

For more information about Ericom and its products, please visit http://www.ericom.com

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