# ARPMiner - HotSpot for Windows

ARPMiner is a multi-purpose access control software runs under Windows *(Vista/7/8/10, 2008-2022 Server)*. ARPMiner can be used as a HotSpot system, NAT gateway and a PPPoE Server.

ARPMiner consists of a GUI and a service application called TekSpot. TekSpot has its own built-in PPPoE, HTTP, DHCP server and a proxy DNS server. TekSpot uses its built-in NAT engine. RADIUS AAA and PPP encryption are supported in only SP edition.
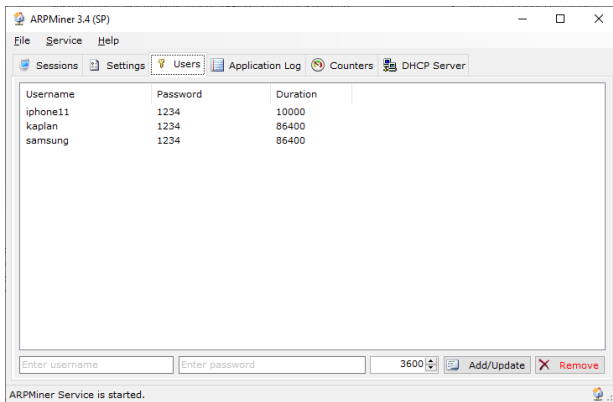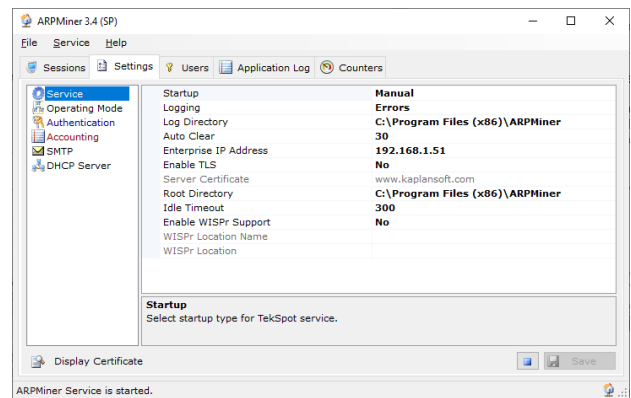

ARPMiner - Users

ARPMiner supports three modes of operation for access control; Network Address Translation (NAT), bridge mode and PPPoE server mode. Bridge operation mode enables you to perform access control for the private network without any topology change in your network

Major Features

- Simple design and easy to use user interface.
- Simple interface for user definitions.
- Real time monitoring of connected users.
- NAT and bridge operation modes for HotSpot Captive Portal.
- PPPoE Server with MPPE *(40/128 bits)* Encryption.
- PAP, CHAP, MS-CHAP-v1/v2 authentication methods.
- Built-in HTTP server with enhanced SSL and CGI/1.1 support, built-in DHCP server and DNS proxy.
- RADIUS AAA support (Commercial editions only). ARPMiner accepts Packet of Disconnect (PoD) from RADIUS servers.
- WISPr authentication and partial RADIUS dictionary support.
- Customizable HTTP interface
- Allow access to web servers specified in Walled Garden for unauthorized users.
- Performance monitoring through Windows Performance Monitor.
- RADIUS MAC authentication.

- Sponsored authorization. Requesting access from a sponsor by sending an e-mail to the sponsor.
- DNS redirection.
- Client Id *(Ethernet MAC address)* in DNS requests *(Experimental)*.

You can use your own defined login, info and error pages. ARPMiner uses built in html resources for these pages. ARPMiner looks for alternative login.html, info.html and error.html files. If any of them found, ARPMiner uses user defined html file. You can also run CGI scripts *(.php, .pl, .bat, .vbs, etc)* placed in HTTP root directory of ARPMiner.

ARPMiner - Service Parameters

ARPMiner RADIUS authentication request packets contains following RADIUS attributes;

- User-Name
- User-Password or CHAP-Password
- NAS-IP-Address
- Calling-Station-Id *(User Ethernet MAC address)*
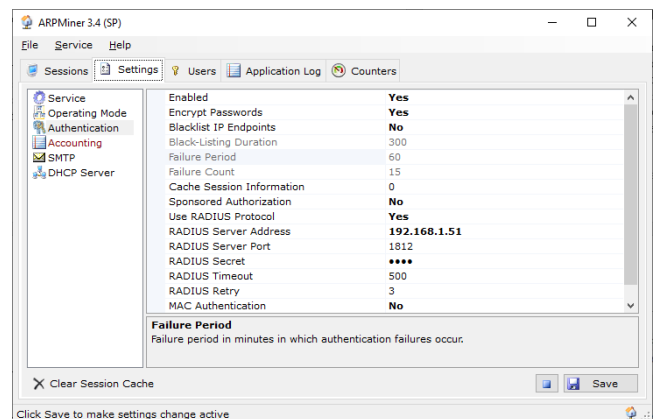
ARPMiner - Authentication Parameters

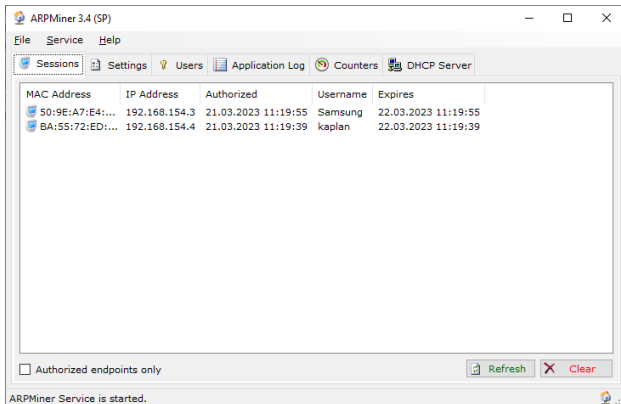ARPMiner expects following RADIUS attributes in an Access-Accept reply;

- Session-Timeout
- Idle-Timeout

ARPMiner recognizes following RADIUS attributes in PPPoE Server Operation Mode;

- MS-MPPE-Encryption-Types
- MS-CHAP2-Success
- MS-CHAP-MPPE-Keys
- MS-MPPE-Send-Key
- MS-MPPE-Recv-Key
- MS-Primary-DNS-Server
- MS-Secondary-DNS-Server
- MS-Primary-NBNS-Server
- MS-Secondary-NBNS-Server

ARPMiner RADIUS accounting start packets contains following RADIUS attributes;

- Acct-Status-Type = Start
- Calling-Station-Id
- Called-Station-Id
- NAS-IP-Address
- Framed-IP-Address
- Acct-Session-Id
- User-Name

ARPMiner - Active Sessions

ARPMiner RADIUS accounting stop packets contains following RADIUS attributes;

- Acct-Status-Type = Stop
- Acct-Terminate-Cause
- Acct-Session-Time
- Acct-Input-Octets
- Acct-Output-Octets
- Framed-IP-Address
- Calling-Station-Id
- Called-Station-Id
- NAS-IP-Address
- Acct-Session-Id
- User-Name

ARPMiner accepts Packet of Disconect from RADIUS servers.

System Requirements

1. A Windows system with 4 GB of RAM.
2. Microsoft.NET Framework 4.8
3. 8 MB of disk space.
4. One Ethernet interface for Private (Hotspot) zone and another for the Internet (Public) connection.
5. Administrative privileges.

Supported Standards

RFC 1034 Domain Names - Concepts and Facilities

RFC 1661 The Point-to-Point Protocol (PPP)

RFC 2131 Dynamic Host Configuration Protocol

RFC 2516 A Method for Transmitting PPP Over Ethernet (PPPoE)

RFC 2616 Hypertext Transfer Protocol -- HTTP/1.1

RFC 2548 Microsoft Vendor-specific RADIUS Attributes

RFC 2616 Hypertext Transfer Protocol -- HTTP/1.1

RFC 2865 RADIUS Authentication

RFC 2866 RADIUS Accounting

RFC 3078 Microsoft Point-To-Point Encryption (MPPE) Protocol

RFC 3079 Deriving Keys for use with Microsoft Point-to-Point Encryption (MPPE)

RFC 3875 The Common Gateway Interface (CGI) Version 1.1

RFC 8908 Captive Portal API

RFC 8910 Captive-Portal Identification in DHCP and Router Advertisements (RAs)

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