

EasyAccess 2.0 Startup Guide for User

Remotely monitor/control your application

This guide walks through important information for EasyAccess 2.0 service provided by Weintek.

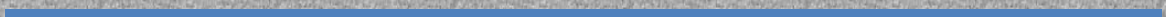


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1. Overview

Traditionally, accessing a remote HMI is a convoluted job. Security concerns and tricky network parameters setup makes it difficult for many HMI users. And even with proper setup, access is still quite limited, allowing only one HMI within the remote network. However, with EasyAccess 2.0, this is about to change.

EasyAccess 2.0 is a new way to access an HMI from anywhere in the world. With EasyAccess 2.0, it becomes very easy to monitor and troubleshoot HMI's/PLC's that are at a remote location as long as Internet connection is available. As EasyAccess 2.0 already takes care of network settings and addresses security issues, the user can connect easily to the HMIs as if they were on the local network. Moreover, it is possible to have multiple available HMIs within a network.

EasyAccess is also a remote supporting service. Consider the case in which a machine builder sells his machine with a Weintek HMI installed. One of his oversea customers is reporting a problem, which may or may not require inspection by an engineer. The machine builder can remotely connect to the HMI through EasyAccess 2.0 to investigate the problem. The customer needs no extra network configuration and just need to plug in Internet connection. In addition, the machine builder can also update the HMI project, monitor the PLC by Ethernet Pass-through, or even update the PLC program.

2. Features

- Secure connections
- Little PC setup required; no router setup required
- User friendly administrator and client UI
- Supports pass-through and proxy server

3. System Requirement

Operation System: Windows XP, Windows 7, Windows 8 (32 / 64bit)

(May Require Administrator privilege)

Weintek HMI with EasyAccess 2.0 feature activated

Internet Connection

4. Terminology

Several terms we used in EasyAccess 2.0 have special meanings. They are:

Activation:

This is the first step towards using EasyAccess 2.0. Each HMI has its EasyAccess 2.0 feature disabled by default, and must be activated in order to use the feature. Only Weintek Partners can activate EasyAccess 2.0 for the HMI through Weintek's EasyAccess administration website by using its unique Hardware Key (HWKey) or on the HMI with their account information.

Domain:

The basic block of HMI management. One Domain account contains multiple Domain Users, HMI groups, and HMIs. It is a special account used to manage Domain information on the web (<https://account.ihmi.net>). This account is *not* used for logging in the EasyAccess program. Note that each HMI belongs to only one Domain. The Domain account holder is the *Domain Admin*.

HMI Group

HMI within a domain can be placed in HMI groups. For Domain Admin, HMI Groups provide easy management of Domain Users' access to HMI. An HMI can belong to more than one HMI groups.

Domain User:

Domain User holds the account used to login in EasyAccess 2.0 program. Identified by a username and a password, a Domain User account can be created by the Domain Admin and thus belongs to that Domain. The Domain Admin decides the group of HMI one Domain User can see by assigning Domain User account to one HMI group. One Domain User can see only one HMI group.

(Online Status) Online:

When an HMI goes on-line, it sends keep-alive information to keep-alive server and lets all EasyAccess 2.0 clients know it is ready for connection. There is still no connection in this state unless one EasyAccess 2.0 client connects to it.

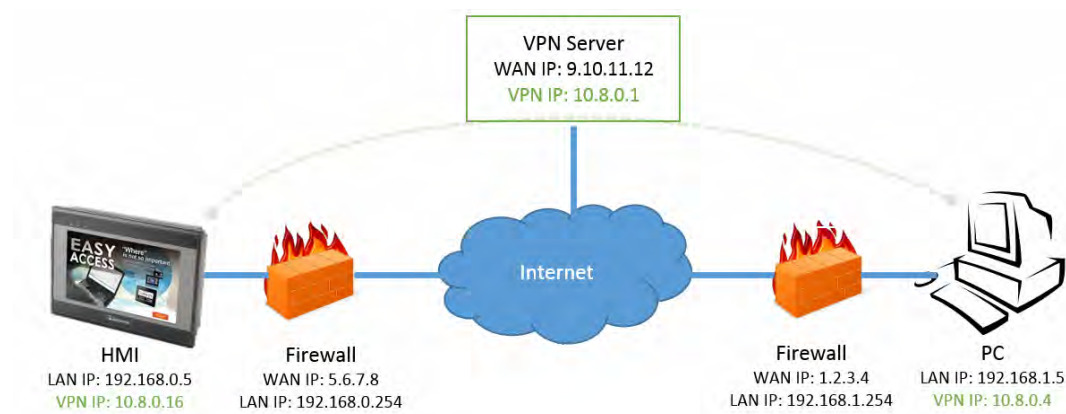
(Online Status) Occupied:

When an EasyAccess 2.0 client connects to the HMI, then the HMI is **occupied** and no other EasyAccess 2.0 client can connect to it until it is disconnected.

5. Getting Started

Understanding EasyAccess 2.0

Traditional remote connection (blue links)	EasyAccess 2.0 (green links)
<ul style="list-style-type: none"> • Connection traffic must pass through a number of firewalls, which means there are layers of network settings. • For one LAN IP, only one device can be connected. • For a device behind two or more routers, connection might not be possible. 	<ul style="list-style-type: none"> • PC and HMI both connect to a dedicated VPN server. • No additional network setting is required. • For one LAN IP, multiple devices can be connected. • Being behind several routers does not affect EasyAccess connectivity at all.



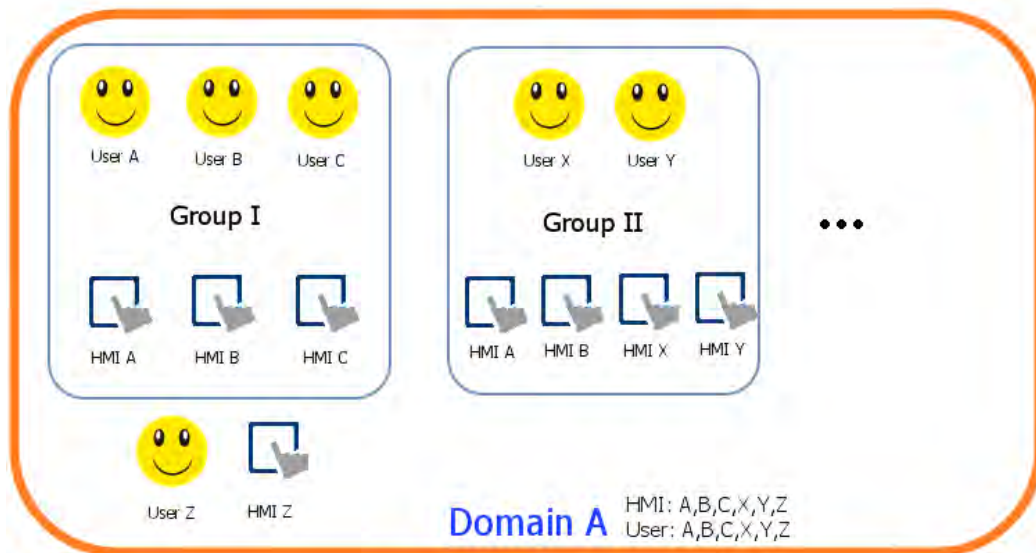
Understanding Domain, Group, HMI and User

The basic management block is Domain, under which HMIs, Groups, and Users exist. Once activated, an HMI can be added to a domain, and then be assigned to a group. A user is to be assigned to a group as well, and will be allowed to access HMIs within that group.

Main rules governing their inter-relationship:

- An HMI can belong to one domain only
- An HMI can belong to multiple groups within the domain
- A user belongs to one group and can only access HMIs within that group.

Consider the following figure for an illustrative example of a domain. In this example, HMI A, B, belonging to both Group I and II, can be used by users A, B, C, X, and Y. On the other hand, HMI C, being in Group I, cannot be used by user X and Y. Finally, User Z and HMI Z are not linked to any group, so both are not available for EasyAccess yet.



Setup Checklist



Certain conditions must be met in order to use EasyAccess 2.0. See relevant sections describing the functions in detail.

- ✓ The HMI must be activated.
[\(6. Activate an HMI\)](#)
- ✓ The HMI must be registered on a Domain, and be assigned to an HMI group within the Domain.
[\(7. Add an HMI to a Domain\)](#)
[\(8. Manage your domain\)](#)
- ✓ The HMI must be programmed to go online.
[\(9. Configure EasyBuilder Pro Project\)](#)
[\(10. Connect the HMI to EasyAccess 2.0\)](#)

- ✓ The user must have a user account associated with the HMI group
[\(8. Manage your domain\)](#)

Having all set up, the user may then initiate remote connection to the HMI!

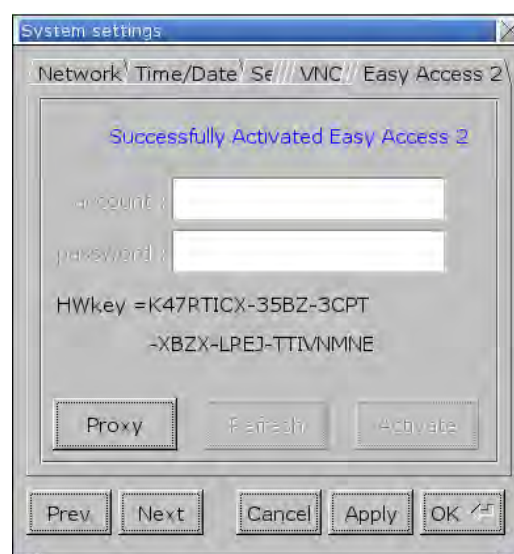
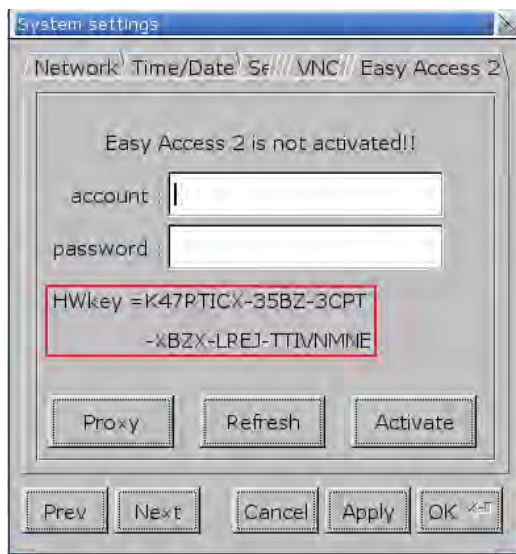
[\(11. Connect to the HMI by EasyAccess 2.0\)](#)

6. Activate an HMI

The HMI must have been activated in order to be connected using EasyAccess 2.0. Check its activation status in the [System settings] page.

Your HMI may have been activated already. If not, go through the following steps to activate the HMI.

1. To activate the HMI, record the HWKey which is shown in the [EasyAccess 2] tab of system setting.
2. Provide the HWKey to your distributor for assistance regarding activation.



7. Add an HMI to a Domain

An HMI must belong to a domain to use EasyAccess 2.0 service.

If an activated HMI does not currently belong to any Domain, once it goes online, it will obtain a set of Session ID/Password, which can be used to add the HMI to a Domain.

EasyAccess 2.0 service requires that each HMI belong to only one Domain. Therefore, once an HMI is added to one domain, it cannot be added to another domain. Another Domain Admin will not be able to add that HMI even with the same Session ID/Password.

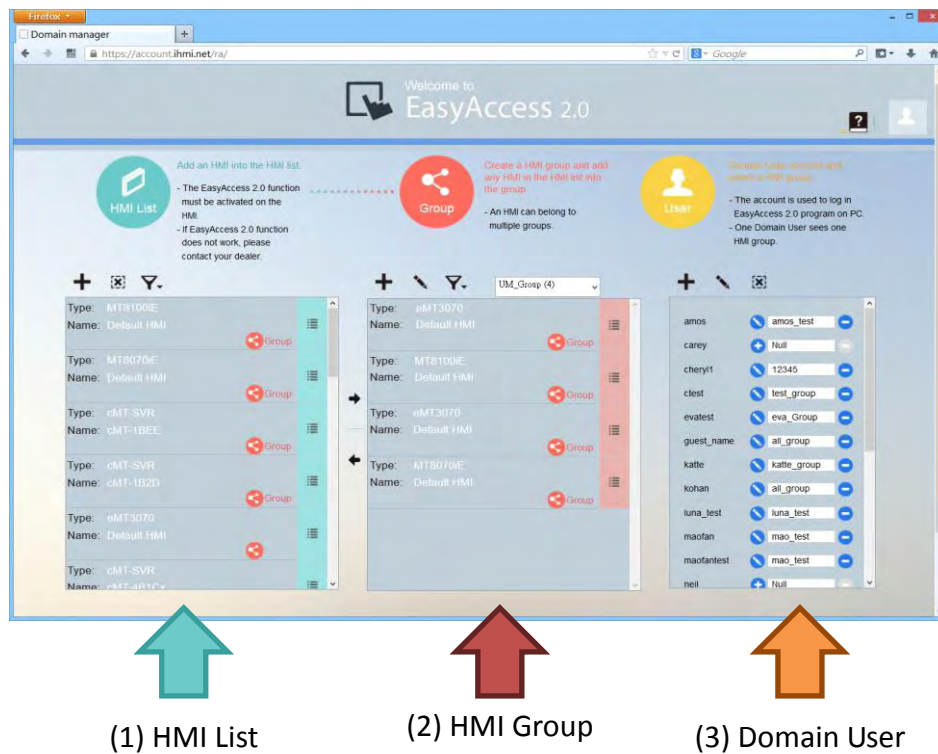
How to find Session ID/Password?

Session ID/Password are generated uniquely for the HMI by the EasyAccess 2.0 service, and HMI must go online in order to receive this piece of information.

First, create and download an EasyBuilder program that displays Session ID/Password (use system registers [LW-10821] to [LW-10827]) and allows HMI to go online. Setting [LW-10820] to ON. Once successfully connected, HMI will display the Session ID/Password. See [\(9. Configure EasyBuilder Pro Project\)](#) for more information.

8. Manage your domain

Go to <https://account.ihmi.net> and log in using the Domain account to manage Domain Users and HMI groups.



(1) HMI List:

The HMI list includes all HMIs in the Domain, excluding ones in the currently selected HMI Group. Use the arrows between HMI List and HMI Group to add/remove selected HMI to/from the HMI Group.



Add an activated HMI to this Domain. (with Session ID/Password)



Remove an activated HMI from this Domain

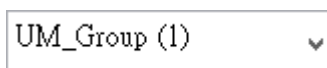


Filter displayed HMI List by HMI model, Name, Private IP, Public IP,

HWKey, or field.

(2) HMI Group:

This list shows HMIs in the selected HMI Group. The selected HMI Group is visible from the drop down menu.



Currently Selected Group



Create a new HMI Group



Modify HMI Group name



Filter displayed HMI List by HMI model, Name, Private IP, Public IP, HWKey, or field.

(3) Domain User:

This list shows all Domain users in the current Domain.



Create a Domain User



Modify Domain User name



Delete a Domain User



Assign the Domain User to an HMI Group



Remove the Domain User from its current HMI Group

9. Configure EasyBuilder Pro Project

EasyBuilder Pro System Tags

In EasyBuilder Pro, the following new system tags are reserved for EasyAccess 2.0:

▪ **LW-10820** (16bit): Connect/Disconnect EasyAccess 2.0

Value {0, 1} = {Disconnect, Connect}

▪ **LW-10828** (16bit): EasyAccess 2.0 Online Status

Value {0, 1, 2, 3} = State {Disable, Offline, Online, Occupied} ([Terminology](#))

▪ **LW-10829** (16bit): Error Code

Error code provides information about error status while the HMI is going online on EasyAccess 2.0.

Value {0, 1, 2, 3} = State {Success, Not activated!, Log-in timeout!, Certificate expired!}

Success: Connection successful

Not activated: EasyAccess 2.0 function is not activated on the HMI

Log-in timeout: Outbound connection is broken or the server is down.

Certificate expired: License Key has expired. Please check with distributor.

▪ **LW-10821** (5words, ASCII): Session ID

▪ **LW-10826** (2words, ASCII): Session Password

Session ID and Password can be used to add an HMI to a Domain, if this HMI does not belong to any Domain already

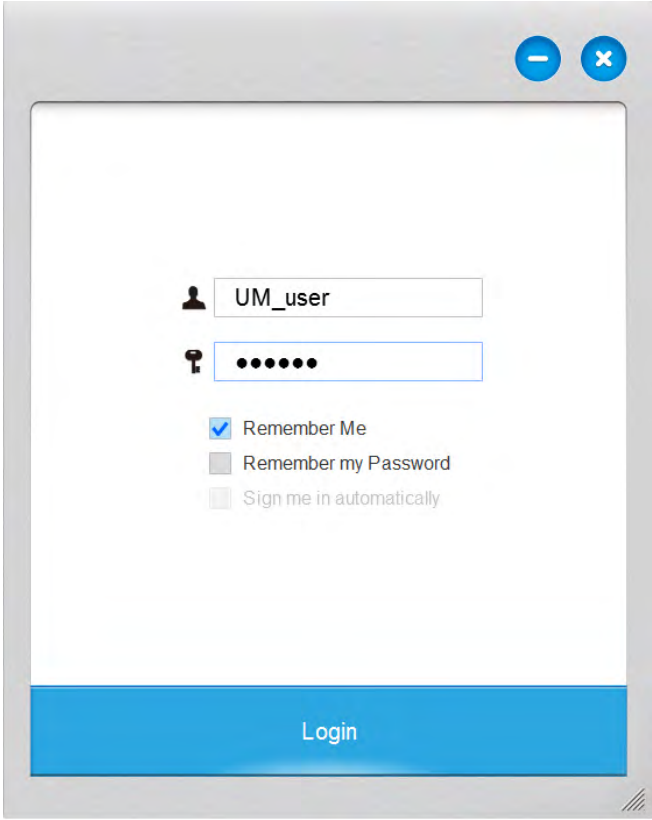
10. Connect the HMI to EasyAccess 2.0

With an activated HMI, go through the following step to connect to the EasyAccess 2.0.

1. Properly configure the EasyBuilder Pro project. In the EasyBuilder project, the user should be able to write to LW-10820.
2. Write "1" to LW-10820 to go online. HMI's EasyAccess 2.0 status should be "Online".

11. Connect to the HMI by EasyAccess 2.0



1. Launch RemoteAccess.exe. If this is the first time EasyAccess 2.0 being launched on the computer, the program will install adapter. (Administrator privilege may be required.)
2. Enter Domain user's username and password, and then click [Login].



A login window with a grey border and standard window controls (minimize, maximize, close) in the top right corner. The window contains a user input section with a person icon and a text field containing 'UM_user', and a password input section with a key icon and a field of seven dots. Below these are three checkboxes: 'Remember Me' (checked), 'Remember my Password' (unchecked), and 'Sign me in automatically' (unchecked). A large blue 'Login' button is at the bottom.

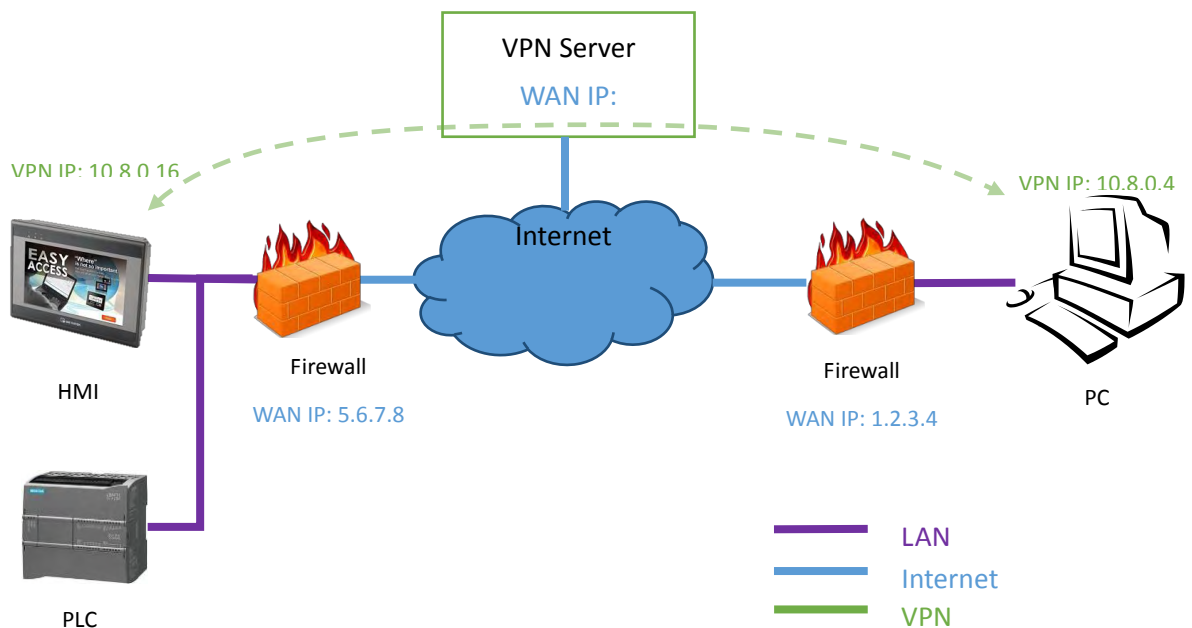
3. Once logged in, the program will list HMIs and their status. Note that these HMIs are from the HMI Group that the user belongs to.



4. Click on  to establish connection to an online HMI. Once connected, the IP address will be displayed. It is now possible to connect directly to the HMI by net services such as VNC or FTP.
5. When finished, click on  again to terminate the connection.

12. Pass-through Connect to a remote PLC on the HMI's network

EasyAccess 2.0 not only makes possible direct connection to a Weintek HMI, but also provides pass-through function that enables the user to connect to the PLC on the remote HMI's network. Consider an EasyAccess network as shown below where a PLC is within the same LAN network as the HMI. Here, the PC, by first establishing EasyAccess 2.0 connection to the HMI, may use the HMI as the relay and connect to the PLC as well.

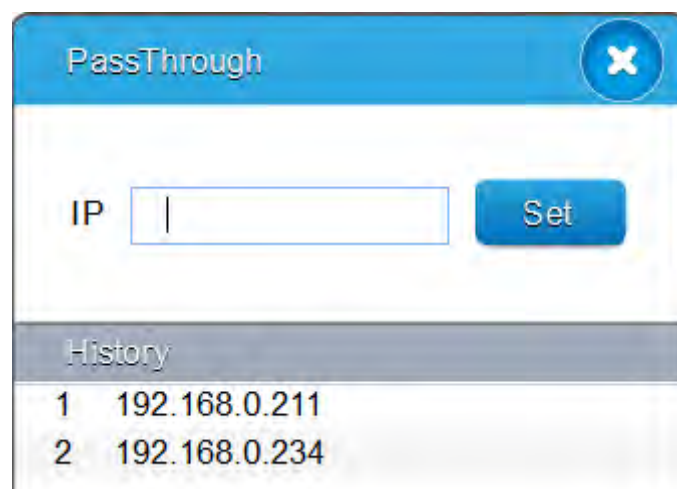


How to setup pass-through to PLC?

On the list of HMI, click on the "set" button which appears below the IP address when connection is active.



A window prompts for an IP address. Enter the IP address of the target PLC.




Once connected, the IP address of the PLC will be shown. The user may now launch the PLC program.

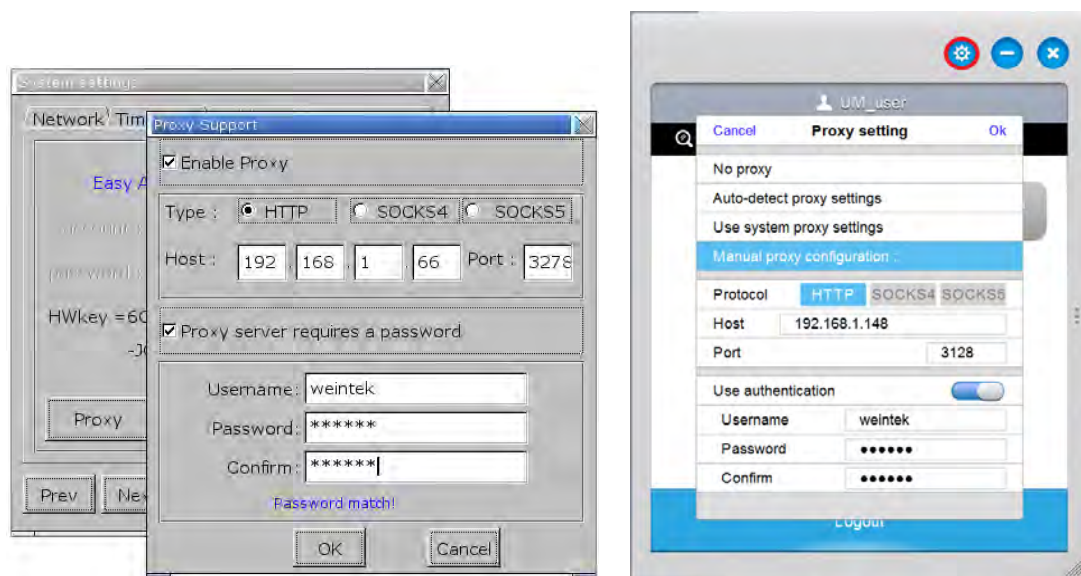


13. Proxy Server

A proxy server acts as an intermediary between clients and servers. In some network infrastructure, especially that of a large scale, proxy servers are used to ensure security, administrative control, and efficiency of the network. To establish connection with EasyAccess 2.0 through proxy, however, requires additional settings on in EasyAccess client program and/or the HMI.

Proxy settings at PC EasyAccess side and HMI side are similar. On PC, proxy setting

window can be called from the setting button  at top. On HMI it is found in the EasyAccess 2 tab of system setting. Enter the proxy type, host address, port number and login credentials obtained from the network administrator.



Proxy related system tags

The following table lists the system tags reserved for EasyAccess 2.0 proxy settings:

LW-11170 (16bit)	Proxy Disable/Enable (0: disable, 1: enable)
LW-11170 (16bit)	Proxy Type (0: HTTP, 1: SOCKSv4, 2: SOCKSv5)
LW-11172 (16bit)	Proxy Server IP0
LW-11173 (16bit)	Proxy Server IP1
LW-11174 (16bit)	Proxy Server IP2

LW-11175 (16bit)	Proxy Server IP3
LW-11176 (16bit)	Proxy Server Port
LW-11177 (16bit)	Proxy authentication (0: disable, 1: enable)
LW-11178 (16 words)	Proxy username
LW-11194 (16 words)	Proxy password

14. Restriction

There are some restrictions for EasyAccess 2.0 service:

1. Each HMI allows only one concurrent EasyAccess 2.0 connection.
2. The IT Infrastructure allows outgoing connection (from HMI) with TCP port 80/8080 or 443/8080

15. Frequently Asked Questions

Q: I do not see the EasyAccess 2 tab.

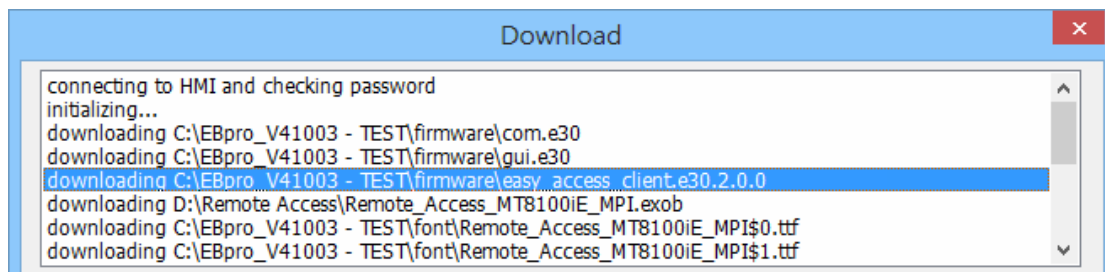
A: Please check the firmware version.

Q: On the EasyAccess 2 tab, it says “connect to the server fails?” in red.

A: The HMI cannot connect to the internet. Please make sure Internet access is available to the HMI. Check the IP address, Gateway, and DNS address settings.

Q: When I try to connect to EasyAccess 2.0 by setting LW-10820, nothing happens.

A: Make sure that EasyAccess client program is in the HMI. It should have been downloaded to the HMI during project download. If not, check the version of EasyBuilder Pro used and whether easy_access_client.e30 is in the firmware folder.



Q: I’ve just updated my OS to the latest release, but my activation disappeared. Do I have to re-activate?

A: In the EasyAccess 2 tab, click on the [Refresh] button. EasyAccess will be re-activated if the same HMI was previously activated.

Q: I’m using Windows 8 and the SmartScreen warns that running the software may put my PC at risk.

A: If you obtained our software from the official channel, either directly from us or from a trusted dealer, you can rest assured that the software is safe. Click on “More info”, and then “Run Anyway” to continue.

16. Other References

Videos (Youtube):

1. EasyAccess 2.0 - 01 - Quick Start
<http://youtu.be/LMoSF2uFat0>
2. EasyAccess 2.0 - Uninstalling TAP-Windows Adapter (Only One Adapter)
<http://youtu.be/b0Mwfqf1piw>