

# **CLXX-N NTP CLOCK MANUAL**

## **Operating Manual**

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## ELECTRO-MED

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## 1 OPERATING PROCEDURE

- 1. Installation
  - Mount the NTP Clock in the desired location using the provided wall-mount brackets or stands.

#### 2. Power On

- Connect the clock to a 220V AC, 50Hz power source.
- Switch on the device.
- The display will light up, and the 7 segments will run a self-test.
- The clock will then attempt to synchronize with the network.
- 3. Network Configuration
  - Ethernet: Connect an Ethernet cable to the RJ45 port on the clock. Ensure the network has internet access.
  - Verify the clock connects to the NTP server. The default server is typically pre-configured, but it can be updated in the settings.
- 4. Synchronization
  - Upon successful network connection, the clock will automatically synchronize time with the NTP server.
  - The display will show the synchronized time in HH:MM:SS format
- 5. Adjustments
  - Use the NTP Clock Manager to make any adjustments, like time correction, time-zone setting, NTP Server configuration.

## 2 TROUBLESHOOTING GUIDE

| # | Issue                           | Possible Cause                          | Solution  |
|---|---------------------------------|---|---|
| 1 | No display or power             | Power supply is not connected or faulty | Check and connect the power supply correctly.   |
| 2 | Clock not synchronizing         | Network connection issue                | Verify Ethernet connection and<br>server reachability.<br>Check ping on the clock IP Address. |
| 3 | Display flickering              | Loose power or network cable            | Inspect and reconnect the input cables securely.  |
| 4 | Intermittent display<br>updates | Noise in the signal line                | Ensure all cables are securely connected.   |
| 5 | Device unresponsive             | Software or hardware issue              | Restart the device or contact customer support.   |

## 3 SOFTWARE

## 3.1 NTP CLOCK MANAGER

To configure the NTP Slave clocks you will need NTP Clock Manager Program.

You can download the program from <u>https://electromed.co.in</u> website or contact Electromed support.

| NTP Clock Manager                 | - 🗆 X            |
|-----------------------------------|------------------|
|                                   |                  |
| IP Address 192.168.1.199          | Resync Time      |
| IP Config                         |                  |
| IP Address                        | 192.168.1.199    |
| Subnet Mask                       | 255.255.255.0    |
| Default Gateway                   | 192.168.1.1      |
| Domain Name Server (DNS)          | 192.168.1.1      |
| Set IP A                          | ddress           |
| Time Server Settings              |                  |
| Host 0.north-america.pool.ntp.org | Host IP          |
| Set NTP                           | Server           |
| TimeZone Setting                  |                  |
| Time Zone 0530                    | Time Adjust 0000 |
| Set Time Zone                     | Time Adjust      |

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#### 3.1.1 IP ADDRESS SETTING

- 1. Power off the clock
- 2. Press and hold Reset Button
- 3. While holding the reset button, power on the clock, and keep holding the button for 10 seconds
- 4. Clock display will show 'RESET'
- 5. Set IP Address of PC to 192.168.0.123
- 6. Enter the IP Address, Subnet Mask, Default Gateway, Domain Name Server (DNS)
- 7. Click 'Set IP Address'
- 8. Clock Display will show 'IP SET'.
- 9. Power Off the Clock, and restart after 5 seconds

#### 3.1.2 TIME SERVER SETTING

The default server address in NTP Clock Manager is for the Open Source Time server. You can set it to your local server via the following steps:

- 1. Enter the hostname of the time server
- 2. If IP Address is known:
  - a. Enter the IP Address
  - b. Tick 'Host IP'
- 3. Click 'Set NTP Server'
- 4. Power Off the Clock, and restart after 5 seconds

#### 3.1.3 TIME ZONE SETTING

- 1. Enter the time zone difference in format ±####.
- 2. Example:
  - a. For India: +0530
- 3. Click 'Set Time Zone'
- 4. Power Off the Clock, and restart after 5 seconds

#### 3.1.4 TIME ADJUSTMENT

- 1. Enter time to be adjusted in milliseconds
- 2. Click 'Adjust'
- 3. Restart the clock

#### 3.1.5 RESYNCHRONIZE TIME

1. Click 'Resynchronize Time'

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#### 3.2 INITIAL SETUP PROCEUDRE

- 1. Power off display
- 2. Press and hold Reset Button
- 3. While holding the reset button pressed, power on the Clock.
- 4. Keep reset button pressed for 10 seconds
- 5. Make a one-to-one connection between clock and laptop/PC using a cross LAN cable



- 6. Check ping on 192.168.0.199. Ensure that IP address of the PC is also of 192.168.0.\*\*\* series.
- 7. Open NTP Clock Manager
- 8. Set IP Address
- 9. Set Server Address
- 10. Set Time Zone
- 11. Restart
- 12. Check IP Address
- 13. Connect to network
- 14. Check Ping
- 15. Wait for the clock to synchronize
- 16. If adjustment is required, click 'Adjust'
- 17. Restart
- 18. Wait for the clock to synchronize

#### 3.3 SOFT RESET TIME

- 1. Press and hold reset button for 2 seconds.
- 2. Time will reset to 00:00:00
- 3. Time will resynchronize with the NTP server (if present) within 30 seconds

#### 3.4 12 / 24 MODE SELECTION

1. Press and hold Reset Button for 10 seconds to toggle between 12 / 24 hour modes.

## 4 GENERAL GUIDELINES

#### 4.1 PRECAUTIONS

- 1. Ensure the clock is connected to a stable and secure network.
- 2. Avoid installing the device in areas with excessive dust, heat, or moisture.
- 3. Do not expose the clock to physical shocks or vibrations.
- 4. Ensure all connections are secure before powering on the device.

#### 4.2 SAFETY INSTRUCTIONS

- 1. Operate the clock within the specified voltage range (220V AC, 50Hz).
- 2. Do not attempt to disassemble or repair the device yourself.
- 3. Handle the device with care to avoid damage to the display or components.
- 4. Keep the device away from flammable materials.

#### 4.3 POWER REQUIREMENTS

- Voltage: 220V AC, 50Hz
- Power Consumption: <10W

#### 4.4 ENVIRONMENTAL CONDITIONS

- Operating Temperature: 0°C to 50°C
- Storage Temperature: -10°C to 60°C
- Humidity: 10% to 90% non-condensing
- Installation Location: Dry and dust-free area (Preferred)

#### 4.5 MAINTENANCE

- 1. Operate the clock within the specified voltage range (220V AC, 50Hz).
- 2. Do not attempt to disassemble or repair the device yourself.
- 3. Handle the device with care to avoid damage to the display or components.
- 4. Keep the device away from flammable materials.

## 5 SETUP LOCAL NTP SERVER

If you do not have a dedicated NTP server, then you can create a server on your local PC via the following steps:

## 5.1 SETUP TIME SERVICE

#### 5.1.1.1 CONFIGURE THE WINDOWS TIME SERVICE

- 1. In the File Explorer, navigate to: Control Panel\System and Security\Administrative Tools
- 2. Double-click Services.

This same task can be completed by entering services.msc in the Windows Run dialog (Windows Key + R).

| 🖅 Run         |  | × |
|---------------|--|---|
|               | Type the name of a program, folder, document, or<br>Internet resource, and Windows will open it for you. |   |
| <u>O</u> pen: | services.msc   | ~ |
|               | OK Cancel <u>B</u> rowse   |   |

3. In the Services list, right-click on Windows Time and click Stop.

Note: The Windows Time service may already be stopped. In this case, skip this step and go to the next step to Update the Windows Registry.

| Windows Time                              | Name                         | Description           | Status       | Startup Type  | Log On As     |
|---|------------------------------|-----------------------|--------------|---------------|---------------|
|   | 🤹 Windows Defender Security  | Windows De.           | Running      | Automatic     | Local System  |
| <u>Start</u> the service                  | Windows Encryption Provid    | Windows En.           |              | Manual (Trigg | Local Service |
|   | 🤹 Windows Error Reporting Se | Allows errors.        |              | Manual (Trigg | Local System  |
| Description:                              | Windows Event Collector      | This service          |              | Manual        | Network Se    |
| Maintains date and time                   | Windows Event Log            | This service          | Running      | Automatic     | Local Service |
| synchronization on all clients and        | Windows Font Cache Service   | Optimizes p           | Running      | Automatic     | Local Service |
| is stopped, date and time                 | Windows Image Acquisition    | Provides ima.         | Running      | Automatic     | Local Service |
| synchronization will be unavailable. If   | Windows Insider Service      | Provides infr.        | -            | Manual (Trigg | Local System  |
| this service is disabled, any services    | Windows Installer            | Adds, modifi.         | Adds, modifi |               | Local System  |
| that explicitly depend on it will fail to | Windows License Manager S    | Provides infr Running |              | Manual (Trigg | Local Service |
| start.                                    | Windows Management Instr     | Provides a c          | Running      | Automatic     | Local System  |
|   | Windows Media Player Netw    | Shares Wind           |              | Manual        | Network Se    |
|   | Windows Mobile Hotspot Se    | Provides the          |              | Manual (Trigg | Local Service |
|   | Windows Modules Installer    | Enables inst          |              | Manual        | Local System  |
|   | Windows Perception Service   | Enables spat.         | -            | Manual (Trigg | Local Service |
|   | Windows Presentation Foun    | Optimizes p           | Running      | Manual        | Local Service |
|   | Windows Push Notifications   | This service r.       | Running      | Automatic     | Local System  |
|   | Windows Push Notifications   | This service          | Running      | Automatic     | Local System  |
|   | Windows PushToInstall Servi  | Provides infr.        | -            | Manual (Trigg | Local System  |
|   | Windows Remote Managem       | Windows Re            |              | Manual        | Network Se    |
|   | Windows Search               | Provides con.         | Running      | Automatic (De | Local System  |
|   | Windows Time                 | Maintains d           |              | Manual (Trigg | Local Service |
|   | Windows Update               | Enab S                | tart         | ual (Trigg    | Local System  |
|   | 🆏 Windows Update Medic Ser   | Enab                  | ton          | nual          | Local System  |
|   | 🧟 WinHTTP Web Proxy Auto-D   | Wint                  |              | nual          | Local Service |
|   | 🎑 Wired AutoConfig           | The V                 | ause         | nual          | Local System  |
|   | Wireless PAN DHCP Server     | R                     | esume        | nual          | Local System  |
|   | 🧠 WLAN AutoConfig            | The V R               | lestart      | omatic        | Local System  |
|   | 🧟 WMI Performance Adapter    | Provi A               | II Tasks     | , jual        | Local System  |
|   | 🎑 Work Folders               | This :                |              | nual          | Local Service |
|   | 🖏 Workstation                | Creat R               | efresh       | omatic        | Network Se    |
|   | 🥘 WWAN AutoConfig            | This :                | reportion    | nual          | Local Service |
|   | 🔅 Xbox Accessory Managemen   | This                  | roperues     | ual (Trigg    | Local System  |
|   | 🖏 Xbox Game Monitoring       | This : H              | lelp         | nual (Trigg   | Local System  |
|   | O Vhoy Live Auth Managor     | Providor aut          |              | Manual        | Local System  |

## 5.1.1.2 UPDATE THE WINDOWS REGISTRY TO CREATE A LOCAL NTP SERVICE

- 1. Launch Windows Run (Windows Key + R).
- 2. Enter regedit and click OK.

|                 | 🖅 Run             | ×  |                            |
|-----------------|-------------------|--|----------------------------|
|                 |                   | Type the name of a program, folder, document, or<br>Internet resource, and Windows will open it for you. |                            |
|                 | <u>O</u> pen:     | regedit ~  |                            |
|                 |                   | OK Cancel <u>B</u> rowse   |                            |
|                 |                   |  |                            |
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#### Operating Manual - CLxx-N NTP Clock Manual 3. Navigate to the registry key:Computer\HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Services\W32Ti me\Parameters Registry Editor $\times$ File Edit View Favorites Help Computer\HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Services\W32Time\Parameters > 📜 vmicvss ^ Name Туре Data > 📙 volmgr REG\_SZ 赴 (Default) (value not set) volmgrx NtpServer REG\_SZ time.windows.com,0x9 volsnap 赴 ServiceDII REG\_EXPAND\_SZ %systemroot%\system32\w32time.dll > Volume BerviceDIIUnIoa... REG\_DWORD 0x0000001 (1) 🗏 vpci SvchostEntry\_W32Time 💩 ServiceMain REG\_SZ > 📜 vsmraid 赴 Type REG\_SZ NTP > 📕 VSS > 📕 VSTXRAID > vwifibus > 📜 vwififlt > vwifimp V32Time 📜 Config Parameters > SecureTime - E Security

4. If you do NOT see LocalNTP REG\_DWORD in the list, create it using the following steps.

> TimeProvide 📜 TriggerInfo 🗸

>

>

<

1. Right-click in the Registry Editor, select New, select DWORD, and enter LocalNTP (note that this name is case sensitive).

| File Edit View Favorites Help         Computer\HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\W32Time\Parameters         Computer\HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\W32Time\Parameters       Data         Name       Type       Data         Volmgr       Name       Type       Data         Numprover       REG_SZ       (value not set)         Volmgrx       NtpServer       REG_SZ       time.windows.com,0x9         Volume       ServiceDII       REG_EXPAND_SZ       %systemroot%\system32\w32time.dll         ServiceDIIUnloa       REG_DWORD       0x00000001 (1)         ServiceMain       REG_SZ       SwchostEntry W32Time | - 🗆 ×                                 |
|---|---------------------------------------|
| Computer\HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\W32Time\Parameters         >  |                                       |
| >     vmicvss     ^     Name     Type     Data       >     volmgr     >     (Default)     REG_SZ     (value not set)       >     volmgrx     >     NtpServer     REG_SZ     time.windows.com,0x9       >     volsnap     >     ServiceDII     REG_EXPAND_SZ     %systemroot%\system32\w32time.dll       >     vpci     %serviceDIIUnloa     REG_DWORD     0x0000001 (1)   |                                       |
| > vsmraid<br>> VSS<br>> VSTRAID   | m,0x9<br>ystem32\w32time.dll<br>2Time |
| New     Key       Wifibus     String Value       Wifip     String Value       W32Time     Binary Value       Config     DWORD (32-bit) Value       Parameters     QWORD (64-bit) Value       Security     Security       TimeProvidi     TimeProvidi       TriggerInfo     Value  | lue<br>lue<br>Value                   |

- 2. Double-click LocalNTP, change the Value data to 1, select a Base of Hexadecimal, and click OK.
- 5. Do not close the Registry Editor because it is used in the following steps.



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#### 5.1.1.3 UPDATE THE WINDOWS REGISTRY TO CONFIGURE THE TIME PROVIDER

- Navigate to the registry key: Computer\HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Services\W32Ti me\TimeProviders
- 2. Select NtpServer, double-click Enabled, change the Value Data to 1, select

a Base of Hexadecimal, and click OK.

| 🃑 Registry | Editor       |  |     |   |   |   |  |                               | _  |      | $\times$ |
|------------|--------------|--|-----|---|---|---|--|-------------------------------|----|------|----------|
| File Edit  | View Favor   | rites Help   |     |   |   |   |  |                               |    |      |          |
| Computer\H | IKEY_LOCAL   | _MACHINE\S   | YST | EM\CurrentControlSet\   | Services\W32T   | ime\Tim                                 | eProviders\NtpServer   |                               |    |      |          |
| Computer\F |              | MACHINE\S<br>wifibus<br>wififlt<br>/32Time<br>Config<br>Parameters<br>SecureTime<br>Security<br>TimeProvide<br>NtpServe<br>VMICTim<br>TriggerInfo<br>/aaSMedicSvo<br>/acomPen<br>/alletService<br>anarpy |     | EM (currentControlSet)<br>Name<br>(Default)<br>ChainDisable<br>ChainDisable<br>ChainLoggingRate<br>ChainMaxEntries<br>ChainMaxHostEn<br>DIIName<br>Enabled<br>EventLogFlags<br>InputProvider<br>RequireSecureTi | Type<br>REG_SZ<br>REG_DWORD<br>REG_DWORD<br>REG_DWORD<br>REG_DWORD<br>REG_DWORD<br>REG_DWORD<br>REG_DWORD<br>REG_DWORD<br>REG_DWORD<br>REG_DWORD<br>REG_DWORD | Edit DV<br>Value n<br>Enable<br>Value d | eProviders\NtpServer<br>Data<br>(value not set)<br>0x00000001 (1)<br>0x00000000 (0)<br>0x00000010 (16)<br>0x0000001e (30)<br>0x000000080 (128)<br>0x00000004 (4)<br>VORD (32-bit) Value<br>ame:<br>d<br>ata: | Base<br>Hexadecima<br>Decimal | 1  | ×    |          |
| <          | > <b>.</b> w | /arpJITSvc<br>>  | ~   |   |   |   |  | ОК                            | Ca | ncel |          |

3. Do not close the Registry Editor because it is used in the following steps.

#### 5.1.1.4 UPDATE THE WINDOWS REGISTRY TO CONFIGURE THE ANNOUNCE FLAGS

- 1. Navigate to the registry key: Computer\HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Services\W32Time\Config
- 2. Double-click AnnounceFlags, change the Value data to 5, select a Base of Hexadecimal, and click OK.

| 📑 Registry Editor                |                      |                     |                    | _ | $\times$ |
|----------------------------------|----------------------|---------------------|--------------------|---|----------|
| File Edit View Favorites Help    |                      |                     |                    |   | <br>     |
| Computer\HKEY_LOCAL_MACHINE\SYST | EM\CurrentControlSet | Services\W32Time\Co | onfig              |   | <br>-    |
| > Vwifibus ^                     | Name                 | Туре                | Data               |   | ^        |
| > Vwififit                       | (Default)            | REG_SZ              | (value not set)    |   |          |
| > Vwifimp                        | AnnounceFlags        | REG_DWORD           | 0x0000000a (10)    |   |          |
| ✓ W32Time                        | ClockAdjustment      | REG DWORD           | 0x00000320 (800)   |   |          |
| Config                           | ClockHoldoverPe      | Edit DWORD (32-bi   | it) Value          | × |          |
| Parameters                       | B EventLogFlags      |                     |                    | _ |          |
| > Secure Time                    | FrequencyCorrec      | Value name:         |                    |   |          |
| TimeBrouid                       | 11 HoldPeriod        | AnnounceFlags       |                    |   |          |
| TriggerInfe                      | B largePhaseOffset   | Value data:         | Base               |   |          |
| WaaSMedicSvr                     | BastKnownGood        | data.               | Hovadasimal        |   |          |
| WacomPen                         |                      | <b>9</b>            | Hexadecimar        | , |          |
| WalletService                    | MawAllowedDhee       | _                   | Decimal            |   |          |
| wanarp                           | in MaxAllowedPhas    |                     |                    | _ |          |
| wanarpy6                         | MaxivegPhaseCo       |                     | OK Cancel          |   |          |
| WarnIITSvc                       | MaxPollInterval      |                     |                    |   |          |
| whengine                         | MaxPosPhaseCor       | REG_DWORD           | 0x0000d2f0 (54000) |   |          |
| > WbioSrvc                       | MinPollInterval      | REG_DWORD           | 0x0000000a (10)    |   |          |
| weifs                            | 201 PhaseCorrectRate | REG_DWORD           | 0x0000001 (1)      |   |          |
|                                  | PollAdjustFactor     | REG_DWORD           | 0x00000005 (5)     |   |          |

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3. Close the Registry Editor.

#### 5.1.1.5 START THE LOCAL WINDOWS NTP TIME SERVICE

- In the File Explorer, navigate to: Control Panel\System and Security\Administrative Tools
- 2. Double-click Services.
- 3. In the Services list, right-click on Windows Time and configure the following settings:
  - 1. Startup type: Automatic
  - 2. Service Status: Start
  - 3. OK



The local NTP Time Server configuration is now complete. You now can synchronize the time of other computers and devices on your local network.

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#### 5.2 WINDOWS FIREWALL SETTINGS





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## 5.3 INBOUND RULES

| 📽 Windows Defender Firewall with Advanced Security – 🗖 🛛 🗙 |   |       |                          |   |  |  |   |
|--|---|-------|--------------------------|---|--|--|---|
| File Action View Help                                      |   |       |                          |   |  |  |   |
| 🗢 🔿 📶 🔂 🖬  |   |       |                          |   |  |  |   |
| I Windows Defender Firew                                   | Inbound Rules   |       |                          | Actions   |  |  |   |
| Cutbound Rules   | Name<br>Ø AnyDesk   | Group | Profile ^<br>Public      | Inbound Rules<br>Rule   |  |  | - |
| <ul> <li>Monitoring</li> </ul>                             | <ul> <li>AnyDesk</li> <li>AnyDesk</li> </ul>                          |       | Private<br>Private       | <ul> <li>▼ Filter by Profile</li> <li>▼ Filter by State</li> <li>▼ Filter by State</li> </ul> |  |  | * |
|  | AnyDesk     AnyDesk     AnyDesk                                       |       | Domai<br>Domai<br>Public | View  |  |  | • |
|  | anydesk (3).exe   |       | Public                   | Export List   |  |  |   |
|  | <ul> <li>Apowersoft Online Launcher</li> <li>bluejeans.exe</li> </ul> |       | All<br>Public            |   |  |  |   |
|  | <ul> <li>bluejeans.exe</li> <li>ffmpeg</li> </ul>                     |       | Public<br>Private        |   |  |  |   |
|  | <ul><li>ffmpeg</li><li>HD2018</li></ul>                               |       | Private<br>Private       |   |  |  |   |
|  | <ul> <li>HD2018</li> <li>HD2018</li> </ul>                            |       | Private<br>Public        |   |  |  |   |
|  | ♥ HD2018<br>♥ HDPlayer  |       | Public<br>Public         |   |  |  |   |
|  | ♥ HDPlayer<br>Shdset  |       | Public<br>Private        |   |  |  |   |
|  | N hdset   |       | Private<br>Public        |   |  |  |   |
|  | S hdset   |       | Public                   |   |  |  |   |
| < >  | <   |       | > Public V               |   |  |  |   |

| Rule Type  |  |
|--|--|
| Select the type of firewall rule   | e to create.   |
| Steps:   |  |
| Rule Type  | What type of rule would you like to create?  |
| <ul> <li>Program</li> <li>Action</li> <li>Profile</li> <li>Name</li> </ul> | <ul> <li>● Program</li> <li>Bute that controls connections for a program.</li> <li>● Popt</li> <li>Bute that controls connections for a TCP or UDP port.</li> <li>● Prodefined:</li> <li>● ProvealAP1.dll.90200</li> <li>✓ Rute that controls connections for a Windows experience.</li> <li>● Dustom Rute.</li> </ul> |

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|  | Operating Manual - CLxx-N NTP Clock Manual  |
|--|---|
| New Inbound Rule W Protocol and Ports Specify the protocols and ports to | Vizard ×  |
| Steps:<br>Protocol and Ports<br>Action<br>Profile<br>Name                | Does this rule apply to TCP or UDP?         ICP         JDP         Does this rule apply to all local ports or specific local ports?         All local ports         Specific local ports         123         Example: 80, 443, 5000-5010 |
| New Inbound Rule W Action Specify the action to be taken who             | rizard ×  |
| Steps:<br>Protocol and Ports<br>Action<br>Profile<br>Name                | What action should be taken when a connection matches the specified conditions? <ul> <li></li></ul>   |

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| s rule applies.  |  |   |
|--|--|---|
|  |  |   |
| When does this rule apply?           Image: Domain           Applies when a computer is connected  | to its corporate domain.   |   |
| Applies when a computer is connected<br>Applies when a computer is connected<br>or work place.<br>Public<br>Applies when a computer is connected | to a private network location, such as a hor<br>I to a public network location.  | me<br>Cancel  |
|  |  | Cancer  |
| lizard<br>of this rule.  |  | ×   |
|  |  |   |
|  |  |   |
|  |  |   |
|  |  |   |
| <u>N</u> ame:  |  |   |
| UDP123Incomming  |  |   |
| Description (optional):  |  |   |
|  |  |   |
|  |  |   |
|  |  |   |
|  | Image: Name:       Mame: Name: N | rule apples.  When does this rule apply?  Domain Apples when a computer is connected to its corporate domain.  Apples when a computer is connected to a private network location, such as a hor or work place.  Public Apples when a computer is connected to a public network location.   Reck Mext >   Name: UDP123Incomming  Description (optional): |

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## 5.4 OUTBOUND RULES

| Pindows Defender Firew  | Windows Defender Firewall with Advanced Security |                       |           |                     |  | × |
|-------------------------|--|-----------------------|-----------|---------------------|--|---|
| File Action View Help   |  |                       |           |                     |  |   |
| 🗢 🔿 🖄 📷 🗟 🖬             |  |                       |           |                     |  |   |
| Prindows Defender Firew | Outbound Rules                                   |                       |           | Actions             |  |   |
| 🗱 Inbound Rules         | Name   | Group                 | Profile ^ | Outbound Rules      |  | • |
| K Outbound Rules        | Apowersoft Online Launcher                       |                       | All       | 🝇 New Rule          |  |   |
| Connection Security R   | Online Video Converter                           |                       | All       | ▼ Filter by Profile |  | • |
| > 🛃 Monitoring          | UDP123OutgoingNTP                                |                       | All       | Filter by State     |  | • |
|                         | Video Converter Studio                           |                       | All       | Filter by Group     |  | • |
|                         | @{Microsoft.AAD.BrokerPlugin_1                   | @{Microsoft.AAD.Brok  | All       | View                |  | • |
|                         | @{Microsoft.AccountsControl_10                   | @{Microsoft.Accounts  | All       | Refresh             |  |   |
|                         | @{Microsoft.LockApp_10.0.1713                    | @{Microsoft.LockApp   | All       | 🗟 Export List       |  |   |
|                         | @{Microsoft.MicrosoftEdge_42.1                   | @{Microsoft.Microsoft | All       | 🛿 Help              |  |   |
|                         | @{Microsoft.MicrosoftEdge_42.1                   | @{Microsoft.Microsoft | All       |                     |  |   |
|                         | @{Microsoft.PPIProjection_10.0.1                 | @{Microsoft.PPIProjec | Public    |                     |  |   |
|                         | @{Microsoft.PPIProjection_10.0.1                 | @{Microsoft.PPIProjec | All       |                     |  |   |
|                         | @{Microsoft.Windows.Apprep.C                     | @{Microsoft.Windows   | All       |                     |  |   |
|                         | @{Microsoft.Windows.CloudExp                     | @{Microsoft.Windows   | All       |                     |  |   |
|                         | @{Microsoft.Windows.CloudExp                     | @{Microsoft.Windows   | All       |                     |  |   |
|                         | @{Microsoft.Windows.ContentD                     | @{Microsoft.Windows   | All       |                     |  |   |
|                         | @{Microsoft.Windows.ContentD                     | @{Microsoft.Windows   | All       |                     |  |   |
|                         | 😻 @{Microsoft.Windows.Cortana_1                  | @{Microsoft.Windows   | All       |                     |  |   |
|                         | 😻 @{Microsoft.Windows.Cortana_1                  | @{Microsoft.Windows   | All       |                     |  |   |
|                         | @{Microsoft.Windows.Holograp                     | @{Microsoft.Windows   | All       |                     |  |   |
|                         | @{Microsoft.Windows.OOBENet                      | @{Microsoft.Windows   | All       |                     |  |   |
|                         | @{Microsoft.Windows.ParentalC                    | @{Microsoft.Windows   | All       |                     |  |   |
|                         | @{Microsoft.Windows.PeopleEx                     | @{Microsoft.Windows   | All       |                     |  |   |
|                         | @{Microsoft.Windows.SecHealth                    | @{Microsoft.Windows   | All       |                     |  |   |
|                         | 🖉 @{Microsoft.Windows.ShellExpe                  | @{Microsoft.Windows   | All       |                     |  |   |
|                         | @{Microsoft.Windows.ShellExpe                    | @{Microsoft.Windows   | All 🗸     |                     |  |   |
| < >                     | <  |                       | >         | ]]                  |  |   |

| 🔗 New Outbound Rule  | Wizard                                      | $\times$ |
|--|---|----------|
| Rule Type  |   |          |
| Select the type of firewall rule to o                                  | eate.                                       |          |
| Steps:<br>Rule Type<br>Protocol and Ports<br>Action<br>Profile<br>Name | What type of rule would you like to create? |          |
|  | < Back Next > Cancel                        |          |

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| A New Outbound Pula                        | Wizard  |   |  |
|--|---|---|--|
|  | Wizaru  |   |  |
| Protocol and Ports                         |   |   |  |
| Specify the protocols and ports to         | which this rule applies.  |   |  |
| Steps:                                     |   |   |  |
| Rule Type                                  | Does this rule apply to TCP or UDP?   |   |  |
| Protocol and Ports                         | ● <u>I</u> CP   |   |  |
| Action                                     | ○ <u>U</u> DP   |   |  |
| Profile                                    |   |   |  |
| Name                                       | Does this rule apply to all remote ports or specific remote ports?  |   |  |
|  |   |   |  |
|  | All remote ports      Specific prote ports      122   |   |  |
|  | Example: 80, 443, 5000-5010   |   |  |
|  |   |   |  |
|  |   |   |  |
|  |   |   |  |
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|  |   |   |  |
|  | < <u>Back</u> <u>Next</u> > Cancel  |   |  |
|  |   |   |  |
| Action<br>Specify the action to be taken w | when a connection matches the conditions specified in the rule.   |   |  |
| Steps:                                     |   |   |  |
| Rule Type                                  | What action should be taken when a connection matches the specified conditions?                           |   |  |
| Protocol and Ports                         | Allow the connection  |   |  |
| Action                                     | This includes connections that are protected with IPsec as well as those are not.                         |   |  |
| Profile                                    | Allow the connection if it is secure  |   |  |
| Name                                       | This includes only connections that have been authenticated by using IPsec. Connections                   |   |  |
|  | will be secured using the settings in IPsec properties and rules in the Connection Security<br>Rule node. |   |  |
|  | Customi <u>z</u> e  |   |  |
|  |   |   |  |
|  | O Block the connection  |   |  |
|  |   |   |  |
|  |   |   |  |
|  |   |   |  |
|  |   |   |  |
|  |   |   |  |
|  |   |   |  |
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|  |   |   |  |
|  | < Back Next > Cancel  |   |  |
|  |   | - |  |
|  |   |   |  |

| Profile   | vvizaro   | >  |  |
|---|---|--|--|
| Specify the profiles for which this   | rule applies.   |  |  |
| Steps:  |   |  |  |
| Rule Type   | When does this rule apply?  |  |  |
| Protocol and Ports  |   |  |  |
| Action  | Domain  |  |  |
| Profile   | Applies when a computer is connected to   | its corporate domain.                      |  |
| Name  | <ul> <li>Private</li> <li>Applies when a computer is connected to<br/>or work place.</li> <li>Public</li> </ul> | a private network location, such as a home |  |
|   | Applies when a computer is connected to   | a public network location.                 |  |
|   |   | < Back Next > Cancel                       |  |
| Name Specify the name and description Steps: Protocol and Ports Action Profile Name | of this rule.           Name:           UDPOutbound 123           Description (optional):                       |  |  |
|   |   |  |  |
|   |   | < Back Finish Cancel                       |  |
|   |   |  |  |
|   |   |  |  |

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