Ewon® BY HMS NETWORKS

ENGLISH

Addresses & Ports Used by Talk2m

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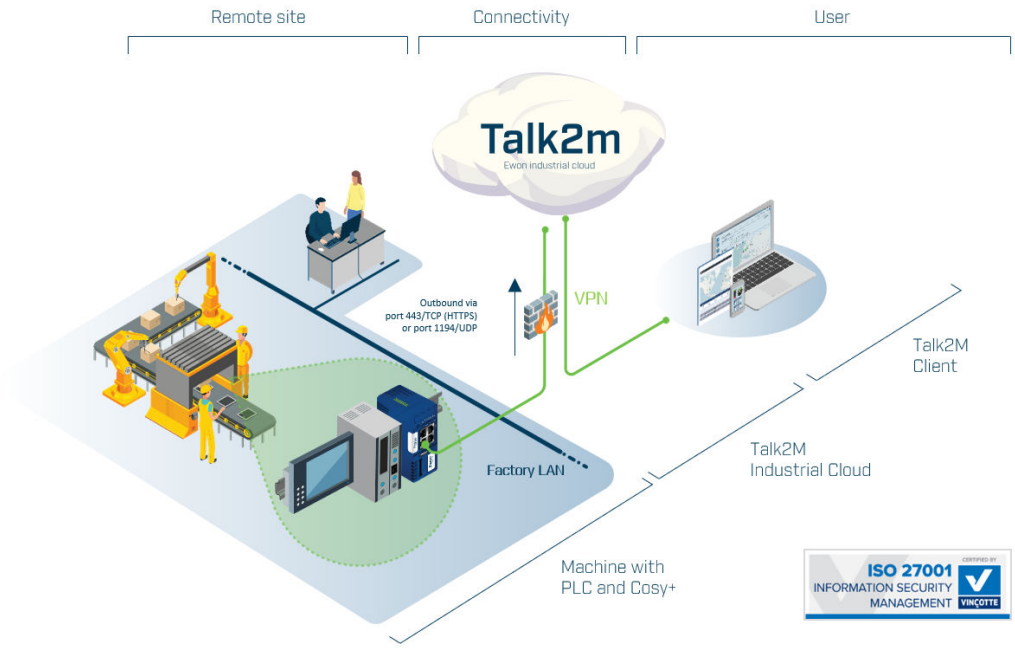

ISO 27001 INFORMATION SECURITY MANAGEMENT VINÇOTTE

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1. Preface

1.1. About This Document

The present document details the addresses and ports used by Talk2m to establish a VPN connection to your Ewon but also to your computer.

For additional related documentation and file downloads, please visit www.ewon.biz/support.

1.2. Document History

Version	Date	Description
1.0	2015-04-22	First release
1.1	2015-07-16	Added Mumbai VPN server
1.2	2015-12-08	Added Europe VPN server
1.3	2015-12-09	Changed: VPN server info
1.4	2018-02-28	Added: access server address
1.5	2018-05-16	Added: detailed List of ortsVPN servers
1.6	2018-07-11	Added: NAP Server
1.7	2018-11-07	Changed: information inside Ewon Connection to Talk2m (page 7)
1.8	2018-12-05	Changed: references inside Ecatcher Connection to Talk2m (page 6) and Ewon Connection to Talk2m (page 7).
1.9	2019-05-08	Changed: General disclaimerAdded: Deep Packet Inspection of TLS/SSL Encrypted Traffic (page 4)
2.0	2019-09-03	Changed: Ecatcher Connection to Talk2m (page 6) Changed: Ewon Connection to Talk2m (page 7)
2.1	2019-10-16	Changed: general review
2.2	2020-04-15	Added: Access Servers (page 3) Added: List of Talk2m VPN Servers (page 5) Added: Talk2m Update Notification (page 5) Added: Self-Signed Certificates (page 5)
2.3	2021-06-04	Changed: Required URL in Ewon Connection to Talk2m (page 7)
2.4	2021-08-26	Changed: Access Servers list in Ewon Connection to Talk2m (page 7)
2.5	27/02/2023	Updated: Chapter 5 - Ewon Connection to Talk2m

1.3. Related Documents

Document	Author	Document ID
N/A	N/A	N/A

1.4. Trademark Information

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All other trademarks mentioned in this document are the property of their respective holders.

2. Introduction

Talk2m is a cloud service that provides remote connectivity to industrial equipment.

To use Talk2m, an Ewon VPN router is installed at the remote site and acts as a VPN client. The Ewon connects to one of the nearest VPN servers hosted by Talk2m.

To connect to the Ewon VPN router, remote users run Ecatcher, the VPN client software, to connect to the same VPN server.

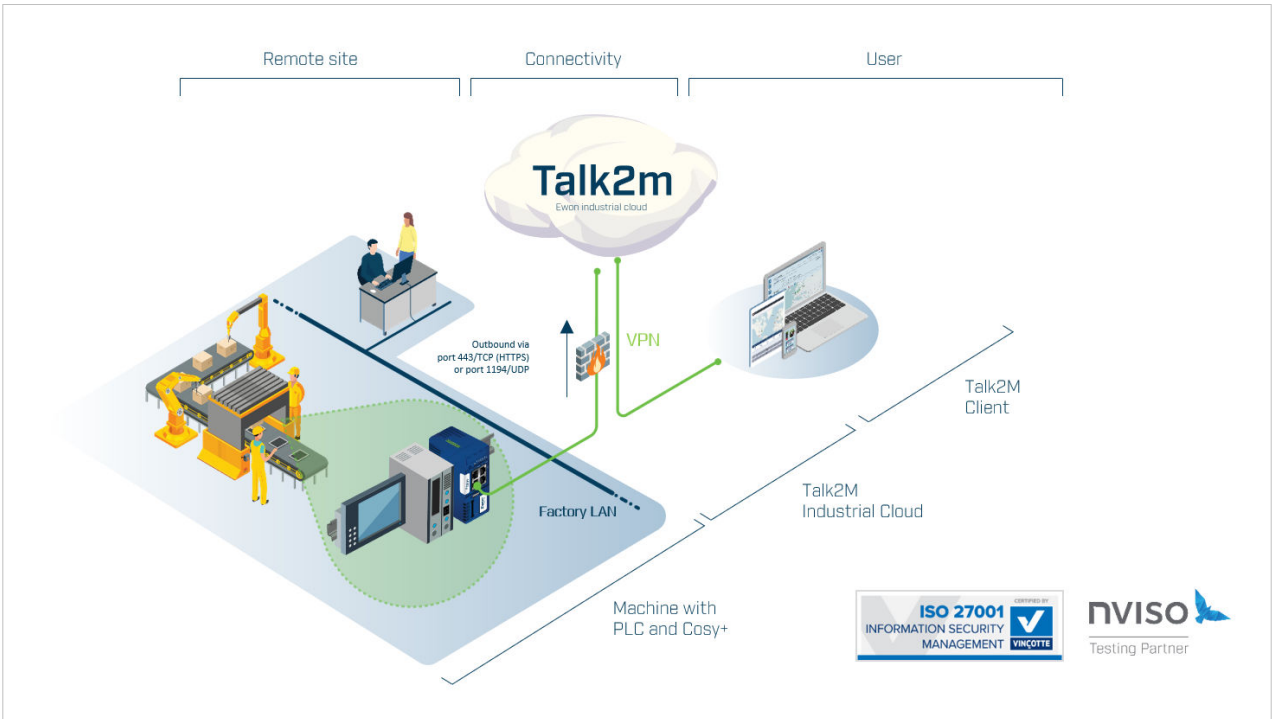

Figure 1. Talk2m overview

The Talk2m architecture consists of multiple interconnected servers and services. This architecture permits a single rule when adding the Talk2m servers and services to a firewall: whitelist the Talk2m domain name.

The simplest solution is to whitelist the wildcard domain ***.talk2M.com** for outgoing port TCP 443 and UDP 1194.

If your firewall cannot be configured with a wildcard, additional information about specific addresses is included in this document.

You can check if the different ports and addresses needed for Talk2m connections are accessible from your network by using our Talk2m connection checker tool: Talk2m connection checker.

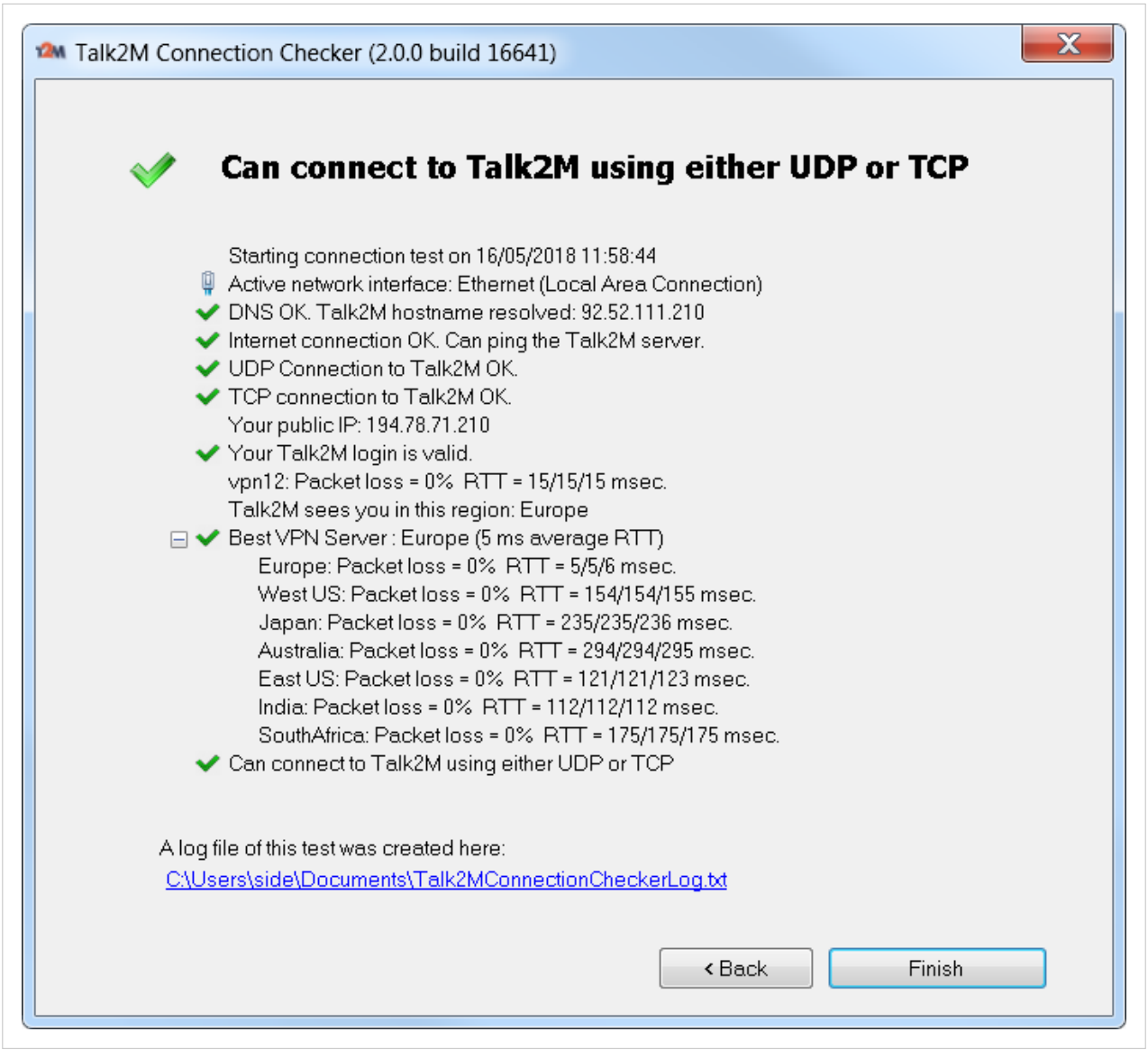

Figure 2. Talk2m connection checker interface

2.1. Access Servers

It is important to understand why the simplest yet required rule in terms of network security must be respected.

Talk2m uses the Access Servers as first contact for the Ewons to know which Talk2m VPN servers they need to connect to.

The configuration explained in Ewon Connection to Talk2m (page 7) describes which rule must be applied to be sure that the connection to the Access Servers is functional.

If your Ewon can't connect to the Access Servers, then the following will might occur:

- No **bidi** communication between the Ewon device and Talk2m. If no more **bidi** communication:
  1. No more KPIs available on M2web or Ecatcher Mobile App;
  2. No more Talk2m VPN server fallback (e.g.: maintenance);
  3. Mail or DataMailbox might not work if the serial number registered in Talk2m is incorrect.

3. Firewall Configuration

The firewall rules should be as follows:

- Required: ***.talk2M.com:443** (TCP protocol).
- Recommended: ***.talk2M.com:443** (TCP protocol) and ***.talk2M.com:1194** (UDP protocol).

Under some circumstances, it is necessary to shift a Talk2m account from one VPN server to another.

If all the Talk2m servers are whitelisted using ***.talk2M.com**, shifting an account does not result in access issues.

If you don't whitelist ***.talk2M.com** (or all required servers), problems could occur such as:

- Remote access is no longer possible.
- If your Ewon VPN router uses Talk2m as a mail server or as an SMS relay, then alarm notification is no longer available
- If your Ewon VPN router uses the DataMailbox, historical data is no longer sent to the DataMailbox.

IMPORTANT
If your firewall has an option "block OpenVPN connection" (or a similar option), be sure to uncheck it as Talk2m uses the OpenVPN technology to link users to their Ewon(s).

NOTE
A server switch from one server to another one can be required during a VPN server maintenance or due to a major VPN server issue.

3.1. Deep Packet Inspection of TLS/SSL Encrypted Traffic

Some firewalls or anti-virus software include a feature which monitors the data of encrypted traffic sent and received by an application.

With this mechanism, the firewall or the anti-virus software replaces the Talk2m HTTPS certificate by its own certificate and may be seen as a "Man in the middle" attack.

This method of replacing certificates is refused by Ecatcher and the Ewon VPN routers for security reasons.

If you face this issue, an error is thrown:

- In Ecatcher, while connecting to the Ewon VPN router:

```
Server communication error : peer not authenticated
```

- In the Ewon VPN router, while running the Talk2m wizard:

```
HTTPS dialog failed (Server certificate verification failed:
certificate issued for a different hostname, issuer is not trusted
```

The only solution is to disable the feature in the firewall / anti-virus software, at least for our URL/IP addresses (see Ecatcher Connection to Talk2m (page 6)and Ewon Connection to Talk2m (page 7)).

3.2. Self-Signed Certificates

Talk2m uses a C.A. (Certificate Authority) created by Ewon devices to sign certificates.

When the Ewon device tries to connect the Talk2m access server in HTTPS using the URL "**device.api.talk2m.com**", this server uses a certificate signed by Talk2m Certificate Authority. This authority may not be trusted or recognized by some firewalls / proxy as it has been created by Ewon.

If your firewall verifies the C.A. origins, it must accept the Talk2m C.A. to allow the Ewon devices to connect to Talk2m.

NOTICE
If you need this Certificate Authority please contact your support representative.

3.3. List of Talk2m VPN Servers

If the firewall responsible of the network security doesn't allow a wildcard as protection rule, you can find a list of all the Talk2m VPN servers on the Ewon support website.

This list is divided per area in the world. It provides the IP addresses and the domain names for each Talk2m VPN server.

With this list, you can set the firewall with the required IP address(es) and / or domain name(s).

3.4. Talk2m Update Notification

By subscribing to the HMS Customers and Distributors Information Service, you can choose which Ewon products / services updates you would like to receive.

By selecting the appropriate options, you can choose to be notified on updates such as:

- Ewon products updates: firmware, features, security, ...
- Talk2m service: VPN server's IP address modification, temporary shut down or restart of a Talk2m VPN server, temporary or permanent migration of the Ewons from one Talk2m VPN server to another, planned maintenance.

4. Ecatcher Connection to Talk2m

If whitelisting ***.talk2m.com** is not possible, then the following section lists the servers you must grant access to.

Ecatcher needs to connect to the following servers:

1. **Access Server:**
   a. Protocol and port used:
      HTTPS (TCP port 443)
   b. Addresses:
      – **as.pro.talk2m.com** (Ecatcher version < 6.3.5)
      – **client.api.talk2m.com** (Ecatcher version < 6.3.5)
2. **VPN servers**
   a. Protocols and ports used:
      UDP port 1194 or **TCP port 443**
   b. Addresses:
      - **client.vpnX.talk2m.com**, where **X** is the VPN server number. The VPN server number can be between 1 and 100.
      - NAP server of China:
      Primary: **sclient.vpn30.talk2m.com**
      Backup: **sclient.vpn31.talk2m.com**

IMPORTANT
You must use the NAP server when the Ewon VPN router is located in China. If the Ewon VPN router is outside China but the user is in China, then additional URLs might be required.

We recommend whitelisting the URL ***.talk2m.com**.

If whitelisting a wildcard domain is not possible, you can whitelist the URLs **client.vpn1.talk2m.com**, **client.vpn2.talk2m.com**, **...**, **client. vpn100.talk2m.com**.

NOTE
We do not use all incremental URLs. There might be gaps between “vpn1” and “vpn100”.

If the Internet connection is established through a proxy server, then Ecatcher uses the TCP protocol.

IMPORTANT
Since Ecatcher v4.1, if Ecatcher connects through a proxy server, this proxy server must allow outbound connections on port **TCP 443** to hostname ***.talk2m.com**.

5. Ewon Connection to Talk2m

1. **Access Server:**
   a. Protocol and port used:
   HTTPS (TCP port 443)
   b. Addresses:
   - **as.pro.talk2m.com** (Ewon firmware < 12.2)
   - **device.api.talk2m.com** (Ewon firmware >= 12.2)
   - **device.talk2m.com** (Ewon Cosy +, firmware >= 20.0)
   - **deviceupdate.talk2m.com** (If the firmware update feature is used in the Ewon Cosy + Web Interface)

   IMPORTANT
   Valid DNS servers should be set in the Ewon device to resolves these IP addresses.

   It is even **mandatory** with Ewon Cosy+ which only uses URL to connect the Talk2m servers.

   If your Ewon can't connect to the Talk2m access servers and is not yet configured, then the Talk2m connection configuration (a.k.a Talk2m Wizard) will be impossible.
   If your Ewon can't connect to the Talk2m access servers but your Ewon is already configured, then the following case might occur: no more *bidi* communication between your Ewon and Talk2m.
   If there is no **bidi** communnication, then:
   - There are no more KPIs available on M2web or Ecatcher Mobile App.
   - There is no more Talk2m VPN server fallback (e.g.: maintenance).

2. **VPN servers**
   a. Protocols and ports used:
   - **UDP port 1194** or **TCP port 443**

   b. Addresses:
   - **device.vpnX.talk2m.com**, where **X** is the VPN server number. The VPN server number can be between 1 and 100.

   We recommend whitelisting the URL ***.talk2m.com**. If whitelisting a wild-card is not possible, you can whitelist the URLs **device.vpn1.talk2m.com**, **device.vpn2.talk2m.com**, **...**, **device.vpn100.talk2m.com**.

   NOTE
   We do not use all incremental URLs. There might be gaps between "vpn1" and "vpn100".

   If the Internet connection is established through a proxy server, then your Ewon VPN router uses the TCP protocol.

   IMPORTANT
   Since Ewon firmware 6.4s6, if your Ewon connects through a proxy server, this proxy server on local site should allow outbound connections on port **TCP 443** to hostname ***.talk2m.com**.

3. **Miscellaneous connections**
   a. **UDP Connection:**
   During the Talk2m registration wizard, the Ewon device is performing a **UDP connection test on port 1194** to the Talk2m Access Server IP address to check if its VPN connection can be established on a UDP connection.
   If this connection test fails, then Ewon will then fallback using a TCP connection on port 443.
   b. **TCP connection:**

During the Internet configuration wizard, the Ewon device is also performing a TCP connection test on port 80 to the Talk2m Access Server IP address to check its access to the Internet. The result of this test is for indicative purposes only.
Passing this test is not needed to apply the configuration.

c. **NTP Sync:**
By using default settings, an NTP sync is performed with the IP "162.159.200.123" (time.cloudflare.com) after each reboot.