Action plan to diagnose
STATEL-eWA connection problems

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1. Scope of the document

The purpose of the document is to provide the STATEL-eWA administrators with a list of actions to be carried out in order to diagnose problems with their eWA-STATEL installation.

This document has two parts focused on the diagnostic of the problem encountered in each application, by providing administrators with a checklist of actions to be done.

2. How to diagnose problem with STATEL 4.2

2.1. STATEL transmission mode

This action plan lists the tasks that will be carried in NSIs in order to find out why the connection between STATEL and Eurostat server is problematic when going through the new proxy.

The picture below depicts the different possible transmission modes that will be tested and described in the document.

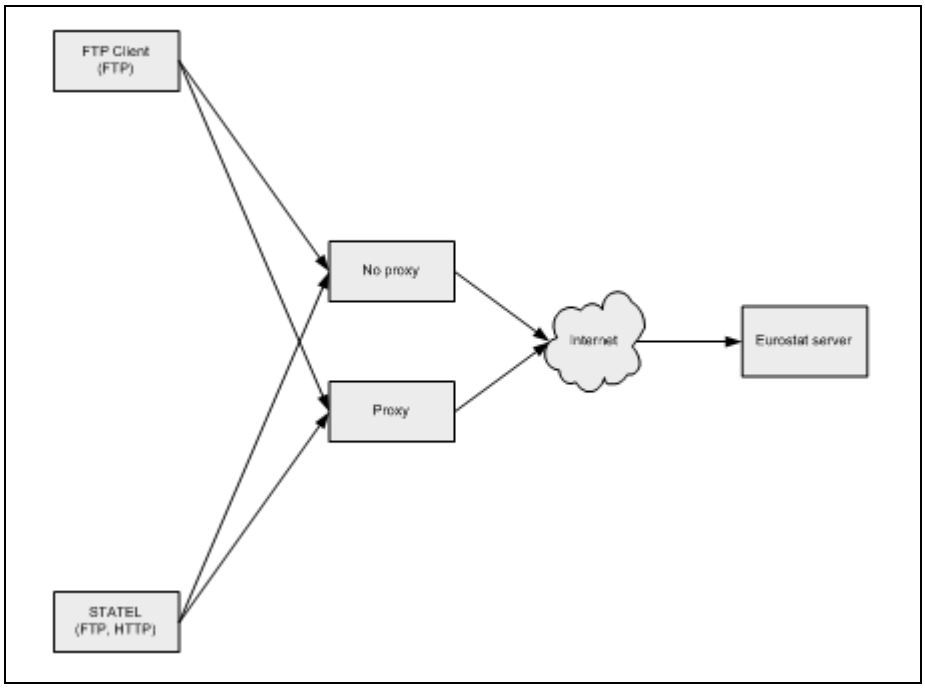

Figure 1: the different transmission modes

2.2. Direct FTP connection

The direct FTP connection mode will be tested to verify that the network configuration doesn't block transmission from NSI towards the Eurostat server using the FTP transmission mode.

The FTP Client will be used with the settings defined previously:

- **host** : statelgw.ec.europa.eu
- **port** : 21
- **uid** : a valid snn (for example lu-org1-ewa1)
- **Password** : *********

uid and **password** will be provided by Eurostat.

Below is an example of a successful connection using the Filezilla FTP Client.

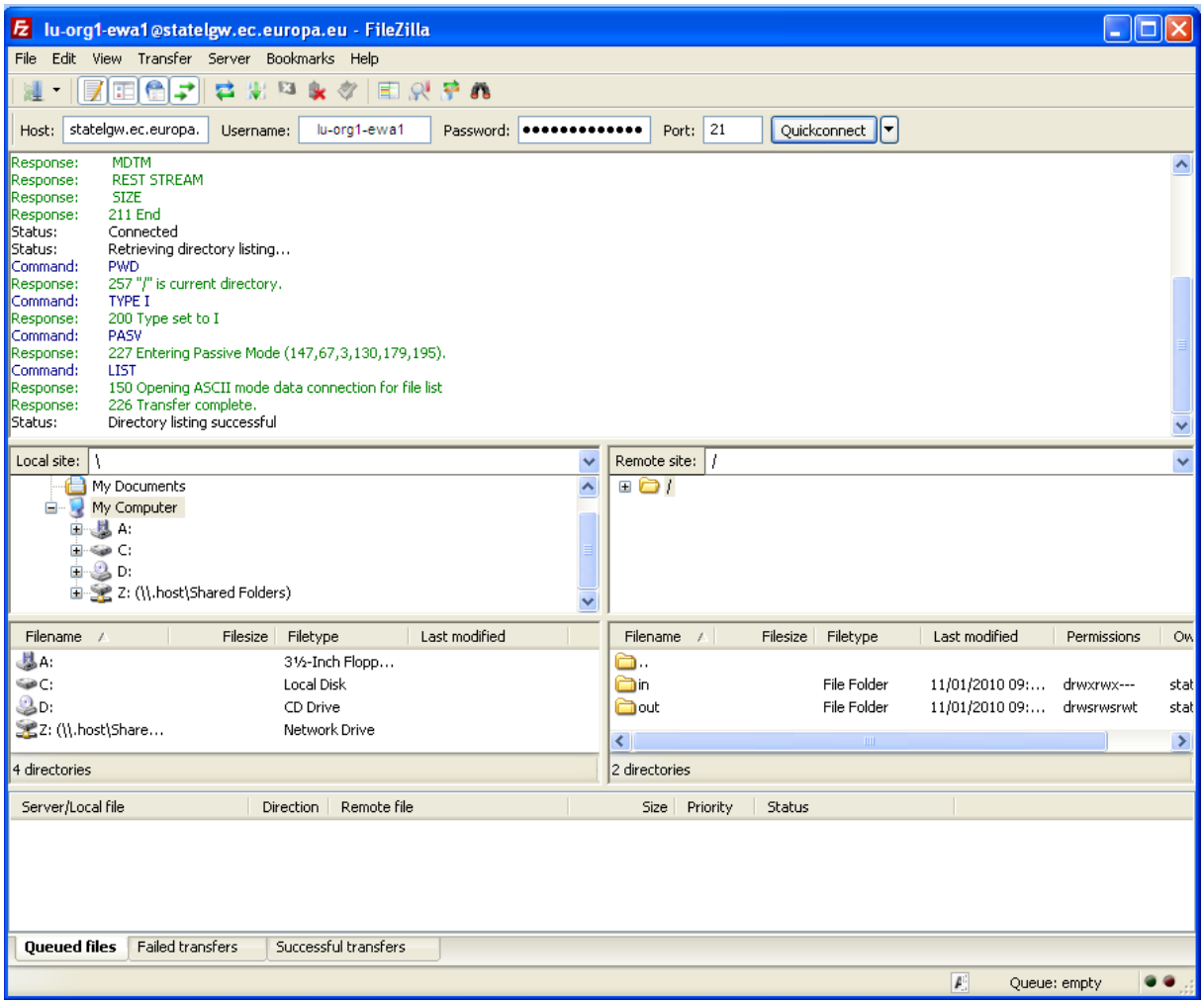

Figure 2: example of FTP client

A successful connection will give access to the "**in**" and "**out**" folders which are the sending and reception transmission folders of STATEL, where "Local site" is the NSI computer and "Remote site" is Eurostat server.

A text file and the PDU file (a file sent by STATEL is cut in several small files called PDU) will have to be copied in the "**in**" folder in order to replicate a correct STATEL transmission. The PDU must be asked to Eurostat.

The PDU must be received as it is (i.e. without structural modification) and treated automatically by the Eurostat server.

The direct FTP connection, using a text file and a PDU, will be done using:

- a proxy
- no proxy

For the test of connection using a proxy, the FTP Client will have to be configured according to the proxy settings defined by the NSI IT service.

2.3. Connection using STATEL

According to the NSIs IT infrastructure, different STATEL configurations have to be tested in order to determine the one to be used.

Some of these configurations need information (Firewall user, firewall password) from the NSI IT service and other (Remote user, Remote password) from Eurostat. Before configuring STATEL, this information has to be collected.

STATEL can connect to the Eurostat server using two transmission modes (FTP and HTTP). The configuration of the tool is depicted in the following chapters.

2.3.1. Using the FTP transmission mode

STATEL version

The document is related to the current STATEL version 4.2. It can be downloaded using the following link:
http://circa.europa.eu/irc/dsis/edamis/info/data/website/tools/STATEL/downloads.htm

Access to the configuration settings

The configuration settings can be access using the "Tools / Open Toolbox" menu of STATEL, then by clicking the "SNNs maintenance" located in the "Configuration" tab.

The configuration screen

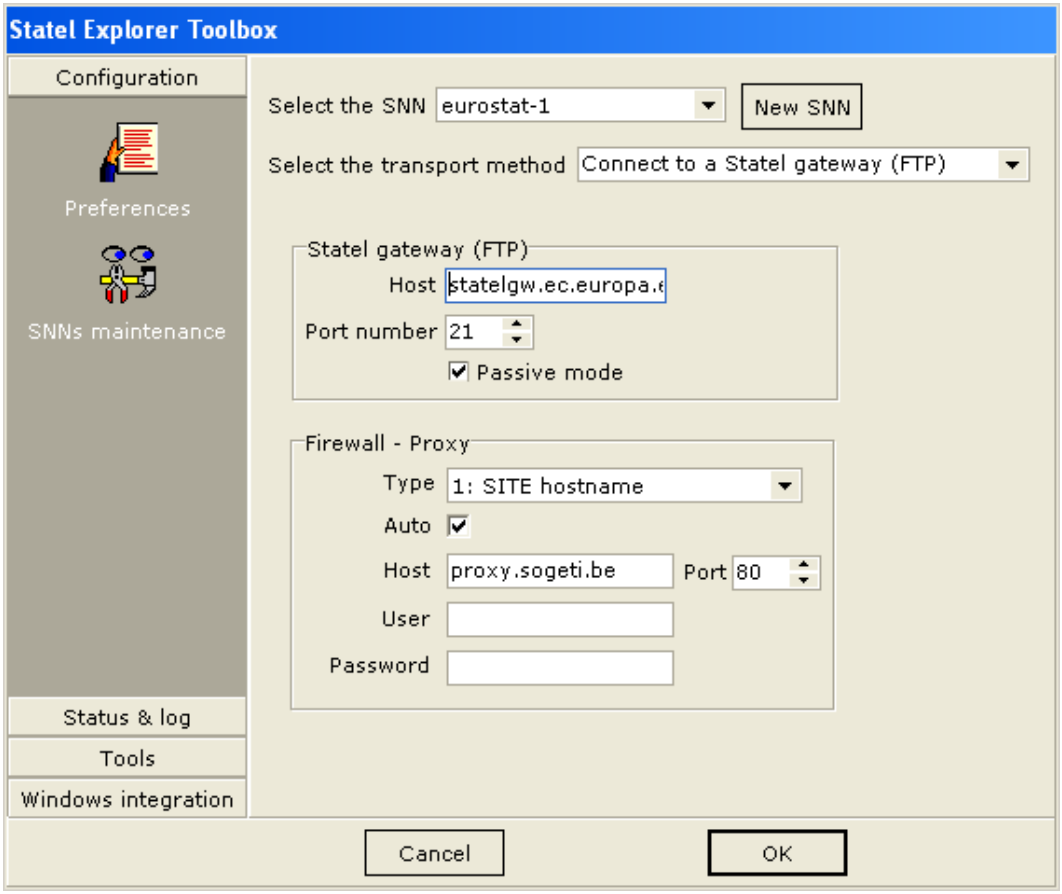

Figure 3: The STATEL configuration screen using the FTP transport method

General settings

- "Select the SNN" must be set to **eurostat-1**
- To use FTP, "Select the transport method" is defined as **Connect to a Statel gateway (FTP)**

The STATEL Gateway settings

- Host address: the value has to be set to **statelgw.ec.europa.eu**
- Port: the default value is **21**. This is the usual port used for FTP transmission and it's not related to the NSI infrastructure.
- Passive mode: this has to be check for secure transmission

FTP passive and active modes definition

- The passive mode

The client initiates the connection of the FTP Server and tries to read the ftp server directory.

The server initiates the connection to the Client for data transfer (list of the file on the directory)

Not all FTP sites support passive mode.

Problem: The Firewall doesn't allow the connection from the FTP server to the Client because the zone is not trusted (Internet).

Solution:

- Allow connection from the FTP server to the Client. (Not secure mode)
- Use FTP Passive Mode (Secure mode).

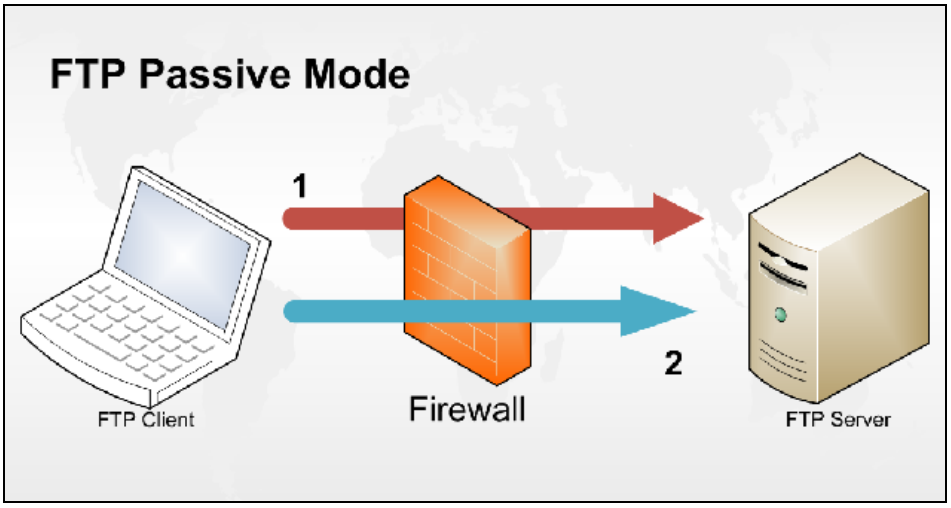

Figure 4: FTP passive mode

- <u>The active mode</u>

The client initiates the command connection of the FTP Server and tries to read the ftp server directory.

The client initiates the data connection to the server (the port was previously defined on the command connection).

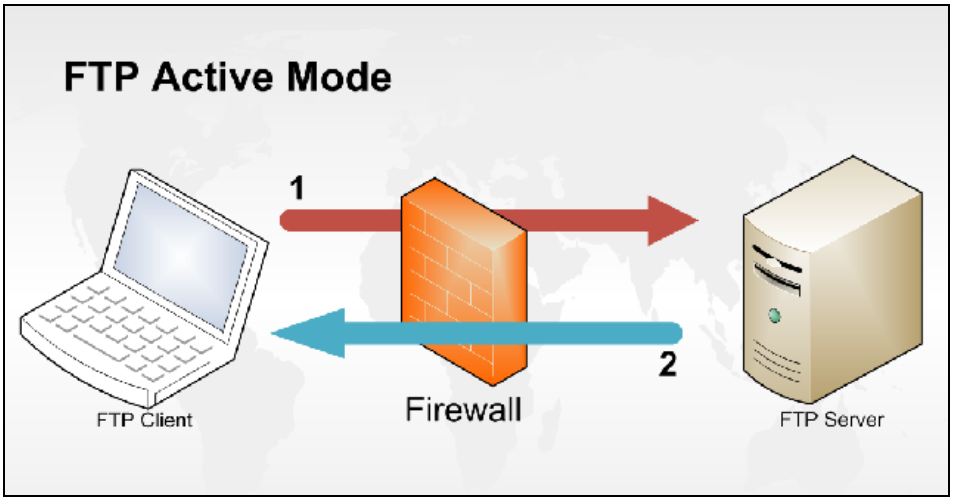

Figure 5: FTP active mode

The Firewall – Proxy settings

Type: Several settings are available for the "Type" of Firewall – Proxy used in the NSI infrastructure.

If you know the settings of your ftp-proxy host, select the appropriate item. Otherwise let the system automatically select and set the proxy type during the first connection to the Statel Gateway. This version of the Statel Explorer 4.2 comes with the capability of parametric configuration and automatic scanning of the ftp-proxy types

Otherwise, only the NSI IT service can determine which settings have to be used.

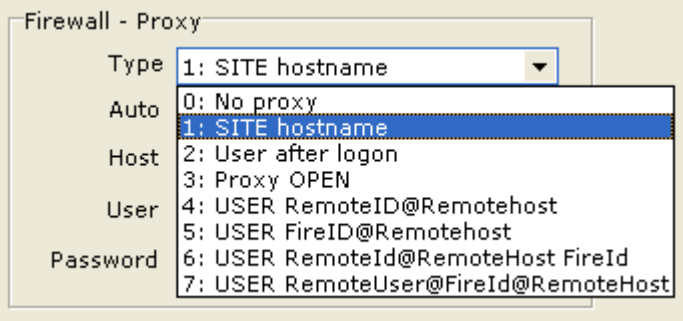

Figure 6: The different FTP settings

Auto: With this option checked (by default), the scanning procedure of the ftp-proxy types is automatically activated each time the connection with the Statel Gateway fails. This option should be unchecked in cases that the connection problems occur for reasons not related to the ftp-proxy configuration, for example in case of frequent failures in the local network.

Host: the proxy address (for example proxy.org1.lu or the IP address used to access the proxy)

Port: the port used by the proxy

User, Password: user and password for passing the NSI firewall and proxy. The proxy definition used for "Type" defined the format that will be used for user and password. (take care of the case sensitivity)

The following table give the user and password formats according to the different configurations used for the Firewall - Proxy.

Firewall – Proxy Type	User	Password
0–No proxy	-	-
1–Site hostname	-	-
	<firewall user>	FirePass
	<remote user>	remotePass
2–user after logon	<firewall user><FirePass><remote user>@<remote host><RemotePass>	FirePass
	<remote user>@<remote host>	RemotePass

3–proxy open	<remote user>	RemotePass
4–user RemoteId@RemoteHost	<remote user>@<remote host>	RemotePass
5–user FireId@RemoteHost	<firewall user>@<remote host>	FirePass
	<remote user>	RemotePass
6–User RemoteId@RemoteHost FireId	<remote user>@<remote host><firewall user>	RemotePass
7–RemoteUser@FireId@RemoteHost	<remote user>@<firewall user>@<remote host>	RemotePass@FirePass

Where:

- **"-"** no value needed. Only firewall and proxy of type 0 and 1
- <remote user>: the local SNN (lu-org1-ewa1 for example)
- <firewall user>: the firewall login ID provided by the NSI IT service
- <remote host> : **statelgw.ec.europa.eu**
- RemotePass: the remote FTP server password to be provided by Eurostat
- FirePass: the firewall password provided by the NSI IT service

In cases 1, 2 and 5, several user and password formats can be used to configure FTP transmissions. It depends only of the NSI infrastructure and must be defined by the NSI IT service.

The error log file

The tmpftplog file is located in the ./Eurostat/Statel32/log folder.

It can be also accessed using the STATEL application via the "Tools/Open ToolBox" menu, then by clicking on the "Telecom log (FTP)" button in the "Status & log" tab.

This log file will display all the connection attempts done with the 7 definition types (called dialogue). The result of a connection is marked as **Ftp connection using dialogue x FAILED** or **Ftp connection using dialogue x SUCCESSFUL.**

An unreachable gateway message when connection STATEL to the Eurostat server is a sign of a problematic dialog.

Figure 7: unreachable gateway

Below is an example of an incorrect STATEL configuration where all connection attempts failed.

```
Ftp-connecting with dialogue 0 ('No proxy')...
C0: >> TCP connecting to  statelgw.ec.europa.eu:21...
S0: <<
Could not connect to remote host:
st_GetServerReply: invalid socket
st_ConnectSocket: Can't connect to statelgw.ec.europa.eu service 21: 10061
Ftp connection using dialogue 0 FAILED

Ftp-connecting with dialogue 1 ('SITE hostname')...
C0: >> TCP connecting to  proxy.sogeti.be:80...
S0: <<
Could not connect to remote host:
st_GetServerReply: invalid socket
st_ConnectSocket: Can't connect to proxy.sogeti.be service 80: 10061
Ftp connection using dialogue 1 FAILED

Ftp-connecting with dialogue 2 ('User after logon')...
C0: >> TCP connecting to  proxy.sogeti.be:80...
S0: <<
Could not connect to remote host:
st_GetServerReply: invalid socket
st_ConnectSocket: Can't connect to proxy.sogeti.be service 80: 10061
Ftp connection using dialogue 2 FAILED

Ftp-connecting with dialogue 3 ('Proxy OPEN')...
C0: >> TCP connecting to  proxy.sogeti.be:80...
S0: <<
Could not connect to remote host:
st_GetServerReply: invalid socket
st_ConnectSocket: Can't connect to proxy.sogeti.be service 80: 10061
Ftp connection using dialogue 3 FAILED

Ftp-connecting with dialogue 4 ('USER RemoteID@Remotehost')...
C0: >> TCP connecting to  proxy.sogeti.be:80...
S0: <<
Could not connect to remote host:
st_GetServerReply: invalid socket
st_ConnectSocket: Can't connect to proxy.sogeti.be service 80: 10061
Ftp connection using dialogue 4 FAILED

Ftp-connecting with dialogue 5 ('USER FireID@Remotehost')...
C0: >> TCP connecting to  proxy.sogeti.be:80...
S0: <<
Could not connect to remote host:
st_GetServerReply: invalid socket
st_ConnectSocket: Can't connect to proxy.sogeti.be service 80: 10061
Ftp connection using dialogue 5 FAILED

Ftp-connecting with dialogue 6 ('USER RemoteId@RemoteHost FireId')...
C0: >> TCP connecting to  proxy.sogeti.be:80...
S0: <<
Could not connect to remote host:
st_GetServerReply: invalid socket
st_ConnectSocket: Can't connect to proxy.sogeti.be service 80: 10061
Ftp connection using dialogue 6 FAILED

Ftp-connecting with dialogue 7 ('USER RemoteUser@FireId@RemoteHost')...
```

```
C0: >> TCP connecting to  proxy.sogeti.be:80...
S0: <<
Could not connect to remote host:
st_GetServerReply: invalid socket
st_ConnectSocket: Can't connect to proxy.sogeti.be service 80: 10061
Ftp connection using dialogue 7 FAILED
Connection to statelgw.ec.europa.eu failed
```

2.3.2. Using the HTTP transmission mode

The configuration settings can be access using the "Tools / Open Toolbox" menu of STATEL, then by clicking the "SNNs maintenance" located in the "Configuration" tab.

The configuration screen

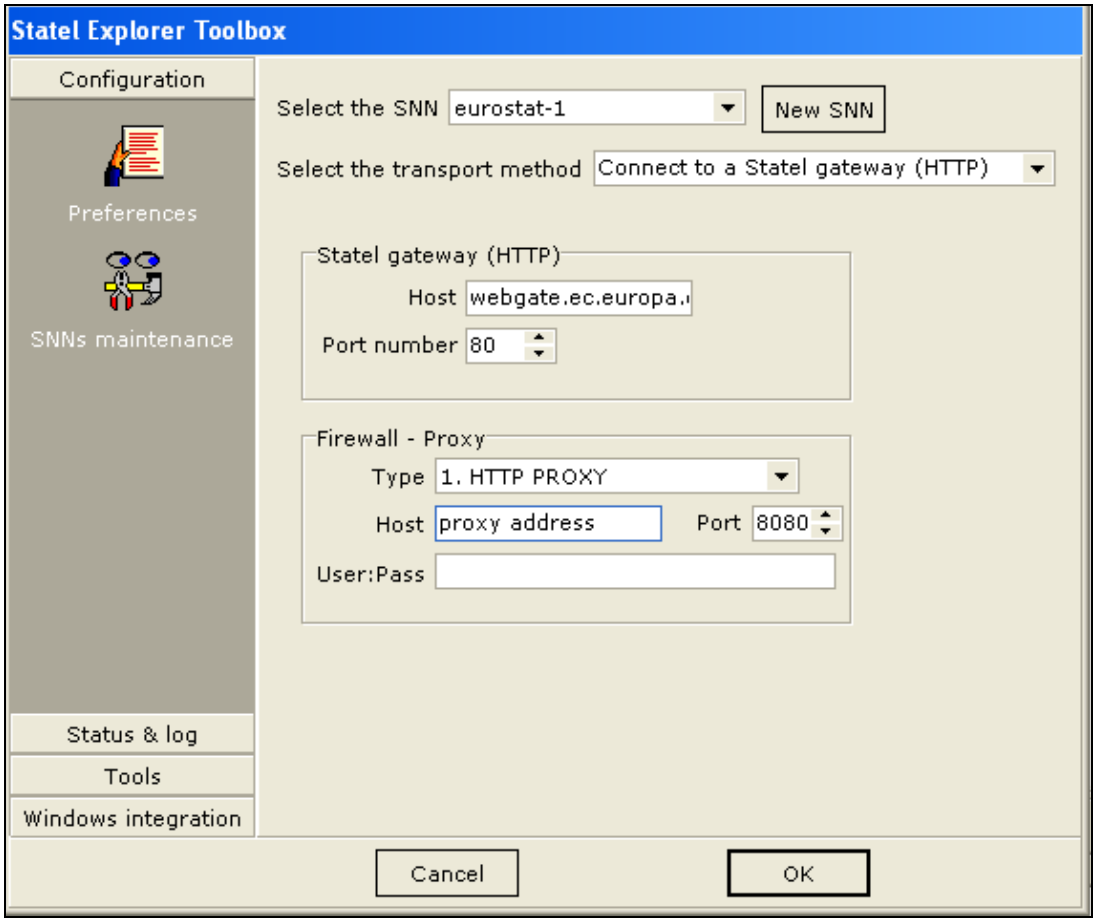

Figure 8: the STATEL configuration screen using the HTTP transport method

General settings

- "Select the SNN" must be set to **eurostat-1**
- To use the HTTP transmission mode, "Select the transport method" is defined as **Connect to a Statel gateway (HTTP)**

The STATEL Gateway settings

- Host address: it has to be modified to **webgate.ec.europa.eu**
- Port number: the STATEL gateway HTTP opened port by is **80**. This is not related to the NSI infrastructure.

The Firewall – Proxy settings

Type: Several settings are available for the "Type" of Firewall – Proxy used in the NSI infrastructure.

Only the NSI IT service can determine which settings have to be used.

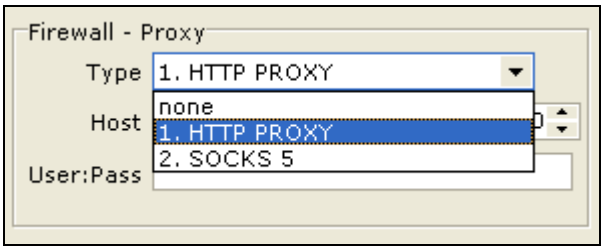

Figure 9: the different HTTP settings

The following table displayed the different HTTP configurations for the Firewall – Proxy.

Firewall – proxy Type	Host	Port	User :Pass
None	-	-	-
1. HTTP Proxy	proxy address	x	FirePass
2 SOCKS 5	proxy address	x	FirePass

Where:

- **Host**: the URL or the host name or the IP address of the proxy to reach
- **x**: the port used by the firewall – proxy
- **FirePass**: the firewall – proxy password (take care of the case sensitivity)

These values are provided by the NSI IT service.

The error log file

The tmpHttplog file is located in the ./Eurostat/Statel32/log folder.

It can be also accessed using the STATEL application via the "Tools/Open ToolBox" menu, then by clicking on the "Telecom log (HTTP)" button in the "Status & log" tab.

Below is an example of an incorrect STATEL configuration where all connection attempts failed.

```
Mon Jan 11 15:05:05 2010
Mon Jan 11 15:05:45 2010
WTMHTTP version 4.2.000
Loaded parameters from C:\Program Files\EUROSTAT\STATEL32\TMHTTP.INI
ListPendingPDUs: CURL execution error:
Couldn't resolve proxy 'proxy.orga.bsse'
Mon Jan 11 15:05:45 2010
```

This error will display the following message

Figure 10: unreachable gateway

2.4. The STATEL checklist

This checklist is divided in 3 categories:

- Category 1: “Direct FTP connection using a FTP client”.
- Category 2: “STATEL transmission – FTP mode”.
- Category 3: “STATEL transmission – HTTP mode”.

Each action in the checklist have a identifier composed of a number a having the form “x.yy” where x is the category number and xx the action number in the category.

The checklist can be printed out and the observations noted next to the actions performed. The checklist can also be updated in electronic format and sent to the eDAMIS support (ESTAT-SUPPORT-EDAMIS@ec.europa.eu) for further investigation.

The STATEL transmission type, in categories 2 and 3, must be defined by the NSI IT service.

	Action	Results	Observation
Category 1 - “Direct FTP transmission” using a FTP client			
1.01	Checking the direct FTP connection without using a proxy is successful		
1.02	Checking the direct FTP connection using a proxy is successful		

	Action	Results	Observation
If these tests are successful, category 2 and/or 3 tests can be done			
Category 2 - "STATEL transmission – FTP mode"			
2.01	Verifying STATEL Gateway address and port		
According to the Type of proxy used, perform the corresponding test. This type can be automatically determine by STATEL if the Auto option is checked			
2.02	Checking STATEL connection using no proxy		
2.03	Checking STATEL connection in "Site hostname" mode		
2.04	Checking STATEL connection in "User after logon" mode		
2.05	Checking STATEL connection in "Proxy open" mode		
2.06	Checking STATEL connection in "User RemoteId@RemoteHost" mode		
2.07	Checking STATEL connection in "User RemoteId@RemoteHost FireId" mode		
2.08	Checking STATEL connection in "RemoteUser@FireId@RemoteHost" mode		
Category 3 - "STATEL transmission – HTTP mode"			
3.01	Verifying STATEL Gateway address and port		
According to the proxy used, perform the corresponding test			
3.02	Checking STATEL connection using no proxy		
3.03	Checking STATEL connection using a proxy		
3.04	Checking STATEL connection using SOCKS 5		

3. How to diagnose problem with eWA

3.1. The eWA checklist

This checklist is divided in 6 categories:

- Category 1: "Structural problems".
- Category 2: "Problems when sending files in manual mode".
- Category 3: "Problems when sending files in (semi-)automatic mode".
- Category 4: "Problems when receiving files".
- Category 5: "Problems when managing user rights".
- Category 6: "Problem with the Mckoi database size".

Each action in the checklist have an identifier composed of a number a having the form "x.yy" where x is the category number and xx the action number in the category.

The checklist can be printed out and the observations noted next to the actions performed. The checklist can also be updated in electronic format and sent to the eDAMIS support (ESTAT-SUPPORT-EDAMIS@ec.europa.eu) for further investigation.

Id	Action	Results	Observation
Category 1 - "Structural problems"			
1.01	Checking the available free disk space. Does the available free disk space is enough to send, save or receive a file? It must be at least 4 times the size of the file.		
1.02	Checking if antivirus software is running. Sometimes antivirus softwares recognise STATEL PDUs as mpeg files and locked them (according to the security policy of the organisation).		
1.03	Identifying changes in proxy/firewall setting. Updates in the configuration of the proxy/firewall of the organisation can lead to situation where STATEL can no longer connect to Eurostat.		
1.04	Checking the RAM usage by the eWA service. In some cases, the eWA service will use the entire available RAM. In this case, the service needs to be restarted.		
1.05	Server local settings. With the use of non-Latin alphabet, warning message may be displayed when free-text comments are used when sending a file. The sending can be in most of the cases nevertheless done.		
1.06	A blank screen is got when accessing eWA. The Internet browser security settings must be set to the middle level. If you're using the Windows firewall, verify that STATEL is in the list of exceptions.		
1.07	No access to the directory. The application has by default the access rights defined in the 'local system account'. This can be modified using "`Start/Settings/Control Panel/Administrative Tools/Services/eDamis/WebApplication/Properties/Log on`".		
1.08	How to define the "SAVED" folder? If you want to define the SAVED folder on a network disk, you must verify that the account used (see 1.07) with rights on the network.		
Category 2 - "Problems when sending files in manual mode"			

Id	Action	Results	Observation
2.01	Checking that user rights are correctly set. This action needs to be done when a data sender complains because the dataset is not available in the send data files form.		
Category 3: "Problems when sending files in (semi-)automatic mode"			
3.01	Checking that files put in the EDI directory of eWA respect the dataset naming convention. Otherwise they appear with the incomplete status in the reports.		
Category 4: "Problems when receiving files"			
4.01	Checking in the eWP[1] that the user is defined as receiver of the outgoing dataset. This action must to be done when the user complain because the received file is not available in the receive data files form.		
Category 5: "Problems when managing user rights"			
5.01	Checking in the eWP that the dataset is linked to the organisation. This action needs to be done when the dataset is missing in eWA and users cannot be granted rights to the dataset.		
Category 6: "Mckoi database"			
6.01	Mckoi database size. When the available disk space become smaller than the size of the Mckoi database, the compact action cannot be performed when the eWA service is started. In this case, the Mckoi database size will continue to increase as far as all the disk space will be used.		

[1] eDAMIS Web Portal

4. Conclusion

This document defined the actions administrators can performed in order to diagnose STATEL and eWA current problems.

For STATEL, the document is focused on configuration problems according to the type of firewall-proxy used.

For eWA, a check list is provided with the most current problems encountered in countries an logged by the Support.

For any explanation and further investigation, the eDAMIS Support can be contacted to ESTAT-SUPPORT-EDAMIS@ec.europa.eu