

# BTS<sup>®</sup>: Installation and connectivity guide

## GUI versions 8.x

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Manual

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**July 2017**

Version 2.4



**London**  
Stock Exchange Group



# Contents

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## Index

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**1.0 Revision History 4**

**2.0 Introduction 5**

2.1 Scope 5

---

**3.0 Technical prerequisites 6**

3.1 Hardware minimum requirements 6

3.2 Software requirements 6

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**4.0 Client Installation & Checks 7**

**5.0 Connectivity parameters 11**

**6.0 Custom Installer 12**

**7.0 Troubleshooting 13**

7.1 Connection issues: Telnet test 13

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**8.0 Appendix 1 – Connectivity Configuration 15**

**9.0 Appendix 2 – Environment Selection 18**

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# BTS<sup>®</sup> Installation and connectivity Guide

31<sup>st</sup> July 2017

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## 1.0 Revision History

<b>Date</b>	<b>Version</b>	<b>Description</b>	<b>Author</b>
1 Apr 2014	2.0	BTS <sup>®</sup> Client Installation, English Version first draft. This document replaces all previous versions which were based on old templates and old company logos.	Borsa Italiana
1 Oct 2014	2.1	Chapter 5 and 7. Added references to configuration file used to quote via excel. Added Appendix 2: manual procedure to be executed in case of SDC invocation for BTS <sup>®</sup> Production (Milan instance only).	Borsa Italiana
16 Feb 2015	2.2	Replaced pictures with old logo Removed reference to former BTS <sup>®</sup> name Appendix 2 / 3: updated manual procedure in case of SDC invocation	Borsa Italiana
28 Apr 2016	2.3	JAVA minimum requirement update References to ContextManagerSetup.config file added for clock link Removed configuration to outdated client versions BTS <sup>®</sup> registered trademark update	Borsa Italiana
31 Jul 2017	2.4	BTS client main release 8.x. – new IPs/ports, new Disaster Recovery model	Borsa Italiana

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# **BTS<sup>®</sup> Installation and connectivity Guide**

31<sup>st</sup> July 2017

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## **2.0 Introduction**

BTS<sup>®</sup> is a multi market client application that works as trading and market data front-end for equities and derivatives markets.

Both trading and market making functionalities are supported, as well as additional functions to help activity control and supervision.

### **2.1 Scope**

This document aims at providing customers with a quick guideline for the correct installation of the client.

Network configuration is also provided in case IP translation (NATting) is enforced and has to be supported within a customer's network.

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# BTS<sup>®</sup> Installation and connectivity Guide

31<sup>st</sup> July 2017

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## 3.0 Technical prerequisites

BTS<sup>®</sup> is a multimarket access client application developed on Java platform and can be downloaded from Borsa Italiana website and installed directly on a member's PC.

In the following a list of requirements is provided: please check if your environment is able to support BTS<sup>®</sup> client before proceeding to the client installation.

### 3.1 Hardware minimum requirements

- CPU: Pentium Dual Core 2GHz
- RAM: 2GB
- HD: 100GB
- Network Adapter: 100 Mbit/s or 1 Gbit/s

### 3.2 Software requirements

- OS:
  - Windows (x32) versions 8.x, 7 (SP1), Vista (SP1,SP2), Server 2008 (SP1, SP2), XP (SP1, SP2, SP3), 2000 (SP3, SP4), Server 2003 (R2, SP1, SP2);
  - Windows (x64) versions 8.x, Server 2012, 7 (SP1), Server 2008 R2 (SP1), Vista (SP1, SP2), XP (SP1, SP2, SP3), 2003 (R2, SP1, SP2).

BTS<sup>®</sup> installation kit includes also the java virtual machine which is installed automatically together with the software application. JVM version changes from time to time and as of July 2017 is **1.8.0\_72-b15**.

Please note that administrator privileges are required in order to install BTS<sup>®</sup> on user's PC.

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# BTS<sup>®</sup> Installation and connectivity Guide

31<sup>st</sup> July 2017

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## 4.0 Client Installation & Checks

BTS<sup>®</sup> client installation files are available for downloading from Borsa Italiana website in the following pages:

<http://www.borsaitaliana.it/borsaitaliana/gestione-mercati/bts-bittradingstation/bts.htm> (Italian)

<http://www.borsaitaliana.it/borsaitaliana/gestione-mercati/bts-bittradingstation/bts.en.htm>  
(English)

Please note that two client versions exist, which can interface all the server instances envisaged to be accessed :

- **BTS London**, which enforces access to:
  - BTS<sup>®</sup> CDS (External test environment);
  - London BTS<sup>®</sup> Prod (Production).
  - SDC London BTS<sup>®</sup> Prod (Production) (in case of Disaster Recovery invocation).
- **BTS Milan**, which enforces access to
  - BTS<sup>®</sup> CDS (External test environment);
  - Milan BTS<sup>®</sup> Prod (Production);
  - SDC Milan BTS<sup>®</sup> Prod (Production) (in case of Disaster Recovery invocation);

Although BTS<sup>®</sup> GUI is designed to maximize backward compatibility, it's highly recommended to always download the latest version available in our website.

**New versions (8.xx.yy.zz) are not compatible with former 7.aa.bb.cc versions.**

# BTS® Installation and connectivity Guide

31<sup>st</sup> July 2017

After downloading the file, please follow the installation instructions:

- Open the downloaded .zip file, extract the.msi installation package and run it:

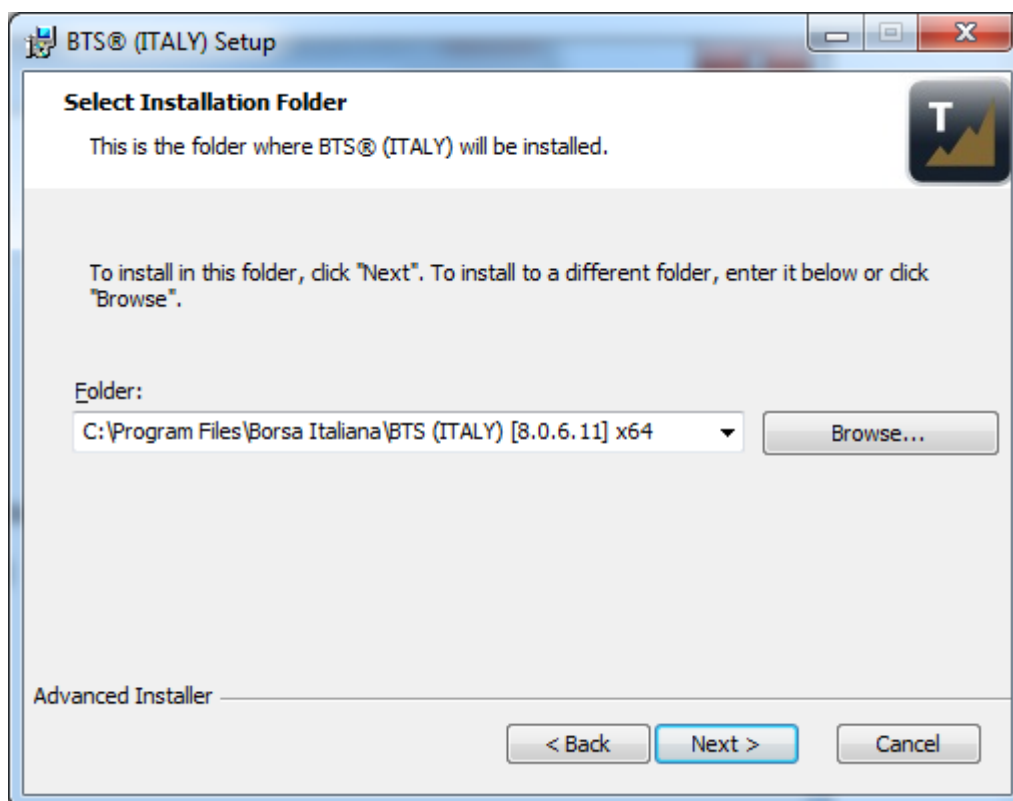




# BTS® Installation and connectivity Guide

31<sup>st</sup> July 2017

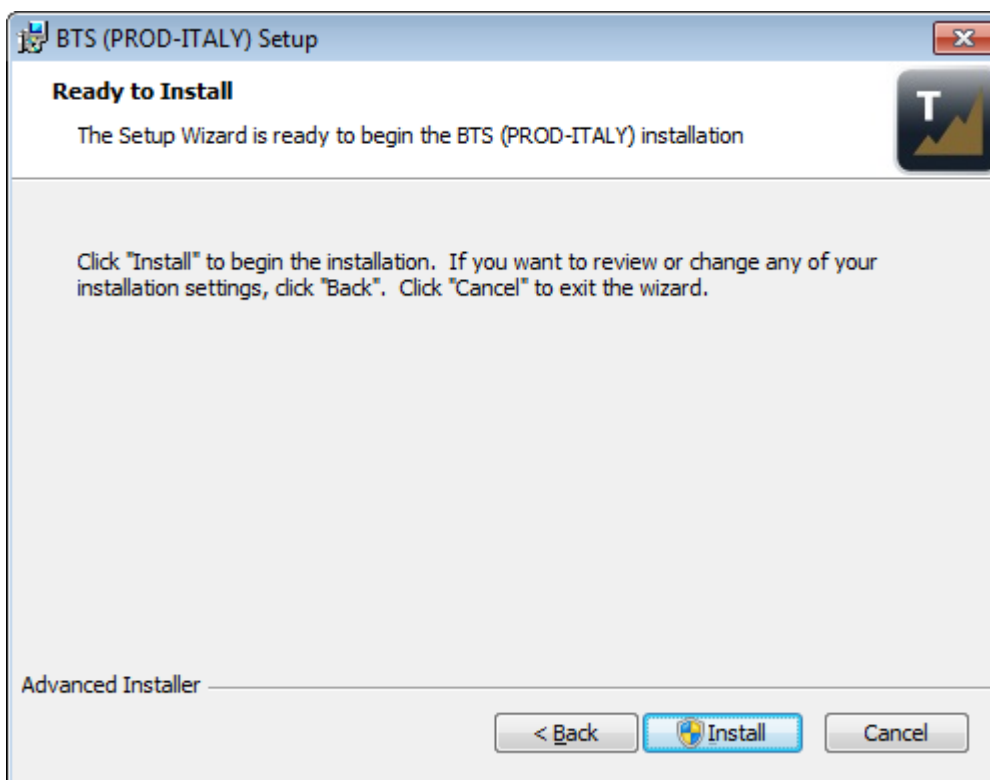
- Click on 'Next':



# BTS<sup>®</sup> Installation and connectivity Guide

31<sup>st</sup> July 2017

- Click on 'Next' to continue installation in the predefined destination folder or 'Browse' if the installation folder needs to be changed, then select 'Next':



Select Install and confirm authorization to proceed, if required.

In order to access BTS<sup>®</sup>, customers need a user id, a password and a Member Code. Credentials are provided by Borsa Italiana Clients-Services team upon request.

In case of problems during the login, please close the BTS<sup>®</sup> GUI interface and follow the steps described in chapter Troubleshooting.

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# BTS<sup>®</sup> Installation and connectivity Guide

31<sup>st</sup> July 2017

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## 5.0 Connectivity parameters

In order to access BTS<sup>®</sup> CDS, production and SDC (Disaster Recovery) services, customers have to enable the following destination IPs and ports on their network:

BTS environment for 8.x GUI versions	IPs	TCP Ports
CDS	194.169.14.172 194.169.15.172	34900;34910;34921;34924
Production + SDC (DR Site)	194.169.14.138 194.169.14.139 194.169.15.138 194.169.15.139	44900;44910;44921;44924 34900;34910;34921;34924

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## 6.0 Custom Installer

In case the customer network architecture requires a re-mapping of IP addresses and ports, use the following procedure :

- Identify the installation directory (in the following defined as %INSTALL%) : the default suggested by the installation procedure is \Programmi\Borsa Italiana\BTS [client\_instance] [version\_number]\
- go to the %INSTALL%\etc\client\ directory
- Open the configuration file **ContextManagerSetup.xml**
- Verify in the <ENVIROMENTS> - <ENVIRONMENT name="xxx" type="yyy"> - <SERVERS> sections that the <SERVER> items corresponds to the values provided in Appendix – Connectivity Configuration chapter
- go to the %INSTALL%\etc\server\ directory
- Open the configuration file **GKApi\_J\_Version.xml**
- In the <ENVIROMENTS> - <ENVIRONMENT name="xxx" type="yyy"> - <SERVERS> - <SERVER> sections replace IP addresses (<TCP\_IP> item) and TCP ports (TCP\_PORT item) with the NATted values

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## 7.0 Troubleshooting

The following sections provide a guide how to resolve typical problems with BTS<sup>®</sup>:

- Server unreachable
  - The service is down, e.g. has not been started, yet, or it has already been shutdown, or it is down for maintenance purposes: verify whether a notice has been delivered to inform about service availability.
  - The configuration is wrong: try to Telnet (see related chapter) the IP/Ports provided by your network administrator or the ones provided in Appendix – Connectivity Configuration in case no NATting is applied. In any case contact you network administrator.
- The user cannot logon: check your credentials. Contact Borsa Italiana Service Desk to reset the password in case it is forgotten.
- The logon is successful, but not all tools are enabled. Contact Borsa Italiana Service Desk to verify that the configuration is applied correctly.

### 7.1 Connection issues: Telnet test

For problems where a connectivity issue might be responsible for a service failure, a Telnet test can be used to provide a first and quick analysis:

- 1) Go to Start Menu, choose Run, and type: "telnet <server\_IP\_address> <server\_TCP\_port>"
- 2) An empty, black window labelled "Telnet <server\_IP\_address>" should open.
- 3) If a text like "Connecting To <server\_IP\_address> <server\_TCP\_port> ..." is displayed and after approx. 30 seconds the error message "Could not open

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# BTS<sup>®</sup> Installation and connectivity Guide

31<sup>st</sup> July 2017

connection to the host, on port `<server_TCP_port>`: connection failed” appears, the communication could not be established. In this case, please contact your Network Administrator to further investigate the problem.

If within few seconds a blank black screen is displayed, the connection could be established successfully: press Ctrl and '+' simultaneously to display the 'Microsoft Telnet' prompt; type 'quit' and return to leave Telnet.

# BTS<sup>®</sup> Installation and connectivity Guide

31<sup>st</sup> July 2017

## 8.0 Appendix 1 – Connectivity Configuration

In the following the connectivity related entries of the configuration files GKApi\_J\_Version.cfg in the different environments is provided for reference.

The file GKApi\_J\_Version.cfg is stored under %INSTALL%\etc\server\ directory, where for %INSTALL% is the client installation directory.

- **London BTS<sup>®</sup>**

GKApi\_J\_Version.cfg:

```
<ENVIRONMENT name="CDS">
  <SERVERS>
    <SERVER name="CDLND AS01">
      <TCP_IP>194.169.14.172</TCP_IP>
      <TCP_PORT>34900</TCP_PORT>
      .....
    </SERVER>
  </SERVERS>
</ENVIRONMENT>
```

```
<ENVIRONMENT name="PROD" type="PROD">
  <SERVERS>
    <SERVER name="PDCLND AS01">
      <TCP_IP>194.169.14.138</TCP_IP>
      <TCP_PORT>44900</TCP_PORT>
      .....
    </SERVER>
    <SERVER name="PDCLND AS02">
      <TCP_IP>194.169.14.139</TCP_IP>
      <TCP_PORT>44900</TCP_PORT>
      .....
    </SERVER>
  </SERVERS>
</ENVIRONMENT>
```

```
<ENVIRONMENT name="SDC" type="SDC">
  <SERVERS>
    <SERVER name="PDCLND AS01">
      <TCP_IP>194.169.15.138</TCP_IP>
      <TCP_PORT>44900</TCP_PORT>
      .....
  </SERVERS>
```

# BTS® Installation and connectivity Guide

31<sup>st</sup> July 2017

```
        </SERVER>
        <SERVER name="PDCLND_AS02">
            <TCP_IP>194.169.15.139</TCP_IP>
            <TCP_PORT>44900</TCP_PORT>
            .....
        </SERVER>
    </SERVERS>
</ENVIRONMENT>
```

- **Milan BTS®**

*GKApi\_J\_Version.cfg:*

```
<ENVIRONMENT name="CDS">
    <SERVERS>
        <SERVER name="CDSLND_AS01">
            <TCP_IP>194.169.14.172</TCP_IP>
            <TCP_PORT>34900</TCP_PORT>
            .....
        </SERVER>
    </SERVERS>
</ENVIRONMENT>
```

```
<ENVIRONMENT name="PROD" type="PROD">
    <SERVERS>
        <SERVER name="PDCLND_AS01">
            <TCP_IP>194.169.15.138</TCP_IP>
            <TCP_PORT>34900</TCP_PORT>
            .....
        </SERVER>
        <SERVER name="PDCLND_AS02">
            <TCP_IP>194.169.15.139</TCP_IP>
            <TCP_PORT>34900</TCP_PORT>
            .....
        </SERVER>
    </SERVERS>
</ENVIRONMENT>
```

```
<ENVIRONMENT name="SDC" type="SDC">
    <SERVERS>
        <SERVER name="PDCLND_AS01">
```



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# BTS<sup>®</sup> Installation and connectivity Guide

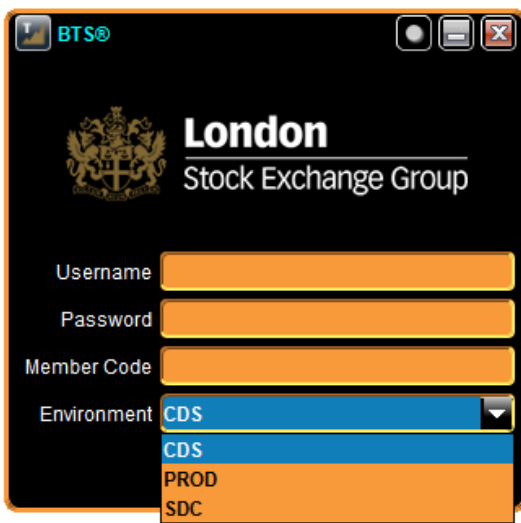
31<sup>st</sup> July 2017

```
        <TCP_IP>194.169.14.138</TCP_IP>
        <TCP_PORT>34900</TCP_PORT>
        .....
    </SERVER>
    <SERVER name="PDCLND_AS02">
        <TCP_IP>194.169.14.139</TCP_IP>
        <TCP_PORT>34900</TCP_PORT>
        .....
    </SERVER>
</SERVERS>
</ENVIRONMENT>
```

# BTS® Installation and connectivity Guide

31<sup>st</sup> July 2017

## 9.0 Appendix 2 – Environment Selection



When launching the BTS® application, a System Login window pops up where Username, Password and Member Code must be entered in order to authenticate.

Moreover the environment to be addressed has to be specified by selecting the target in the 'Environment' field drop-down menu. The possible values are:

- **CDS** = test environment
- **PROD** = production environment
- **SDC** = secondary production site (to be used only in case of Disaster Recover invocation)

Once the user has logged in, the BTS® top-level tool bar appears with all available Menus and virtual desks.



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