

GTP007 – GTP Lite Guide

GROUP TICKER PLANT

Issue E1.1 | 15 OCT 2021

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1. THIS GUIDE



1.1 Readership

This document is particularly relevant to trading, market data and technical teams within member firms, information vendors and other market participants who currently receive or are interested in receiving Borsa Italiana market data.

When read in conjunction with other Group Ticker Plant documents it is intended to provide all required information to develop to, and interact with, our GTP Lite real-time information systems.

1.2 Document Series

This guide, **GTP007 – GTP Lite Guide**, forms part of the documentation library supporting those clients interacting with the Group Ticker Plant. For information, the full series of currently available documentation is outlined below:

- GTP001 – Product Guide;
- GTP002 – Technical Guide (this document);
- GTP003 – Statistics Guide;
- GTP004 – Parameters Guide;
- GTP005 – Testing Guide;
- GTP006 – External Sources Guide;
- GTP007 – GTP Lite Guide.
- GTP008 – Market Attributes Guide

The full library of Group Ticker Plant documentation for Borsa Italiana can be found at:

Group Ticker Plant - Borsa Italiana

1.3 Document History

This document has been subject to the following iterations:

Issue	Date	Description
E1.0	5 October 2021	Document Rebrand
E1.1	15 October 2021	Updated market rebranding

In subsequent issues of this document, where amendments have been made, these changes will be indicated through the use of **red text**.

1.4 Enquiries

For further information on Group Ticker Plant, please contact either your Technical Account Manager or Client Technology Services (Italy):

- Telephone: (+39) 02 42 41 13 99
- Telephone (Toll Free): (00800) 26 77 20 00
- Email: **clients-services@borsaitaliana.it**

2. SERVICE OVERVIEW



GTP Lite broadcasts data in a compressed binary format, based on TCP transmission and operates on limited circuit capacities.

Any customer requiring guidance on the most appropriate Group Ticker Plant product to support their market data needs should contact their Technical Account Manager in either London or Milan.

2.1 Data Sets

The first iteration of GTP Lite services will be launched to support the Group Ticker Plant Phase 1.0 services in TCP format. At go-live, GTP Lite will deliver the following service lines:

- Level 1 incremental service;
- Level 2 10 depth snapshot service;
- Level 2 full depth incremental service;
- Reference Data;
- Announcements;
- FTSE indices;



Figure 1: Service lines offered by the GTP Lite service at go-live.

Further information on the structure, including the functionality and design of these services, can be found in GTP001 – Product Guide.

The following markets will be supported at the go-live of GTP Lite:

- Cash Equity markets: **Euronext Milan (MTA)**, SeDex and ETFs;
- Derivatives markets (IDEM);
- Fixed Income markets (MOT);
- EuroTLX markets (ETLX).



3. SYSTEM OVERVIEW



3.1 Architecture and subscription

The GTP Lite architecture has been designed to be scalable and resilient. The GTP Lite services will be housed on the same architecture as the Group Ticker Plant core services, leveraging the identical upstream architecture, including existing feed handlers and databases. The provisioned Group Ticker Plant replay and recovery solutions, used by customers recovering from message loss, outage or late join, will be provided to customers of the GTP Lite service.

Customers are required to establish a TCP session with the gateway and login to the service. In a similar approach to the core Group Ticker Plant service lines, customers will not be permitted to subscribe to a subset of instruments or messages on the supporting gateway.

Login to the GTP Lite services is done through the Login Request message, as detailed in section 3.9.1 of GTP002 – Technical Guide. Following successful login, validation of an active TCP session is done through the standard TCP 'keep-alive' mechanism. No explicit unsubscription from the GTP Lite service is required and closing the TCP session will disconnect customers from the GTP Lite service. In order to facilitate resumption of market data processing in the event of disconnections or late joins from Customers, the transmission of Heartbeat messages is enabled on GTP Lite sessions.

Customers should note, however, that no secondary market data service will be provided to customers using the GTP Lite service. Unlike the multicast services, whereby a secondary feed is routed on customer's resilient circuit, only a primary service, provisioned on a customer's primary circuit will be permissioned for GTP Lite users during normal service. In the unlikely event of component failure, a secondary GTP Lite service will be made available for subscription on customers' secondary circuit.



3.2 Connectivity

The GTP Lite service employs industry standard data delivery and recovery transmission techniques.

The GTP Lite service will use TCP over IP version 4 (IPv4) Ethernet standards. TCP Header information is defined in IETF RFC 793 standard and IPv4 is defined in the RFC791 standard. Further information is contained in section 2 of GTP002 – Technical Guide.

Customers should note that network topology information, including IP unicast addresses and port details, will be published in GTP004 – Parameters Guide, shortly.



4. MESSAGE FORMATS



The GTP Lite services will deliver the same data as that of the core Group Ticker Plant services. The real-time data messages delivered by the GTP Lite service, whilst compressed to ensure the most efficient delivery, will be delivered in the same format as the core Group Ticker Plant service. All message formats, including uncompressed message length and data types, are contained within section 3 of GTP002 – Technical Guide.

4.1 Message Compression and Composition

All messages disseminated on the GTP Lite market data service will be compressed to ensure the most efficient possible data transmission. Compression will be done using the industry standard 'z-lib' library. To facilitate decompression, the message stream will be split into a series of data chunks – each chunk containing a number of compressed messages, as well as a delimiter and a message header.

The delimiter will contain an auto-generated unique number. Customers should note that this is not the sequence number of the message. The delimiter is followed by the chunk header, which will contain the total length of the messages in the chunk, both compressed and uncompressed – both of these values and the delimiter will be two bytes in length. The chunk header will then be followed by a number of compressed messages.



Figure 2: Structure of the GTP Lite message following compression

Customers should note that messages sent to logon to the GTP Lite service, and all messages sent to or sent from the replay and recovery solutions should be not be compressed.



4.2 Message Sequencing

All messages sent from the Group Ticker Plant service, including those transmitted on GTP Lite will be sequenced. GTP Lite messages will carry the identical sequence number to that of the corresponding Group Ticker Plant multicast service. Sequence numbers are not customer specific and are not, therefore, reset to 1 upon successful subscription to the GTP Lite service. Any customer subscribing to the GTP Lite service after messages have already begun disseminated should expect sequence numbers to be higher than 1.



5. PRODUCT FAILOVER



All Group Ticker Plant services, including GTP Lite and the core Group Ticker Plant services are designed to be robust and resilient. In the unlikely event of component failure, recovery has been designed to be transparent to customers wherever possible.

The local and remote resilience of GTP Lite components and service lines mirrors that of the core Group Ticker Plant multicast services.

As per section 3.1 of this document, GTP Lite will only be provided on a customer's primary circuit during normal operations. Should the primary market data gateway fail, the secondary market data gateway will become available for subscription to the GTP Lite service. The behavior of the secondary gateway, including the reset of sequence numbers will mirror that of the core Group Ticker Plant multicast services. Further information is provided in section 5 of GTP002 – Technical Guide.

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