



arrowhead System Stats Data Specification

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2-1. Symbol Allocation Information

[Content]

- Allocation information on trading servers for each stock/CB.
- Only for symbols at TSE market, excluding non-TSE exchanges and Dummy Symbols.
- Contains information on resource group allocations in trading servers.
 - Resource group is a division unit of server resources, on which CPU and memory allocations are based at application runtime.
 - Different resource groups are allocated to different server resources and processed in parallel.

[Format]

- Provided as a zip archive containing one csv file.
- The table below shows the contents and file layouts.

#	File	Filename	File Layout
S1	Symbol Allocation Information	S1_SYB_ALC_yyyy mmdd.zip	Date (yyyymmdd), Server no. (001-042), Resource group no. (nnn), Exchange classification (TSE:"1" fixed), Market division (Stocks:"11" or CBs:"12"), Issue code* (Stock: nnnn or nnnnnn CB: nnnnnnnn)

(*) Please note that alphabetic characters will be implemented for securities codes newly established on or after January 1, 2024.

2-2. CPU Usage Rate

[Content]

- CPU usage rates of each participant GW server and trading server.

[Format]

- Provided as a zip archive containing one csv file when provided (at 8:50am, 11:55am, 7:00pm).
- Each file contains per-second data (snapshots) between 7:00am and 8:20am, 7:00am and 11:29am, 7:00am and 3:01pm respectively.
- The table below shows the contents and file layouts.

#	File	Filename (*)	File Layout
C1	CPU Usage Rate per Participant GW	C1_GW_CPU_yyyymmdd.zip	Time stamp (hhmmss), Server no. (001-016), Usage rate (0.00-100.00)
C2	CPU Usage Rate per Trading Server	C2_TR_CPU_yyyymmdd.zip	Time stamp (hhmmss), Server no. (001-042), Usage rate (0.00-100.00)

(*) The zip archive contains the following file when provided.

8:50am C1_GW_CPU_yyyymmdd_01.csv and C2_TR_CPU_yyyymmdd_01.csv
11:55am C1_GW_CPU_yyyymmdd_02.csv and C2_TR_CPU_yyyymmdd_02.csv
7:00pm C1_GW_CPU_yyyymmdd_03.csv and C2_TR_CPU_yyyymmdd_03.csv

2-3. Number of Orders per Millisecond

[Content]

- Number of orders per millisecond for each resource group allocated to trading servers, on each participant GW server. (New/Modification/Cancel orders respectively.)
- Symbols on non-TSE exchanges and Dummy Symbols are not included.
- Including orders which are accepted at GW once and eventually rejected by Registration Error at trading server. Excluding orders rejected by Acceptance Error at GW.
- Records of zero orders per millisecond are not included.

[Format]

- Provided as 2 zip archives containing 16 csv files, one for each participant GW server.
- Each file contains per-millisecond data between 8:00am and 3:00pm, based on the time arrival at GW servers.
- The table below shows the contents and file layouts.

#	File	Filename (*)	File Layout
M1	No. of Orders per Millisecond(01-08)	M1_ODR_QTY_y yyymmdd.zip	Time (hhmmssmmm), Server no. (001-016), Resource group no. (nnn), No. of New orders (0-9999), No. of Modification orders (0-9999), No. of Cancel orders (0-9999),
M2	No. of Orders per Millisecond(09-16)	M2_ODR_QTY_y yyymmdd.zip	

(*) The zip archives contain the 16 files below.

M1_ODR_QTY_yyyymmdd_01.csv	M1_ODR_QTY_yyyymmdd_06.csv	M2_ODR_QTY_yyyymmdd_11.csv
M1_ODR_QTY_yyyymmdd_02.csv	M1_ODR_QTY_yyyymmdd_07.csv	M2_ODR_QTY_yyyymmdd_12.csv
M1_ODR_QTY_yyyymmdd_03.csv	M1_ODR_QTY_yyyymmdd_08.csv	M2_ODR_QTY_yyyymmdd_13.csv
M1_ODR_QTY_yyyymmdd_04.csv	M2_ODR_QTY_yyyymmdd_09.csv	M2_ODR_QTY_yyyymmdd_14.csv
M1_ODR_QTY_yyyymmdd_05.csv	M2_ODR_QTY_yyyymmdd_10.csv	M2_ODR_QTY_yyyymmdd_15.csv
		M2_ODR_QTY_yyyymmdd_16.csv

2-4. Number of Executions per Millisecond

[Content]

- Number of executions per millisecond for each stock/CB on each participant GW server.
- Symbols on non-TSE exchanges and Dummy Symbols are not included.
- Records of zero executions per millisecond are not included.

[Format]

- Provided as a zip archive containing 16 csv files, one for each participant GW server.
- Each file contains per-millisecond data between 9:00am and 3:01pm, based on the time when the Execution Completion Notice Message goes through participant GW server (= "Transmission Time" Field in ESP Message Header).
- The table below shows the contents and file layouts.

#	File	Filename (*1)	File Layout
M3	No. of Executions per Millisecond	M3_EXE_QTY_YYYYmmdd.zip	Time (hhmmssmmm), Server no. (001-016), Issue code(*2) (Stock: nnnn or nnnnn CB: nnnnnnnnn), No. of executions (1-9999)

(*1) The zip archive contains the 16 files below.

M3_EXE_QTY_YYYYmmdd_01.csv	M3_EXE_QTY_YYYYmmdd_06.csv	M3_EXE_QTY_YYYYmmdd_11.csv
M3_EXE_QTY_YYYYmmdd_02.csv	M3_EXE_QTY_YYYYmmdd_07.csv	M3_EXE_QTY_YYYYmmdd_12.csv
M3_EXE_QTY_YYYYmmdd_03.csv	M3_EXE_QTY_YYYYmmdd_08.csv	M3_EXE_QTY_YYYYmmdd_13.csv
M3_EXE_QTY_YYYYmmdd_04.csv	M3_EXE_QTY_YYYYmmdd_09.csv	M3_EXE_QTY_YYYYmmdd_14.csv
M3_EXE_QTY_YYYYmmdd_05.csv	M3_EXE_QTY_YYYYmmdd_10.csv	M3_EXE_QTY_YYYYmmdd_15.csv
		M3_EXE_QTY_YYYYmmdd_16.csv

(*2) Please note that alphabetic characters will be implemented for securities codes newly established on or after January 1, 2024.

2-5. FLEX Throttling Count

[Content]

- Number of times data traffic exceeds the FLEX throttling threshold for each multicast group.
- Only for WB services of TSE real-time (Stock/CB) Information.
- Records of zero counts per second are not included.

[Format]

- Provided as a zip archive containing one csv file.
- Each file contains per-second data between 8:00am and 3:01pm.
- The table below shows the contents and file layouts.

#	File	Filename	File Layout
F1	Throttling Count per MCG (Full WB)	F1_FL_TRT_yyyym mdd.zip	Time (hhmmss), MCG no. (nnn), Count (1-9999)
F2	Throttling Count per MCG (Standard WB)	F2_ST_TRT_yyyym mdd.zip	Time (hhmmss), MCG no. (nnn), Count (1-9999)

2-6. Number of Connected Virtual Servers

[Content]

- Total number of connected virtual servers on each participant GW server at certain times of the day.
- Only for Order/Notice virtual servers at TSE.

[Format]

- Each file contains data as at 8:20am, 11:29am, and 2:59pm.
- Provided as a zip archive containing one csv file when provided (at 8:50am, 11:55am, 7:00pm).
- The table below shows the contents and file layouts.

#	File	Filename (*)	File Layout
G1	No. of Connected Virtual Servers	G1_VS_NUM_YYYYMMDD.zip	Time (hhmm), Server no. (001-016), No. of Connected Virtual Servers(0-9999)

(*) The zip archive contains the following file when provided.

8:50am	G1_VS_NUM_YYYYMMDD_01.csv
11:55am	G1_VS_NUM_YYYYMMDD_02.csv
7:00pm	G1_VS_NUM_YYYYMMDD_03.csv

2-7. Virtual Server Allocation Information

[Content]

- Information on the connection destination participant GW for each virtual server at certain times of the day.
- Only for Order/Notice virtual servers at TSE.
- Only available to user having LLT or Participant Code for their virtual servers in use.
(Information for the dedicated virtual servers on arrowhead is available to user having LLT Code.)

[Format]

- Each file contains connection conditions as at 8:20am, 11:29am, and 2:59pm.
- Provided as a zip archive containing one csv file when provided (at 8:50am, 11:55am, 7:00pm).
- The table below shows the contents and file layouts.

#	File	Filename (*,**)	File Layout
V1	Virtual Server Allocation Information	V1_VS_ALC_(user code)_yyyymmdd.zip	Time (hhmm), Virtual server no. (ZZZZZZ), TP code (ZZZZZ), LLT code (ZZZZZ or null), Server no. (001-016 or null),

(*) The zip archive contains the following file when provided.

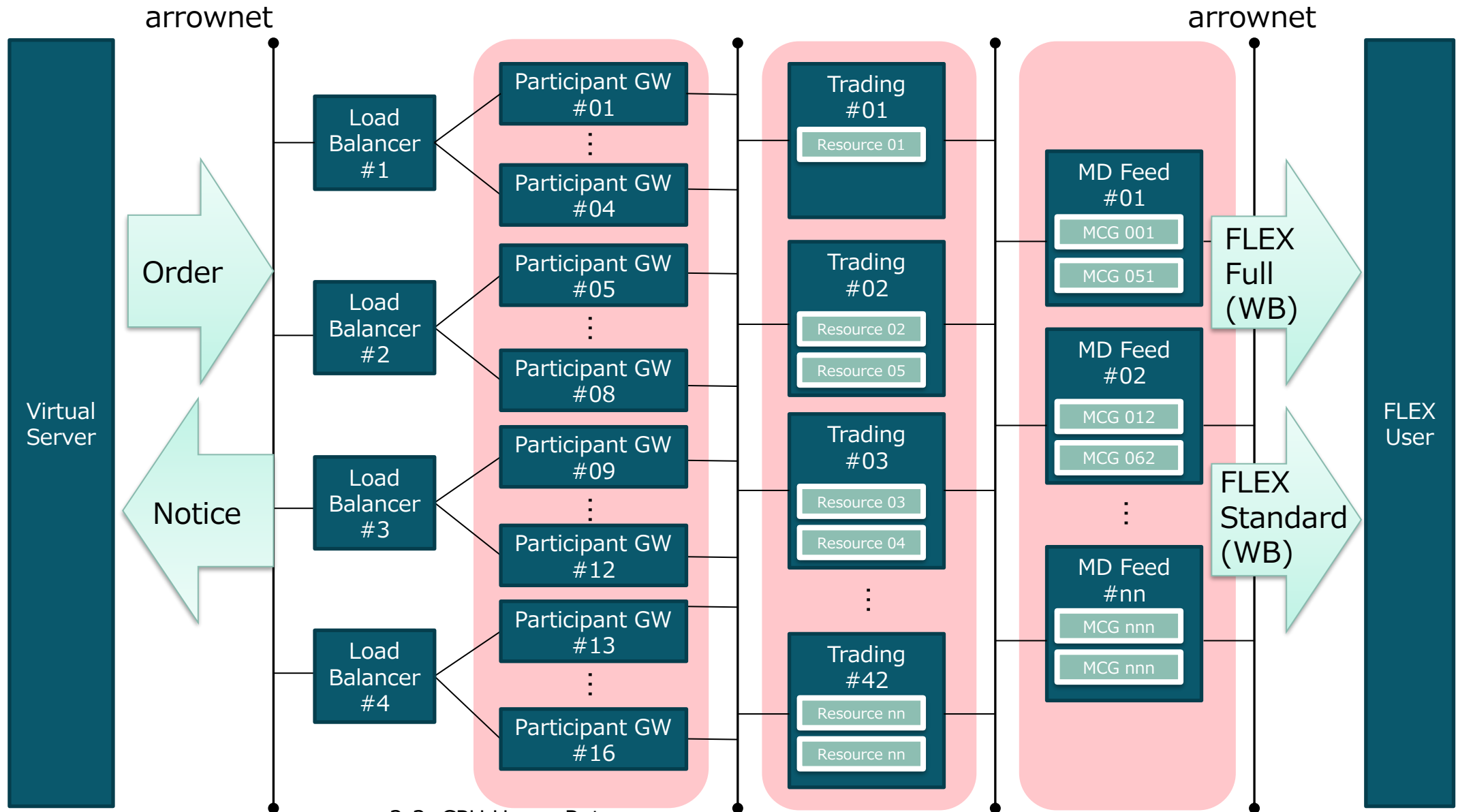
8:50am V1_VS_ALC_(user code)_yyyymmdd_01.csv
11:55am V1_VS_ALC_(user code)_yyyymmdd_02.csv
7:00pm V1_VS_ALC_(user code)_yyyymmdd_03.csv

(**) The user codes are as below.

In the case of a trading participant: Trading participant code

In the case of a user that conducts low latency trading: LLT code

3. Reference (System Configuration and Data Contents)



- 2-2. CPU Usage Rate
- 2-3. No. of Orders per ms
- 2-4. No. of Executions per ms
- 2-6. No. of Connected VSs
- 2-7. VS Allocation Information

- 2-1. Symbol Allocation Information
- 2-2. CPU Usage Rate

- 2-5. FLEX Throttling Count

3. Reference (Delivery Frequency of Data Contents)

