KPI Definitions for Application Monitoring

This chapter covers the following topics:

- General Information

- KPIs for RPC - Successful Requests

- KPIs for RPC - Failed Requests

- KPIs for CICS ECI - Successful Requests

- KPIs for CICS ECI - Failed Requests

- KPIs for IMS Connect - Successful Requests

- KPIs for IMS Connect - Failed Requests

General Information

The tables below describe the KPIs (key performance indicators) monitored by the Application Monitoring Data Collector. Each KPI is represented as a row in the CSV file produced by the data collector. The KPI name is identical to the row name in the first column of the CSV file. There is only one common layout of the CSV file. Therefore, depending on the scenario, KPIs may have no values. In this case, the column has an empty entry in the corresponding row. This can be changed to the value "0" by setting the parameter `entirex.appmondc.usezeroasnullvalue` in the configuration file *entirex.appmondc.properties* (see *Configuration for Application Monitoring*).

There are three different scenarios: RPC, CICS ECI and IMS Connect. Each scenario has a different set of KPIs for successful requests and for failed requests. For a successful request, the KPI "ErrorCode" is always empty. For a failed request this KPI always has a value.

The RPC scenario is supported when using the EntireX Broker as well as when using the Direct RPC component of the EntireX Adapter. The CICS ECI and IMS Connect scenarios are supported by the EntireX Adapter only when using the corresponding connection types.

The sequence of the KPIs in the tables below is the same as the sequence of the KPIs in the CSV file.

KPIs for RPC - Successful Requests

KPI Name	Description
Time	The time the event has been processed by the data collector in the format "YYYY-MM-DD HH:MM:SS.SSS" using the current time zone.
Timestamp	The time the event has been processed by the data collector as a number. The number is the difference, measured in milliseconds, between the current time and midnight, January 1, 1970 UTC.
Scenario	The scenario identifier "RPC".

KPI Name	Description
ApplicationName	"*application-name*" as defined by the broker attribute `APPMON-NAME`. If the broker attribute is not specified, the server address is used; for example `RPC/SRV/CALLNAT`.
Address	The broker ID and the server address of the RPC request.
TimeResponse	The complete response time (roundtrip from client to server and back) in microseconds.
TimeClientLayer	The time spent in the client RPC layer in microseconds.
TimeClientTransport	The transport time from the client to the broker and back in microseconds.
TimeBroker	The time spent in the broker (active processing) in microseconds.
TimeBrokerWaitForServer	The time spent in the broker waiting for an available server in microseconds.
TimeServerTransport	The transport time from the broker to the server and back in microseconds.
TimeServerLayer	The time spent in the server RPC layer (runtime and stub) in microseconds.
TimeServerProgram	The time spent in the user program (called by the RPC server) in microseconds. For Natural programs on a mainframe, this time does not include the database times. For other programs, the database times are included.
TimeDBCalls	The time spent for database calls in microseconds. For an Adabas database, this is the time the Adabas server needs to process the database call ("client wait time"). For other databases, the DB calls time includes also the DB transport time. [1]
TimeDBTransport	The transport time from the Natural user program to the Adabas router and back including the client receiving time in microseconds. [1,2]
Program	The program name.
ClientApplication	The client application name as defined in the broker control block.
ClientHost	The client host name.
ClientUser	The client user ID.
LengthRequest	The length of the RPC request in bytes.
LengthReply	The length of the RPC reply in bytes.
LengthTotal	The total length of the RPC call (request plus reply) in bytes.
DBCalls	The number of database calls (including system file calls, without Natural Security calls). [1]
ErrorCode	Always empty.

Notes:

[1] This KPI is only available if the call is issued by a Natural RPC server on a mainframe.

[2] This KPI is only available for a database call against an Adabas server.

KPIs for RPC - Failed Requests

KPI Name	Description
Time	The time the event has been processed by the data collector in the format "YYYY-MM-DD HH:MM:SS.SSS" using the current time zone.
Timestamp	The time the event has been processed by the data collector as a number. The number is the difference, measured in milliseconds, between the current time and midnight, January 1, 1970 UTC.
Scenario	The scenario identifier "RPC".
ApplicationName	"*application-name*" as defined by the broker attribute `APPMON-NAME`. If the broker attribute is not specified, the server address is used; for example `RPC/SRV/CALLNAT`.
Address	The broker ID and the server address of the RPC request.
TimeResponse	The response time of the failed RPC request in microseconds.
Program	The program name.
ClientApplication	The client application name as defined in the broker control block.
ClientHost	The client host name.
ClientUser	The client user ID.
ErrorCode	The 8-digit error code (error class and number).
ErrorMessage	The error message.

KPIs for CICS ECI - Successful Requests

KPI Name	Description
Time	The time the event has been processed by the data collector in the format "YYYY-MM-DD HH:MM:SS.SSS" using the current time zone.
Timestamp	The time the event has been processed by the data collector as a number. The number is the difference, measured in milliseconds, between the current time and midnight, January 1, 1970 UTC.
Scenario	The scenario identifier "CICS ECI".
ApplicationName	"*host-name*:*port-number*" of the CICS ECI installation.
Address	The name of the Integration Server adapter service which calls CICS ECI.
TimeResponse	The complete response time of the CICS ECI request in microseconds.
TimeClientLayer	The time spent in the EntireX Adapter in microseconds.
TimeServerLayer	The sum of the transport time to CICS ECI and the time spent in the CICS user program in microseconds.
Program	The CICS transaction name.
ClientHost	The client host name.
ClientUser	The client user ID.
LengthRequest	The length of the CICS request in bytes.
LengthReply	The length of the CICS reply in bytes.
LengthTotal	The total length of the CICS call (request plus reply) in bytes.
ErrorCode	Always empty.

KPIs for CICS ECI - Failed Requests

KPI Name	Description
Time	The time the event has been processed by the data collector in the format "YYYY-MM-DD HH:MM:SS.SSS" using the current time zone.
Timestamp	The time the event has been processed by the data collector as a number. The number is the difference, measured in milliseconds, between the current time and midnight, January 1, 1970 UTC.
Scenario	The scenario identifier "CICS ECI".
ApplicationName	"*host-name*:*port-number*" of the CICS ECI installation.
Address	The name of the Integration Server adapter service which calls CICS ECI.
TimeResponse	The response time of the failed CICS ECI request in microseconds.
Program	The CICS transaction name.
ClientHost	The client host name.
ClientUser	The client user ID.
ErrorCode	The 8-digit error code (error class and number).
ErrorMessage	The error message.

KPIs for IMS Connect - Successful Requests

KPI Name	Description
Time	The time the event has been processed by the data collector in the format "YYYY-MM-DD HH:MM:SS.SSS" using the current time zone.
Timestamp	The time the event has been processed by the data collector as a number. The number is the difference, measured in milliseconds, between the current time and midnight, January 1, 1970 UTC.
Scenario	The scenario identifier "IMS Connect".
ApplicationName	"*host-name*:*port-number*/*datastore*" of the IMS Connect installation.
Address	The name of the Integration Server adapter service which calls IMS Connect.
TimeResponse	The complete response time of the IMS request in microseconds.
TimeClientLayer	The time spent in the EntireX Adapter in microseconds.
TimeServerLayer	The sum of the transport time to IMS Connect and the time spent in IMS Connect, IMS and the IMS user program in microseconds.
Program	The IMS transaction name.
ClientHost	The client host name.
ClientUser	The client user ID.
LengthRequest	The length of the IMS request in bytes.
LengthReply	The length of the IMS reply in bytes.
LengthTotal	The total length of the IMS call (request plus reply) in bytes.
ErrorCode	Always empty.

KPIs for IMS Connect - Failed Requests

KPI Name	Description
Time	The time the event has been processed by the data collector in the format "YYYY-MM-DD HH:MM:SS.SSS" using the current time zone.
Timestamp	The time the event has been processed by the data collector as a number. The number is the difference, measured in milliseconds, between the current time and midnight, January 1, 1970 UTC.
Scenario	The scenario identifier "IMS Connect".
ApplicationName	"*host-name*:*port-number*/*datastore*" of the IMS Connect installation.
Address	The name of the Integration Server adapter service which calls IMS Connect.
TimeResponse	The response time of the failed IMS request in microseconds.
Program	The IMS transaction name.
ClientHost	The client host name.
ClientUser	The client user ID.
ErrorCode	The 8-digit error code (error class and number).
ErrorMessage	The error message.