TIBCO Hawk® Microagent for TIBCO FTL®/TIBCO eFTL™

User's Guide

Version 1.1.0
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Overview

TIBCO Hawk is a sophisticated tool for monitoring and managing distributed applications and systems throughout the enterprise. TIBCO Hawk® Microagent for TIBCO FTL®/TIBCO eFTL™ enables you to monitor TIBCO FTL and TIBCO eFTL applications using TIBCO Hawk in enterprise and container environments. You can collect metrics for TIBCO FTL applications, TIBCO FTL server, persistent storage, and TIBCO eFTL. You can also perform actions on TIBCO FTL and TIBCO eFTL applications by using management methods provided by the microagent.

TIBCO FTL® is a messaging infrastructure product. It features high speed, structured data messages, and clearly defined roles for application developers and application administrators. TIBCO FTL software can achieve low message latency with consistent performance.

Hawk® Microagent for TIBCO FTL/TIBCO eFTL provides microagent methods to monitor TIBCO FTL and TIBCO eFTL. For more information about microagent methods, see Methods of Hawk® Microagent for TIBCO FTL®/TIBCO eFTL™.

Methods of Hawk® Microagent for TIBCO FTL®/TIBCO eFTL™

The following methods for Hawk® Microagent for TIBCO FTL/TIBCO eFTL are available to monitor TIBCO FTL and TIBCO eFTL:

Methods to collect information about the Release Version

- getReleaseVersion

Methods to collect TIBCO ActiveSpaces® Metrics

- getActiveSpacesMetrics

- getActiveSpacesNodeMetrics

- getActiveSpacesProxyMetrics

- getActiveSpacesStatekeeperMetrics

Methods to collect Application Metrics

- getApplicationMetrics

- getEndpointMetrics

- getPublisherSubscriberMetrics

- getTransportMetrics

- getQueueMetrics

Methods to collect Persistent Store Metrics

- getPersistentMetrics

Methods to collect TIBCO FTL Server Metrics

- getServerMetrics

- getBridgeMetrics

- getComponentStatus

Methods to collect TIBCO eFTL Metrics

- getEFtlMetrics

Methods to perform actions on TIBCO FTL Applications

- stopServer

- stopCluster

- disableClient

- purgeClient

- setMonitoringModeOfClient

- setLoggingModeOfClient

- setLogLevelClient

- setBridgeLogLevel

- purgeDurable

getReleaseVersion

This method returns version information about the current release of this microagent. The version consists of a major, minor, and update number separated by periods (for example, 1.1.0). Both a string representation of the version (Version) and an integer representation of the major, minor, and update components of the version (Major, Minor, and Update, respectively) is returned.

Type

Synchronous, `IMPACT_INFO`

Arguments

None.

Returns

Name	Type	Description
Name	String	Name of the binary which implements this microagent
Version	String	Version number
Date	String	Version date
Major	Integer	Release version major number
Minor	Integer	Release version minor number
Update	Integer	Release version update number

getApplicationMetrics

Retrieves details of TIBCO FTL applications (clients).

Arguments

Argument Name	Description	Required?
App Name	Name of the TIBCO FTL application (client) to monitor. If App Name is not specified, details about all active applications is retrieved.	No

Returns

Item	Description
Client Label	When connecting to the FTL server, a client program can supply a label

Item	Description
	that denotes that particular client. Unlike a client ID, which denotes a specific client process, this label remains unchanged even when you restart the client as a new process. You can use this label to identify clients by their role within your enterprise.
Client ID	Client ID of the client process. The FTL server assigns each client process a unique client ID.
Dynamic Formats	Number of distinct dynamic formats registered within the client. Creating a message with a dynamic format increments this counter. Receiving an inbound message with a dynamic format also increments this counter. This count can decrease when the client library automatically unregisters unused formats.
Resident Memory Set Size (KB)	Current size (in KB) of working memory set in the application.
Peak Resident Memory Set Size (KB)	Maximum size (in KB) of the application's working memory set. This value is calculated from the time the client started.
Process VM (KB)	Current size in KB of an application's virtual memory set
User CPU Time (microseconds)	Time of executing the client's object code. This value is calculated from the time the client started.
System CPU Time (microseconds)	Time executing operating system calls from the client. This value is calculated from the time the client started.
Total CPU Time (microseconds)	The sum of time executing the client's object code and its operating system calls. This value is calculated from the time the client started.

getEndpointMetrics

This method returns metrics about activity on an endpoint of a client.

Arguments

Argument	Description	Required?
App Name	Name of the TIBCO FTL application (client) for which you want to collect endpoint metrics.	No

Returns

Item	Description
Client Label	When connecting to the FTL server, a client program can supply a label that denotes that particular client. Unlike a client ID, which denotes a specific client process, this label remains unchanged even when the client restarts as a new process. You can use this label to identify clients by their role within your enterprise.
Client ID	Client ID of the client process. The FTL server assigns each client process a unique client ID.
Endpoint ID	An identifier that represents the endpoint. Within a client process, a one-to-one mapping pairs the endpoint names with the endpoint identifiers.
Store Mismatch Messages	Number of message flows that result from persistence store mismatch. Any non-zero value indicates a store mismatch which is a misconfiguration. Store mismatch occurs when a direct path transport connects two endpoints that are associated with two different persistence stores.

Item	Description
Endpoint Delivered/Received Messages	Number of inbound data messages through an endpoint in the client.
Endpoint Published Messages	Number of outbound data messages through an endpoint in the client.
Endpoint Non-Matching Messages	This metric counts the number of outbound messages that an endpoint did not transmit because the messages did not match the content matcher of any remote subscriber.

getPublisherSubscriberMetrics

This method retrieves publisher subscriber persistence details of a client.

Arguments

None

Returns

Item	Description
Client Label	When connecting to the FTL server, a client program can supply a label that denotes that particular client. Unlike a client ID, which denotes a specific client process, this label remains unchanged even when the client restarts as a new process. You can use this label to identify clients by their role within your enterprise.
Client ID	Client ID of the client process. The FTL server assigns each client process a unique client ID.
Endpoint	The name of the endpoint in the application definition.

Item	Description
Name	
Subscriber Delivered Messages	The count of the inbound data messages received by the client through subscribers.
Publisher Published Messages	The count of the outbound data messages sent from the client through a publisher.
Publisher Non-Matching Messages	The count of the outbound data messages that a publisher did not transmit because the messages did not match the content matcher of any remote subscriber.

getTransportMetrics

This method retrieves transport details of a client.

Arguments

Argument	Description	Required?
App Name	Name of the TIBCO FTL application (client) for which you want to collect transport metrics.	No

Returns

Item	Description
Client Label	When connecting to the FTL server, a client program can supply a label that denotes that particular client.

Item	Description
	Unlike a client ID, which denotes a specific client process, this label remains unchanged even when the client restarts as a new process.
	You can use this label to identify clients by their role within your enterprise.
Client ID	Client ID of the client process. The FTL server assigns each client process a unique client ID.
Transport Name	Name of the transport
Bytes Sent	Outbound data bytes on a transport in the client.
Bytes Received	Inbound data bytes on a transport in the client.
Data Lost	Inbound data loss events on a transport in the client.
	It is not possible to measure the magnitude of the events in bytes.
Format Unavailable	Messages with an unrecognized format carried on a transport in the client.
Packets Sent	Outbound data packets on a multicast or RUDP transport.
	This counter includes all outbound data packets, including original data packets and retransmitted data packets.
Packets Received	Number of inbound data packets on a multicast or RUDP transport.
	This counter includes all inbound data packets, including original data packets and retransmitted data packets.
Packets Retransmitted	Number of outbound packets retransmitted on a multicast or RUDP transport.
	If the transport retransmits a packet several times, it increments this counter for each retransmission.
Packets Missed	Number of missed inbound packets on a multicast or RUDP transport.

Item	Description
Packets Lost Outbound	Number of outbound packets discarded on a multicast or RUDP transport.
Packets Lost Inbound	Number of inbound packets deemed lost on a multicast or RUDP transport.
	The transport accounts a packet as lost after its reliability constraints expire.

getQueueMetrics

Retrieves activity details in each individual event queue in a client.

Arguments

Argument	Description	Required?
App Name	Name of TIBCO FTL application (client) for which you want to collect queue metrics.	No

Returns

Item	Description
Client Label	When connecting to the FTL server, a client program can supply a label that denotes that particular client.
	Unlike a client ID, which denotes a specific client process, this label remains unchanged even when the client restarts as a new process.
	You can use this label to identify clients by their role within your enterprise.
Client ID	The client ID of the client process. The FTL server assigns each client process a

Item	Description
	unique client ID.
Queue Name	Name of a queue
Queue Backlog	Maximum number of messages in an event queue of the client during the sample interval.
Queue Discards	Inbound messages discarded by a queue of the client.

getPersistentMetrics

Retrieves persistent store details of a client.

Arguments

Argument	Description	Required?
App Name	Name of TIBCO FTL application (client) for which you want to collect persistent store metrics.	No

Returns

Item	Description
Client Label	When connecting to the FTL server, a client program can supply a label that denotes that particular client. Unlike a client ID, which denotes a specific client process, this label remains unchanged even when the client restarts as a new process. You can use this label to identify clients by their role within your enterprise.

Item	Description
Client ID	The client ID of the client process. The FTL server assigns each client process a unique client ID.
Store ID	Unique identifier for the store.
Message Count	Number of messages in a store at the end of the sample interval.
Message Size	Storage (in bytes) that messages occupy in a store at the end of the sample interval.
Durable Count	Number of durables in a store at the end of the sample interval.

getServerMetrics

Retrieves metrics for TIBCO FTL server.

Arguments

None

Returns

Item	Description
Server Label	Name of the server
Server ID	The UUID of the FTL server.
Client Connect Count	Cumulative number of client connections since the FTL server process started.
Client	Number of clients that reconnected to the FTL server during the sample

Item	Description
Reconnect Count	interval.
	Increase in this count could indicate a network connectivity issue between the FTL server and its clients.
Send To Inbox Failure	Number of undelivered protocol messages that the FTL server sent to a client.
	Increase in this count usually indicates that several clients abruptly exited.
Server Host	Host name of the server
Server URL	URL to connect to the server
Server Status	Status of the server (Online / Offline)

getBridgeMetrics

Retrieves TIBCO FTL bridge metrics. Each bridge is itself an application client, and tracks application metrics.

Arguments

Argument	Description	Is required?
App Name	Name of TIBCO FTL bridge application	No

Returns

Item	Description
Client Label	When connecting to the FTL server, a client program can supply a label that denotes that particular client.

Item	Description
	Unlike a client ID, which denotes a specific client process, this label remains unchanged even when the client restarts as a new process.
	You can use this label to identify clients by their role within your enterprise.
Client ID	Client ID of the client process. The FTL server assigns each client process a unique client ID.
Bridge Active	This column displays binary values, which are explained as follows: 1 indicates that the bridge actively forwards messages.
	0 indicates that the bridge is a backup in standby mode.

getComponentStatus

This method retrieves the status of all the components connected to the TIBCO FTL server. A component can be the application client, bridge, persistent store servers, or TIBCO eFTL server which is connecting to the TIBCO FTL server as a client.

Arguments

Argument Name	Description	Required?
App Name	Name of TIBCO FTL application (client) to monitor.	No

Returns

Item	Description
Component Label	Label of the component
Component ID	Unique identifier for the component

Item	Description
Component Status	Status of the component (Example: Running, Timed out)
Component Type	Type of the component

getEFtlMetrics

Retrieves metrics that you can use to assess the operation of eFTL channels.

Arguments

Argument	Description	Required?
App Name	Name of TIBCO eFTL application (client) for which you want to collect metrics.	No

Returns

Item	Description
Client Label	When connecting to the TIBCO FTL server, a client program can supply a label that denotes that particular client.
	Unlike a client ID, which denotes a specific client process, this label remains unchanged even when the client restarts as a new process.
	You can use this label to identify clients by their role within your enterprise.
Client ID	Client ID of the client process. The TIBCO FTL server assigns each client process a unique client ID.
Connection Count	Number of TIBCO eFTL client connections on a channel at the end of the sample interval.

Item	Description
Subscription Count	Open subscriptions from TIBCO eFTL clients on a channel at the end of the sample interval.
Inbound eFTL Message Count	Messages inbound from TIBCO eFTL clients on a channel.
Outbound eFTL Message Count	Messages outbound to TIBCO eFTL clients on a channel.
Discarded Message Count	Data loss from publishers: the number of messages that the server discarded on a channel. Discards can occur because a publisher sent a message that exceeded the maximum message size.
Connection Pending Count	Number of new TIBCO eFTL client connections on a channel that are not yet fully initialized at the end of the sample interval.
Connection Suspended Count	Number of TIBCO eFTL client connections disconnected by a temporary network outage that have not yet automatically reconnected nor fully disconnected at the end of the sample interval.

stopServer

Stops the TIBCO FTL server.

Arguments

Argument	Description	Is required?
Server Name	Name of TIBCO FTL core server to stop. Specify the name of the server that you want to stop or select **core** from list to stop core servers or select **All** to stop all servers.	Yes

Returns

None

stopCluster

Stops the TIBCO FTL cluster.

Arguments

None

Returns

None

disableClient

Disables the client with Client ID specified in the argument.

Arguments

Argument	Description	Is required?
Client ID	The client ID of the client process. The FTL server assigns each client process a unique client ID.	Yes

Returns

None

purgeClient

Purges clients that no longer exist from the list of clients after a timeout interval.

Arguments

None

Returns

None

setMonitoringModeOfClient

Sets monitoring mode of the client with ID specified in the argument.

Arguments

Argument	Description	Is required?
Client ID	The client ID of the client process. The FTL server assigns each client process a unique client ID.	Yes
Monitoring Mode	Collecting subscription statistics can produce a large volume of data. You can enable (**dynamic_monitor_info_on**) and disable this feature (**dynamic_monitor_info_off**) for each individual client. When disabled, a client does not collect monitoring data.	Yes

Returns

None

setLoggingModeOfClient

Sets the logging mode of a client.

Arguments

Argument	Description	Is required?
Client ID	The client ID of the client process. The FTL server assigns each client process a unique client ID.	Yes
Log Mode	Collecting logs from many clients can produce a large volume of data. For each client, you can enable this option (**on**) to send logs to TIBCO FTL server or disable it (**off**) to stop sending logs.	Yes

Returns

None

setLogLevelClient

Sets logging level of a client. The log level determines the level of detail and the quantity of log statements. Properly tuned logging can help diagnose unexpected behaviors.

> ℹ **Note:** Excessively detailed logging can contribute to message latency and consume storage resources.

Arguments

Argument	Description	Is required?
Client ID	Client ID of the client process.	Yes

Argument	Description	Is required?
	The FTL server assigns each client process a unique client ID.	
Log Level	Specify the log level for a client. Following values are allowed for the log level: • `off` • `severe` • `warn` • `info` • `verbose` • `debug` **Note:** The output from `debug` and `verbose` can result in very large log files. This level of detail is generally not useful unless TIBCO staff specifically requests it.	Yes

Returns

None

setBridgeLogLevel

Sets the logging level of a bridge.

Arguments

Argument	Description	Is required?
Bridge Name	Name of the bridge	Yes
Log Level	Specify the log level for a bridge.	Yes

Argument	Description	Is required?
	Following values are allowed for the log level: • off • severe • warn • info • verbose • debug **Note:** The output from debug and verbose can result in very large log files. This level of detail is generally not useful unless TIBCO staff specifically requests it.	

Returns

None

purgeDurable

Purges durables from a persistence store.

Arguments

Argument	Description	Required?
Cluster Name	Name of the cluster	Yes
Store Name	Name of the persistence store	Yes
Durable Name	Name of the durable to purge specific durable or keep it blank to purge all durables from the persistence store specified	No

Returns

None

getActiveSpacesMetrics

Gets metrics of TIBCO ActiveSpaces®.

Arguments

None.

Returns

Item	Description
Client Label	Name of the client
Client ID	ID of the client
Metric Name	Name of the metric
Metric Value	Value of the metric

getActiveSpacesStatekeeperMetrics

Gets metrics of TIBCO ActiveSpaces® Statekeeper.

Arguments

None

Returns

Item	Description
Client Label	Name of the client
Client ID	ID of the client
tib_as_sk_ready	Indicates whether the Statekeeper is ready. A value of 1 indicates that the statekeeper is ready and a value of 0 indicates that Statekeeper is not ready.
tib_as_sk_started	Indicates whether the Statekeeper is started. A value of 1 indicates that the statekeeper is started and a value of 0 indicates that Statekeeper is stopped.
tib_as_sk_copyset_epoch_updated	Timestamp when a node has made change to its copyset

getActiveSpacesNodeMetrics

Gets metrics of TIBCO ActiveSpaces® Node.

Arguments

None

Returns

Item	Description
Client Label	Name of the client
Client ID	ID of the client

Item	Description
tib_as_node_kvstore_write_time_nanos	Time (in nanoseconds) that is spend in writing to the kvstore on a node for a specific process
tib_as_node_remove_op_count	Number of remove operations on a node for a specific process
tib_as_node_insert_op_count	Number of insert operations on a node for a specific process
tib_as_node_queryget_op_count	Number of get operations for a query on a node for a specific process
tib_as_node_reindex_rows_count	Number of re-indexed rows on a node for a specific process
tib_as_node_dr_remove_op_count	Number of DR remove operations on a node for a specific process.
tib_as_node_stmtcreate_op_count	Number of create statement operations on a node for a specific process
tib_as_node_stmtclose_op_count	Number of close statement operations on a node for a specific process
tib_as_node_numrowsscanned	Number of rows scanned on a node for a specific process
tib_as_node_deleted_keys_count	Number of keys deleted on a node for a specific process
tib_as_node_numttltables	Number of TTL tables on a node for a specific process
tib_as_node_txnbegin_op_count	Number of transactions begun on a node for a specific process
tib_as_node_livedata_	The live data size on a node for a specific process

Item	Description
size	
tib_as_node_ migration_bins_ received	Migration bins received on a node for a specific process
tib_as_node_ txncommit_op_count	Number of transaction commit operations on a node for a specific process
tib_as_node_global_ ops_rejected	Number of global operations rejected on a node for a specific process
tib_as_node_ready	Indicates whether the node is ready. A value of 1 indicates that the node is ready and a value of 0 indicates that the node is not ready.
tib_as_node_global_ ops_pending	Number of pending global operations
tib_as_node_get_op_ count	Number of get operations on a node for a specific process
tib_as_node_ eventsforwarded	Number of events forwarded on a node for a specific process
tib_as_node_ operations_allowed	Number of operations allowed on a node for a specific process
tib_as_node_dr_put_ op_count	Number of DR operations on a node for a specific process
tib_as_node_ numlisteners	Number of listeners on a node for a specific process
tib_as_node_ migration_bins_sent	Number of migration bins sent on a node for a specific process
tib_as_node_	Number of queryclose operations on a node for a specific process

Item	Description
queryclose_op_count	
tib_as_node_started	Indicates whether the node is started. A value of 1 indicates that the node is started and a value of 0 indicates that the node is stopped.
tib_as_node_put_op_count	Number of put operations on a node for a specific process
tib_as_node_journal_rows_reclaimed	Number of journal rows reclaimed on a node for a specific process
tib_as_node_failed_op_count	Number of operations that have failed on a node for a specific process
tib_as_node_numqueries_value	Number of concurrent queries active on a node for a specific process
tib_as_node_itercreate_op_count	Number of iterator create operations on a node for a specific process
tib_as_node_iterclose_op_count	Number of iterator close operations on a node for a specific process
tib_as_node_numscanscompleted	Number of scans completed on a node for a specific process
tib_as_node_fs_used	The data (in bytes) of the data directory reported by the operating system
tib_as_node_operations_suspended	Number of operations suspended on a node for a specific process
tib_as_node_numrowsexpired	Number of rows expired on a node for a specific process
tib_as_node_journal_rows_written	Number of rows written in a journal on a node for a specific process

Item	Description
tib_as_node_ completed_op_count	Number of completed operations on a node for a specific process
tib_as_node_kvstore_ write_value_count	Number of values written to kvstore on a node for a specific process
tib_as_node_kvstore_ write_count	Number of write operations on kvstore on a node for a specific process
tib_as_node_journal_ bins_disabled	Number of journal bins disabled on a node for a specific process
tib_as_node_ migration_bins_ pending	Number of migration bins pending on a node for a specific process
tib_as_node_update_ op_count	Number of update operations on a node for a specific process
tib_as_node_iterget_ op_count	Number of iterator get operations triggered on a node for a specific process
tib_as_node_ querycreate_op_count	Number of create query operations on a node for a specific process
tib_as_node_reindex_ completed	Number of re-indexing operations completed on a node for a specific process
tib_as_node_fs_ capacity	The capacity (in bytes) of the data directory reported by the operating system
tib_as_node_ txnrollback_op_count	Number of transaction rollback operations on a node for a specific process
tib_as_node_ latestchkpt_ts	The timestamp of the last checkpoint on a node for a specific process

Item	Description
tib_as_node_ rowsreceived	Number of rows received on a node for a specific process
tib_as_node_reindex_ started	Number of re-indexing tasks started on a node for a specific process
tib_as_grid_mirrored_ checkpoints_sent	Number of grid mirrored checkpoints that have been sent
tib_as_grid_bulk_ mirror_offered	Number of grid bulk mirror offered
tib_as_grid_mirrored_ checkpoints_received	Number of grid mirrored checkpoints that have been received
tib_as_grid_mirrored_ checkpoints_requested	Number of grid mirrored checkpoints that have been requested
tib_as_grid_ incremental_mirror_ offered	Number of incremental grid mirrors offered
tib_as_grid_mirrored_ checkpoints_offered	Number of grid mirrored checkpoints offered

getActiveSpacesProxyMetrics

Gets metrics of TIBCO ActiveSpaces®Proxy.

Arguments

None

Returns

Item	Description
Client Label	Name of the client
Client ID	ID of the client
tib_as_proxy_ started	Indicates whether the proxy is started. A value of 1 indicates that the proxy is started and a value of 0 indicates that the proxy is stopped.
tib_as_proxy_num_ iterators	Number of iterators on proxy
tib_as_proxy_ready	Indicates whether the proxy is ready. A value of 1 indicates that the proxy is ready and a value of 0 indicates that the proxy is not ready.
tib_as_proxy_ remove_op_count	Number of remove operations on proxy
tib_as_proxy_num_ queries	Number of queries on proxy
tib_as_proxy_dr_ remove_op_count	Number of DR remove operations on proxy
tib_as_proxy_ querycreate_op_ count	Number of query create operations on proxy
tib_as_proxy_put_ op_count	Number of put operations on proxy
tib_as_proxy_num_ listeners	Number of listeners on proxy
tib_as_proxy_ iterclose_op_count	Number of iterator close operations on proxy
tib_as_proxy_num_	Number of listener events that have been recorded on the proxy

Item	Description
lsnrevents	
tib_as_proxy_dr_client_connected	Number of DR clients connected
tib_as_proxy_txncommit_op_count	Number of transaction commit operations on proxy
tib_as_proxy_queryclose_op_count	Number of query close operations on proxy
tib_as_proxy_dr_put_op_count	Number of DR put operations on proxy
tib_as_proxy_latestchkpt_ts	Latest checkpoint timestamp on proxy
tib_as_proxy_queryget_op_count	Number of get query operations on proxy
tib_as_proxy_stmtcreate_op_count	Number of create statement query operations on proxy
tib_as_proxy_txnbegin_op_count	Number of begin transaction operations on proxy
tib_as_proxy_get_op_count	Number of get operations on proxy
tib_as_proxy_txnrollback_op_count	Number of transaction rollback operations on proxy
tib_as_proxy_client_	Number of clients disconnected from proxy

Item	Description
disconnected	
tib_as_proxy_num_statements	Number of statements on proxy
tib_as_proxy_latestchkpt_updated_count	Number of latest checkpoint updated on proxy
tib_as_proxy_stmtclose_op_count	Number of statement close operations on proxy
tib_as_proxy_iterget_op_count	Number of iterator get operations triggered on a proxy
tib_as_proxy_dr_client_disconnected	Number of DR clients disconnected
tib_as_proxy_itercreate_op_count	Number of create iterator operations on proxy
tib_as_proxy_client_connected	Number of clients connected on proxy

TIBCO Documentation and Support Services

For information about this product, you can read the documentation, contact TIBCO Support, and join TIBCO Community.

How to Access TIBCO Documentation

Documentation for TIBCO products is available on the TIBCO Product Documentation website, mainly in HTML and PDF formats.

The TIBCO Product Documentation website is updated frequently and is more current than any other documentation included with the product.

Product-Specific Documentation

Documentation for TIBCO Hawk® Microagent for TIBCO FTL®/TIBCO eFTL™ is available on the TIBCO Hawk® Microagent for TIBCO FTL®/TIBCO eFTL™ Product Documentation page.

The following documents for this product can be found in the TIBCO Documentation site:

- *TIBCO Hawk® Microagent for TIBCO FTL®/TIBCO eFTL™ Release Notes*

- *TIBCO Hawk® Microagent for TIBCO FTL®/TIBCO eFTL™ Installation*

- *TIBCO Hawk® Microagent for TIBCO FTL®/TIBCO eFTL™ User's Guide*

How to Contact TIBCO Support

Get an overview of TIBCO Support. You can contact TIBCO Support in the following ways:

- For accessing the Support Knowledge Base and getting personalized content about products you are interested in, visit the TIBCO Support website.

- For creating a Support case, you must have a valid maintenance or support contract with TIBCO. You also need a user name and password to log in to TIBCO Support website. If you do not have a user name, you can request one by clicking **Register** on the website.

How to Join TIBCO Community

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