

# Oracle® Tuxedo System and Applications Monitor Plus

Reference Guide

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# Contents

## TSAM Plus Server, Command, and API Reference

Local Monitor Server	1
LMS	1
tlisten Options for JMX Monitoring	4
GWTDOMAIN Option for BTM Monitoring	5
tmadmin Command	5
Call Path Monitoring APIs	6
tpgetcallinfo(3c)	6
tsambegin(3c)	6
tsamend(3c)	7

## TSAM Plus Database Metadata

Tuxedo Configuration Information	1
Tuxedo Monitoring Information	12
TSAM Plus Management Information	39

## Enterprise Manager for Tuxedo Target Reference

Understanding Properties and Metrics Tables	1
Property Characters	1
Metrics Tables	2
Status Column	2
Collection Interval	2
Tuxedo Targets	2

Tuxedo Home . . . . .	4
Tuxedo Application Home . . . . .	5
Tuxedo tlisten . . . . .	5
Tuxedo Domain . . . . .	7
Tuxedo Machine . . . . .	18
Tuxedo Group . . . . .	31
Tuxedo Server . . . . .	36
Tuxedo System Server . . . . .	52
Tuxedo Bridge . . . . .	56
Tuxedo TMS . . . . .	60
Tuxedo /T Domain Gateway . . . . .	64
Tuxedo Web Service Gateway . . . . .	72
Tuxedo Workstation Listener . . . . .	78
Tuxedo Jolt Listener . . . . .	82
Tuxedo Event Broker . . . . .	86
Tuxedo LMS . . . . .	91
Tuxedo /Q Manager Server . . . . .	93
TMA Targets . . . . .	100
TMA SNA Gateway . . . . .	100
TMA TCP Gateway . . . . .	107
TMA CRM . . . . .	114
ART CICS Targets . . . . .	118
Tuxedo CICS Region . . . . .	118
Tuxedo ART CICS Transaction . . . . .	120
ART CICS TSQ Server . . . . .	124
ART CICS TDQ Server . . . . .	127
ART Batch Targets . . . . .	129
Tuxedo Batch System . . . . .	129

OTMQ Manager Server . . . . .	132
ECM Tables . . . . .	139
Tuxedo Domain . . . . .	140
Tuxedo Machine . . . . .	143
Tuxedo Group . . . . .	145
Tuxedo Server . . . . .	146
Tuxedo Bridge . . . . .	148
Tuxedo TMS . . . . .	148
Tuxedo /Q . . . . .	149
Tuxedo Message Queue (OTMQ) . . . . .	152
Properties.xml Schema . . . . .	155

## MBeans and JMX Operations

Admin MBean . . . . .	2
Tuxedo Domain MBean . . . . .	7
Tuxedo Machine MBean . . . . .	11
Tuxedo Group MBean . . . . .	17
Tuxedo Server MBean . . . . .	20
Tuxedo System Server Mbean . . . . .	23
Tuxedo Bridge MBean . . . . .	25
Tuxedo TMS Mbean . . . . .	28
Tuxedo /T Domain Gateway . . . . .	29
Tuxedo Mainframe Adapter Gateway for SNA . . . . .	30
Tuxedo Mainframe Adapter Gateway for TCP . . . . .	30
Tuxedo Web Service Gateway . . . . .	31
Tuxedo Workstation Listener . . . . .	31
Tuxedo Jolt Listener . . . . .	35
Tuxedo Event Broker . . . . .	37

Tuxedo Queue Server .....	37
Tuxedo QTMQ Server .....	38
Tuxedo ART Batch System Target .....	40

## TXST Command and Variable Reference

TXST Command Categories Overview .....	1
Browse Commands .....	2
cd .....	2
prompt .....	3
pwd .....	4
Control Commands .....	5
connect .....	5
connectDomain .....	6
disconnectDomain .....	7
disconnect .....	7
exit .....	8
Editing Commands .....	9
create .....	9
delete .....	11
get .....	12
set .....	13
Information Commands .....	14
find .....	14
getMBean .....	15
getPath .....	15
lookup .....	16
ls .....	17
redirect .....	18

startRecording . . . . .	19
stopRecording . . . . .	20
stopRedirect . . . . .	20
easeSyntax . . . . .	21
Life Cycle Commands . . . . .	22
migrate . . . . .	22
resume . . . . .	22
shutdownDomain . . . . .	23
startDomain . . . . .	24
shutdown . . . . .	25
start . . . . .	26
suspend . . . . .	27
TXST Variable Reference . . . . .	28
Jython Class for Tuxedo Mbeans . . . . .	29
Mbean . . . . .	29
getName . . . . .	30
getType . . . . .	30
getMbeanName . . . . .	30
DomainMbean . . . . .	30
CreateMachine . . . . .	30
GetParameters . . . . .	30
GetParameter . . . . .	31
SetParameters . . . . .	31
SetParameter . . . . .	31
GetRoutings . . . . .	31
Add Routing . . . . .	32
DeleteRouting . . . . .	32
SetRoutingParameter . . . . .	32

SetRoutingParameters . . . . .	32
GetRoutingParameter . . . . .	33
Swap . . . . .	33
Tuxedo_Domain . . . . .	33
MachineMbean . . . . .	35
CreateGroup . . . . .	35
CreateBridge . . . . .	36
GetParameters . . . . .	36
GetParameter . . . . .	36
SetParameters . . . . .	36
SetParameter . . . . .	37
DeleteRecursively . . . . .	37
Delete . . . . .	37
Migrate . . . . .	37
Clean . . . . .	37
GetNativeClients . . . . .	38
Suspend . . . . .	38
Resume . . . . .	38
KillClient . . . . .	38
GetTransactions . . . . .	38
AbortTransaction . . . . .	39
GetUlog . . . . .	39
Client_Connections . . . . .	39
Machine_Operation_Statistics . . . . .	39
Tuxedo_machines . . . . .	40
GroupMbean . . . . .	42
CreateServer . . . . .	42
GetParameters . . . . .	42



GetParameter . . . . .	42
SetParameters . . . . .	43
SetParameter . . . . .	43
CreateTMS . . . . .	43
DeleteRecursively . . . . .	43
Delete . . . . .	43
Migrate . . . . .	44
Tuxedo_groups . . . . .	44
BridgeMbean . . . . .	45
GetParameters . . . . .	45
GetParameter . . . . .	46
GetRemoteLinks . . . . .	46
GetRemoteLinkParameter . . . . .	46
SetRemoteLinkParameters . . . . .	46
SuspendRemoteLink . . . . .	47
ResumeRemoteLink . . . . .	47
DeactivateRemoteLink . . . . .	47
Bridge_Remote_Link_Statistics . . . . .	47
Bridge_Queue_Statistics . . . . .	48
Tuxedo_ECM_Bridge . . . . .	49
ServerMbean . . . . .	49
GetParameters . . . . .	49
GetParameter . . . . .	50
SetParameters . . . . .	50
SetParameter . . . . .	50
Delete . . . . .	50
SetServiceParam . . . . .	50
GetServiceParam . . . . .	51

DeleteService . . . . .	51
GetServices . . . . .	51
SuspendService . . . . .	51
ResumeService . . . . .	52
Server_Statistics . . . . .	52
Service_Statistics . . . . .	53
IPC_Queue_Statistics . . . . .	54
Tuxedo_servers . . . . .	55
SystemServerMbean . . . . .	56
GetParameters . . . . .	57
GetParameter . . . . .	57
SetParameters . . . . .	57
SetParameter . . . . .	57
Delete . . . . .	58
System_Server_Number . . . . .	58
TMSMbean . . . . .	58
GetParameters . . . . .	58
GetParameter . . . . .	59
SetParameters . . . . .	59
SetParameter . . . . .	59
Delete . . . . .	59
TMS_Transaction_Statistics . . . . .	59
Tuxedo_TMS . . . . .	60
TDomainGatewayMbean . . . . .	61
GetParameters . . . . .	61
GetParameter . . . . .	61
SetParameters . . . . .	61
SetParameter . . . . .	62

Delete	62
Remote_Link_Statistics	62
Domain_Gateway_Transaction_Statistics	63
EventBrokerMbean	63
GetParameters	63
GetParameter	64
SetParameters	64
SetParameter	64
Delete	64
Event_Statistics	65
QueueServerMbean	65
GetParameters	65
GetParameter	66
SetParameters	66
SetParameter	66
Delete	66
Queue_Space_Statistics	66
Queue_Space_Peak	67
Queue_Statistics	68
Tuxedo_Q_QSPACE	69
Tuxedo_Q_QUEUE	70
WebServiceGatewayMbean	70
GetParameter	70
GetParameters	70
SetParameter	71
SetParameters	71
Delete	71
Web_Service_Gateway_Statistics	71

WorkstationListenerMbean . . . . .	73
GetParameter . . . . .	73
GetParameters . . . . .	73
SetParameter . . . . .	73
SetParameters . . . . .	73
Delete . . . . .	74
Get Handler Parameter . . . . .	74
Get Handlers . . . . .	74
Suspend Handler . . . . .	74
Resume Handler . . . . .	75
Kill Handler . . . . .	75
Get Clients . . . . .	75
Suspend Client . . . . .	75
Resume Client . . . . .	76
Kill Client . . . . .	76
Workstation_Listener_Statistics . . . . .	76
JoltListenerMbean . . . . .	77
GetParameter . . . . .	77
GetParameters . . . . .	77
SetParameter . . . . .	77
SetParameters . . . . .	78
Delete JSL . . . . .	78
Get Handlers . . . . .	78
Suspend Handler . . . . .	78
Resume Handler . . . . .	79
Jolt_Listener_Statistics . . . . .	79
ARTBatchSystemMbean . . . . .	79
GetBatchs . . . . .	79

CancelBatch . . . . .	80
PurgeBatch . . . . .	80
HoldBatch . . . . .	80
ReleaseBatch . . . . .	81
GetBatchSysOuts . . . . .	81
SubmitBatch . . . . .	81
GetGDGFiles . . . . .	81
GetBatchFiles . . . . .	82



# TSAM Plus Server, Command, and API Reference

This chapter contains the following sections:

- [Local Monitor Server](#)
- [tlisten Options for JMX Monitoring](#)
- [GWTDOMAIN Option for BTM Monitoring](#)
- [tmadmin Command](#)
- [Call Path Monitoring APIs](#)

## Local Monitor Server

### LMS

#### Name

LMS—The Oracle TSAM Plus Agent Local Monitor Server

#### Synopsis

```
LMS SRVGRP="identifier" SRVID="number" [other_parms]
CLOPT= "-A -- -l
tsam-manager-dataserver-url[,tsam-manager-backupdataserver-url,...][;tsam-ma
nager-dataserver-url, tsam-manager-dataserver-url,...] [-t
heartbeat-interval] [-n fetch_coll_capacity] [-m metrics-shm-size] [-T
data-thread-number][-e log-warning-interval]"
```

## Description

LMS is an Oracle TSAM Plus Agent Tuxedo server. It provides the following functions:

- Acts as the local Tuxedo domain data collection proxy

The performance metrics collected by the Oracle TSAM Plus framework are passed to the plug-in. Oracle TSAM Plus default plug-in sends the data to the LMS using the Tuxedo service infrastructure.

- Plug-in metrics are stored in the LMS before being sent to the Oracle TSAM Plus manager data server. The LMS and Oracle TSAM Plus manager use the HTTP+XML protocol.
- Other management information exchanges between the LMS and Oracle TSAM Plus manager.

The LMS must be configured in the `UBBCONFIG` file and set with the proper options. One Tuxedo machine must be configured with one LMS. Multiple LMS on one machine is not supported. LMS is recommended to be configured at the end of `UBBCONFIG` so that it can retrieve all server information when Tuxedo domain booted. LMS still can synchronize the configuration to TSAM Plus manager periodically.

## Options

-1

Mandatory parameter. It specifies the Oracle TSAM Plus manager data servers addresses. You can set one or multiple addresses. The host address and port number are set based on your Oracle TSAM Plus manager installation. The format is:

```
host:port/tsam, host:port/tsam, ...[; host:port/tsam, host:port/tsam, ...]
```

- `host` is the host DNS name or IP address of the box where TSAM Plus manager is installed.
- `port` is the TCP port number.
- `tsam` is the Oracle TSAM Plus manager reserved path name.

TSAM Plus server addresses can consist of two parts using semicolon (;): the first active data servers part and the second standby data servers part. Each part contains multiple TSAM Plus server addresses separated by comma (,).

LMS logs on with the TSAM Plus manager specified by the first address. If failed to connect, LMS tries the next server. If no active data server is available, the standby data Server is used. At most 126 servers can be configured.



If a connected server is failed for health checking, LMS reconnects the servers from first to last.

When the connection to a data server is broken, the thread reconnects the data servers from first to last to get another active data server which connection number does not meet the maximum value. If there is no server available, the thread keeps reconnecting the data server one by one with an incremental sleep interval specified by the `-r` option.

**Note:** Configuring multiple TSAM Plus manager addresses has been supported since TSAM Plus 12.1.3.

`-m`

Optional parameter. Specifies the size of shared memory used to store raw data metrics. The optional trailing letter k or m denotes KB or MB bytes, otherwise the unit is in bytes. The effective value is rounded up to 4K size since it is the page size for most platforms.

The default value is 10MB if this option is not present. The size of the shared memory will not grow at run time when there is no free space to store new data. In this case oldest data is replaced with new data.

`-r`

Specifies the maximum sleep time (in milliseconds) of reconnecting when TSAM agent keeps failing to connect TSAM manager. The default value is 60,000 milliseconds.

`-t`

Optional parameter. It specifies the time interval in seconds that LMS should connect to the Oracle TSAM Plus manager with configuration synchronization. The default value is 100 seconds.

`-n`

Optional parameter, introduced since TSAM Plus 12.1.1.1. It specifies the amount of monitoring data sent by TSAM Plus agent to TSAM Plus manager per request. Valid value range is from 1 to 100 and the default value is 16. If configuring a value that is greater than 100, 100 will be used.

`-T`

LMS creates multiple threads to fetch data from Ring Buffer and sends the data to Manager Server. This option specifies the total number of threads the data servers can be connected. The threads number is distributed to each active data server evenly. The maximum value is 1023.

`-e`

Optional parameter. It specifies the time interval LMS sends a warning message to ULOG if performance metrics data is dropped due to shared memory size limit. Its range is

[1-65535]. The default value is equal the `-t` value. The warning message reports how many messages have been lost during the past interval.

## Example(s)

[Listing 1-1](#) shows the LMS in UBBCONFIG.

### Listing 1-1 LMS in UBBCONFIG

---

```
...
*SERVERS
LMS SRVGRP=LMSGRP SRVID=1
CLOPT="-A -- -l tsamweb.abc.com:8080/tsam -m 20M -t 180 -n 64"
...
```

---

## tlisten Options for JMX Monitoring

The following `tlisten` options serve for JMX monitoring:

`-j jmxaddr`

Used to start the embedded JMX agent.

`jmxaddr` specifies the address of RMI connector of embedded JMX agent. If the address has been occupied by another process, an error message is printed into ULOG and JMX agent fails to start up. [Table 1](#) lists the `jmxaddr` address formats.

**Table 1** IPv4 and IPv6 Address Formats

---

IPv4	IPv6
<code>rmi://IP:port</code>	<code>rmi://[IPv6 address]:port</code>
<code>rmi://hostname:port_number</code>	<code>rmi://hostname:port_number</code>
<code>rmi://#. #. #. #:port_number</code>	Hex format is not supported

---

**Note:** For the MP domain, you need to configure the `-j` option for `tlisten` on all machine nodes.

- m `jvm_min_mem`  
Specifies the minimal memory size (in MB), that should be allocated for the JVM used by JMX agent. The default value is 200MB.
- M `jvm_max_mem`  
Specifies the maximum memory size (in MB) that can be allocated for the JVM used by JMX agent. The value of `jvm_max_mem` cannot be set smaller than the value of `jvm_min_mem`, otherwise the JVM are not created and JMX agent fails to start up. The default value is 500MB.
- S  
Specifies SSL connection rather than the default connection between EM OMS/Agent and JMX agent.
- C `keyStore`  
Specifies the `keyStore` absolute path.
- P `keyStorePassword`  
Specifies the environment variable in which the password for the key store is stored. This variable is only usefully when no `tty` is attached.

## GWTDOMAIN Option for BTM Monitoring

A new CLOPT option is introduced for GWTDOMAIN.

-m

The BTM monitor URL. The format is `http://<HOST>:<PORT>/btmmonitor/agent/agent/`.

Example:

```
GWTDOMAIN SRVGRP="gwgrp" SRVID=1003 CLOPT="-A -- -m
http://bej301493.cn.oracle.com:9001/btmmonitor/agent/agent/"
```

When this option is specified, GWTDOMIAN starts an embedded JVM and runs a BTM delegate observer to monitor bidirectional calls between WTC and itself.

## tmadmin Command

Oracle TSAM Plus Agent provides a `tmadmin` command to turn on/off. If you want to turn off Oracle TSAM Plus temporarily, this command can be used. The format is as follows:

```
changemonitor (chmo) [-m machine] on|off
```

The `-m` parameter specifies the logic machine name where the Oracle TSAM Plus collection is disabled. Without this option, monitoring on all machines is disabled. By default, monitoring is

turned on. If monitoring is turned off, all data collection is stopped even if there is a monitoring policy defined.

## Call Path Monitoring APIs

### tpgetcallinfo(3c)

`tpgetcallinfo` is used for call path monitoring. Using `tpgetcallinfo` allows applications to make dynamic decisions based on application performance metrics. When call path monitoring is enabled, `tpgetcallinfo` allows applications to get the corresponding call path information, for example, correlation ID and various timestamps.

For more information, see [tpgetcallinfo\(3c\)](#) in the ATMI C Function Reference.

### tsambegin(3c)

#### Name

`tsambegin()` - Used in pair with `tsamend()` for users to manually add a segment to the current call path.

#### Synopsis

```
#include <tsam_ext.h>

long tsambegin(char* type, char * subtype, int argc, char ** argv, int flags)
```

#### Description

##### **type**

Specifies the monitoring type defined by users. Its value is a NULL-terminated string with a length limit of 255. For example, it could be "CICS" or "Database".

##### **subtype**

Specifies the subordinate command type defined by users. Its value is a NULL-terminated string with a length limit of 255. For example, it could be "insert" or "update". Both type and subtype values can be potentially specified as filters when users submit a query.

##### **argc**

Specifies the number of string pointed by `argv`. It must not less than 0.

**argv**

Specifies a list of properties transferred to TSAM, in which every string should be formatted like (%s=%s). The property name and value are defined by users. The maximum total length of argv is 4000 bytes.

**flags**

Reserved.

**Return Values**

If succeeded, TSAM Plus returns a positive description in long type denoting a sequence ID. The sequence ID is transferred to `tsamend()`, by which TSAM Plus can correlate the two APIs.

Otherwise, TSAM Plus returns a negative error code.

**Errors**

Its error codes are defined in the file `tsam_ext.h`.

**Table 1-1 tsambegin Error Codes**

Error Macro Name	Value	Description
TSAM_EXT_ERROR_NOTENABLE	-1	TSAM Plus is not enabled
TSAM_EXT_ERROR_NOTMONABLE	-2	TSAM Plus is not monitorable
TSAM_EXT_ERROR_INVALIDARG	-3	argc or argv value is invalid
TSAM_EXT_ERROR_INVALIDTYPE	-4	type value is invalid
TSAM_EXT_ERROR_INVALIDSUBTYP E	-5	subtype value is invalid

**See Also**

[tsamend\(3c\)](#)

**tsamend(3c)****Name**

`tsamend()`- Used in pair with `tsambegin()` for users to manually add a segment to the current call path. It must be used with `tsambegin()` in the same thread.

## Synopsis

```
#include <tsam_ext.h>

int tsamend(long cd, int argc, char ** argv, int flags);
```

## Description

### **cd**

Specifies the sequence ID returned by `tsambegin()`.

### **argc**

Specifies the number of string pointed by **argv**. It must not less than 0.

### **argv**

Specifies a list of properties transferred to TSAM Plus, in which every string should be formatted like (%s=%s). The property name and value are defined by users. The maximum total length of argv is 4000 bytes.

### **flags**

Reserved.

## Return Values

If succeeded, returns 0; otherwise, returns a negative error code.

## Errors

Its error codes are defined in the file `tsam_ext.h`.

**Table 1-2 tsamend Error Codes**

Error Macro Name	Value	Description
TSAM_EXT_ERROR_NOTENABLE	-1	TSAM Plus is not enabled
TSAM_EXT_ERROR_NOTMONABLE	-2	TSAM Plus is not monitorable
TSAM_EXT_ERROR_INVALIDARG	-3	argc or argv value is invalid
TSAM_EXT_ERROR_INVALIDCD	-6	cd value is invalid

## See Also

[tsambegin\(3c\)](#)

[Call Path and Tuxedo Monitoring Policy](#) in [Oracle TSAM Plus User Guide](#)





# TSAM Plus Database Metadata

This chapter contains the following sections:

- [Tuxedo Configuration Information](#)
- [Tuxedo Monitoring Information](#)
- [TSAM Plus Management Information](#)

## Tuxedo Configuration Information

This section contains the following:

- [TUXDOMAIN](#)
- [MACHINE](#)
- [GROUPS](#)
- [SERVER](#)
- [SERVICE](#)
- [LDOM](#)
- [RDOM](#)
- [ARTREGION](#)
- [ARTTUXGROUP](#)
- [ARTRESGROUP](#)
- [ARTTRAN](#)

- [IMS\\_TRANS](#)
- [IMS\\_APPS](#)

## TUXDOMAIN

Tuxedo domain information.

COLUMN	TYPE	Nullable	Constraints	Since Version	Note
ID	NUMBER	NO	PK	11.1.1.1.0	
NAME	VARCHAR2(255)	NO	Unique	11.1.1.1.0	The domain name to identify the domain. Its value is composed of: [Domain id]:[PMID of master machine]:[IPC key]
MASTER	VARCHAR2(255)	NO		11.1.1.1.0	LMID of master machine
STATUS	VARCHAR2(31)	NO		11.1.1.1.0	The status of the Tuxedo domain: <ul style="list-style-type: none"> <li>• ACT: Active</li> <li>• INA: Inactive</li> <li>• INV: Invalid, the node may not exist anymore.</li> </ul>
TUXMODE	VARCHAR2(31)	YES		11.1.1.1.0	MODE parameter in UBB
TAG	NUMBER	NO		11.1.1.1.0	Internal used.
ATTRIBUTES	VARCHAR2(1023)	YES		11.1.1.1.0	Reserved.

## MACHINE

Tuxedo machine information.

<b>COLUMN</b>	<b>TYPE</b>	<b>Nullable</b>	<b>Constraints</b>	<b>Since Version</b>	<b>Note</b>
ID	NUMBER	NO	PK	11.1.1.1.0	
TUXDOMAI NID	NUMBER	NO	FK to TUXDOMAI N (ID)	11.1.1.1.0	
NAME	VARCHAR2( 255)	NO	Indexed	11.1.1.1.0	PMID of the Tuxedo Machine
LMID	VARCHAR2( 255)	NO		11.1.1.1.0	LMID of the Tuxedo Machine
STATUS	VARCHAR2( 31)	NO		11.1.1.1.0	The status of the Tuxedo machine: <ul style="list-style-type: none"> <li>• ACT: Active</li> <li>• INA: Inactive</li> <li>• INV: Invalid, the node may not exist anymore.</li> </ul>
TUXVERSIO N	VARCHAR2( 255)	YES		11.1.1.1.0	Tuxedo version
TSAMVERSI ON	VARCHAR2( 255)	YES		11.1.1.1.0	TSAM Plus Agent version
HOSTNAME	VARCHAR2( 255)	NO		11.1.1.1.0	Host name of the machine.
SERVERNA ME	VARCHAR(1 023)	YES		12.1.1.0	The host name of TSAM Plus manages to which the Tuxedo machine is connecting.

SERVERPORT	NUMBER	YES		12.1.1.0	The port of TSAM Plus manager to which the Tuxedo machine is connecting.
ATTRIBUTES	VARCHAR2(1023)	YES		11.1.1.1.0	Reserved

## GROUPS

Tuxedo group information.

COLUMN	TYPE	Nullable	Constraints	Since Version	Note
ID	NUMBER	NO	PK	11.1.1.1.0	
MACHINEID	NUMBER	NO	FK to MACHINE (ID)	11.1.1.1.0	
NAME	VARCHAR2(255)	NO	Indexed	11.1.1.1.0	Group name
TUXGRPID	NUMBER	NO		11.1.1.1.0	GRPNO parameter in the UBB.
STATUS	VARCHAR2(31)	NO		11.1.1.1.0	The status of the Tuxedo machine: <ul style="list-style-type: none"> <li>• ACT: Active</li> <li>• INA: Inactive</li> <li>• INV: Invalid, the node may not exist anymore.</li> </ul>
ATTRIBUTES	VARCHAR2(1023)	YES		11.1.1.1.0	Reserved

## SERVER

Tuxedo server information.

<b>COLUMN</b>	<b>TYPE</b>	<b>Nullable</b>	<b>Constraints</b>	<b>Since Version</b>	<b>Note</b>
ID	NUMBER	NO	PK	11.1.1.1.0	
GROUPID	NUMBER	NO	FK to GROUPS (ID)	11.1.1.1.0	GRPNO parameter in the UBB
NAME	VARCHAR2(255)	NO	Indexed	11.1.1.1.0	AOUT parameter in UBB
TUXSVRID	NUMBER	NO		11.1.1.1.0	SRVID parameter in UBB
STATUS	VARCHAR2(31)	NO		11.1.1.1.0	The status of the Tuxedo machine: <ul style="list-style-type: none"> <li>• ACT: Active</li> <li>• INA: Inactive</li> <li>• INV: Invalid, the node may not exist anymore.</li> </ul>
CLOPT	VARCHAR2(1023)	YES		11.1.1.2.0	CLOPT parameter in UBB
ATTRIBUTES	VARCHAR2(1023)	YES		11.1.1.1.0	Reserved.

## SERVICE

Tuxedo service information.

<b>COLUMN</b>	<b>TYPE</b>	<b>Nullable</b>	<b>Constraints</b>	<b>Since Version</b>	<b>Note</b>
ID	NUMBER	NO	PK	11.1.1.1.0	
SERVERID	NUMBER	NO	FK to SERVER (ID)	11.1.1.1.0	
NAME	VARCHAR2(255)	NO	Indexed	11.1.1.1.0	Service name

FUNCNAME	VARCHAR2(255)	YES		11.1.1.1.0	Function name
STATUS	VARCHAR2(31)	NO		11.1.1.1.0	The status of the Tuxedo machine: <ul style="list-style-type: none"> <li>• ACT: Active</li> <li>• INA: Inactive</li> <li>• INV: Invalid, the node may not exist anymore.</li> </ul>
ATTRIBUTES	VARCHAR2(1023)	YES		11.1.1.1.0	Reserved.

## LDOM

Tuxedo local domain gateway information.

COLUMN	TYPE	Nullable	Constraints	Since Version	Note
ID	NUMBER	NO	PK	11.1.1.1.0	
NAME	VARCHAR2(255)	NO	Indexed	11.1.1.1.0	The name of this local domain access point.
LDOMID	VARCHAR2(255)	NO		11.1.1.1.0	The identifier of the domain gateway group associated with this local domain access point.
GROUPNAME	VARCHAR2(255)	NO		11.1.1.1.0	The group name of the domain gateway group representing this local domain access point.
STATUS	VARCHAR2(31)	NO		11.1.1.1.0	The status of this local domain access point: VALid

TYPE	VARCHAR2(255)	YES		11.1.1.1.0	Always TDOMAIN
TUXDOMAI NID	NUMBER	NO	FK to TUXDOMAI N (ID)	11.1.1.1.0	
ATTRIBUTES	VARCHAR2(1023)	YES		11.1.1.1.0	Reserved.

## RDOM

Tuxedo remote domain gateway information.

COLUMN	TYPE	Nullable	Constraints	Since Version	Note
ID	NUMBER	NO	PK	11.1.1.1.0	
NAME	VARCHAR2(255)	NO	Indexed	11.1.1.1.0	The name of the remote domain access point
RDOMID	VARCHAR2(255)	YES		11.1.1.1.0	Reserved
LDOM	NUMBER	NO	FK to LDOM(ID)	11.1.1.1.0	
STATUS	VARCHAR2(31)	NO		11.1.1.1.0	The status of the remote domain access point: <ul style="list-style-type: none"> <li>• Active</li> <li>• SUSPended</li> <li>• INItializing</li> <li>• INActive</li> <li>• UNKknown</li> </ul>
TYPE	VARCHAR2(255)	YES		11.1.1.1.0	The type of domain: TDOMAIN
ATTRIBUTES	VARCHAR2(1023)	YES		11.1.1.1.0	Reserved.

## ARTREGION

Tuxedo application runtime for CICS region information.

COLUMN	TYPE	Nullable	Constraints	Since Version	Note
ID	NUMBER	NO	PK	11.1.1.1.0	Region ID
TUXDOMAI NID	NUMBER	NO	FK to TUXDOMAI N (ID)	11.1.1.1.0	Domain ID
NAME	VARCHAR2( 255)	NO	Unique	11.1.1.1.0	Region name
STATUS	VARCHAR2( 31)	YES		11.1.1.1.0	The status of the Region: <ul style="list-style-type: none"><li>• ACT: Active</li><li>• INA: Inactive</li><li>• INV: Invalid, the node may not exist anymore.</li></ul>
STARTTIME	TIMESTAMP	YES		11.1.1.1.0	Start time
SHUTDOWN TIME	TIMESTAMP	YES		11.1.1.1.0	Shutdown time
TRANCLASS ESDESC	VARCHAR2( 4000)	YES		12.1.1.0	The content of file tranclasses.de sc
ATTRIBUTES	VARCHAR2( 1023)	YES		11.1.1.1.0	Reserved.

## ARTTUXGROUP

Tuxedo application runtime for CICS region information

COLUMN	TYPE	Nullable	Constraints	Since Version	Note
ID	NUMBER	NO	PK	11.1.1.1.0	



ARTREGIONID	NUMBER	NO	FK to ARTREGION (ID)	11.1.1.1.0	
GROUPID	NUMBER	NO		11.1.1.1.0	Tuxedo Group ID
NAME	VARCHAR2(255)	NO		11.1.1.1.0	Tuxedo Group Name
STATUS	VARCHAR2(31)	YES		11.1.1.1.0	Reserved.
ATTRIBUTES	VARCHAR2(1023)	YES		11.1.1.1.0	Reserved.

## ARTRESGROUP

Tuxedo application runtime for CICS group information

COLUMN	TYPE	Nullable	Constraints	Since Version	Note
ID	NUMBER	NO	PK	11.1.1.1.0	
ARTREGIONID	NUMBER	NO	FK to ARTREGION (ID)	11.1.1.1.0	
NAME	VARCHAR2(255)	NO		11.1.1.1.0	Resource group name
STATUS	VARCHAR2(31)	YES		11.1.1.1.0	The status of the resource group: <ul style="list-style-type: none"> <li>• ACT: Active</li> <li>• INA: Inactive</li> <li>• INV: Invalid, the node may not exist anymore.</li> </ul>
ATTRIBUTES	VARCHAR2(1023)	YES		11.1.1.1.0	Reserved.

## ARTTRAN

Tuxedo application runtime for CICS transaction information

<b>COLUMN</b>	<b>TYPE</b>	<b>Nullable</b>	<b>Constraints</b>	<b>Since Version</b>	<b>Note</b>
ID	NUMBER	NO	PK	11.1.1.1.0	
ARTRESGRO UPID	NUMBER	NO	FK to ARTRESGRO UP (ID)	11.1.1.1.0	
NAME	VARCHAR2( 255)	NO		11.1.1.1.0	Resource group name
STATUS	VARCHAR2( 31)	YES		11.1.1.1.0	The status of the Region group: <ul style="list-style-type: none"><li>• ACT: Active</li><li>• INA: Inactive</li><li>• INV: Invalid, the node may not exist anymore.</li></ul>
TRANCLASS	VARCHAR2( 255)	YES		12.1.1.0	The transaction class which this resource group belongs to.
ATTRIBUTES	VARCHAR2( 1023)	YES		11.1.1.1.0	Reserved.

## IMS\_TRANS

IMS transaction configuration

<b>COLUMN</b>	<b>TYPE</b>	<b>Nullable</b>	<b>Constraints</b>	<b>Since Version</b>	<b>Note</b>
NAME	VARCHAR2 (255)	NO	PK	12.1.3	Transaction code
SPA_SIZE	NUMBER	YES		12.1.3	SPA size

<b>COLUMN</b>	<b>TYPE</b>	<b>Nullable</b>	<b>Constraints</b>	<b>Since Version</b>	<b>Note</b>
RESPONSE	VARCHAR2 (255)	YES		12.1.3	Whether response is required for the transaction code specified in the "NAME" field. Its value is "Yes" or "No".
EDIT	VARCHAR2 (255)	YES		12.1.3	Whether the messages are converted to upper case automatically. Its value is "UC" or "ULC".
APPNAME	VARCHAR2 (255)	NO		12.1.3	The name of the COBOL application program that processes the transaction code specified in the "NAME" field.
CLASS	NUMBER	YES		12.1.3	The class of the transaction code. Its range is [1..999].
ATTRIBUTES	VARCHAR2( 1023)	YES		12.1.3	Reserved.
TUXDOMAI NID	NUMBER	NO	PK, FK to TUXDOMAI N (ID)	12.1.3	Domain ID

## IMS\_APPS

IMS application configuration

COLUMN	TYPE	Nullable	Constraints	Since Version	Note
NAME	VARCHAR2 (255)	NO	PK	12.1.3	Application name
PGMTYPE	VARCHAR2 (255)	NO		12.1.3	For MPP, its value is "TP"; for BMP and BMPT, its value is "BATCH".
LANG	VARCHAR2 (255)	NO		12.1.3	For COBOL programs, its value is "COBOL"; for c programs, its value is "C".
ATTRIBUTES	VARCHAR2( 1023)	YES		12.1.3	Reserved.
TUXDOMAI NID	NUMBER	NO	PK, FK to TUXDOMAI N (ID)	12.1.3	Domain ID

## Tuxedo Monitoring Information

This section contains the following:

- [POLICY](#)
- [ALERT\\_DEFINITION](#)
- [ALERT](#)
- [CALLPATH](#)
- [MON\\_CPSEGMENT](#)
- [MON\\_XA](#)
- [MON\\_SERVICE](#)
- [MON\\_GWTDOMAIN](#)
- [MON\\_GWTLINK](#)
- [MON\\_BRIDGE](#)

- [MON\\_BRGLINK](#)
- [MON\\_GWWS](#)
- [MON\\_ARTTCP](#)
- [MON\\_JESJOB](#)
- [MON\\_CLOB](#)
- [MON\\_IMS\\_DETAIL](#)

## POLICY

Monitoring policy information.

COLUMN	TYPE	Nullable	Constraints	Since Version	Note
ID	NUMBER	NO	PK	11.1.1.1.0	
TUXDOMAI NID	NUMBER	NO	FK to TUXDOMAI N (ID)	11.1.1.1.0	
NAME	VARCHAR2( 255)	NO	Indexed	11.1.1.1.0	Policy name.
STATUS	VARCHAR2( 31)	NO		11.1.1.1.0	Policy status: <ul style="list-style-type: none"> <li>• enabled</li> <li>• disabled</li> </ul>
AGENTTYPE	VARCHAR2( 255)	YES		11.1.1.1.0	Policy type: <ul style="list-style-type: none"> <li>• tuxedo: Tuxedo monitoring policy.</li> <li>• art: Tuxedo application runtime for CICS monitoring policy.</li> </ul>
CREATEDTI ME	TIMESTAMP	NO		11.1.1.1.0	Create time
MODIFIEDTI ME	TIMESTAMP	YES		11.1.1.1.0	Modify time

TSAMVERSION	VARCHAR2(255)	YES		11.1.1.1.0	Reserved.
DEFINITION	VARCHAR2(4000)	YES		11.1.1.1.0	Policy definition in XML.
ATTRIBUTES	VARCHAR2(1023)	YES		11.1.1.1.0	Reserved.

## ALERT\_DEFINITION

Monitoring alert policy definition.

COLUMN	TYPE	Nullable	Constraints	Since Version	Note
ID	NUMBER	NO	PK	11.1.1.1.0	
ARTREGIONID	NUMBER	YES		11.1.1.1.0	ART Region ID
NAME	VARCHAR2(255)	NO	UNIQUE	11.1.1.1.0	Alert definition name
STATUS	VARCHAR2(31)	NO		11.1.1.1.0	Status: <ul style="list-style-type: none"> <li>enabled</li> <li>disabled</li> </ul>
SEVERITY	VARCHAR2(31)	NO		11.1.1.1.0	Alert definition severity: <ul style="list-style-type: none"> <li>information</li> <li>warn</li> <li>critical</li> <li>fatal</li> </ul>

TYPE	VARCHAR2(255)	NO	11.1.1.1.0	Alert definition type: <ul style="list-style-type: none"> <li>• callpath</li> <li>• svc</li> <li>• xatran</li> <li>• gwt domain</li> <li>• bridge</li> <li>• gwsw</li> <li>• arttran</li> <li>• arttcp</li> <li>• jesjob</li> <li>• jesmetrics</li> </ul>
AGENTTYPE	VARCHAR2(255)	YES	11.1.1.1.0	Alert definition agent type: <ul style="list-style-type: none"> <li>• tuxedo</li> <li>• art</li> <li>• jes</li> </ul>
EXPRESSION	VARCHAR2(4000)	YES	11.1.1.1.0	Alert definition expression
EXPRESSION MODE	NUMBER	NO	11.1.1.1.0	Alert definition expression mode: <ul style="list-style-type: none"> <li>• 0 (Metric Evaluation)</li> <li>• 1 (fml)</li> </ul>
ACTION	VARCHAR2(255)	YES	11.1.1.1.0	Alert definition action. Null or a Tuxedo event broker name
RESFILTER	VARCHAR2(4000)	YES	11.1.1.1.0	Alert definition resource filter
RESFILTER MODE	NUMBER	NO	11.1.1.1.0	Alert definition resource filter mode: <ul style="list-style-type: none"> <li>• 0 (Selection)</li> <li>• 1 (advance)</li> </ul>

TUXEVENTNAME	VARCHAR2(255)	YES		11.1.1.1.0	The event name posted to the Oracle Tuxedo event broker. The event name is the alert name by default; you can also specify it manually.
CREATEDTIME	TIMESTAMP	YES		12.1.1.1	Alert definition created timestamp
MODIFIEDTIME	TIMESTAMP	YES		12.1.1.1	Alert definition modified timestamp
ATTRIBUTES	VARCHAR2(1023)	YES		11.1.1.1.0	Reserved.
INTERVAL	NUMBER	YES		11.1.1.1.0	Alert check interval

## ALERT

Alert information.

COLUMN	TYPE	Nullable	Constraints	Since Version	Note
ID	NUMBER	NO	PK	11.1.1.1.0	
ALERTDEFID	NUMBER	YES		11.1.1.1.0	
NAME	VARCHAR2(255)	NO	Indexed	11.1.1.1.0	Alert definition name
DOMAIN	VARCHAR2(255)	YES		11.1.1.1.0	Tuxedo domain name
MACHINE	VARCHAR2(255)	YES		11.1.1.1.0	Tuxedo machine LMID
TUXGROUP	VARCHAR2(255)	YES		11.1.1.1.0	Tuxedo group number
PROCESSNAME	VARCHAR2(255)	YES		11.1.1.1.0	Tuxedo process name



SERVERID	NUMBER	YES	11.1.1.1.0	Tuxedo server ID
PID	NUMBER	YES	11.1.1.1.0	Tuxedo process ID
LOGTIME	TIMESTAMP	NO	11.1.1.1.0	The time an alert occurs.
CLEARTIME	TIMESTAMP	YES	11.1.1.1.0	The time an alert is cleared.
SEVERITY	VARCHAR2(31)	NO	11.1.1.1.0	Alert definition severity: <ul style="list-style-type: none"> <li>• information</li> <li>• warn</li> <li>• critical</li> <li>• fatal</li> </ul>
ALERTTYPE	VARCHAR2(31)	NO	11.1.1.1.0	Alert definition type: <ul style="list-style-type: none"> <li>• callpath</li> <li>• svc</li> <li>• xatran</li> <li>• gwt domain</li> <li>• bridge</li> <li>• gwsw</li> <li>• arttran</li> <li>• arttcp</li> <li>• jesjob</li> <li>• jesmetrics</li> <li>• system</li> </ul>
REASON	VARCHAR2(1023)	YES	11.1.1.1.0	The reason/cause for the alert.
STATUS	VARCHAR2(31)	NO	11.1.1.1.0	The status of an alert: <ul style="list-style-type: none"> <li>• 0 (new)</li> <li>• 1 (cleared)</li> </ul>

TSAMVERSION	VARCHAR2(255)	YES		11.1.1.1.0	TSAM Plus agent version: <ul style="list-style-type: none"> <li>• null (11g or above)</li> <li>• 1.1 (TSAM 1.1 and 10gR3)</li> </ul>
ATTRIBUTES	VARCHAR2(1023)	YES		11.1.1.1.0	Reserved.

## CALLPATH

Call path master information (for TSAM Plus 12.1.3 GA version only).

COLUMN	TYPE	Nullable	Constraints	Since Version	Note
CORRELATIONID	VARCHAR2(255)	NO	PK	11.1.1.1.0	
PROCTYPE	NUMBER	YES		11.1.1.1.0	Tuxedo process type: <ul style="list-style-type: none"> <li>• 0 (NCLIENT)</li> <li>• 1 (WCLIENT)</li> <li>• 2 (APPSERVER)</li> <li>• 3 (GWTDOMAIN)</li> <li>• 4 (BRIDGE)</li> <li>• 5 (GWWS)</li> <li>• 6 (WSH)</li> <li>• 7 (JSH)</li> <li>• 8 (ISH)</li> <li>• 9 (TMQUEUE)</li> <li>• 10 (TMQFORWARD)</li> </ul>
DOMAIN	VARCHAR2(255)	YES	Indexed	11.1.1.1.0	Tuxedo domain name
MACHINE	VARCHAR2(255)	YES	Indexed	11.1.1.1.0	Tuxedo machine LMID

INITIATOR	VARCHAR2(255)	YES	Indexed	11.1.1.1.0	Initiator process name
SERVICE	VARCHAR2(255)	YES	Indexed	11.1.1.1.0	Tuxedo service
LOGTIME	TIMESTAMP	YES	Indexed	11.1.1.1.0	The time a call path is generated
USERNAME	VARCHAR2(255)	YES		12.1.1.0	Tuxedo user name
CLTADDR	VARCHAR2(255)	YES		11.1.1.1.0	Tuxedo client name
TSAMVERSION	VARCHAR2(255)	YES		11.1.1.1.0	TSAM agent version: <ul style="list-style-type: none"> <li>• null (11g or above)</li> <li>• 1.1 (TSAM 1.1 and 10gR3)</li> </ul>
SEGMENTCOUNT	NUMBER	NO		11.1.1.1.0	Segment count
CALLPATTERN	VARCHAR2(4000)	YES		11.1.1.1.0	Call pattern in XML. If the length exceeds 4000, only an MD5 value will be stored here and the actual value should be found in MON_CLOB table.

CALLPATTE RN_DET AILED	VARCHAR2( 4000)	YES		11.1.1.1.0	Detailed call pattern in XML.  If the length exceeds 4000, only an MD5 value will be stored here and the actual value should be found in MON_CLOB table.
ATTRIBUTES	VARCHAR2( 1023)	YES		11.1.1.1.0	Reserved.

## MON\_CPSEGMENT

Call path detail information.

COLUMN	TYPE	Nullable	Constraints	Since Version	Note
ID	NUMBER	NO	PK	11.1.1.1.0	
CORRELATI ONID	VARCHAR2( 255)	NO	Indexed	11.1.1.1.0	
DOMAIN	VARCHAR2( 255)	NO		11.1.1.1.0	Tuxedo domain name
MACHINE	VARCHAR2( 255)	NO		11.1.1.1.0	Tuxedo machine LMID
TUXGROUP	VARCHAR2( 255)	YES		11.1.1.1.0	Tuxedo group number
PROCESSNA ME	VARCHAR2( 255)	NO		11.1.1.1.0	Tuxedo server process name
SERVERID	NUMBER	YES		11.1.1.1.0	Tuxedo server ID
PID	NUMBER	NO		11.1.1.1.0	Tuxedo server process ID
USERNAME	VARCHAR2( 255)	YES		12.1.1.0	Tuxedo user name

DEPTH	NUMBER	YES		11.1.1.1.0	Call path depth
TARGETSVC	VARCHAR2(255)	YES		11.1.1.1.0	Target service
HOSTSVC	VARCHAR2(255)	YES		11.1.1.1.0	Host service
CPUTIME	NUMBER	YES		11.1.1.1.0	CPU time
SYSCPUTIME	NUMBER	YES		12.1.1.0	SYS CPU time
USRCPUTIME	NUMBER	YES		12.1.1.0	User CPU time
ELAPSETIME	NUMBER	YES		11.1.1.1.0	Elapse time
TOTALTIME	NUMBER	YES	Indexed	11.1.1.1.0	Total time
URCODE	NUMBER	YES		11.1.1.1.0	tpurcode
ERRNO	NUMBER	YES	Indexed	11.1.1.1.0	tperrno
STATUS	NUMBER	YES		11.1.1.1.0	Status: <ul style="list-style-type: none"> <li>• null</li> <li>• 1</li> </ul>
MSGTYPE	VARCHAR2(16)	YES		11.1.1.1.0	Message type: <ul style="list-style-type: none"> <li>• ARP</li> <li>• ARQ</li> </ul>
MSGSIZE	NUMBER	YES		11.1.1.1.0	Message size
MSGSTAGE	VARCHAR2(16)	YES		11.1.1.1.0	Message stage: <ul style="list-style-type: none"> <li>• STMO</li> <li>• ME2NET</li> <li>• NET2ME</li> <li>• ME2Q</li> <li>• Q2ME</li> <li>• ME2QFAIL</li> </ul>
MSGQUEUE D	NUMBER	YES		11.1.1.1.0	Message queue length

LOCALGRID	VARCHAR2(255)	YES	Indexed	11.1.1.1.0	Local GRID
MSGID	VARCHAR2(255)	YES		11.1.1.1.0	Message ID
CALLMODE	NUMBER	YES		11.1.1.1.0	Call mode: <ul style="list-style-type: none"> <li>• 1 (tpacall)</li> <li>• 2 (tpcall)</li> <li>• 3 (tpforward)</li> </ul>
CALLFLAG	NUMBER	YES		11.1.1.1.0	Call flag
SVCSEQ	VARCHAR2(1023)	YES		11.1.1.1.0	Service sequence
PSVCSEQ	VARCHAR2(1023)	YES		11.1.1.1.0	Parent service sequence
IPCQID	VARCHAR2(64)	YES		11.1.1.1.0	IPC queue ID
LOGTIME	TIMESTAMP	YES		11.1.1.1.0	Log time
STARTTIME	TIMESTAMP	NO		11.1.1.1.0	Call start time
LASTTIME	TIMESTAMP	YES		11.1.1.1.0	Call last time
PROCTYPE	NUMBER	YES		11.1.1.1.0	Tuxedo Process type: <ul style="list-style-type: none"> <li>• 0 (NCLIENT)</li> <li>• 1 (WCLIENT)</li> <li>• 2 (APPSERVER)</li> <li>• 3 (GWTDOMAIN)</li> <li>• 4 (BRIDGE)</li> <li>• 5 (GWWS)</li> <li>• 6 (WSH)</li> <li>• 7 (JSH)</li> <li>• 8 (ISH)</li> <li>• 9 (TMQUEUE)</li> <li>• 10 (TMQFORWARD)</li> </ul>

TSAMVERSION	VARCHAR2(255)	YES	11.1.1.1.0	TSAM agent version: <ul style="list-style-type: none"> <li>• null (11g or above)</li> <li>• 1.1 (TSAM 1.1 and 10gR3)</li> </ul>
CLTADDR	VARCHAR2(255)	YES	11.1.1.1.0	Tuxedo client address
LDM	VARCHAR2(255)	YES	11.1.1.1.0	Ldom name: Ldom ID
RDM	VARCHAR2(255)	YES	11.1.1.1.0	Rdom name: Rdom ID
MSGCVTIME	NUMBER	YES	11.1.1.1.0	Message convert time
ATTRIBUTES	VARCHAR2(4000)	YES	11.1.1.1.0	Reserved.
EXTTYPE	VARCHAR2(255)	YES	12.1.1.0	Call path extended type
EXTSUBTYPE	VARCHAR2(255)	YES	12.1.1.0	Call path extended subtype
EXTSEQ	NUMBER	YES	12.1.1.0	Call path extended sequence
EXTCORSEQ	NUMBER	YES	12.1.1.0	Call path extended parent sequence
ECID	VARCHAR2(1024)	YES	12.1.3	ECID (Execution Context ID)
MSGTAG	VARCHAR2(4000)	YES	12.1.3 RP006	Message Tag
MD5	VARCHAR(40)	YES	12.1.3 RP008	MD5 in MON_CLOB_CP
MD5_DTL	VARCHAR(40)	YES	12.1.3 RP008	MD5 in MON_CLOB_CPDTL

## MON\_XA

XA transaction information.

COLUMN	TYPE	Nullable	Constraints	Since Version	Note
ID	NUMBER	NO	PK	11.1.1.1.0	
LOCALGTRID	VARCHAR2(255)	NO	Indexed	11.1.1.1.0	Local GTRID
DOMAIN	VARCHAR2(255)	YES		11.1.1.1.0	Tuxedo domain name
MACHINE	VARCHAR2(255)	YES		11.1.1.1.0	Tuxedo machine LMID
TUXGROUP	VARCHAR2(255)	YES		11.1.1.1.0	Tuxedo group number
PROCESSNAME	VARCHAR2(255)	YES		11.1.1.1.0	Tuxedo server process name
SERVERID	NUMBER	YES		11.1.1.1.0	Tuxedo server ID
PID	NUMBER	YES		11.1.1.1.0	Tuxedo process ID
PROCTYPE	NUMBER	YES		11.1.1.1.0	Tuxedo process type: <ul style="list-style-type: none"> <li>• 0 (NCLIENT)</li> <li>• 1 (WCLIENT)</li> <li>• 2 (APPSERVER)</li> <li>• 3 (GWTDOMAIN)</li> <li>• 4 (BRIDGE)</li> <li>• 5 (GWWS)</li> <li>• 6 (WSH)</li> <li>• 7 (JSH)</li> <li>• 8 (ISH)</li> <li>• 9 (TMQUEUE)</li> <li>• 10 (TMQFORWARD)</li> </ul>
LOGTIME	TIMESTAMP	YES	Indexed	11.1.1.1.0	Log time



XACODE	NUMBER	YES	11.1.1.1.0	The XA Routine return code
REMOTEGTR ID	VARCHAR2(255)	YES	11.1.1.1.0	Remote GTRID
RMID	NUMBER	YES	11.1.1.1.0	RMID
XANAME	VARCHAR2(255)	YES	11.1.1.1.0	The transaction routine name: <ul style="list-style-type: none"> <li>• tpbegin</li> <li>• tpcommit</li> <li>• tprolback</li> <li>• tpabort</li> <li>• xa_commit</li> <li>• xa_start</li> <li>• xa_prepare</li> <li>• xa_rollback</li> <li>• xa_end</li> <li>• tms_msg_xxx (forGWTDOMAIN XA transaction activities)</li> <li>• xa_msg_xxx (forGWTDOMAIN XA transaction activities)</li> </ul>
LDMO	VARCHAR2(255)	YES	11.1.1.1.0	Ldom name: Ldom ID
RDMO	VARCHAR2(255)	YES	11.1.1.1.0	Rdom name: Rdom ID
MSGCVTTIME	NUMBER	YES	11.1.1.1.0	Message convert time
EXEETIME	NUMBER	YES	11.1.1.1.0	Transaction execute time
FLAGS	NUMBER	YES	11.1.1.1.0	The XA Routine call flag

TIMEOUT	NUMBER	YES	11.1.1.1.0	The XA Routine timeout
TSAMVERSION	VARCHAR2(255)	YES	11.1.1.1.0	TSAM agent version: <ul style="list-style-type: none"> <li>• null (11g or above)</li> <li>• 1.1 (TSAM 1.1 and 10gR3)</li> </ul>
ATTRIBUTES	VARCHAR2(1023)	YES	11.1.1.1.0	Reserved.

## MON\_SERVICE

Tuxedo service call information.

COLUMN	TYPE	Nullable	Constraints	Since Version	Note
ID	NUMBER	NO	PK	11.1.1.1.0	
SVCNAME	VARCHAR2(255)	NO	Indexed	11.1.1.1.0	Service name
DOMAIN	VARCHAR2(255)	NO	Indexed	11.1.1.1.0	Tuxedo domain name
MACHINE	VARCHAR2(255)	NO	Indexed	11.1.1.1.0	Tuxedo machine LMID
TUXGROUP	VARCHAR2(255)	NO	Indexed	11.1.1.1.0	Tuxedo group number
PROCESSNAME	VARCHAR2(255)	YES		11.1.1.1.0	Tuxedo server process name
SERVERID	NUMBER	YES		11.1.1.1.0	Tuxedo server ID
PID	NUMBER	YES		11.1.1.1.0	Tuxedo process ID
THREADID	NUMBER	YES		11.1.1.1.0	Tuxedo thread ID

PROCTYPE	NUMBER	YES		11.1.1.1.0	Tuxedo Process type: <ul style="list-style-type: none"> <li>• 0 (NCLIENT)</li> <li>• 1 (WCLIENT)</li> <li>• 2 (APPSERVER)</li> <li>• 3 (GWTDOMAIN)</li> <li>• 4 (BRIDGE)</li> <li>• 5 (GWWS)</li> <li>• 6 (WSH)</li> <li>• 7 (JSH)</li> <li>• 8 (ISH)</li> <li>• 9 (TMQUEUE)</li> <li>• 10 (TMQFORWARD)</li> </ul>
USERNAME	VARCHAR2(255)	YES	Indexed	12.1.1.0	Tuxedo user name
LOGTIME	TIMESTAMP	NO	Indexed	11.1.1.1.0	Log time
MSGSIZE	NUMBER	YES		11.1.1.1.0	Message size
MSGTYPE	VARCHAR2(6)	YES		11.1.1.1.0	Message type: <ul style="list-style-type: none"> <li>• ARP</li> <li>• ARQ</li> </ul>
MSGQUEUE D	NUMBER	YES		11.1.1.1.0	Message queue length
MSGWAITTI ME	NUMBER	YES		11.1.1.1.0	Message wait time
STATUS	VARCHAR2(31)	YES		11.1.1.1.0	Reserved
ERRNO	NUMBER	YES		11.1.1.1.0	tperrno
URCODE	NUMBER	YES		11.1.1.1.0	tpurcode
EXEETIME	NUMBER	YES		11.1.1.1.0	Service execute time
CPUTIME	NUMBER	YES		11.1.1.1.0	Service CPU time

SYSCPUTIME	NUMBER	YES	12.1.1.0	Service SYS CPU time
USRCPUTIME	NUMBER	YES	12.1.1.0	Service USER CPU time
TSAMVERSION	VARCHAR2(255)	YES	11.1.1.1.0	TSAM agent version: <ul style="list-style-type: none"> <li>• null (11g or above)</li> <li>• 1.1 (TSAM 1.1 and 10gR3)</li> </ul>
ATTRIBUTES	VARCHAR2(1023)	YES	11.1.1.1.0	Reserved
ARTTRAN	VARCHAR2(255)	YES	12.1.3	ART CICS transaction server name
ARTSVRTYPE	NUMBER	YES	12.1.3 RP001	
ARTPROGRAMNAME	VARCHAR2(255)	YES	12.1.3 RP001	

## MON\_GWTDOMAIN

Tuxedo /T domain gateway performance statistics master information.

COLUMN	TYPE	Nullable	Constraints	Since Version	Note
ID	NUMBER	NO	PK	11.1.1.1.0	
DOMAIN	VARCHAR2(255)	NO		11.1.1.1.0	Tuxedo domain name
MACHINE	VARCHAR2(255)	NO		11.1.1.1.0	Tuxedo machine LMID
TUXGROUP	VARCHAR2(255)	YES		11.1.1.1.0	Tuxedo group number

PROCESSNAME	VARCHAR2(255)	NO		11.1.1.1.0	Tuxedo server process name
SERVERID	NUMBER	YES		11.1.1.1.0	Tuxedo server ID
PID	NUMBER	NO		11.1.1.1.0	Tuxedo process ID
LDM	VARCHAR2(255)	YES	Indexed	11.1.1.1.0	Ldm name: Ldm ID
LOGTIME	TIMESTAMP	NO	Indexed	11.1.1.1.0	Log time
LINKNUMBER	NUMBER	YES		11.1.1.1.0	Link number
MSGQUEUE	NUMBER	YES		11.1.1.1.0	Message queue length
REQUESTQUEUED	NUMBER	YES		11.1.1.1.0	Reserved
WORKLOAD	NUMBER	YES		11.1.1.1.0	Reserved
PROCTYPE	NUMBER	YES		11.1.1.1.0	Tuxedo process type: 3 (GWTDOMAIN)
TSAMVERSION	VARCHAR2(255)	YES		11.1.1.1.0	TSAM agent version: <ul style="list-style-type: none"> <li>• null (11g or above)</li> <li>• 1.1 (TSAM 1.1 and 10gR3)</li> </ul>
ATTRIBUTES	VARCHAR2(1023)	YES		11.1.1.1.0	Reserved.

## MON\_GWTLINK

Tuxedo /T domain gateway performance statistics detail information.

COLUMN	TYPE	Nullable	Constraints	Since Version	Note
ID	NUMBER	NO	PK	11.1.1.1.0	

MON_GWTD OMAINID	NUMBER	NO	FK to MON_GWTD OMAIN (ID)	11.1.1.1.0	
LINKADDRE SS	VARCHAR2( 255)	YES		11.1.1.1.0	Link address
LOGTIME	TIMESTAMP	NO		12.1.1.0	Log time
LINKSTATU S	NUMBER	YES		11.1.1.1.0	Link status: <ul style="list-style-type: none"> <li>• 0 (UP)</li> <li>• -1 (DOWN)</li> <li>• 1 (INIT)</li> </ul>
PENDNUMB ER	NUMBER	YES		11.1.1.1.0	Network Pending Number
PENDBYTES	NUMBER	YES		11.1.1.1.0	Network Pending Bytes
ACCNUMBE R	NUMBER	YES		11.1.1.1.0	Network Message Number
ACCBYTES	NUMBER	YES		11.1.1.1.0	Network Message Bytes
WAITREPLY NUMBER	NUMBER	YES		11.1.1.1.0	Network Outstanding Requests
ATTRIBUTES	VARCHAR2( 1023)	YES		11.1.1.1.0	Reserved.

## MON\_BRIDGE

Tuxedo bridge gateway performance statistics master information.

COLUMN	TYPE	Nullable	Constraints	Since Version	Note
ID	NUMBER	NO	PK	11.1.1.1.0	
DOMAIN	VARCHAR2( 255)	NO	Indexed	11.1.1.1.0	Tuxedo domain name

MACHINE	VARCHAR2(255)	NO		11.1.1.1.0	Tuxedo machine LMID
TUXGROUP	VARCHAR2(255)	YES		11.1.1.1.0	Tuxedo group number
PROCESSNAME	VARCHAR2(255)	NO		11.1.1.1.0	Tuxedo server process name
SERVERID	NUMBER	YES		11.1.1.1.0	Tuxedo server ID
PID	NUMBER	NO		11.1.1.1.0	Tuxedo process ID
LOGTIME	TIMESTAMP	NO	Indexed	11.1.1.1.0	Log time
LINKNUMBER	NUMBER	YES		11.1.1.1.0	Link number
MSGQUEUE	NUMBER	YES		11.1.1.1.0	Message queue length
REQUESTQUEUED	NUMBER	YES		11.1.1.1.0	Reserved
WORKLOAD	NUMBER	YES		11.1.1.1.0	Reserved
PROCTYPE	NUMBER	YES		11.1.1.1.0	
TSAMVERSION	VARCHAR2(255)	YES		11.1.1.1.0	TSAM agent version: <ul style="list-style-type: none"> <li>• null (11g or above)</li> <li>• 1.1 (TSAM 1.1 and 10gR3)</li> </ul>
ATTRIBUTES	VARCHAR2(1023)	YES		11.1.1.1.0	Reserved

## MON\_BRGLINK

Tuxedo /T domain gateway performance statistics detail information.

COLUMN	TYPE	Nullable	Constraints	Since Version	Note
ID	NUMBER	NO	PK	11.1.1.1.0	

MON_BRIDGEID	NUMBER	NO	FK to MON_BRIDGE (ID)	11.1.1.1.0	
LINKADDRESS	VARCHAR2(255)	YES		11.1.1.1.0	Link address
LOGTIME	TIMESTAMP	NO		12.1.1.0	Log time
LINKSTATUS	NUMBER	YES		11.1.1.1.0	Link status: <ul style="list-style-type: none"> <li>• 0 (UP)</li> <li>• -1 (DOWN)</li> <li>• 1 (INIT)</li> </ul>
PENDNUMBER	NUMBER	YES		11.1.1.1.0	Network Pending Number
PENDBYTES	NUMBER	YES		11.1.1.1.0	Network Pending Bytes
ACCNUMBER	NUMBER	YES		11.1.1.1.0	Network Message Number
ACCBYTES	NUMBER	YES		11.1.1.1.0	Network Message Bytes
TSAMVERSION	VARCHAR2(255)	YES		11.1.1.1.0	TSAM agent version: <ul style="list-style-type: none"> <li>• null (11g or above)</li> <li>• 1.1 (TSAM 1.1 and 10gR3)</li> </ul>
ATTRIBUTES	VARCHAR2(1023)	YES		11.1.1.1.0	

## MON\_GWWS

Tuxedo GWWS performance statistics information.

COLUMN	TYPE	Nullable	Constraints	Since Version	Note
ID	NUMBER	NO	PK	11.1.1.1.0	



ACTCLIENT NUM	NUMBER	YES	11.1.1.1.0	Active client number
ACTTHREAD NUM	NUMBER	YES	11.1.1.1.0	Active Thread Number
ATTRIBUTES	VARCHAR2( 1023)	YES	11.1.1.1.0	Reserved
AVGINTIME	NUMBER	YES	11.1.1.1.0	Average Inbound Process Time
AVGOUTTIM E	NUMBER	YES	11.1.1.1.0	Average Outbound Process Time
DOMAIN	VARCHAR2( 255)	NO	11.1.1.1.0	Tuxedo domain name
TUXGROUP	VARCHAR2( 255)	YES	11.1.1.1.0	Tuxedo group number
GWWSID	VARCHAR2( 255)	NO	11.1.1.1.0	GWWS ID
INBOUNDPE ND	NUMBER	YES	11.1.1.1.0	Inbound Pending Request
OUTBOUND PEND	NUMBER	YES	11.1.1.1.0	Outbound Pending Request
INOWFAILN UM	NUMBER	YES	11.1.1.1.0	Inbound One-Way Failure Number
INOWSUCCN UM	NUMBER	YES	11.1.1.1.0	Inbound One-Way Success Number
INRPCFAILN UM	NUMBER	YES	11.1.1.1.0	Inbound RPC Failure Number
INRPCSUCC NUM	NUMBER	YES	11.1.1.1.0	Inbound RPC Success Number
MACHINE	VARCHAR2( 255)	NO	11.1.1.1.0	Tuxedo machine LMID

OUTOWFAIL NUM	NUMBER	YES	11.1.1.1.0	Outbound One-Way Failure Number
OUTOWSUC CNUM	NUMBER	YES	11.1.1.1.0	Outbound One-Way Success Number
OUTRPCFAI LNUM	NUMBER	YES	11.1.1.1.0	Outbound RPC Failure Number
OUTRPCSUC CNUM	NUMBER	YES	11.1.1.1.0	Outbound RPC Success Number
PID	NUMBER	NO	11.1.1.1.0	Tuxedo process ID
PROCESSNA ME	VARCHAR2( 255)	NO	11.1.1.1.0	Tuxedo process name
PROCTYPE	NUMBER	YES	11.1.1.1.0	Tuxedo process type: 5 (GWWS)
SERVERID	NUMBER	YES	11.1.1.1.0	Tuxedo server ID
LOGTIME	TIMESTAMP	YES	11.1.1.1.0	Log time
TSAMVERSI ON	VARCHAR2( 255)	YES	11.1.1.1.0	TSAM agent version: <ul style="list-style-type: none"> <li>• null (11g or above)</li> <li>• 1.1 (TSAM 1.1 and 10gR3)</li> </ul>

## MON\_ARTTCP

Tuxedo application runtime for CICS TCP listener performance statistics information.

<b>COLUMN</b>	<b>TYPE</b>	<b>Nullable</b>	<b>Constraints</b>	<b>Since Version</b>	<b>Note</b>
ID	NUMBER	NO	PK	11.1.1.1.0	
ATTRIBUTES	VARCHAR2( 1023)			11.1.1.1.0	Reserved
DOMAIN	VARCHAR2( 255)	NO		11.1.1.1.0	Tuxedo domain name

TUXGROUP	VARCHAR2(255)	YES	11.1.1.1.0	Tuxedo group number
TRANFAILNUM	NUMBER	YES	11.1.1.1.0	Failed Transaction Number
TRANSUCCESSUM	NUMBER	YES	11.1.1.1.0	Successful Transaction Number
MACHINE	VARCHAR2(255)	NO	11.1.1.1.0	Tuxedo machine LMID
SESSIONNUM	NUMBER	YES	11.1.1.1.0	Session Number
PID	NUMBER	NO	11.1.1.1.0	Tuxedo process ID
PROCESSNAME	VARCHAR2(255)	NO	11.1.1.1.0	Tuxedo process name
PROCTYPE	SMALLINT	YES	11.1.1.1.0	Tuxedo process type: 2 (APPSERVER)
SERVERID	NUMBER	YES	11.1.1.1.0	Tuxedo server ID
LOGTIME	TIMESTAMP	NO	11.1.1.1.0	Log time
TSAMVERSION	VARCHAR2(255)	YES	11.1.1.1.0	TSAM agent version: null (11g or above)

## MON\_JESJOB

Tuxedo application runtime for Batch job information.

COLUMN	TYPE	Nullable	Constraints	Since Version	Note
ID	NUMBER	NO	PK	11.1.1.2.0	Job ID
DOMAIN	VARCHAR2(255)	NO	PK	11.1.1.2.0	Tuxedo domain name
MACHINE	VARCHAR2(255)	YES		11.1.1.2.0	Tuxedo machine LMID

NAME	VARCHAR2(32)	YES	Indexed	11.1.1.2.0	Job name
TYPRUN	VARCHAR2(7)	YES		11.1.1.2.0	Job typrun
PRIORITY	NUMBER	YES	Indexed	11.1.1.2.0	Job priority
OWNER	VARCHAR2(32)	YES	Indexed	11.1.1.2.0	Job owner
EXECMAC	VARCHAR2(32)	YES		11.1.1.2.0	Job executing machine
STATUS	VARCHAR2(12)	YES		11.1.1.2.0	Job status: <ul style="list-style-type: none"> <li>• CONVING</li> <li>• WAITING</li> <li>• EXECUTING</li> <li>• DONE</li> <li>• HOLD_CONVING</li> <li>• HOLD_WAITING</li> <li>• HOLD_DELAY</li> <li>• FAIL</li> <li>• DISCARD</li> <li>• INDOUBT</li> </ul>
JOBCLASS	CHAR(1)	YES	Indexed	11.1.1.2.0	Job class. Value may be [A-Z], [0-9]
RUNNINGSTEP	VARCHAR2(32)	YES		11.1.1.2.0	Job running step
EXECSTATUS	VARCHAR2(32)	YES		11.1.1.2.0	Job executing status
SUBMITTIME	NUMBER	YES		11.1.1.2.0	Submit time
WAITINGTIME	NUMBER	YES		11.1.1.2.0	Job waiting time
EXEETIME	NUMBER	YES		11.1.1.2.0	Job execution time
ENDTIME	NUMBER	YES		11.1.1.2.0	Job end time

PURGETIME	NUMBER	YES		11.1.1.2.0	Job purge time
LOGTIME	TIMESTAMP	NO	Indexed	11.1.1.2.0	Log time
USRCPU	NUMBER	YES		11.1.1.2.0	Job user CPU time
SYSCPU	NUMBER	YES		11.1.1.2.0	Job system CPU time
INITIATORPID	NUMBER	YES		11.1.1.2.0	Job initiator PID
ATTRIBUTES	VARCHAR2(1023)	YES		12.1.1.0	Reserved

## MON\_CLOB

Global CLOB information table.

COLUMN	TYPE	Nullable	Constraints	Since Version	Note
MD5	VARCHAR2(40)	NO	PK	12.1.1.0	Call pattern content MD5  If MD5 is a user name, CONTENT is the saved queries XML.
CONTENT	CLOB	NO		12.1.1.0	Call pattern content
ATTRIBUTES	VARCHAR2(1023)	YES		12.1.1.0	Reserved

## MON\_IMS\_DETAIL

Tuxedo application runtime for IMS transactions or programs.

COLUMN	TYPE	Nullable	Constraints	Since Version	Note
ID	NUMBER	NO	PK	12.1.3	
DOMAIN	VARCHAR2(255)	NO	Indexed	12.1.3	Tuxedo domain name

<b>COLUMN</b>	<b>TYPE</b>	<b>Nullable</b>	<b>Constraints</b>	<b>Since Version</b>	<b>Note</b>
MACHINE	VARCHAR2(255)	NO	Indexed	12.1.3	Tuxedo machine LMID
TUXGROUP	VARCHAR2(255)	NO	Indexed	12.1.3	Tuxedo group number
PROCESSNAME	VARCHAR2(255)	YES		12.1.3	Tuxedo process name
SERVERID	NUMBER	YES		12.1.3	Tuxedo server ID
PID	NUMBER	YES		12.1.3	Tuxedo process ID
LOGTIME	TIMESTAMP	YES	Indexed	12.1.3	Log time
TSAMVERSION	VARCHAR2(255)	YES		12.1.3	TSAM agent version. Its value is null.
TRANSACTION_NAME	VARCHAR2(255)	YES	Indexed	12.1.3	Transaction name
TRANSACTION_CLASS	NUMBER	YES	Indexed	12.1.3	Transaction class
LOGIC_TERMINAL	VARCHAR2(255)	YES		12.1.3	Logic terminal name
REGION_TYPE	VARCHAR2(255)	NO	Indexed	12.1.3	Region type
JOB_NAME	VARCHAR2(255)	YES		12.1.3	JES submitted job name
USER_ID	VARCHAR2(255)	YES		12.1.3	User ID of DFSRC00
START_TIME	TIMESTAMP	NO		12.1.3	Transaction/Program start time
END_TIME	TIMESTAMP	NO		12.1.3	Transaction/Program end time
ELAPSED_TIME	NUMBER	YES		12.1.3	Transaction/Program elapsed time

COLUMN	TYPE	Nullable	Constraints	Since Version	Note
SYS_CPU_TIME	NUMBER	YES		12.1.3	Transaction/Program system CPU time
USER_CPU_TIME	NUMBER	YES		12.1.3	Transaction/Program user CPU time
PROGRAM_NAME	VARCHAR2 (255)	YES	Indexed	12.1.3	Program name
PSB_NAME	VARCHAR2 (255)	YES		12.1.3	PSB name
PROGRAM_ELAPSED_TIME	NUMBER	YES		12.1.3	Total program elapsed time, includes DL/I elapsed time
SPA_SIZE	NUMBER	YES		12.1.3	Current SPA size
ABEND_NUMBER	NUMBER	YES		12.1.3	Abend code
ENQ_NUMBER	NUMBER	YES		12.1.3	Message number pushed in /Q
DEQ_NUMBER	NUMBER	YES		12.1.3	Message number popped from /Q
DLI_TIME	NUMBER	YES		12.1.3	DL/I elapsed time
DLIS	VARCHAR2 (2048)	YES		12.1.3	DL/I list
ATTRIBUTES	VARCHAR2( 1023)	YES		12.1.3	Reserved

## TSAM Plus Management Information

This section contains the following:

- [GLOBALCONFIG](#)
- [ROLES](#)

- [USERS](#)

## GLOBALCONFIG

TSAM Plus global parameters information.

<b>COLUMN</b>	<b>TYPE</b>	<b>Nullable</b>	<b>Constraints</b>	<b>Since Version</b>	<b>Note</b>
PARAM	VARCHAR2(255)	NO	PK	11.1.1.1.0	Parameter name
VALUE	VARCHAR2(255)	YES		11.1.1.1.0	Parameter value
ATTRIBUTES	VARCHAR2(1023)	YES		11.1.1.1.0	Reserved

## ROLES

TSAM Plus role information.

<b>COLUMN</b>	<b>TYPE</b>	<b>Nullable</b>	<b>Constraints</b>	<b>Since Version</b>	<b>Note</b>
NAME	VARCHAR2(255)	NO	PK	11.1.1.2.0	Role name
ID	NUMBER	NO	Unique	11.1.1.2.0	Role ID
DESCRIPTION	VARCHAR2(255)	YES		11.1.1.2.0	Role description
DEFINITION	VARCHAR2(4000)	YES		11.1.1.2.0	Role definition
ATTRIBUTES	VARCHAR2(1023)	YES		11.1.1.2.0	Reserved

## USERS

TSAM Plus user information.



<b>COLUMN</b>	<b>TYPE</b>	<b>Nullable</b>	<b>Constraints</b>	<b>Since Version</b>	<b>Note</b>
NAME	VARCHAR2(255)	NO	PK	11.1.1.1.0	User login name
ROLENAMES	VARCHAR2(255)	NO		11.1.1.2.0	Role names the user belongs to
PASSWORD	VARCHAR2(255)	NO		11.1.1.1.0	User password
FULLNAME	VARCHAR2(255)	YES	Indexed	11.1.1.1.0	User full name
DESCRIPTIO N	VARCHAR2(255)	YES		11.1.1.1.0	User description
MODIFIEDTI ME	TIMESTAMP	YES		11.1.1.1.0	User modification time
ATTRIBUTES	VARCHAR2(1023)	YES		11.1.1.1.0	Reserved
SAVEDQUER IES	VARCHAR2(4000)	YES		12.1.3	Saved queries XML. If the length exceeds 4000, only the user name is stored here and the actual value should be found in MON_CLOB table.



# Enterprise Manager for Tuxedo Target Reference

This chapter contains the following sections:

- [Understanding Properties and Metrics Tables](#)
- [Tuxedo Targets](#)
- [TMA Targets](#)
- [ART CICS Targets](#)
- [ART Batch Targets](#)
- [OTMQ Manager Server](#)
- [ECM Tables](#)
- [Properties.xml Schema](#)

## Understanding Properties and Metrics Tables

### Property Characters

The following characters are used for describing a property:

- **Visible:** indicates the property is visible on the Target home page on Enterprise Manager console. If not specified, the property is invisible.

- **Editable:** indicates the property can be modified on Enterprise Manager console. If not specified, the property is not editable. Editable(\*) indicates it's a mandatory property that you cannot leave empty when adding a standalone target.
- **CMD Option:** indicates the property is specified by a command option of the process.
- **UBB Parameter:** indicates the property is specified by the parameter of the corresponding entry defined in `UBBCONFIG(5)`.

## Metrics Tables

Metrics tables in this book lists all the metrics belonging to each target. You can also check all metrics of a target from the Oracle Enterprise Manager Cloud Control by clicking the target menu > **Monitoring** > **All Metrics**.

### Status Column

The Status column in availability metrics tables of Tuxedo targets is retrieved from `TA_STATE` field of the corresponding Tuxedo `TM_MIB` classes. The mapping rule from `TS_STATE` to Status column is:

<code>TA_STATE</code>	Status
ACT   MIG   CLE   RES   PAR	1
INA   SUS   DEA   EXI	0

### Collection Interval

All the Collection Interval value listed in the following metrics tables are default value and can be customized on the **Metric and Collection Settings** page of each target (Click target menu > **Monitoring** > **Metric and Collection Settings**).

## Tuxedo Targets

[Table 3-1](#) lists all Oracle Tuxedo targets the Enterprise Manager for Oracle Tuxedo supports.

**Table 3-1 Tuxedo Targets Description**

<b>Target</b>	<b>Description</b>
<a href="#">Tuxedo Home</a>	This target is an install homes target which corresponds to a Tuxedo installation.
<a href="#">Tuxedo Application Home</a>	This target is a home directory to deploy Tuxedo applications from Enterprise Manager for Oracle Tuxedo.
<a href="#">Tuxedo tlisten</a>	This target corresponds to a tuxedo tlisten process.
<a href="#">Tuxedo Domain</a>	This target is an Enterprise Manager system target and corresponds to a Tuxedo Domain.
<a href="#">Tuxedo Machine</a>	This target corresponds to an entry defined in the MACHINES section of the TUXCONFIG file of monitored Tuxedo domain.
<a href="#">Tuxedo Group</a>	This target is a repository side target, which corresponds to an entry defined in the GROUPS section of the TUXCONFIG file of monitored Tuxedo domain.
<a href="#">Tuxedo Server</a>	This target corresponds to an entry defined in the SERVERS section of the TUXCONFIG file of monitored Tuxedo domain.
<a href="#">Tuxedo System Server</a>	This target corresponds to an entry defined in the SERVERS section of the TUXCONFIG file of monitored Tuxedo domain.
<a href="#">Tuxedo Bridge</a>	This target corresponds to a Tuxedo BRIDGE process.
<a href="#">Tuxedo TMS</a>	This target corresponds to a Tuxedo global transaction manager server entry defined in TUXCONFIG.
<a href="#">Tuxedo /T Domain Gateway</a>	This target corresponds to a GWTDOMAIN entry defined in TUXCONFIG.
<a href="#">Tuxedo Web Service Gateway</a>	This target corresponds to a GWIDOMAIN entry defined in TUXCONFIG.
<a href="#">Tuxedo Web Service Gateway</a>	This target corresponds to a Tuxedo SALT GWWS entry defined in TUXCONFIG.
<a href="#">Tuxedo Workstation Listener</a>	This target corresponds to a Tuxedo WSL entry defined in TUXCONFIG.
<a href="#">Tuxedo Jolt Listener</a>	This target corresponds to a Tuxedo JSL entry defined in TUXCONFIG.

**Table 3-1 Tuxedo Targets Description**

Target	Description
<a href="#">Tuxedo /Q Manager Server</a>	This target is used to monitor Tuxedo /Q, from which you can view queue related statistics information.
<a href="#">Tuxedo Event Broker</a>	This target corresponds to a Tuxedo TMSYSEVT or TMUSREVR entry defined in TUXCONFIG.
<a href="#">Tuxedo LMS</a>	This target corresponds to an LMS entry defined in TUXCONFIG.

## Tuxedo Home

### Description

This target is an installation home target that corresponds to a Tuxedo installation.

### Properties

Name	Display Label	Characters	Description
Name	Name	Visible Editable	[Host Name] : [TUXDIR]
Version	Version	Visible Editable	Tuxedo installation release number, such as 12.1.1.0  <b>Note:</b> This version determines the version of Tuxedo Machine and its subordinate targets. Target version determines which UBB parameters can display on the target homepage.
RP Level	RP Level	Visible Editable	Rolling patch package level
Directory	Directory	Visible Editable	Tuxedo installation directory

## Tuxedo Application Home

### Description

This target is a home directory to deploy Tuxedo applications from Tuxedo add-on.

### Properties

Name	Display Label	Characters	Description
Name	Name	Visible Editable	[Host Name]:[Directory]
Directory	Directory	Visible Editable	A root directory to deploy Tuxedo applications.
ENV_PATH	PATH Environment variable	Visible Editable	A list of paths separated by ‘:’ and will be used as “PATH” environment variable.

### Associations

`installed_at`: associates with [Tuxedo Home](#) target.

## Tuxedo tlisten

### Description

This target corresponds to a tuxedo tlisten process.

### Properties

Name	Display Label	Characters	Description
Name	Name	Visible Editable	[nlsaddr]/tlisten

Host	Host	Editable(*)	The listening IP address or hostname of the 'tlisten' process associated with the Tuxedo Machine.
Port	Port	Editable(*)	The listening port of the JMX RMI connector embedded in 'tlisten' process associated with the Tuxedo Machine.
device	device	Visible, CMD Option	Full pathname of the network device.
uid	uid	Visible, CMD Option	
sec_principal_name	sec_principal_name	Visible CMD Option	
sec_principal_location	sec_principal_location	Visible, CMD Option	
sec_principal_passvar	sec_principal_passvar	Visible, CMD Option	
zbits	zbits	Visible, CMD Option	
Zbits	Zbits	Visible, CMD Option	
nlsaddr	nlsaddr	Visible, CMD Option	
User Name	Tuxedo User	Visible	Use this Tuxedo User to get metric data
User Password	Tuxedo User Password	Visible	Use this Tuxedo User to get metric data
Application Password	Tuxedo Application Password	Visible	Use this Tuxedo User to get metric data



useSSL	Use SSL	Visible	Use SSL or not
tlisten Password	Tuxedo tlisten Password	Visible	Auto discovery uses this to discovery

## Association

`installed_at`: associates with [Tuxedo Home](#) target where application runs.

## Availability Metrics

<b>Metric Name</b>	Response		
<b>Metric Type</b>	TABLE		
<b>Metric Display</b>	Response		
<b>Collection Interval</b>	5 minutes		
<b>Key Column(s)</b>	None		
<b>Column Name</b>	<b>Column Type</b>	<b>Display Label</b>	<b>Note</b>
Timing	NUMBER	Elapsed Time	
Status	NUMBER	Status	0 - Inactive 1 – Active, tlisten will always return 1 If status>=1, then the target is available.

## Tuxedo Domain

### Description

Tuxedo Domain is a system target type.

## Properties

Name	Display Label	Characters	Description
Name	Name	Visible Editable	[DOMAINID]:[PMID of the master machine]: [PMID of the backup machine]: [IPCKEY]  <b>Note:</b> When making swap operation, the name is not changed.
Host	Host	Editable(*)	The listening IP address or hostname of the 'tlisten' process associates with the master Tuxedo Machine of the domain.
Port	Port	Editable(*)	The listening port of the JMX RMI connector embedded in 'tlisten' process associates with the master Tuxedo Machine of the domain.
DOMAINID	DOMAINID	Visible, Editable(*), UBB Parameter,	DOMAINID parameter in TUXCONFIG
IPCKEY	IPCKEY	Visible, Editable(*), UBB Parameter,	IPCKEY parameter in TUXCONFIG
MASTER	MASTER	Visible, UBB Parameter	Specifies the LMIDs list of master Tuxedo Machines
MODEL	MODEL	Visible, UBB Parameter	MODEL parameter in TUXCONFIG
SECURITY	SECURITY	Visible, UBB Parameter	SECURITY parameter in TUXCONFIG
OPTIONS	OPTIONS	Visible, UBB Parameter	OPTIONS parameter in TUXCONFIG

RESB	Resource Broker Enabled	Visible	This property is for internal use only.
SNMP_PORT	SNMP Receive Port	Editable	Required for Tuxedo Event collection. Domain target uses this port to receive tuxedo event trap from tuxedo event agent.
User Name	Tuxedo User	Visible	Use this Tuxedo User to get metric data
User Password	Tuxedo User Password	Visible	Use this Tuxedo User to get metric data
Application Password	Tuxedo Application Password	Visible	Use this Tuxedo User to get metric data
useSSL	Use SSL	Visible	Use SSL or not

## Association

App\_composite\_contains: Tuxedo Machine target

## Availability Metrics

<b>Metric Name</b>	Response		
<b>Metric Type</b>	TABLE		
<b>Metric Display</b>	Response		
<b>Collection Interval</b>	5 minutes		
<b>Key Column(s)</b>	None		
<b>Column Name</b>	<b>Column type</b>	<b>Display Label</b>	<b>Note</b>

Timing	NUMBER	Elapsed Time	
Status	NUMBER	Status	<p>0: Inactive: When all Tuxedo Machines under this domain are inactive.</p> <p>1: Partly active: When at least a Tuxedo Machine under this domain is inactive.</p> <p>2: Active: When all Tuxedo Machines under this domain are active.</p> <p>If status&gt;=1, the target is available.</p>

## Client Number Metrics

<b>Metric Name</b>	CLIENT_CONNECTION_NUMBER		
<b>Metric Type</b>	TABLE, Repository side		
<b>Metric Display</b>	Client Connection Number		
<b>Collection Interval</b>	15 minutes		
<b>Key Column(s)</b>	None		
<b>Column Name</b>	<b>Column Type</b>	<b>Display Label</b>	<b>Note</b>
NATIVE_CLIENT_NUMBER	NUMBER	Native Clients	<p>The number of native clients that are joining the Tuxedo domain.</p> <p>Not NULL</p> <p>Threshold: &gt;</p>

WORKSTATION_CLIENT_NUMBER	NUMBER	Workstation Clients	The number of workstation clients that are connecting to the Tuxedo domain target. Not NULL Threshold: >
JOLT_CLIENT_NUMBER	NUMBER	Jolt Clients	The number of JOLT clients that are connecting to the Tuxedo domain. Not NULL Threshold: >
CLIENT_NUMBER	NUMBER	Clients	The total number of clients that are joining or connecting to the Tuxedo domain. Not NULL Value: NATIVE_CLIENT_NUMBER+ WORKSTATION_CLIENT_NUMBER+ JOLT_CLIENT_NUMBER Threshold: >

## Domain Metrics

<b>Metric Name</b>	DOMAIN_OPERATION_STATISTICS
<b>Metric Type</b>	TABLE, Repository side

<b>Metric Display</b>		Domian Operation Statistics	
<b>Collection Interval</b>		15 minutes	
<b>Key Column(s)</b>		None	
<b>Column Name</b>	<b>Column Type</b>	<b>Display Label</b>	<b>Note</b>
TPCONNECT_NUMBER	NUMBER	tpconnect Per Minute	The invoking times (per minute) of tpconnect method in Tuxedo domain during the interval. Not NULL Threshold: >
TPDEQUEUE_NUMBER	NUMBER	tpdequeue Per Minute	The invoking times (per minute) of tpdequeue method in Tuxedo domain during the interval. Not NULL Threshold: >
TPENQUEUE_NUMBER	NUMBER	tpenqueue Per Minute	The invoking times (per minute) of tpenqueue method in Tuxedo domain during the interval. Not NULL Threshold: >

TPPOST_NUMBER	NUMBER	tppost Per Minute	The invoking times (per minute) of tppost method in Tuxedo domain during the interval. Not NULL Threshold: >
TPCALL_NUMBER	NUMBER	tpcall &tpacall Per Minute	The invoking times (per minute) of tpcall method in Tuxedo domain during the interval. Not NULL Threshold: >
TPSUBSCRIBE_NUMBER	NUMBER	tpsubscribe Per Minute	The invoking times (per minute) of tpsubscribe method in Tuxedo domain during the interval. Not NULL Threshold: >
INITIATED_TRANSACTION_NUMBER	NUMBER	Initiated Transactions Per Minute	The number of XA transactions initiated (per minute) in Tuxedo domain during the interval. Not NULL Threshold: >

Enterprise Manager for Tuxedo Target Reference

ABORTED_TRANSACTION_NUMBER	NUMBER	Aborted Transactions Per Minute	<p>The number of XA transactions aborted (per minute) in Tuxedo domain during the interval.</p> <p>Not NULL</p> <p>Threshold:</p> <p>&gt;</p>
COMMITTED_TRANSACTION_NUMBER	NUMBER	Committed Transactions Per Minute	<p>The number of XA transactions committed (per minute) in Tuxedo domain during the interval.</p> <p>Not NULL</p> <p>Threshold:</p> <p>&gt;</p>
COMPLETE_TRANSACTION_NUMBER	NUMBER	Completed Transactions Per Minute	<p>The number of XA transactions aborted or committed (per minute) in Tuxedo domain during the interval.</p> <p>Not NULL</p> <p>Value:</p> <p>COMMITTED_TRANSACTION_NUMBER + ABORTED_TRANSACTION_NUMBER</p> <p>Threshold:</p> <p>&gt;</p>



REQUEST_NUMBER	NUMBER	Requests Per Minute	The invoking times (per minute) of tpcall, tpacall and tpconnect method in Tuxedo domain during the interval.  Internal system calls are counted as well.  Not NULL  Value: TPCONNECT_NUMBER+ TPCALL_NUMBER
COMPLETED_WORKLOAD	NUMBER	Completed Workload Per Minute	The work load (per minute) completed in Tuxedo domain during the interval.  Not NULL  Threshold:  >

## Service Metrics

This metrics is the repository side metrics, which is aggregated from all Tuxedo Server targets under the Tuxedo Domain in terms of service name.

<b>Metric Name</b>	SERVICE_STATISTICS		
<b>Metric Type</b>	TABLE, Repository Side		
<b>Metric Display</b>	Service Statistics		
<b>Collection interval</b>	15 minutes		
<b>Key Column(s)</b>	SERVICE_NAME		
<b>Column Name</b>	<b>Column Type</b>	<b>Display Label</b>	<b>Note</b>

SERVICE_NAME	STRING	Name	Service name.
MESSAGE_SIZE	NUMBER	Message Bytes Per Minute	<p>The size of all request messages in bytes (per minute) aggregated by the service name.</p> <p>The value is NULL if no request is served during the interval.</p> <p>Threshold: &gt;</p>
EXECUTION_TIME	NUMBER	Average Execution Time (microsecond)	<p>The average execution time in microsecond aggregated by the service name.</p> <p>The value is NULL if no request is served during the interval.</p> <p>Threshold: &gt;</p>
CPU_TIME	NUMBER	Average CPU Time (microsecond)	<p>The average CPU occupancy time in microsecond aggregated by the service name.</p> <p>The value is NULL if no request is served during the interval.</p> <p>Threshold: &gt;</p>

SUCCESS_NUMBER	NUMBER	Successes Per Minute	The successful request number per minute aggregated by the service name. Not NULL Threshold: >
SYSTEM_FAILURE_NUMBER	NUMBER	System Failures Per Minute	The request number of system failure per minute (tperrno is not TPESVCFail) aggregated by the service name. Not NULL Threshold: >

USER_FAILURE_NUMBER	NUMBER	User Failures Per Minute	The request number of user failure per minute (tperrno is TPESVCFAIL) aggregated by the service name. Not NULL Threshold: >
REQUEST_NUMBER	NUMBER	Requests Per Minute	The request number per minute aggregated by the service name. Not NULL Value: SUCCESS_NUMBER + SYSTEM_FAILURE_NUMBER + USER_FAILURE_NUMBER Threshold: >

## Tuxedo Machine

### Description

This target corresponds to an entry defined in the `MACHINES` section of the `TUXCONFIG` file of monitored Tuxedo domain. Tuxedo Machine is a system target type.

### Properties

Name	Display Label	Characters	Description
Name	Name	Visible Editable	[Domain Name]/[LMID]

Host	Host	Editable(*)	Listening IP address or hostname of the tlisten process associated with the Tuxedo Machine.
Port	Port	Editable(*)	Listening port of the JMX RMI connector embedded in tlisten process associated with the Tuxedo Machine.
DOMAINID	DOMAINID	Editable(*), UBB Parameter	
IPCKEY	IPCKEY	Editable(*), UBB Parameter	
PMID	PMID	Visible UBB Parameter	Physical machine ID
LMID	LMID	Visible Editable(*), UBB Parameter	Logic machine name
APPDIR	APPDIR	Visible UBB Parameter	
ENVFILE	ENVFILE	Visible UBB Parameter	
User Name	Tuxedo User	Visible	Use this Tuxedo User to get metric data
User Password	Tuxedo User Password	Visible	Use this Tuxedo User to get metric data
Application Password	Tuxedo Application Password	Visible	Use this Tuxedo User to get metric data
useSSL	Use SSL	Visible	Use SSL or not

## Associations

- `installed_at`: associates with [Tuxedo Home](#) target where the application runs.
- `installed_at`: associates with [Tuxedo Application Home](#) target if the Tuxedo machines are deployed through Tuxedo add-on.
- `App_composite_contains`: [Tuxedo Group](#).
- `App_composite_contains`: [Tuxedo Bridge](#).
- `managed_by`: [Tuxedo tlisten](#).

## Availability Metrics

<b>Metric Name</b>	Response		
<b>Metric Type</b>	TABLE		
<b>Metric Display</b>	Response		
<b>Collection Interval</b>	5 minutes		
<b>Key Column(s)</b>	None		
<b>Column Name</b>	<b>Column Type</b>	<b>Display Label</b>	<b>Note</b>
Timing	NUMBER	Elapsed Time	
Status	NUMBER	Status	<p>0: Inactive, when BBL process in this Tuxedo Machine is not running.</p> <p>1: Active, when BBL process in this Tuxedo Machine is running.</p> <p>If status&gt;=1, the target is available.</p>

## Client Number Metrics

<b>Metric Name</b>		CLIENT_CONNECTION_NUMBER	
<b>Metric Type</b>		TABLE	
<b>Metric Display</b>		Client Connections	
<b>Collection Interval</b>		15 minutes	
<b>Key Column(s)</b>		None	
<b>Column Name</b>	<b>Column Type</b>	<b>Display Label</b>	<b>Note</b>
NATIVE_CLIENT_NUMBER	NUMBER	Native Clients	The number of native clients that are joining the Tuxedo machine. Not NULL Threshold: >
WORKSTATION_CLIENT_NUMBER	NUMBER	Workstation Clients	The number of workstation clients that are connecting to the Tuxedo machine. Not NULL Threshold: >

JOLT_CLIENT_NUMBER	NUMBER	Jolt Clients	The number of JOLT clients that are connecting to the Tuxedo machine. Not NULL Threshold: >
CLIENT_NUMBER	NUMBER	Clients	The total number of clients that are joining or connecting to the Tuxedo machine. Not NULL Value: NATIVE_CLIENT_NUMBER+ WORKSTATION_CLIENT_NUMBER+ JOLT_CLIENT_NUMBER Threshold: >

## Machine Metrics

<b>Metric Name</b>	MACHINE_OPERATION_STATISTICS		
<b>Metric Type</b>	TABLE		
<b>Metric Display</b>	Machine Operation Statistics		
<b>Collection Interval</b>	15 minutes		
<b>Key Column(s)</b>	None		
<b>Column Name</b>	<b>Column Type</b>	<b>Display Label</b>	<b>Note</b>



TPCONNECT_NUMB ER	NUMBER	tpconnect Per Minute	<p>The invoking times (per minute) of <code>tpconnect</code> method in Tuxedo machine during the interval.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold: &gt;</p>
TPDEQUEUE_NUMB ER	NUMBER	tpdequeue Per Minute	<p>The invoking times (per minute) of <code>tpdequeue</code> method in Tuxedo machine during the interval.</p> <p>interval.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold: &gt;</p>

TPENQUEUE_NUMB ER	NUMBER	tpenqueue Per Minute	<p>The invoking times (per minute) of tpenqueue method in Tuxedo machine during the interval.</p> <p>interval.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold:</p> <p>&gt;</p>
TPOST_NUMBER	NUMBER	tppost Per Minute	<p>The invoking times (per minute) of tppost method in Tuxedo machine during the interval.</p> <p>interval.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold:</p> <p>&gt;</p>

TPCALL_NUMBER	NUMBER	tpcall & tpacall Per Minute	<p>The invoking times (per minute) of <code>tpcall</code> method in Tuxedo machine during the interval.</p> <p>interval.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold:</p> <p>&gt;</p>
TPSUBSCRIBE_NUMBER	NUMBER	tpsubscribe Per Minute	<p>The invoking times (per minute) of <code>tpsubscribe</code> method in Tuxedo machine during the interval.</p> <p>interval.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold:</p> <p>&gt;</p>

INITIATED_TRANS ACTION_NUMBER	NUMBER	Initiated Transactions Per Minute	<p>The number of XA transactions initiated (per minute) in Tuxedo machine during the interval.</p> <p>interval.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold:</p> <p>&gt;</p>
COMMITTED_ TRANSACTION_NU MBER	NUMBER	Committed Transactions Per Minute	<p>The number of XA transactions committed (per minute) in Tuxedo machine during the interval.</p> <p>interval.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold:</p> <p>&gt;</p>

ABORTED_TRANSACTION_NUMBER	NUMBER	Aborted Transactions Per Minute	<p>The number of XA transactions aborted (per minute) in Tuxedo machine during the interval.</p> <p>interval.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold:</p> <p>&gt;</p>
COMPLETE_TRANSACTION_NUMBER	NUMBER	Completed Transactions Per Minute	<p>The number of XA transactions aborted or committed (per minute) in Tuxedo machine during the interval.</p> <p>interval.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Value:</p> <p>COMMITTED_TRANSACTION_NUMBER + ABORTED_TRANSACTION_NUMBER</p> <p>Threshold:</p> <p>&gt;</p>

REQUEST_NUMBER	NUMBER	Requests Per Minute	<p>The invoking times (per minute) of <code>tpcall</code>, <code>tpacall</code> and <code>tpconnect</code> method in Tuxedo machine during the interval.</p> <p>interval.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Value:</p> <p><code>TPCONNECT</code> <code>_NUMBER+</code> <code>TPCALL_NUMBER</code></p> <p>Threshold:</p> <p>&gt;</p>
COMPLETED_WOR KLOAD	NUMBER	Completed Workload Per Minute	<p>The work load (per minute) completed in Tuxedo machine during the interval.</p> <p>interval.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold:</p> <p>&gt;</p>

## Service Metrics

This metrics is repository side metrics, which is aggregated from all Tuxedo Server targets under the Tuxedo Machine in terms of service name.

<b>Metric Name</b>	SERVICE_STATISTICS		
<b>Metric Type</b>	TABLE, Repository Side		
<b>Metric Display</b>	Service Statistics c		
<b>Collection interval</b>	15 minutes		
<b>Key Column(s)</b>	SERVICE_NAME		
<b>Column Name</b>	<b>Column Type</b>	<b>Display Label</b>	<b>NOTE</b>
SERVICE_NAME	STRING	Name	Service name.
MESSAGE_SIZE	NUMBER	Message Bytes Per Minute	<p>The size of all request messages in bytes (per minute) aggregated by the service name.</p> <p>The value will be NULL if no request is served during the interval.</p> <p>Threshold: &gt;</p>
EXECUTION_TIME	NUMBER	Average Execution Time (microsecond)	<p>The average execution time in microsecond aggregated by the service name.</p> <p>The value will be NULL if no request is served during the interval.</p> <p>Threshold: &gt;</p>

CPU_TIME	NUMBER	Average CPU Time (microsecond)	The average CPU occupancy time in microsecond aggregated by the service name.  The value will be NULL if no request is served during the interval.  Threshold:  >
SUCCESS_NUMBER	NUMBER	Successes Per Minute	The successful request number per minute aggregated by the service name.  Not NULL  Threshold:  >
SYSTEM_FAILURE_NUMBER	NUMBER	System Failures Per Minute	The request number of system failure per minute (tperrno is not TPESVCFAIL) aggregated by the service name.  Not NULL  Threshold:  >



USER_FAILURE_NUMBER	NUMBER	User Failures Per Minute	The request number of user failure per minute (tperrno is TPESVCFAIL) aggregated by the service name. Not NULL Threshold: >
REQUEST_NUMBER	NUMBER	Requests Per Minute	The request number per minute aggregated by the service name. Not NULL Value: SUCCESS_NUMBER+ SYSTEM_FAILURE_NUMBER+ USER_FAILURE_NUMBER Threshold: >

## Tuxedo Group

### Description

This target is a repository side target with system target type, which corresponds to an entry defined in the `GROUPS` section of the `TUXCONFIG` file of monitored Tuxedo domain.

## Properties

Name	Display Label	Characters	Description
Name	Name	Visible Editable	[Domain Name]/[MasterLMID]/[SRVGRP]  <b>Note:</b> After group migration, the group with original master LMID (in name) is not deleted.
Host	Host	Editable(*)	Listening IP address or hostname of the tlisten process associated with the Tuxedo Machine.
Port	Port	Editable(*)	Listening port of the JMX RMI connector embedded in tlisten process associated with the Tuxedo Machine.
DOMAINID	DOMAINID	Editable(*), UBB Parameter	
IPCKEY	IPCKEY	Editable(*), UBB Parameter	
LMID	LMID	Visible UBB Parameter	The current LMID, this property is especially necessary for a group related to two Tuxedo Machines.
SRVGRP	SRVGRP	Visible Editable(*), UBB Parameter	Group name.
GRPNO	GRPNO	Visible Editable UBB Parameter	GRPNO parameter for the group.
CICS_Included	CICS_Included		Indicates whether this group includes ART JES servers.  Values: Yes No

Migrated	Is Migrated Target		Indicates whether this target has been migrated off.
User Name	Tuxedo User	Visible	Use this Tuxedo User to get metric data
User Password	Tuxedo User Password	Visible	Use this Tuxedo User to get metric data
Application Password	Tuxedo Application Password	Visible	Use this Tuxedo User to get metric data
useSSL	Use SSL	Visible	Use SSL or not

## Associations

App\_composite\_contains: [Tuxedo Server](#) and all Tuxedo System server except [Tuxedo Bridge](#) targets.

## Availability Metrics

<b>Metric Name</b>	Response		
<b>Metric Type</b>	TABLE		
<b>Metric Display</b>	Response		
<b>Collection Interval</b>	5 minutes		
<b>Key Column(s)</b>	None		
<b>Column Name</b>	<b>Column type</b>	<b>Display Label</b>	<b>Note</b>

Timing	NUMBER	Elapsed Time	
Status	NUMBER	Status	<p>0: Inactive, when none of process in this Tuxedo Machine is running.</p> <p>1: Active, when any processes in this Tuxedo Machine are running.</p> <p>If status&gt;=1, then the target is available.</p>

### Service Metrics

This metrics is a repository side metrics, which is aggregated from all Tuxedo Server targets under the Tuxedo Group in terms of service name.

<b>Metric Name</b>	SERVICE_STATISTICS		
<b>Metric Type</b>	TABLE, Repository Side		
<b>Metric Display</b>	Service Statistics		
<b>Collection interval</b>	15 minutes		
<b>Key Column(s)</b>	SERVICE_NAME		
<b>Column Name</b>	<b>Column Type</b>	<b>Display Label</b>	<b>Note</b>
SERVICE_NAME	STRING	Name	Service name.
MESSAGE_SIZE	NUMBER	Message Bytes Per Minute	<p>The size of all request messages in bytes (per minute) aggregated by the service name.</p> <p>The value is NULL if no request is served during the interval.</p> <p>Threshold: &gt;</p>

EXECUTION_TIME	NUMBER	Average Execution Time (microsecond)	<p>The average execution time in microsecond aggregated by the service name.</p> <p>The value is NULL if no request is served during the interval.</p> <p>Threshold:</p> <p>&gt;</p>
CPU_TIME	NUMBER	Average CPU Time (microsecond)	<p>The average CPU occupancy time in microsecond aggregated by the service name.</p> <p>The value is NULL if no request is served during the interval.</p> <p>Threshold:</p> <p>&gt;</p>
SUCCESS_NUMBER	NUMBER	Successes Per Minute	<p>The successful request number per minute aggregated by the service name.</p> <p>Not NULL</p> <p>Threshold:</p> <p>&gt;</p>
SYSTEM_FAILURE_NUMBER	NUMBER	System Failures Per Minute	<p>The request number of system failure per minute (tperno is not TPESVCFail) aggregated by the service name.</p> <p>Not NULL</p> <p>Threshold:</p> <p>&gt;</p>

USER_FAILURE_NUMBER	NUMBER	User Failures Per Minute	The request number of user failure per minute (tperrno is TPESVCFAIL) aggregated by the service name. Not NULL Threshold: >
REQUEST_NUMBER	NUMBER	Requests Per Minute	The request number per minute aggregated by the service name. Not NULL Value: SUCCESS_NUMBER+ SYSTEM_FAILURE_NUMBER+ USER_FAILURE_NUMBER Threshold: >

## Tuxedo Server

### Description

This target corresponds to an entry defined in the `SERVERS` section of the `TUXCONFIG` file of monitored Tuxedo domain.

### Properties

Name	Display Label	Characters	Description
Name	Name	Visible Editable	[Group Name]/[AOUT]:[ SRVID]

Host	Host	Editable(*)	The listening IP address or hostname of the <code>tlisten</code> process associated with the Tuxedo Machine.
Port	Port	Editable(*)	The listening port of the JMX RMI connector embedded in <code>tlisten</code> process associated with the Tuxedo Machine.
DOMAINID	DOMAINID	Editable(*), UBB Parameter	
IPCKEY	IPCKEY	Editable(*), UBB Parameter	
SRVGRP	SRVGRP	Editable(*), Visible UBB Parameter	Group name
GRPNO	GRPNO	UBB Parameter	GRPNO parameter for the group
SRVID	SRVID	Visible Editable(*), UBB Parameter	SRVID parameter for the server entry defined in <code>SERVERS</code> section of <code>UBBCONFIG ( 5 )</code>
AOUT	AOUT	Visible Editable, UBB Parameter	process name
User Name	Tuxedo User	Visible	Use this Tuxedo User to get metric data.
User Password	Tuxedo User Password	Visible	Use this Tuxedo User to get metric data.
Application Password	Tuxedo Application Password	Visible	Use this Tuxedo User to get metric data.
Migrated	Is Migrated Target		Indicates whether this target has been migrated off.
useSSL	Use SSL	Visible	Use SSL or not

## Availability Metrics

<b>Metric Name</b>		Response	
<b>Metric Type</b>		TABLE	
<b>Metric Display</b>		Response	
<b>Collection Interval</b>		5 minutes	
<b>Key Column(s)</b>		None	
<b>Column Name</b>	<b>Column Type</b>	<b>Display Label</b>	<b>Note</b>
Timing	NUMBER	Elapsed Time	
Status	NUMBER	Status	<ul style="list-style-type: none"> <li>• 0:Inactive, when no process instance is running</li> <li>• 1:Active, if at least one process instance is running</li> </ul> <p>If status&gt;=1, then the target is available.</p>

## Service Metrics

<b>Metric Name</b>		SERVICE_STATISTICS	
<b>Metric Type</b>		TABLE	
<b>Metric Display</b>		Service Statistics	
<b>Collection interval</b>		15 minutes	
<b>Key Column(s)</b>		SERVICE_NAME	
<b>Column Name</b>	<b>Column type</b>	<b>Display Label</b>	<b>Note</b>
SERVICE_NAME	STRING	Name	Service name.



MESSAGE_SIZE	NUMBER	Message Bytes Per Minute	<p>The size of all request messages in bytes (per minute) aggregated by the service name.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold:</p> <p>&gt;</p>
EXECUTION_TIME	NUMBER	Average Execution Time (microsecond)	<p>The average execution time in microsecond aggregated by the service name.</p> <p>The value is NULL if no request is served during the interval.</p> <p>Threshold:</p> <p>&gt;</p>
CPU_TIME	NUMBER	Average CPU Time (microsecond)	<p>The average CPU occupancy time in microsecond aggregated by the service name.</p> <p>The value is NULL if no request is served during the interval.</p> <p>Threshold:</p> <p>&gt;</p>

## Enterprise Manager for Tuxedo Target Reference

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SUCCESS_NUMBER	NUMBER	Successes Per Minute	<p>The successful request number per minute aggregated by the service name.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold:</p> <p>&gt;</p>
SYSTEM_FAILURE_NUMBER	NUMBER	System Failures Per Minute	<p>The request number of system failure per minute (tperno is not TPESVCFAIL) aggregated by the service name.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold:</p> <p>&gt;</p>

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USER_FAILURE_NUMBER	NUMBER	User Failures Per Minute	<p>The request number of user failure per minute (tperrno is TPESVCFAIL) aggregated by the service name.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold:</p> <p>&gt;</p>
REQUEST_NUMBER	NUMBER	Requests Per Minute	<p>The request number per minute aggregated by the service name.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Value:</p> <p>SUCCESS_NUMBER+ SYSTEM_FAILURE_NUMBER+ USER_FAILURE_NUMBER</p> <p>Threshold:</p> <p>&gt;</p>

## IPC Queue Metrics

<b>Metric Name</b>		IPC_QUEUE_STATISTICS	
<b>Metric Type</b>		TABLE	
<b>Metric Display</b>		IPC Queue Statistics	
<b>Collection Interval</b>		15 minutes	
<b>Key Column(s)</b>		IPC_QUEUE_NAME, SERVER_ID	
<b>Column Name</b>	<b>Column Type</b>	<b>Display Label</b>	<b>Note</b>
IPC_QUEUE_NAME	STRING	Name	Tuxedo request IPC queue name.
SERVER_ID	STRING	Server ID	Tuxedo server ID. For MSSQ server, only one queue is created no matter how many server instances are running and the SRVID parameter is used.
QUEUE_DEPTH	NUMBER	Queue Depth	The IPC queue length. Not NULL Threshold: >

## Server Metrics

<b>Metric Name</b>		SERVER_STATISTICS	
<b>Metric Type</b>		TABLE	
<b>Metric Display</b>		Server Statistics	
<b>Collection Interval</b>		15 minutes	
<b>Key Column(s)</b>		None	

Column Name	Column Type	Display Label	Note
INSTANCE_NUMBER	NUMBER	Instances	<p>The active server process number of the Tuxedo server target.</p> <p>Not NULL</p> <p>Threshold:</p> <p>&gt;</p>
DISPATCH_THREAD_NUMBER	NUMBER	Dispatch Threads	<p>The total dispatch thread number in all active server processes of the Tuxedo server target.</p> <p>Not NULL</p> <p>A snapshot of total dispatch thread number of all server instances.</p> <p>Threshold:</p> <p>&gt;</p>
TPCONNECT_NUMBER	NUMBER	tpconnect Per Minute	<p>The invoking times (per minute) of <code>tpconnect</code> method in Tuxedo server during the interval.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold:</p> <p>&gt;</p>

TPDEQUEUE_NUMB ER	NUMBER	tpdequeue Per Minute	<p>The invoking times (per minute) of tpdequeue method in Tuxedo server during the interval.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold: &gt;</p>
TPENQUEUE_NUMB ER	NUMBER	tpenqueue Per Minute	<p>The invoking times (per minute) of tpenqueue method in Tuxedo server during the interval.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold: &gt;</p>

TPPOST_NUMBER	NUMBER	tppost Per Minute	<p>The invoking times (per minute) of <code>tppost</code> method in Tuxedo server during the interval.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold:</p> <p>&gt;</p>
TPCALL_NUMBER	NUMBER	tpcall & tpcall Per Minute	<p>The invoking times (per minute) of <code>tpcall</code> method in Tuxedo server during the interval.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold:</p> <p>&gt;</p>

TPSUBSCRIBE_NUMBER	NUMBER	tpssubscribe Per Minute	<p>The invoking times (per minute) of tpssubscribe method in Tuxedo server during the interval.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold:</p> <p>&gt;</p>
INITIATED_TRANS ACTION_NUMBER	NUMBER	Initiated Transactions Per Minute	<p>The number of XA transactions initiated (per minute) in Tuxedo server during the interval.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold:</p> <p>&gt;</p>



ABORTED_TRANSACTION_NUMBER	NUMBER	Aborted Transactions Per Minute	<p>The number of XA transactions aborted (per minute) in Tuxedo server during the interval.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold:</p> <p>&gt;</p>
COMMITTED_TRANSACTION_NUMBER	NUMBER	Committed Transactions Per Minute	<p>The number of XA transactions committed (per minute) in Tuxedo server during the interval.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold:</p> <p>&gt;</p>

REQUEST_NUMBER	NUMBER	Requests Per Minute	<p>The invoking times (per minute) of <code>tpcall</code>, <code>tpacall</code> and <code>tpconnect</code> method in Tuxedo server during the interval.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Value:</p> <p>TPCONNECT _NUMBER+ TPCALL_NUMBER</p> <p>Threshold:</p> <p>&gt;</p>
COMPLETED_WOR KLOAD	NUMBER	Completed Workload Per Minute	<p>The work load (per minute) completed in Tuxedo server during the interval.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold:</p> <p>&gt;</p>

## Service Aggregated Metrics

<b>Metric Name</b>		SERVER_AGGREGATED_STATISTICS	
<b>Metric Type</b>		TABLE	
<b>Metric Display</b>		Server Aggregated Statistics	
<b>Collection Interval</b>		15 minutes	
<b>Key Column(s)</b>		None	
<b>Column Name</b>	<b>Column Type</b>	<b>Display Label</b>	<b>Note</b>
SERVICE _EXECUTION_TIME	NUMBER	Average Service Execution Time(microsecond)	The average service execution time in microsecond of all services advertised by the Tuxedo server target.  The value is NULL if no request is served during the interval.  Threshold:  >
SERVICE _CPU_TIME	NUMBER	Average Service CPU Time (microsecond)	The average CPU occupancy time in microsecond of all services advertised by the Tuxedo server target.  The value is NULL if no request is served during the interval.  Threshold:  >

## Enterprise Manager for Tuxedo Target Reference

SERVICE _SUCCESS_NUMBE R	NUMBER	Successes Per Minute	<p>The number of successful requests (per minute) on the Tuxedo Server target.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold: &gt;</p>
SERVICE _SYSTEM_FAILURE _NUMBER	NUMBER	System Failures Per Minute	<p>The number of system failure service requests per minute (tperno is not TPESVCFALL) on the Tuxedo Server target.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold: &gt;</p>

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SERVICE _USER_FAILURE_ NUMBER	NUMBER	User Failures Per Minute	<p>The number of user failure service requests per minute (tperrno is TPESVCFALL) on the Tuxedo Server target.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold:</p> <p>&gt;</p>
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REQUEST_NUMBER	NUMBER	Requests Per Minute	<p>The number of service requests (per minute) on the Tuxedo Server target.</p> <p>This value will become 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>SUCCESS_NUMBER+ SYSTEM_FAILURE_NUMBER+ USER_FAILURE_NUMBER</p> <p>Threshold: &gt;</p>
SERVICE_SUCCESS_RATIO	NUMBER	Success Ratio(%)	<p>The successful ratio of service requests on the Tuxedo server target.</p> <p>This value will become 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>The value is NULL if no request is served during the interval.</p> <p>Threshold: &lt;</p>

## Tuxedo System Server

### Description

This target corresponds to an entry defined in the `SERVERS` section of the `TUXCONFIG` file of monitored Tuxedo domain.

The following system servers contain the Tuxedo System Server target type.

- ARTJESADM
- ARTJESINITIATOR
- ARTJESCONV
- ARTJESPURGE
- AUTHSVR
- BBL
- DBBL
- DMADM
- GAUTHSVR
- GWADM
- JREPSVR
- KAUTHSVR
- LAUTHSVR
- LMS
- TMMETADATA
- TMQFORWARD
- TMQUEUE

## Properties

Name	Display Label	Characters	Description
Name	Name	Visible Editable	[Group Name]/[AOUT]:[SRVID]
Host	Host	Editable(*)	The listening IP address or hostname of the <code>tlisten</code> process associated with the Tuxedo Machine.
Port	Port	Editable(*)	The listening port of the JMX RMI connector embedded in <code>tlisten</code> process associated with the Tuxedo Machine.

DOMAINID	DOMAINID	Editable(*), UBB Parameter	
IPCKEY	IPCKEY	Editable(*), UBB Parameter	
SRVGRP	SRVGRP	Visible Editable(*), UBB Parameter	Group name
GRPNO	GRPNO	UBB Parameter	GRPNO parameter for the group.
SRVID	SRVID	Visible Editable(*), UBB Parameter	SRVID parameter for the server entry defined in <code>SERVERS</code> section of <code>UBBCONFIG(5)</code> .
AOUT	AOUT	Visible Editable UBB Parameter	Process name
User Name	Tuxedo User	Visible	Use this Tuxedo User to get metric data.
User Password	Tuxedo User Password	Visible	Use this Tuxedo User to get metric data.
Application Password	Tuxedo Application Password	Visible	Use this Tuxedo User to get metric data.
Migrated	Is Migrated Target		Indicates whether this target has been migrated off.
useSSL	Use SSL	Visible	Use SSL or not

## Availability Metrics

<b>Metric Name</b>	Response
<b>Metric Type</b>	TABLE



<b>Metric Display</b>		Response	
<b>Collection Interval</b>		5 minutes	
<b>Key Column(s)</b>		None	
<b>Column Name</b>	<b>Column Type</b>	<b>Display Label</b>	<b>Note</b>
Timing	NUMBER	Elapsed Time	
Status	NUMBER	Status	<p>0:Inactive, when no process instance is running</p> <p>1:Active, if at least one process instance is running</p> <p>If status&gt;=1, then the target is available.</p>

## Instance Number Metrics

<b>Metric Name</b>		SYSTEM_SERVER_NUMBER	
<b>Metric Type</b>		TABLE	
<b>Metric Display</b>		System Server Metrics	
<b>Collection Interval</b>		15 minutes	
<b>Key Column(s)</b>		None	
<b>Column Name</b>	<b>Column Type</b>	<b>Display Label</b>	<b>Note</b>
INSTANCE_NUMBE R	NUMBER	Instances	<p>The active server processes number of the target.</p> <p>Not NULL</p> <p>Threshold: &gt;</p>

# Tuxedo Bridge

## Description

This target corresponds to a Tuxedo BRIDGE process.

## Properties

Name	Display Label	Characters	Description
Name	Name	Visible Editable	[Domain Name]/ [LMID]/BRIDGE
Host	Host	Editable(*)	The listening IP address or hostname of the <code>tlisten</code> process associated with the Tuxedo Machine.
Port	Port	Editable(*)	The listening port of the <code>JMX_RMI</code> connector embedded in <code>tlisten</code> process associated with the Tuxedo Machine.
DOMAINID	DOMAINID	Editable(*), UBB Parameter	
IPCKEY	IPCKEY	Editable(*), UBB Parameter	
LMID	LMID	Editable(*), UBB Parameter	Logical machine of the Tuxedo Machine where the bridge is running.
NADDR	NADDR	Visible UBB Parameter	Specifies the complete network listening address for the Bridge process.
User Name	Tuxedo User	Visible	Use this Tuxedo User to get metric data.
User Password	Tuxedo User Password	Visible	Used to get metric data.
Application Password	Tuxedo Application Password	Visible	Used to get metric data.
useSSL	Use SSL	Visible	Use SSL or not

## Associations

`communicates_to`: Peers of Tuxedo Bridge on other [Tuxedo Machine](#).

## Availability Metrics

<b>Metric Name</b>		Response	
<b>Metric Type</b>		TABLE	
<b>Metric Display</b>		Response	
<b>Collection Interval</b>		5 minutes	
<b>Key Column(s)</b>		None	
<b>instance_number</b>	<b>Instance Number</b>	<b>Display Label</b>	<b>Note</b>
Timing	NUMBER	Elapsed Time	
Status	NUMBER	Status	0:Inactive, when the process is running 1:Active, if the process instance is running If status>=1, then the target is available.

## IPC Queue Metrics

<b>Metric Name</b>		BRIDGE_QUEUE_STATISTICS	
<b>Metric Type</b>		TABLE	
<b>Metric Display</b>		Bridge Queue Statistics	
<b>Collection Interval</b>		15 minutess	
<b>Key Column(s)</b>		None	

Column Name	Column Type	Display Label	Note
IPCQUEUE_DEPTH	NUMBER	Depth of IPC Queue	The IPC queue length. Not NULL Threshold: >

## Remote Link Metrics

<b>Metric Name</b>	REMOTE_LINK_STATISTICS		
<b>Metric Type</b>	TABLE		
<b>Metric Display</b>	Remote Link Statistics		
<b>Collection Interval</b>	15 minutes		
<b>Key Column(s)</b>	LMID		
Column Name	Column Type	Display Label	NOTE
LMID	STRING	LMID	LMID of the remote Tuxedo machine
INBOUND_MESSAG E_NUMBER	NUMBER	Inbound Network Messages Per Minute	The number of messages transferred from the remote Tuxedo machine per minute.  This value will become to 0 at the earliest collection after the collection interval or target properties are changed.  Not NULL Threshold: >

OUTBOUND_MESSA GE_NUMBER	NUMBER	Outbound Network Messages Per Minute	<p>The number of messages transferred to the remote Tuxedo machine per minute.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold:</p> <p>&gt;</p>
INBOUND_NETWORK_MESSAGE_SIZE	NUMBER	Inbound Network Messages Bytes Per Minute	<p>The message size in byte transferred from the remote Tuxedo machine per minute.</p> <p>Not NULL</p> <p>Threshold:</p> <p>&gt;</p>
OUTBOUND_NETWORK_MESSAGE_SIZE	NUMBER	Outbound Network Messages Bytes Per Minute	<p>The message size in byte transferred to the remote Tuxedo machine per minute.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold:</p> <p>&gt;</p>

PENDING_NETWORK_MESSAGE_NUMBER	NUMBER	Pending Network Messages	The number of messages that are pending in the network to the remote Tuxedo machine. Not NULL Threshold: >
PENDING_NETWORK_MESSAGE_SIZE	NUMBER	Pending Network Messages Bytes	The total message size in byte that are pending in the network to the remote Tuxedo machine. Not NULL Threshold: >

## Tuxedo TMS

### Description

This target corresponds to a Tuxedo global transaction manager server entry defined in TUXCONFIG.

### Properties

Name	Display Label	Characters	Description
Name	Name	Visible Editable	For TMS defined in GROUPS section the name is [Group Name] / [AOUT]. For TMS defined in RMS section, the name is [Group Name] / [AOUT] : [RMSNAME]
RMSName	RMS Name	Visible UBB Parameter	For TMS defined in RMS section, it means Resource manager name. For TMS defined in GROUPS section the name, it will be empty.

RMID	RMID	Visible UBB Parameter	For TMS defined in RMS section, it means Resource manager ID. For TMS defined in GROUPS section the name, it is empty.
Host	Host	Editable(*)	The listening IP address or hostname of the <code>tlisten</code> process associated with the Tuxedo Machine.
Port	Port	Editable(*)	The listening port of the JMX RMI connector embedded in <code>tlisten</code> process associated with the Tuxedo Machine.
DOMAINID	DOMAINID	Editable(*), UBB Parameter	
IPCKEY	IPCKEY	Editable(*), UBB Parameter	
SRVGRP	SRVGRP	Visible Editable(*), UBB Parameter	Group name
GRPNO	GRPNO	UBB Parameter	GRPNO parameter for the group
AOUT	AOUT	Visible Editable(*), UBB Parameter	Process name
User Name	Tuxedo User	Visible	Use this Tuxedo User to get metric data.
User Password	Tuxedo User Password	Visible	Use this Tuxedo User to get metric data.
Application Password	Tuxedo Application Password	Visible	Use this Tuxedo User to get metric data.
useSSL	Use SSL	Visible	Use SSL or not

## Availability Metrics

<b>Metric Name</b>		Response	
<b>Metric Type</b>		TABLE	
<b>Metric Display</b>		Response	
<b>Collection Interval</b>		5 minutes	
<b>Key Column(s)</b>		None	
<b>Column Name</b>	<b>Column Type</b>	<b>Display Label</b>	<b>Note</b>
Timing	NUMBER	Elapsed Time	
Status	NUMBER	Status	0:Inactive, when the process is running 1:Active, if the process instance is running If status>=1, then the target is available.

## XA Transaction Metrics

<b>Metric Name</b>		TMS_TRANSACTION_STATISTICS	
<b>Metric Type</b>		TABLE	
<b>Metric Display</b>		TMS Transaction Statistics	
<b>Collection Interval</b>		15 minutes	
<b>Key Column(s)</b>		None	
<b>Column Name</b>	<b>Column Type</b>	<b>Display Label</b>	<b>Note</b>



ACTIVE_INSTANCE _NUMBER	NUMBER	Active Instances	The number of active processes. Not NULL Threshold: >
COMMITTED_ TRANSACTION_NU MBER	NUMBER	Committed XA Transactions Per Minute	The number of XA transactions committed per minute during the interval.  This value will become to 0 at the earliest collection after the collection interval or target properties are changed. Not NULL Threshold: >

ABORTED_TRANSACTION_NUMBER	NUMBER	Aborted XA Transactions Per Minute	<p>The number of XA transactions aborted per minute during the interval.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold:</p> <p>&gt;</p>
COMPLETE_TRANSACTION_NUMBER	NUMBER	Complete Transactions Per Minute	<p>The number of XA transactions aborted or committed per minute during the interval.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Value:</p> <p>COMMITTED_TRANSACTION_NUMBER + ABORTED_TRANSACTION_NUMBER</p> <p>Threshold:</p> <p>&gt;</p>

## Tuxedo /T Domain Gateway

### Description

This target corresponds to a Tuxedo GWTDOMAIN entry defined in TUXCONFIG.

## Properties

Name	Display Label	Characters	Description
Name	Name	Visible Editable	[ Group Name ] / [ AOUT ] : [ SRVID ]
Host	Host	Editable(*)	The listening IP address or hostname of the <code>tlisten</code> process associated with the Tuxedo Machine.
Port	Port	Editable(*)	The listening port of the <code>JMX_RMI</code> connector embedded in <code>tlisten</code> process associated with the Tuxedo Machine.
DOMAINID	DOMAINID	Editable(*), UBB Parameter	
IPCKEY	IPCKEY	Editable(*), UBB Parameter	
SRVGRP	SRVGRP	Visible Editable(*), UBB Parameter	Group name
GRPNO	GRPNO	UBB Parameter	GRPNO parameter for the group
SRVID	SRVID	Visible Editable, UBB Parameter	SRVID parameter for the server entry defined in <code>SERVERS</code> section of <code>UBBCONFIG ( 5 )</code>
AOUT	AOUT	Visible Editable, UBB Parameter	Process name
GatewayAddresses	Gateway Address	Visible	Listening address of the domain gateway
GatewayPort	Gateway Port	Visible	Listening port of the domain gateway

is_migrated_target	Is Migrated Target		Indicates this is a migrated target that doesn't exist in Tuxedo side.
User Name	Tuxedo User	Visible	Use this Tuxedo User to get metric data.
User Password	Tuxedo User Password	Visible	Use this Tuxedo User to get metric data.
Application Password	Tuxedo Application Password	Visible	Use this Tuxedo User to get metric data.
Migrated	Is Migrated Target		Indicates whether this target been migrated off.
useSSL	Use SSL	Visible	Use SSL or not

## Associations

`communicates_to`: the Tuxedo /T Domain Gateway peer on other Tuxedo Domain.

## Availability Metrics

<b>Metric Name</b>	Response		
<b>Metric Type</b>	TABLE		
<b>Metric Display</b>	Response		
<b>Collection Interval</b>	5 minutes		
<b>Key Column(s)</b>	None		
<b>Column Name</b>	<b>Column Type</b>	<b>Display Label</b>	<b>Note</b>
Timing	NUMBER	Elapsed Time	
Status	NUMBER	Status	0:Inactive, when the process is running 1:Active, if the process instance is running If status>=1, then the target is available.

## XA Transaction Metrics

<b>Metric Name</b>	DOMAIN_GATEWAY_TRANSACTION_STATISTICS		
<b>Metric Type</b>	TABLE		
<b>Metric Display</b>	Domain Gateway Transaction Statistics		
<b>Collection Interval</b>	15 minutes		
<b>Key Column(s)</b>	None		
<b>Column Name</b>	<b>Column Type</b>	<b>Display Label</b>	<b>Note</b>
COMMITTED_TRANSACTION_NUMBER	NUMBER	Committed XA Transactions Per Minute	<p>The number of XA transactions committed per minute during the interval.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold: &gt;</p>

ABORTED_TRANSACTION_NUMBER	NUMBER	Aborted XA Transactions Per Minute	<p>The number of XA transactions aborted per minute during the interval.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold: &gt;</p>
COMPLETE_TRANSACTION_NUMBER	NUMBER	Complete Transactions Per Minute	<p>The number of XA transactions aborted or committed per minute during the interval.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Value: COMMITTED_TRANSACTION_NUMBER+ ABORTED_TRANSACTION_NUMBER</p> <p>Threshold: &gt;</p>

## Remote Link Metrics

<b>Metric Name</b>		REMOTE_LINK_STATISTICS	
<b>Metric Type</b>		TABLE	
<b>Metric Display</b>		Remote Link Statistics	
<b>Collection Interval</b>		15 minutes	
<b>Key Column(s)</b>		REMOTE_DOMAIN_ID	
<b>Column Name</b>	<b>Column Type</b>	<b>Display Label</b>	<b>Note</b>
REMOTE_DOMAIN_ID	STRING	Remote Domain ID	The remote domain ID.
CONNECTION_STATUS	STRING	Connection Status	The connection status to the remote domain. TA_STATE filed of T_DM_CONNECTION class, DM_MIB. Value: {ACT   SUS   INI   INA   UNK}
INBOUND_MESSAGE_NUMBER	NUMBER	Inbound Network Messages Per Minute	The number of messages transferred from the remote Tuxedo domain per minute. This value will become to 0 at the earliest collection after the collection interval or target properties are changed. Not NULL Threshold: >

Enterprise Manager for Tuxedo Target Reference

OUTBOUND_MESSA GE_NUMBER	NUMBER	Outbound Network Messages Per Minute	<p>The number of messages transferred to the remote Tuxedo domain per minute.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold: &gt;</p>
INBOUND _NETWORK_MESSA GE_SIZE	NUMBER	Inbound Network Messages Bytes Per Minute	<p>The message size in byte transferred from the remote Tuxedo domain per minute.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold: &gt;</p>



OUTBOUND _NETWORK_MESSA GE_SIZE	NUMBER	Outbound Network Messages Bytes Per Minute	<p>The message size in byte transferred to the remote Tuxedo domain per minute.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold: &gt;</p>
PENDING_NETWORK_MESSAGE_NUMBER	NUMBER	Pending Network Messages	<p>The number of messages that are pending in the network to the remote Tuxedo domain.</p> <p>Not NULL</p> <p>The number of messages that are pending in the network</p> <p>Threshold: &gt;</p>

PENDING_NETWORK_MESSAGE_SIZE	NUMBER	Pending Network Messages Bytes	The total messages size in byte that are pending in the network to the remote Tuxedo domain. Not NULL Total size (bytes) of messages that are pending in the network Threshold: >
OUTSTANDING_NETWORK_REQUEST_NUMBER	NUMBER	Outstanding Network Requests	The number of requests that are waiting for reply from the remote Tuxedo domain. Not NULL Threshold: >

## Tuxedo Web Service Gateway

### Description

This target corresponds to a Tuxedo `SALT GWWS` entry defined in `TUXCONFIG`.

### Properties

Name	Display Label	Characters	Description
Name	Name	Visible Editable	[Group Name]/[AOUT]:[SRVID]
Host	Host	Editable(*)	The listening IP address or hostname of the <code>tlisten</code> process associated with the Tuxedo Machine.

Port	Port	Editable(*)	The listening port of the JMX RMI connector embedded in <code>tlisten</code> process associated with the Tuxedo Machine.
DOMAINID	DOMAINID	Editable(*), UBB Parameter	
IPCKEY	IPCKEY	Editable(*), UBB Parameter	
SRVGRP	SRVGRP	Visible Editable(*), UBB Parameter	Group name
GRPNO	GRPNO	UBB Parameter	GRPNO parameter for the group.
SRVID	SRVID	Visible Editable(*), UBB Parameter	SRVID parameter for the server entry defined in <code>SERVERS</code> section of <code>UBBCONFIG</code> .
AOUT	AOUT	Visible UBB Parameter	Process name.
User Name	Tuxedo User	Visible	Use this Tuxedo User to get metric data.
User Password	Tuxedo User Password	Visible	Use this Tuxedo User to get metric data.
Application Password	Tuxedo Application Password	Visible	Use this Tuxedo User to get metric data.
Migrated	Is Migrated Target		Indicates whether this target been migrated off.
useSSL	Use SSL	Visible	Use SSL or not

## Availability Metrics

<b>Metric Name</b>		Response	
<b>Metric Type</b>		TABLE	
<b>Metric Display</b>		Response	
<b>Collection Interval</b>		5 minutes	
<b>Key Column(s)</b>		None	
<b>Column Name</b>	<b>Column Type</b>	<b>Display Label</b>	<b>Note</b>
Timing	NUMBER	Elapsed Time	
Status	NUMBER	Status	0:Inactive, when the process is running 1:Active, if the process instance is running If status>=1, then the target is available.

## Gateway Metrics

<b>Metric Name</b>		WEBSERVICE_GATEWAY_STATISTICS	
<b>Metric Type</b>		TABLE	
<b>Metric Display</b>		Web Service Gateway Statistics	
<b>Collection Interval</b>		15 minutes	
<b>Key Column(s)</b>		None	
<b>Column Name</b>	<b>Column Type</b>	<b>Display Label</b>	<b>Note</b>

ACTIVE_THREAD_NUMBER	NUMBER	Active Threads	The number of working threads in the pool. Not NULL Threshold: >
INBOUND_PROCESS_TIME	NUMBER	Average Inbound Process Time (microsecond)	The average response time in microsecond for inbound requests. The value is NULL if no request is served during the interval. Threshold: >
OUTBOUND_PROCESS_TIME	NUMBER	Average Outbound Process Time (microsecond)	The average response time in microsecond for outbound requests. The value is NULL if no request is served during the interval. Threshold: >
INBOUND_ONEWAY_FAILURE_NUMBER	NUMBER	Inbound One-Way Failures Per Minute	The inbound one-way failure number per minute. This value will become to 0 at the earliest collection after the collection interval or target properties are changed. Not NULL Threshold: >

<p>INBOUND_ONEWAY _SUCCESS_NUMBE R</p>	<p>NUMBER</p>	<p>Inbound One-Way Successes Per Minute</p>	<p>The inbound one-way success number per minute.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold: &gt;</p>
<p>INBOUND_RPC _FAILURE_NUMBER</p>	<p>NUMBER</p>	<p>Inbound RPC Failures Per Minute</p>	<p>The inbound PRC failure number per minute.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold: &gt;</p>
<p>INBOUND_RPC _SUCCESS_NUMBE R</p>	<p>NUMBER</p>	<p>Inbound RPC Successes Per Minute</p>	<p>The inbound PRC success number per minute.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold: &gt;</p>

OUTBOUND_ONWAY_FAILURE_NUMBER	NUMBER	Outbound One-Way Failures Per Minute	<p>The outbound one-way failure number per minute.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold:</p> <p>&gt;</p>
OUTBOUND_ONWAY_SUCCESSES_NUMBER	NUMBER	Outbound One-Way Successes Per Minute	<p>The outbound one-way success number per minute.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold:</p> <p>&gt;</p>
OUTBOUND_RPC_FAILURE_NUMBER	NUMBER	Outbound RPC Failures Per Minute	<p>The outbound RPC failure number per minute.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold:</p> <p>&gt;</p>

OUTBOUND_RPC _SUCCESS_NUMBE R	NUMBER	Outbound RPC Successes Per Minute	The outbound RPC success number per minute.  This value will become to 0 at the earliest collection after the collection interval or target properties are changed.  Not NULL  Threshold:  >
INBOUND_PENDING _REQUEST_NUMBE R	NUMBER	Inbound Pending Requests	The number of requests that are waiting for reply from Tuxedo system.  Not NULL  Threshold:  >
OUTBOUND_PENDI NG_REQUEST_NUM BER	NUMBER	Outbound Pending Requests	The number of requests that are waiting for the reply from outside.  Not NULL  Threshold:  >

## Tuxedo Workstation Listener

### Description

This target corresponds to a Tuxedo WSL entry defined in TUXCONFIG.



## Properties

<b>Name</b>	<b>Display Label</b>	<b>Characters</b>	<b>Description</b>
Name	Name	Visible Editable	[Group Name] / [AOUT] : [ SRVID ]
Host	Host	Editable(*)	The listening IP address or hostname of the <code>listen</code> process associated with the Tuxedo Machine.
Port	Port	Editable(*)	The listening port of the JMX RMI connector embedded in <code>listen</code> process associated with the Tuxedo Machine.
DOMAINID	DOMAINID	Editable(*), UBB Parameter	
IPCKEY	IPCKEY	Editable(*), UBB Parameter	
SRVGRP	SRVGRP	Visible Editable(*), UBB Parameter	Group name
GRPNO	GRPNO	UBB Parameter	GRPNO parameter for the group
SRVID	SRVID	Visible Editable(*), UBB Parameter	SRVID parameter for the server entry defined in <code>SERVERS</code> section of <code>UBBCONFIG</code> .
AOUT	AOUT	Visible UBB Parameter	Process name
User Name	Tuxedo User	Visible	Use this Tuxedo User to get metric data.
User Password	Tuxedo User Password	Visible	Use this Tuxedo User to get metric data.
Application Password	Tuxedo Application Password	Visible	Use this Tuxedo User to get metric data.

Migrated	Is Migrated Target		Indicates whether this target has been migrated off.
useSSL	Use SSL	Visible	Use SSL or not

## Availability Metrics

<b>Metric Name</b>	Response		
<b>Metric Type</b>	TABLE		
<b>Metric Display</b>	Response		
<b>Collection Interval</b>	5 minutes		
<b>Key Column(s)</b>	None		
<b>Column Name</b>	<b>Column Type</b>	<b>Display Label</b>	<b>Note</b>
Timing	NUMBER	Elapsed Time	
Status	NUMBER	Status	0:Inactive, when the process is running 1:Active, if the process instance is running If status>=1, the target is available.

## Workstation Listener Metrics

<b>Metric Name</b>	WORKSTATION_LISTENER_STATISTICS		
<b>Metric Type</b>	TABLE		
<b>Metric Display</b>	Workstation Listener Statistics		
<b>Collection Interval</b>	15 minutes		
<b>Key Column(s)</b>	None		

<b>Column Name</b>	<b>Column Type</b>	<b>Display Label</b>	<b>Note</b>
ACTIVE_HANDLER_ NUMBER	NUMBER	Active Handlers	The number of the active handlers spawned by the listener. Not NULL Threshold: >
CLIENT_NUMBER	NUMBER	Clients	The number of the clients that are connecting with the handlers spawned by the listener. Not NULL Threshold: >

REQUEST_NUMBER	NUMBER	Request Per Minute	<p>The number of the requests that are sent to the handlers spawned by the listener per minute.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold: &gt;</p>
OUTSTANDING_REQUEST_NUMBER	NUMBER	Outstanding Requests	<p>The number of the requests that are waiting for the reply on the handlers spawned by the listener.</p> <p>Not NULL</p> <p>Threshold: &gt;</p>

## Tuxedo Jolt Listener

### Description

This target corresponds to a Tuxedo JSL entry defined in TUXCONFIG.

### Properties

Name	Display Label	Characters	Description
Name	Name	Visible Editable	[Group Name]/[AOUT]:[SRVID]

Host	Host	Editable(*)	The listening IP address or hostname of the <code>tlisten</code> process associated with the Tuxedo Machine.
Port	Port	Editable(*)	The listening port of the JMX RMI connector embedded in <code>tlisten</code> process associated with the Tuxedo Machine.
DOMAINID	DOMAINID	Editable(*), UBB Parameter	
IPCKEY	IPCKEY	Editable(*), UBB Parameter	
SRVGRP	SRVGRP	Visible Editable(*), UBB Parameter	Group name
GRPNO	GRPNO	UBB Parameter	GRPNO parameter for the group
SRVID	SRVID	Visible Editable(*), UBB Parameter	SRVID parameter for the server entry defined in <code>SERVERS</code> section of <code>UBBCONFIG</code>
AOUT	AOUT	Visible UBB Parameter	Process name
User Name	Tuxedo User	Visible	Use this Tuxedo User to get metric data.
User Password	Tuxedo User Password	Visible	Use this Tuxedo User to get metric data.
Application Password	Tuxedo Application Password	Visible	Use this Tuxedo User to get metric data.
Migrated	Is Migrated Target		Indicates whether this target has been migrated off.
useSSL	Use SSL	Visible	Use SSL or not

## Availability Metrics

<b>Metric Name</b>		Response	
<b>Metric Type</b>		TABLE	
<b>Metric Display</b>		Response	
<b>Collection Interval</b>		5 minutes	
<b>Key Column(s)</b>		None	
<b>Column Name</b>	<b>Column Type</b>	<b>Display Label</b>	<b>Note</b>
Timing	NUMBER	Elapsed Time	
Status	NUMBER	Status	0:Inactive, when the process is running 1:Active, if the process instance is running If status>=1, the target is available.

## Jolt Listener Metrics

<b>Metric Name</b>		JOLT_LISTENER_STATISTICS	
<b>Metric Type</b>		TABLE	
<b>Metric Display</b>		Jolt Listener Statistics	
<b>Collection Interval</b>		15 minutes	
<b>Key Column(s)</b>		None	
<b>Column Name</b>	<b>Column type</b>	<b>Display Label</b>	<b>Note</b>

ACTIVE_HANDLER_NUMBER	NUMBER	Active Handlers	The number of the active handlers spawned by the listener. Not NULL Threshold: >
CLIENT_NUMBER	NUMBER	Clients	The number of the clients that are connecting with the handlers spawned by the listener. Not NULL Threshold: >
REQUEST_NUMBER	NUMBER	Requests Per Minute	The number of the requests that are sent to the handlers spawned by the listener per minute. This value will become to 0 at the earliest collection after the collection interval or target properties are changed. Not NULL Threshold: >
OUTSTANDING_REQUEST_NUMBER	NUMBER	Outstanding Requests	The number of the requests that are waiting for the reply on the handlers spawned by the listener. Not NULL Threshold: >

## Tuxedo Event Broker

### Description

This target corresponds to a Tuxedo `TMSYSEVT` or `TMUSREVR` entry defined in `TUXCONFIG`.

### Properties

Name	Display Label	Characters	Description
Name	Name	Visible Editable	[Group Name]/[AOUT]:[SRVID]
Host	Host	Editable(*)	The listening IP address or hostname of the <code>tlisten</code> process associated with the Tuxedo Machine.
Port	Port	Editable(*)	The listening port of the JMX RMI connector embedded in <code>tlisten</code> process associated with the Tuxedo Machine.
DOMAINID	DOMAINID	Editable(*), UBB Parameter	
IPCKEY	IPCKEY	Editable(*), UBB Parameter	
SRVGRP	SRVGRP	Visible Editable(*), UBB Parameter	Group name
GRPNO	GRPNO	UBB Parameter	GRPNO parameter for the group
SRVID	SRVID	Visible Editable(*), UBB Parameter	SRVID parameter for the server entry defined in <code>SERVERS</code> section of <code>UBBCONFIG</code>



AOUT	AOUT	Visible UBB Parameter	Process name
Migrated	Is Migrated Target		Indicates whether this target has been migrated off.

### Availability Metrics

<b>Metric Name</b>	Response		
<b>Metric Type</b>	TABLE		
<b>Metric Display</b>	Response		
<b>Collection Interval</b>	5 minutes		
<b>Key Column(s)</b>	None		
<b>Column Name</b>	<b>Column Type</b>	<b>Display Label</b>	<b>Note</b>
Timing	NUMBER	Elapsed Time	
Status	NUMBER	Status	0:Inactive, when the process is running 1:Active, if the process instance is running. If status>=1, then the target is available.

### Event Statistics Metrics

<b>Metric Name</b>	EVENT_STATISTICS		
<b>Metric Type</b>	TABLE		
<b>Metric Display</b>	Event Statistics		
<b>Collection Interval</b>	15 minutes		

Key Column(s)		None	
Column Name	Column Type	Display Label	Note
SERVICE_EVENT_NUMBER	NUMBER	Notified Events by Service Per Minute	<p>The number of the events notified to Tuxedo service per minute.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold: &gt;</p>
UNSOLICITED_MESSAGE_EVENT_NUMBER	NUMBER	Notified Events by Unsolicited Message Per Minute	<p>The number of the events notified by unsolicited message per minute.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold: &gt;</p>

QUEUE_MESSAGE_ EVENT_NUMBER	NUMBER	Notified Events by Queue Message Per Minute	<p>The number of the events notified to /Q per minute.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold: &gt;</p>
COMMAND_LINE_E VENT_NUMBER	NUMBER	Notified Events by Command Line Per Minute	<p>The number of the events notified by command line per minute.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold: &gt;</p>

USERLOG_MESSAG E_EVENT_NUMBER	NUMBER	Notified Events by USERLOG Message Per Minute	<p>The number of the events notified by ULOG message per minute.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold: &gt;</p>
EVENT_NUMBER	NUMBER	Notified Events Per Minute	<p>The number of the events notified by all methods per minute.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Value: SERVICE_EVENT_NUMBER+ UNSOLICITED_MESSAGE_EVENT_NUMBER + QUEUE_MESSAGE_EVENT_NUMBER+ COMMAND_LINE_EVENT_NUMBER+ USERLOG_MESSAGE_EVENT_NUMBER</p> <p>Threshold: &gt;</p>

## Tuxedo LMS

This target corresponds to an LMS entry defined in TUXCONFIG.

### Properties

Name	Display Label	Characters	Description
Name	Name	Visible, Editable	[Group Name] / [AOUT] : [SRVID]
Host	Host	Editable(*)	The listening IP address or hostname of the <code>tlisten</code> process associated with the Tuxedo Machine.
Port	Port	Editable(*)	The listening port of the JMX RMI connector embedded in <code>tlisten</code> process associated with the Tuxedo Machine.
DOMAINID	DOMAINID	Editable(*), UBB Parameter	
IPCKEY	IPCKEY	Editable(*), UBB Parameter	
SRVGRP	SRVGRP	Visible Editable(*), UBB Parameter	Group name
GRPNO	GRPNO	UBB Parameter	GRPNO parameter for the group
SRVID	SRVID	Visible Editable(*), UBB Parameter	SRVID parameter for the server entry defined in <code>SERVERS</code> section of <code>UBBCONFIG</code>
AOUT	AOUT	Visible Editable UBB Parameter	Process name

Migrated	Is Migrated Target		Indicates whether this target has been migrated off.
TUXCONFIG	TUXCONFIG	Visible	
User Name	Tuxedo User	Visible	Use this Tuxedo User to get metric data.
User Password	Tuxedo User Password	Visible	Use this Tuxedo User to get metric data.
Application Password	Tuxedo Application Password	Visible	Use this Tuxedo User to get metric data.
useSSL	Use SSL	Visible	Use SSL or not

## Availability Metrics

<b>Metric Name</b>	Response		
<b>Metric Type</b>	TABLE		
<b>Metric Display</b>	Response		
<b>Collection Interval</b>	5 minutes		
<b>Key Column(s)</b>	None		
<b>Column Name</b>	<b>Column Type</b>	<b>Display Label</b>	<b>Note</b>
Timing	NUMBER	Elapsed Time	
Status	NUMBER	Status	0:Inactive, when no process instance is running 1:Active, if at least one process instance is running If status>=1, the target is available.

## Tuxedo /Q Manager Server

This target is used to monitor Tuxedo /Q, from which you can view queue related statistics information.

### Properties

Name	Display Label	Characters	Description
Name	Name	Visible, Editable	[Group Name]/[AOUT]:[SRVID]
Host	Host	Editable(*)	The listening IP address or hostname of the 'tlisten' process associated with the Tuxedo Machine.
Port	Port	Editable(*)	The listening port of the JMX RMI connector embedded in 'tlisten' process associated with the Tuxedo Machine.
DOMAINID	DOMAINID	Editable(*), UBB Parameter	
IPCKEY	IPCKEY	Editable(*), UBB Parameter	
LMID	LMID	Editable(*), UBB Parameter	
SRVGRP	SRVGRP	Editable(*), Visible UBB Parameter	group name
GRPNO	GRPNO	UBB Parameter	GRPNO parameter for the group
SRVID	SRVID	Visible, Editable(*) UBB Parameter	SRVID parameter for the server entry defined in SERVERS section of UBBCONFIG(5)

<b>Name</b>	<b>Display Label</b>	<b>Characters</b>	<b>Description</b>
Qspace name	Qspace Name	Visible Editable(*)	Qspace name
QMCONFIG	Queue space path	Visible Editable(*)	Absolute pathname of the file or device where the application queue space is located.
AOUT	AOUT	Visible Editable, UBB Parameter	process name
User Name	Tuxedo User	Visible	Use this Tuxedo User to get metric data
User Password	Tuxedo User Password	Visible	Use this Tuxedo User to get metric data
Application Password	Tuxedo Application Password	Visible	Use this Tuxedo User to get metric data
useSSL	Use SSL	Visible	Use SSL or not
Migrated	Is Migrated Target		Indicates whether this target has been migrated off.

## Associations

Tuxedo Group App\_composite\_contains Tuxedo /Q Manager Server

## Availability Metrics

<b>Metric Name</b>	Response
<b>Metric Type</b>	TABLE
<b>Metric Display</b>	Response
<b>Collection Interval</b>	5 minutes



<b>Key Column(s)</b>		None	
<b>Column Name</b>	<b>Column type</b>	<b>Display Label</b>	<b>Note</b>
Timing	NUMBER	Elapsed Time	
Status	NUMBER	Status	0: Inactive, When /Q Manager Server process is not running. 1: Active, when /Q Manager Server is running. If status >= 1, then the target is available.

### Queue Space Statistics Metrics

<b>Metric Name</b>		QUEUE_SPACE_STATISTICS	
<b>Metric Type</b>		TABLE	
<b>Metric Display</b>		Queue Space Statistics	
<b>Collection Interval</b>		15 minutes	
<b>Key Column(s)</b>		QSPACE_NAME, STATE	
<b>Column Name</b>	<b>Column Type</b>	<b>Display Label</b>	<b>Note</b>
QSPACE_NAME	STRING	Name	TA_APPQSPACENAME
STATE	STRING	State	TA_STATE
ACTIONS	NUMBER	Current Actions	TA_CURACTIONS Not NULL Threshold: >

## Enterprise Manager for Tuxedo Target Reference

CURSORS	NUMBER	Current Cursors	TA_CURCURSORS Not NULL Threshold: >
HANDLES	NUMBER	Current Handles	TA_CURHANDLES Not NULL Threshold: >
MEMNONPERSIST	NUMBER	Memory of Non-persistent Messages	TA_CURMEMNONP ERSIST Not NULL Threshold: >
PENDING_MSG	NUMBER	Total Pending Messages	TA_CURMSG Not NULL Threshold: >
PROCS	NUMBER	Current Processes	TA_CURPROC Not NULL Threshold: >
QUEUES	NUMBER	Current Queues	TA_CURQUEUES Not NULL Threshold: >

TQUEUES	NUMBER	Current Temp Queues	TA_CURTMPQUEUE S Not NULL Threshold: >
TRANS	NUMBER	Current Transactions	TA_CURTRANS Not NULL Threshold: >

### Queue Space Peak Metrics

<b>Metric Name</b>		QUEUE_SPACE_PEAK	
<b>Metric Type</b>		TABLE	
<b>Metric Display</b>		Queue Space Peak Value	
<b>Collection Interval</b>		15 minutes	
<b>Key Column(s)</b>		QSPACE_NAME	
<b>Column Name</b>	<b>Column Type</b>	<b>Display Label</b>	<b>Note</b>
QSPACE_NAME	STRING	Queue Space Name	TA_APPQSPACENAME Not NULL Threshold: >
ACTIONS	NUMBER	Concurrent Actions	TA_HW ACTIONS Not NULL Threshold: >

## Enterprise Manager for Tuxedo Target Reference

CURSORS	NUMBER	Concurrent Cursors	TA_HWCURSORS Not NULL Threshold: >
HANDLES	NUMBER	Concurrent Handles	TA_HWHANDLES Not NULL Threshold: >
MEMNONPERSIST	NUMBER	Memory Consumed by Non-persist Message Memory	TA_HWMEMNONPE RSIST Not NULL Threshold: >
PENDING_MSG	NUMBER	Pending Messages	TA_HWMSG Not NULL Threshold: >
OWNERS	NUMBER	Concurrent Owners	TA_HWOWNERS Not NULL Threshold: >
PROCS	NUMBER	Concurrent Processes	TA_HWPROC Not NULL Threshold: >
QUEUES	NUMBER	Queues	TA_HWQUEUES Not NULL Threshold: >

TQUEUES	NUMBER	Temp Queues	TA_HWTMPQUEUES Not NULL Threshold: >
TRANS	NUMBER	Concurrent Transactions	TA_HWTRANS Not NULL Threshold: >

### Queue Statistics Metrics

<b>Metric Name</b>		QUEUE_STATISTICS	
<b>Metric Type</b>		TABLE	
<b>Metric Display</b>		Queue Statistics	
<b>Collection Interval</b>		15 minutes	
<b>Key Column(s)</b>		QUEUE_NAME, QSPACE_NAME	
<b>Column Name</b>	<b>Column Type</b>	<b>Display Label</b>	<b>Note</b>
QUEUE_NAME	STRING	Name	TA_APPQNAME Not NULL Threshold: >
QSPACE_NAME	STRING	Queue Space Name	TA_APPQSPACENAME Not NULL Threshold: >

BLOCKS	NUMBER	Disk Pages	TA_CURBLOCKS Not NULL Threshold: >
NONPERSIST_MEM	NUMBER	Memory Bytes Consumed by Non-persistent Messages	TA_CURNONPERSISTBYTES Not NULL Threshold: >
PENDING_MSG	NUMBER	Pending Messages	TA_CURMSG+TA_CURNONPERSISTMSG Not NULL Threshold: >

## TMA Targets

### TMA SNA Gateway

This target corresponds to a GWSNAX entry defined in TUXCONFIG.

#### Properties

Name	Display Label	Characters	Description
Name	Name	Visible Editable	[ Group Name ] / [ AOUT ] : [ SRVID ]
Host	Host	Editable(*)	The listening IP address or hostname of the <code>listen</code> process associated with the Tuxedo Machine.

Port	Port	Editable(*)	The listening port of the JMX RMI connector embedded in <code>tlisten</code> process associated with the Tuxedo Machine.
DOMAINID	DOMAINID	Editable(*), UBB Parameter	
IPCKEY	IPCKEY	Editable(*), UBB Parameter	
SRVGRP	SRVGRP	Visible Editable(*), UBB Parameter	group name
GRPNO	GRPNO	UBB Parameter	GRPNO parameter for the group
SRVID	SRVID	Visible Editable(*), UBB Parameter	SRVID parameter for the server entry defined in <code>SERVERS</code> section of <code>UBBCONFIG(5)</code>
AOUT	AOUT	Visible UBB Parameter	Process name
GatewayAddress	Gateway Address	Visible	Listening address of the domain gateway
GatewayPort	Gateway Port	Visible	Listening port of the domain gateway
User Name	Tuxedo User	Visible	Use this Tuxedo User to get metric data.
User Password	Tuxedo User Password	Visible	Use this Tuxedo User to get metric data.
Application Password	Tuxedo Application Password	Visible	Use this Tuxedo User to get metric data.

Migrated	Is Migrated Target		Indicates whether this target has been migrated off.
useSSL	Use SSL	Visible	Use SSL or not

## Availability Metrics

<b>Metric Name</b>	Response		
<b>Metric Type</b>	TABLE		
<b>Metric Display</b>	Response		
<b>Collection Interval</b>	5 minutes		
<b>Key Column(s)</b>	None		
<b>Column Name</b>	<b>Column Type</b>	<b>Display Label</b>	<b>Note</b>
Timing	NUMBER	Elapsed Time	
Status	NUMBER	Status	0:Inactive, when the process is running 1:Active, if the process instance is running If status>=1, then the target is available.

## XA Transaction Metrics

<b>Metric Name</b>	SNA_DOMAIN_GATEWAY_TRANSACTION_STATISTICS
<b>Metric Type</b>	TABLE
<b>Metric Display</b>	SNA Domain Gateway Transaction Statistics
<b>Collection Interval</b>	15 minutes



Key Column(s)		None	
Column Name	Column Type	Display Label	Note
COMMITTED_TRANSACTION_NUMBER	NUMBER	Committed XA Transaction Per Minute	<p>The number of XA transactions committed (per minute) during the interval.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold: &gt;</p>

ABORTED_TRANSACTION_NUMBER	NUMBER	Aborted XA Transaction Per Minute	<p>The number of XA transactions aborted per minute during the interval.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold: &gt;</p>
COMPLETE_TRANSACTION_NUMBER	NUMBER	Complete Transaction Per Minute	<p>The number of XA transactions aborted or committed per minute during the interval.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Value: COMMITTED_TRANSACTION_NUMBER+ ABORTED_TRANSACTION_NUMBER</p> <p>Threshold: &gt;</p>

## Remote Link Metrics

<b>Metric Name</b>		REMOTE_LINK_STATISTICS	
<b>Metric Type</b>		TABLE	
<b>Metric Display</b>		Remote Link Statistics	
<b>Collection Interval</b>		15 minutes	
<b>Key Column(s)</b>		REMOTE_DOMAIN_ID	
<b>Column Name</b>	<b>Column Type</b>	<b>Display Label</b>	<b>Note</b>
REMOTE_DOMAIN_ID	STRING	Remote Domain ID	The remote domain ID.
CONNECTION_STATUS	STRING	Connection Status	The connection to the remote Mainframe domain status.  TA_STATE filed of T_DM_CONNECTION class, DM_MIB.  Value: {ACT   SUS   INI   INA   UNK}
INBOUND_MESSAGE_NUMBER	NUMBER	Inbound Network Message Per Minute	The number of messages transferred from the remote Mainframe domain per minute.  This value becomes to 0 at the earliest collection after the collection interval or target properties are changed.  Not NULL  Threshold:  >

OUTBOUND_MESSA GE_NUMBER	NUMBER	Outbound Network Message Per Minute	<p>The number of messages transferred to the remote Mainframe domain per minute.</p> <p>This value becomes to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold: &gt;</p>
INBOUND _NETWORK_MESSA GE_SIZE	NUMBER	Inbound Network Message Bytes Per Minute	<p>The message size (in byte) transferred from the remote Mainframe domain per minute.</p> <p>This value becomes to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold: &gt;</p>
OUTBOUND _NETWORK_MESSA GE_SIZE	NUMBER	Outbound Network Message Bytes Per Minute	<p>The message size (in byte) transferred to the remote Mainframe domain per minute.</p> <p>This value becomes to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold: &gt;</p>

PENDING_NETWORK_MESSAGE_NUMBER	NUMBER	Pending Network Message	The number of messages that are pending in the network to the remote Mainframe domain. Not NULL Threshold: >
PENDING_NETWORK_MESSAGE_SIZE	NUMBER	Pending Network Message Bytes	The total messages size (in byte) that are pending in the network to the remote Mainframe domain. Not NULL Threshold: >
OUTSTANDING_NETWORK_REQUEST_NUMBER	NUMBER	Outstanding Network Request	The number of requests that are waiting for reply from the remote Mainframe domain. Not NULL Threshold: >

## TMA TCP Gateway

This target corresponds to a GWIDOMAIN entry defined in TUXCONFIG.

### Properties

Name	Display Label	Characters	Description
Name	Name	Visible Editable	[Group Name] / [AOUT] : [SRVID]

Host	Host	Editable(*)	The listening IP address or hostname of the <code>tlisten</code> process associated with the Tuxedo Machine.
Port	Port	Editable(*)	The listening port of the JMX RMI connector embedded in <code>tlisten</code> process associated with the Tuxedo Machine.
DOMAINID	DOMAINID	Editable(*), UBB Parameter	
IPCKEY	IPCKEY	Editable(*), UBB Parameter	
SRVGRP	SRVGRP	Visible Editable(*), UBB Parameter	Group name
GRPNO	GRPNO	UBB Parameter	GRPNO parameter for the group
SRVID	SRVID	Visible Editable(*), UBB Parameter	SRVID parameter for the server entry defined in <code>SERVERS</code> section of <code>UBBCONFIG(5)</code>
AOUT	AOUT	Visible UBB Parameter	Process name
GatewayAddress	Gateway Address	Visible	Listening address of the domain gateway.
GatewayPort	Gateway Port	Visible	Listening port of the domain gateway.
User Name	Tuxedo User	Visible	Use this Tuxedo User to get metric data.
User Password	Tuxedo User Password	Visible	Use this Tuxedo User to get metric data.
Application Password	Tuxedo Application Password	Visible	Use this Tuxedo User to get metric data.

Migrated	Is Migrated Target		Indicates whether this target has been migrated off.
useSSL	Use SSL	Visible	Use SSL or not

## Availability Metrics

<b>Metric Name</b>	Response		
<b>Metric Type</b>	TABLE		
<b>Metric Display</b>	Response		
<b>Collection Interval</b>	5 minutes		
<b>Key Column(s)</b>	None		
<b>Column Name</b>	<b>Column Type</b>	<b>Display Label</b>	<b>Note</b>
Timing	NUMBER	Elapsed Time	
Status	NUMBER	Status	0:Inactive, when the process is running 1:Active, if the process instance is running If status>=1, then the target is available.

## XA Transaction Metrics

<b>Metric Name</b>	TCP_DOMAIN_GATEWAY_TRANSACTION_STATISTICS
<b>Metric Type</b>	TABLE
<b>Metric Display</b>	TCP Domain Gateway Transaction Statistics
<b>Key Column(s)</b>	None
<b>Collection Interval</b>	15 minutes

## Enterprise Manager for Tuxedo Target Reference

<b>Column Name</b>	<b>Column Type</b>	<b>Display Label</b>	<b>Note</b>
COMMITTED_TRAN SACTION_NUMBER	NUMBER	Committed XA Transaction Per Minute	The number of XA transactions committed per minute during the interval.  This value will become to 0 at the earliest collection after the collection interval or target properties are changed.  Not NULL  Threshold:  >



ABORTED_TRANSACTION_NUMBER	NUMBER	Aborted XA Transaction Per Minute	<p>The number of XA transactions aborted per minute during the interval.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold:</p> <p>&gt;</p>
COMPLETE_TRANSACTION_NUMBER	NUMBER	Complete Transaction Per Minute	<p>The number of XA transactions aborted or committed per minute during the interval.</p> <p>This value will become to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Value:</p> <p>COMMITTED_TRANSACTION_NUMBER+ ABORTED_TRANSACTION_NUMBER</p> <p>Threshold:</p> <p>&gt;</p>

## Remote Link Metrics

<b>Metric Name</b>		REMOTE_LINK_STATISTICS	
<b>Metric Type</b>		TABLE	
<b>Metric Display</b>		Remote Link Statistics	
<b>Collection Interval</b>		15 minutes	
<b>Key Column(s)</b>		REMOTE_DOMAIN_ID	
<b>Column Name</b>	<b>Column Type</b>	<b>Display Label</b>	<b>Note</b>
REMOTE_DOMAIN_ID	STRING	Remote Domain ID	The remote domain ID.
CONNECTION_STATUS	STRING	Connection Status	The connection to the remote Mainframe domain status.  TA_STATE filed of T_DM_CONNECTION class, DM_MIB.  Value: {ACT   SUS   INI   INA   UNK}
INBOUND_MESSAGE_NUMBER	NUMBER	Inbound Network Message Per Minute	The number of messages transferred from the remote Mainframe domain per minute.  This value becomes to 0 at the earliest collection after the collection interval or target properties are changed.  Not NULL  Threshold:  >

OUTBOUND_MESSA GE_NUMBER	NUMBER	Outbound Network Message Per Minute	<p>The number of messages transferred to the remote Mainframe domain per minute.</p> <p>This value becomes to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold: &gt;</p>
INBOUND _NETWORK_MESSA GE_SIZE	NUMBER	Inbound Network Message Bytes Per Minute	<p>The message size (in byte) transferred from the remote Mainframe domain per minute.</p> <p>This value becomes to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold: &gt;</p>
OUTBOUND _NETWORK_MESSA GE_SIZE	NUMBER	Outbound Network Message Bytes Per Minute	<p>The message size (in byte) transferred to the remote Mainframe domain per minute.</p> <p>This value becomes to 0 at the earliest collection after the collection interval or target properties are changed.</p> <p>Not NULL</p> <p>Threshold: &gt;</p>

PENDING_NETWORK_MESSAGE_NUMBER	NUMBER	Pending Network Message	The number of messages that are pending in the network to the remote Mainframe domain. Not NULL Threshold: >
PENDING_NETWORK_MESSAGE_SIZE	NUMBER	Pending Network Message Bytes	The total messages size (in byte) that are pending in the network to the remote Mainframe domain. Not NULL Threshold: >
OUTSTANDING_NETWORK_REQUEST_NUMBER	NUMBER	Outstanding Network Request	The number of requests that are waiting for the reply from the remote Mainframe domain. Not NULL Threshold: >

## TMA CRM

### Description

The Communications Resource Manager (CRM) is the Oracle Tuxedo Mainframe Adapter for SNA component that manages communications resources. The CRM coordinates the flow of data between applications running on an ATMI platform and applications running on a mainframe.

## Properties

Name	Display Label	Characters	Description
Name	Name	Visible Editable	CRM/[Host]:[Port]
Host	Host	Editable	CRM address.
Port	Port	Editable	CRM host.
AOUT	AOUT	Visible Editable	Process name

## Availability Metrics

<b>Metric Name</b>	Response		
<b>Metric Type</b>	TABLE		
<b>Metric Display</b>	Response		
<b>Collection Interval</b>	1 minute		
<b>Key Column(s)</b>	None		
<b>Column Name</b>	<b>Column Type</b>	<b>Display Label</b>	<b>Note</b>
Timing	NUMBER	Elapsed Time	
Status	NUMBER	Status	0: Inactive, when the service metrics has not been collected from source target. 1:Active, when the service metrics has been collected from source target. If status>=1, then the target is available.

## Trace Status Metrics

<b>Metric Name</b>	TRACE_STATUS		
<b>Metric Type</b>	TABLE		
<b>Metric Display</b>	Trace Status		
<b>Collection Interval</b>	10 minutes		
<b>Key Column(s)</b>			
<b>Column Name</b>	<b>Column Type</b>	<b>Display Label</b>	<b>Note</b>
APPC_STACK_TRAC E	STRING	Appc Stack Trace	
TRACE_LEVEL	STRING	Trace Level	

## Remote Link Status Metrics

<b>Metric Name</b>	REMOTE_LINK_STATUS		
<b>Metric Type</b>	TABLE		
<b>Metric Display</b>	Remote Link Status		
<b>Collection Interval</b>	5 minutes		
<b>Key Column(s)</b>	REMOTE_LINK_ID		
<b>Column Name</b>	<b>Column Type</b>	<b>Display Label</b>	<b>Note</b>
REMOTE_LINK_ID	STRING	ID	
MAX_COUNT	NUMBER	Max	Not NULL
ACTIVE_COUNT	NUMBER	Active	Not NULL
IN_USE_COUNT	NUMBER	In Use	Not NULL

## Remote Link Statistics Metrics

<b>Metric Name</b>		REMOTE_LINK_STATISTICS	
<b>Metric Type</b>		TABLE	
<b>Metric Display</b>		Remote Link Statistics	
<b>Collection Interval</b>		5 minutes	
<b>Key Column(s)</b>		REMOTE_LINK_ID	
<b>Column Name</b>	<b>Column Type</b>	<b>Display Label</b>	<b>Note</b>
REMOTE_LINK_ID	STRING	ID	
INPUT_CONVERSATION_COUNT	NUMBER	Input Conversations Per Minute	Not NULL Threshold: >
INPUT_MESSAGE_COUNT	NUMBER	Input Messages Per Minute	Not NULL Threshold: >
INPUT_DATA_SIZE	NUMBER	Input Data Per Minute	Not NULL Threshold: >
OUTPUT_CONVERSATION_COUNT	NUMBER	Output Conversations Per Minute	Not NULL Threshold: >
OUTPUT_MESSAGE_COUNT	NUMBER	Output Messages Per Minute	Not NULL Threshold: >
OUTPUT_DATA_SIZE	NUMBER	Output Data Per Minute	Not NULL Threshold: >

# ART CICS Targets

## Tuxedo CICS Region

"Tuxedo CICS Region" is a system target type.

### Associations

Tuxedo Domain App\_composite\_contains: Tuxedo CICS Region targets

App\_composite\_contains: Tuxedo CICS Transaction targets

### Properties

Name	Display Label	Characters	Description
Name	Name	Visible Editable(*)	Name of the region. When first discovery, the CICS Region name will be [Domain Name]/CICS_Region  User is able to give a new name when they redefine the ART CICS region.

### ART CICS Statistics Metrics

<b>Metric Name</b>	ART_CICS_REGION_STATISTICS		
<b>Metric Type</b>	Repository		
<b>Metric Display</b>	ART CICS Region Statistics		
<b>Collection interval</b>	15 minutes		
<b>Key Column(s)</b>	None		
<b>Column Name</b>	<b>Column type</b>	<b>Display Label</b>	<b>Note</b>
TRANSACTION_NAME	String	Name	Transaction Name



EXECUTION_TIME	NUMBER	Average Execution Time (microsecond)	The value will be NULL if no request is served during the interval. AVG(service_statistics.avg_execution_time) Threshold: >
CPU_TIME	NUMBER	Average CPU Time (microsecond)	The value will be NULL if no request is served during the interval. Value: AVG(service_statistics.CPU_time) Threshold: >
TRANSACTION_NUMBER	NUMBER	Transactions Per Minute	Not NULL Value: transaction_success_number+ transaction_failure_number Threshold: >
TRANSACTION_SUCCESS_NUMBER	NUMBER	Transaction Successes Per Minute	Not NULL Value: Sum(service_statistics.success_number) Threshold: >

TRANSACTION_FAI LURE_NUMBER	NUMBER	Transaction Failures Per Minute	Not NULL Value: Sum(service_statistics. system_failure_number + service_statistics user_failure_number) Threshold: >
FAILED_TRANSACT ION_RATIO	NUMBER	Failed Transaction ratio(%)	The value will be NULL if no request is served during the interval. Value: (100* transaction_failure_nu mber/ transaction_number) Threshold: >

## Tuxedo ART CICS Transaction

"Tuxedo ART CICS Transaction" is defined in the ART CICS resource file "transactions.desc"; on Enterprise Manager side. Metrics of an ART transaction are aggregated from all associated Tuxedo servers.

### Properties

Name	Display Label	Characters	Description
Name	Name	Visible Editable(*)	[ART CICS Region Name]/[Transaction Name]
Host	Host	Editable(*)	The listening IP address or hostname of the 'tlisten' process associated with the Tuxedo Machine.

Name	Display Label	Characters	Description
Port	Port	Editable(*)	The listening port of the JMX RMI connector embedded in 'tlisten' process associated with the Tuxedo Machine.
TransactionName	Transaction Name	Editable(*)	

### ART CICS Transaction Metrics

This metrics is repository side metrics, which is aggregated from all "ART Transaction Server" targets under the ART CICS Region in terms of service name.

<b>Metric Name</b>	ART_CICS_TSANSACTION_STATISTICS		
<b>Metric Type</b>	TABLE Repository Side		
<b>Metric Display</b>	ART CICS Transaction Statistics		
<b>Collection interval</b>	15 minutes		
<b>Key Column(s)</b>	None		
<b>Column Name</b>	<b>Column Type</b>	<b>Display Label</b>	<b>Note</b>
MESSAGE SIZE	NUMBER	Message Bytes Per Minute	The value will be NULL if no request is served during the interval.

## Enterprise Manager for Tuxedo Target Reference

EXECUTION_TIME	NUMBER	Average Execution Time (microsecond)	<p>The value will be NULL if no request is served during the interval.</p> <p>Value: AVG(service_statistics.avg_execution_time)</p> <p>Threshold: &gt;</p>
CPU_TIME	NUMBER	Average CPU Time (microsecond)	<p>The value will be NULL if no request is served during the interval.</p> <p>Value: AVG(service_statistics.CPU_time)</p> <p>Threshold: &gt;</p>
SUCCESS_NUMBER	NUMBER	Successes Per Minute	<p>Not NULL</p> <p>Value: Sum(service_statistics.success_number)</p> <p>Threshold: &gt;</p>
SYSTEM_FAILURE_NUMBER	NUMBER	System Failures Per Minute	<p>Not NULL</p> <p>Value: Sum(service_statistics.system_failure_number)</p> <p>Threshold: &gt;</p>

USER_FAILURE_NUM BER	NUMBER	User Failures Per Minute	Not NULL Value: Sum(service_statistics. user_failure_number) Threshold: >
REQUEST_NUMBER	NUMBER	Requests Per Minute	Not NULL Value: Sum(service_statistics. success_number + service_statistics. system_failure_number +service_statistics. user_failure_number) Threshold: >
FAILED_TRANSACTION_RATIO	NUMBER	Failed Transactions ratio(%)	The value will be NULL if no request is served during the interval. Value: (100* success_number r/ request_number) Threshold: >

## ART CICS TSQ Server

### Properties

Name	Display Label	Characters	Description
Name	Name	Visible, Editable	[Group Name]/[AOUT]:[SRVID]
Host	Host	Editable(*)	The listening IP address or hostname of the 'tlisten' process associated with the Tuxedo Machine.
Port	Port	Editable(*)	The listening port of the JMX RMI connector embedded in 'tlisten' process associated with the Tuxedo Machine.
DOMAINID	DOMAINID	Editable(*), UBB Parameter	
IPCKEY	IPCKEY	Editable(*), UBB Parameter	
SRVGRP	SRVGRP	Visible Editable(*), UBB Parameter	group name
GRPNO	GRPNO	UBB Parameter	GRPNO parameter for the group
SRVID	SRVID	Visible Editable(*), UBB Parameter	SRVID parameter for the server entry defined in SERVERS section of UBBCONFIG
AOUT	AOUT	Visible, UBB Parameter	process name
User Name	Tuxedo User	Visible	Use this Tuxedo User to get metric data

Name	Display Label	Characters	Description
User Password	Tuxedo User Password	Visible	Use this Tuxedo User to get metric data
Application Password	Tuxedo Application Password	Visible	Use this Tuxedo User to get metric data
useSSL	Use SSL	Visible	Use SSL or not

## Availability Metrics

<b>Metric Name</b>	Response		
<b>Metric Type</b>	TABLE		
<b>Metric Display</b>	Response		
<b>Collection Interval</b>	5 minutes		
<b>Key Column(s)</b>	None		
<b>Column Name</b>	<b>Column type</b>	<b>Display Label</b>	<b>Note</b>
Timing	NUMBER	Elapsed Time	
Status	NUMBER	Status	0:Inactive, when the process is running 1:Active, if the process instance is running If status>=1, then the target is available.

## ART TSQ Metrics

<b>Metric Name</b>	ARTTSQ_STATISTICS
<b>Metric Type</b>	TABLE
<b>Metric Display</b>	ART TSQ Statistics

<b>Collection Interval</b>	15 minutes		
<b>Key Column(s)</b>	TSQUEUE_NAME		
<b>Column Name</b>	<b>Column type</b>	<b>Display Label</b>	<b>Note</b>
TSQUEUE_NAME	STRING	Name	
TOTAL_LENGTH	NUMBER	All Items Length (Bytes)	Indicates the total length in bytes of all the items in the temporary storage queue.
MAXITEMLEN	NUMBER	Largest Item Length (Bytes)	Indicates the length in bytes of the largest item in the temporary storage queue.
MINITEMLEN	NUMBER	Smallest Item Length (Bytes)	Indicates the length in bytes of the smallest item in the temporary storage queue.
NUMITEMS	NUMBER	Items	Indicates the number of items in the temporary storage queue.
WRITEQSUM	NUMBER	WRITEQ Commands Per Minute	Indicates the total number of WRITEQ commands performed of this TSQUEUE.
REWRITESUM	NUMBER	REWRITEQ Commands Per Minute	Indicates the total number of REWRITEQ commands performed of this TSQUEUE.
READQSUM	NUMBER	READQ Commands Per Minute	Indicates the total number of READQ commands performed of this TSQUEUE.



## ART CICS TDQ Server

### Properties

Name	Display Label	Characters	Description
Name	Name	Visible, Editable	[Group Name]/[AOUT]:[SRVID]
Host	Host	Editable(*)	The listening IP address or hostname of the 'tlisten' process associated with the Tuxedo Machine.
Port	Port	Editable(*)	The listening port of the JMX RMI connector embedded in 'tlisten' process associated with the Tuxedo Machine.
DOMAINID	DOMAINID	Editable(*), UBB Parameter	
IPCKEY	IPCKEY	Editable(*), UBB Parameter	
SRVGRP	SRVGRP	Visible Editable(*), UBB Parameter	group name
GRPNO	GRPNO	UBB Parameter	GRPNO parameter for the group
SRVID	SRVID	Visible Editable(*), UBB Parameter	SRVID parameter for the server entry defined in SERVERS section of UBBCONFIG
AOUT	AOUT	Visible UBB Parameter	process name

Name	Display Label	Characters	Description
User Name	Tuxedo User	Visible	Use this Tuxedo User to get metric data
User Password	Tuxedo User Password	Visible	Use this Tuxedo User to get metric data
Application Password	Tuxedo Application Password	Visible	Use this Tuxedo User to get metric data
useSSL	Use SSL	Visible	Use SSL or not

## Availability Metrics

<b>Metric Name</b>	Response		
<b>Metric Type</b>	TABLE		
<b>Metric Display</b>	Response		
<b>Collection Interval</b>	5 minutes		
<b>Key Column(s)</b>	None		
<b>Column Name</b>	<b>Column type</b>	<b>Display Label</b>	<b>Note</b>
Timing	NUMBER	Elapsed Time	
Status	NUMBER	Status	0:Inactive, when the process is running 1:Active, if the process instance is running If status>=1, then the target is available.

## ART TDQ Metrics

<b>Metric Name</b>	ARTTDQ_STATISTICS		
<b>Metric Type</b>	TABLE		
<b>Metric Display</b>	ART TDQ Statistics		
<b>Collection Interval</b>	15 minutes		
<b>Key Column(s)</b>	TDQUEUE_NAME		
<b>Column Name</b>	<b>Column Type</b>	<b>Display Label</b>	<b>Note</b>
TDQUEUE_NAME	STRING	TDQUEUE Name	
WRITEQSUM	NUMBER	WRITEQ commands Per Minute	Indicates the total number of WRITEQ commands performed of this TSQUEUE.
READQSUM	NUMBER	READQ commands Per Minute	Indicates the total number of READQ commands performed of this TSQUEUE.

## ART Batch Targets

### Tuxedo Batch System

This is a system type target that is used to monitor the metrics generated by JES jobs.

## Properties

Name	Display Label	Characters	Description
Name	Name	Visible, Editable	Name of the Batch System. When first discovery, the Batch System name will be [ Domain Name]/Batch_System
Host	Host	Editable(*)	The listening IP address or hostname of the 'listen' process associated with the Tuxedo Machine.
Port	Port	Editable(*)	The listening port of the JMX RMI connector embedded in 'listen' process associated with the Tuxedo Machine.
domain_id	DOMAINID	Editable(*), UBB Parameter	
IPC_key	IPCKEY	Editable(*), UBB Parameter	
snmp_agent_port	Receive Port for SNMP Agent	Editable(*) OPTIONAL	
UserName	User Name	Editable(*) OPTIONAL	
password	User Password	Editable(*) OPTIONAL	
application_password	Application Password	Editable(*) OPTIONAL	
useSSL	Use SSL	Editable(*)	

## Availability Metrics

<b>Metric Name</b>	Response
<b>Metric Type</b>	TABLE

<b>Metric Display</b>	Response		
<b>Collection Interval</b>	5 minutes		
<b>Key Column(s)</b>	None		
<b>Column Name</b>	<b>Column type</b>	<b>Display Label</b>	<b>Note</b>
Timing	NUMBER	Elapsed Time	
Status	NUMBER	Status	0: Inactive, When no ARTJESADM server is active. 1: Active, when at least one ARTJESADM server is active

## Job Aggregated Statistics

<b>Metric Name</b>	JOB_AGGREGATED_STATISTICS		
<b>Metric Type</b>	TABLE		
<b>Metric Display</b>	Job Aggregated Statistics		
<b>Collection Interval</b>	15 minutes		
<b>Key Column(s)</b>			
<b>Column Name</b>	<b>Column type</b>	<b>Display Label</b>	<b>Note</b>
SUBMITTED_NUMBER	NUMBER	Submitted Jobs Per Minute	
SUCCESSFUL_NUMBER	NUMBER	Successes Per Minute	
FAILED_NUMBER	NUMBER	Failures Per Minute	
WAITING_NUMBER	NUMBER	WAITING Jobs	
AVERAGE_USRCPU	NUMBER	Average User CPU Time (milliseconds)	

AVERAGE_SYSCPU	NUMBER	Average System CPU Time (milliseconds)
AVERAGE_CPU	NUMBER	Average CPU Time (milliseconds)
AVERAGE_EXECUTION_TIME	NUMBER	Average Execution Time (second)

## OTMQ Manager Server

This target is used to monitor OTMQ, from which you can view queue related statistics information. Target type is tuxedo\_OTMQ\_server.

### Properties

Name	Display Label	Characters	Description
Name	Name	Visible, Editable	[ Group Name ] / [ AOUT ] : [ SRVID ]
Host	Hostname	Editable(*)	The listening IP address or hostname of the 'tlisten' process associated with the Tuxedo Machine.
Port	Port	Editable(*)	The listening port of the JMX RMI connector embedded in 'tlisten' process associated with the Tuxedo Machine.
DOMAINID	Domain ID	Editable(*), UBB Parameter	
IPCKEY	IPC Key	Editable(*), UBB Parameter	
LMID	LMID	Editable(*), UBB Parameter	

<b>Name</b>	<b>Display Label</b>	<b>Characters</b>	<b>Description</b>
SRVGRP	Group Name	Editable(*), Visible UBB Parameter	Group name
GRPNO	Group Number	UBB Parameter	Group Number for the group
SRVID	SRVID	Visible Editable(*) UBB Parameter	SRVID parameter for the server entry defined in SERVERS section of UBBCONFIG(5)
Queue server name	AOUT	Visible Editable	OTMQ server name
Qspace name	Queue Space Name	Visible Editable(*)	OTMQ Qspace name
QMCONFIG	Queue space path	Visible Editable(*)	Absolute pathname of the file or device where the application queue space is located.
Migrated	Is Migrated Target		Indicates whether this target has been migrated off.
User Name	User Name	Editable	Use this Tuxedo User to get metric data
User Password	User Password	Editable	Tuxedo User password
Application Password	Application Password	Editable	Tuxedo Application password
useSSL	Use SSL	Editable	Use SSL or not

## Associations

Tuxedo Group App\_composite\_contains OTMQ Manager Server

## Availability Metrics

<b>Metric Name</b>	Response		
<b>Metric Type</b>	TABLE		
<b>Metric Display</b>	Response		
<b>Collection Interval</b>	5 minutes		
<b>Key Column(s)</b>	None		
<b>Column Name</b>	<b>Column Type</b>	<b>Display Label</b>	<b>Note</b>
Timing	NUMBER	Elapsed Time	
Status	NUMBER	Status	0: Inactive, When OTMQ Manager Server process is not running. 1: Active, when OTMQ Manager Server is running. If status >= 1, then the target is available.

## Queue Space Statistics Metrics

<b>Metric Name</b>	QUEUE_SPACE_STATISTICS		
<b>Metric Type</b>	TABLE		
<b>Metric Display</b>	Queue Space Statistics		
<b>Collection Interval</b>	15 minutes		
<b>Key Column(s)</b>	QSPACE_NAME		
<b>Column Name</b>	<b>Column Type</b>	<b>Display Label</b>	<b>Note</b>
QSPACE_NAME	STRING	Name	TA_APPQSPACENAME



STATE	STRING	State	TA_STATE
ACTIONS	NUMBER	Current Actions	TA_CURACTIONS Not NULL Threshold: >
CURSORS	NUMBER	Current Cursors	TA_CURCURSORS Not NULL Threshold: >
HANDLES	NUMBER	Current Handles	TA_CURHANDLES Not NULL Threshold: >
MEMNONPERSIST	NUMBER	Memory of Non-persistent Messages	TA_CURMEMNONP ERSIST Not NULL Threshold: >
PENDING_MSG	NUMBER	Total Pending Messages	TA_CURMSG Not NULL Threshold: >
PROCS	NUMBER	Current Processes	TA_CURPROC Not NULL Threshold: >
QUEUES	NUMBER	Current Queues	TA_CURQUEUEES Not NULL Threshold: >

## Enterprise Manager for Tuxedo Target Reference

TQUEUES	NUMBER	Current Temp Queues	TA_CURTMPQUEUE S Not NULL Threshold: >
TRANS	NUMBER	Current Transactions	TA_CURTRANS Not NULL Threshold: >
SENT_MSG	NUMBER	Send Messages Per Minute	TA_MSGSENT Not NULL Threshold: >
RECV_MSG	NUMBER	Receive Messages Per Minute	TA_MSGRCV Not NULL Threshold: >

## Queue Space Peak Metrics

<b>Metric Name</b>	QUEUE_SPACE_PEAK		
<b>Metric Type</b>	TABLE		
<b>Metric Display</b>	Queue Space Peak Value		
<b>Collection Interval</b>	15 minutes		
<b>Key Column(s)</b>	QSPACE_NAME		
<b>Column Name</b>	<b>Column type</b>	<b>Display Label</b>	<b>Note</b>
QSPACE_NAME	STRING	Queue Space Name	TA_APPQSPACENAME

ACTIONS	NUMBER	Concurrent Actions	TA_HW_ACTIONS Not NULL Threshold: >
CURSORS	NUMBER	Concurrent Cursors	TA_HWCURSORS Not NULL Threshold: >
HANDLES	NUMBER	Concurrent Handles	TA_HWHANDLES Not NULL Threshold: >
MEMNONPERSIST	NUMBER	Memory Consumed by Non-persist Message Memory	TA_HWMEMNONPE RSIST Not NULL Threshold: >
PENDING_MSG	NUMBER	Pending Messages	TA_HWMSG Not NULL Threshold: >
OWNERS	NUMBER	Concurrent Owners	TA_HWOWNERS Not NULL Threshold: >
PROCS	NUMBER	Concurrent Processes	TA_HWPROC Not NULL Threshold: >

QUEUES	NUMBER	Queues	TA_HWQUEUES Not NULL Threshold: >
TQUEUES	NUMBER	Temp Queues	TA_HWTMPQUEUES Not NULL Threshold: >
TRANS	NUMBER	Concurrent Transactions	TA_HWTRANS Not NULL Threshold: >

### Queue Statistics Metrics

<b>Metric Name</b>	QUEUE_STATISTICS		
<b>Metric Type</b>	TABLE		
<b>Metric Display</b>	Queue Statistics		
<b>Collection Interval</b>	15 minutes		
<b>Key Column(s)</b>	QUEUE_NAME, QSPACE_NAME		
<b>Column Name</b>	<b>Column type</b>	<b>Display Label</b>	<b>Note</b>
QUEUE_NAME	STRING	Name	TA_APPQNAME
QSPACE_NAME	STRING	Queue Space Name	TA_APPQSPACENAME
CUR_PID	NUMBER	Owner Process ID	TA_PID
ATTACH_STATE	STRING	Attach State	TA_STATE

BLOCKS	NUMBER	Disk Pages	TA_CURBLOCKS Not NULL Threshold: >
NONPERSIST_MEM	NUMBER	Memory Bytes Consumed by Non-persistent Messages	TA_CURNONPERSIS TBYTES Not NULL Threshold: >
SENT_MSG	NUMBER	Send Messages Per Minute	TA_MSGSENT Not NULL Threshold: >
RECV_MSG	NUMBER	Receive Messages Per Minute	TA_MSGRCV Not NULL Threshold: >
PENDING_MSG	NUMBER	Pending Messages	TA_CURMSG+TA_C URNONPERSISTMS G Not NULL Threshold: >

## ECM Tables

Enterprise Manager Configuration Management (ECM) primarily deals with collection and storage of the configuration data of hardware and software components managed and monitored by Enterprise Manager.

For Enterprise Manager for Oracle Tuxedo, ECM is used to collect and demonstrate configuration information of all Tuxedo Target types.

This section covers the following ECM tables:

- [Tuxedo Domain](#)
- [Tuxedo Machine](#)
- [Tuxedo Group](#)
- [Tuxedo Server](#)
- [Tuxedo Bridge](#)
- [Tuxedo TMS](#)
- [Tuxedo /Q](#)
- [Tuxedo Message Queue \(OTMQ\)](#)

## Tuxedo Domain

<b>TARGET_TYPE</b>	tuxedo_domain			
<b>UI_IGNORE</b>	N			
<b>HISTORY_IGNORE</b>	N			
<b>COMPARE_IGNORE</b>	N			
<b>TABLE NAME</b>	TUXEDO_ECM_DOMAIN			
<b>SINGLE_ROW</b>	Y			
<b>COLUMN NAME</b>	<b>DISPLAY NAME</b>	<b>TYPE</b>	<b>TYPE_FORMAT</b>	<b>IS_KEY</b>
AUTOTRAN	AUTOTRAN	STRING	64	N
TRANTIME	TRANTIME	NUMBER	10	N
IPCKEY	IPCKEY	NUMBER	10	N
MASTER	MASTER	STRING	64	N
MODEL	MODEL	STRING	32	N
DOMAINID	DOMAINID	STRING	64	N
USERID	UID	NUMBER	10	N

GID	GID	NUMBER	10	N
PERM	PERM	NUMBER	10	N
MAXACCESSES	MAXACCESSES	NUMBER	10	N
MAXSERVERS	MAXSERVERS	NUMBER	10	N
MAXSERVICES	MAXSERVICES	NUMBER	10	N
MAXGROUPS	MAXGROUPS	NUMBER	10	N
MAXNETGROUPS	MAXNETGROUPS	NUMBER	10	N
MAXMACHINES	MAXMACHINES	NUMBER	10	N
MAXQUEUES	MAXQUEUES	NUMBER	10	N
MAXACLGROUPS	MAXACLGROUPS	NUMBER	10	N
MAXGTT	MAXGTT	NUMBER	10	N
MAXCONV	MAXCONV	NUMBER	10	N
MAXBUFTYPE	MAXBUFTYPE	NUMBER	10	N
MAXBUFSTYPE	MAXBUFSTYPE	NUMBER	10	N
MAXDRT	MAXDRT	NUMBER	10	N
MAXRFT	MAXRFT	NUMBER	10	N
MAXRTDATA	MAXRTDATA	NUMBER	10	N
MAXSPDATA	MAXSPDATA	NUMBER	10	N
MAXTRANTIME	MAXTRANTIME	NUMBER	10	N
CMTRET	CMTRET	STRING	32	N

## Enterprise Manager for Tuxedo Target Reference

LDBAL	LDBAL	STRING	32	N
SYSTEM_ACCESS	SYSTEM_ACCESS	STRING	32	N
OPTIONS	OPTIONS	STRING	32	N
USIGNAL	USIGNAL	STRING	32	N
SECURITY	SECURITY	STRING	32	N
SSL_RENEGOTIATION	SSL_RENEGOTIATION	NUMBER	10	N
AUTHSVC	AUTHSVC	STRING	32	N
SCANUNIT	SCANUNIT	NUMBER	10	N
SANITYSCAN	SANITYSCAN	NUMBER	10	N
DBBLWAIT	DBBLWAIT	NUMBER	10	N
BBLQUERY	BBLQUERY	NUMBER	10	N
BLOCKTIME	BLOCKTIME	NUMBER	10	N
NOTIFY	NOTIFY	STRING	32	N
SEC_PRINCIPAL_NAME	SEC_PRINCIPAL_NAME	STRING	32	N
SEC_PRINCIPAL_LOCATION	SEC_PRINCIPAL_LOCATION	STRING	32	N
SEC_PRINCIPAL_PASSVAR	SEC_PRINCIPAL_PASSVAR	STRING	32	N
SIGNATURE_AHEAD	SIGNATURE_AHEAD	NUMBER	10	N
SIGNATURE_BEHIND	SIGNATURE_BEHIND	NUMBER	10	N



SIGNATURE_R EQUIRED	SIGNATURE_R EQUIRED	STRING	32	N
ENCRYPTION_ REQUIRED	ENCRYPTION_ REQUIRED	STRING	32	N

## Tuxedo Machine

<b>TARGET_TYPE</b>	tuxedo_machine			
<b>HISTORY_IGNORE</b>	N			
<b>TABLE NAME</b>	TUXEDO_ECM_MACHINE			
<b>UI_IGNORE</b>	N			
<b>COMPARE_IGNORE</b>	N			
<b>SINGLE_ROW</b>	N			
<b>COLUMN NAME</b>	<b>DISPLAY NAME</b>	<b>TYPE</b>	<b>TYPE_FORMAT</b>	<b>IS_KEY</b>
ADDRESS	ADDRESS	STRING	64	N
LMID	LMID	STRING	64	Y
APPDIR	APPDIR	STRING	256	N
TUXCONFIG	TUXCONFIG	STRING	256	N
TUXDIR	TUXDIR	STRING	256	N
USERID	USERID	NUMBER	10	N
GID	GID	NUMBER	10	N
PERM	PERM	NUMBER	10	N
BRTHREADS	BRTHREADS	STRING	64	N
MAXACCESSES	MAXACCESSES	NUMBER	10	N

MAXWSCLIEN TS	MAXWSCLIEN TS	NUMBER	10	N
MAXACLCACH E	MAXACLCACH E	NUMBER	10	N
MAXCONV	MAXCONV	NUMBER	10	N
MAXPENDING BYTES	MAXPENDING BYTES	NUMBER	10	N
MAXGTT	MAXGTT	NUMBER	10	N
TYPE	TYPE	STRING	64	N
CMPLIMIT	CMPLIMIT	STRING	64	N
NETLOAD	CMPLIMIT	NUMBER	10	N
SPINCOUNT	SPINCOUNT	NUMBER	10	N
TLOGDEVICE	TLOGDEVICE	STRING	256	N
TLOGOFFSET	TLOGOFFSET	NUMBER	10	N
TLOGNAME	TLOGNAME	STRING	64	N
TLOGSIZE	TLOGSIZE	NUMBER	10	N
ULOGPFX	ULOGPFX	STRING	256	N
TUXOFFSET	TUXOFFSET	NUMBER	10	N
ENVFILE	ENVFILE	STRING	256	N
SEC_PRINCIPAL_NAME	SEC_PRINCIPAL_NAME	STRING	512	N
SEC_PRINCIPAL_LOCATION	SEC_PRINCIPAL_LOCATION	STRING	1024	N
SEC_PRINCIPAL_PASSVAR	SEC_PRINCIPAL_PASSVAR	STRING	64	N
SIGNATURE_REQUIRED	SIGNATURE_REQUIRED	STRING	64	N

ENCRYPTION_ REQUIRED	ENCRYPTION_ REQUIRED	STRING	64	N
SICACHEENTRI ESMAX	SICACHEENTRI ESMAX	STRING	64	N

## Tuxedo Group

<b>TARGET_TYPE</b>			tuxedo_group	
<b>UI_IGNORE</b>			N	
<b>HISTORY_IGNORE</b>			N	
<b>COMPARE_IGNORE</b>			N	
<b>TABLE NAME</b>			TUXEDO_ECM_GROUPS	
<b>SINGLE_ROW</b>			N	
<b>COLUMN NAME</b>	<b>DISPLAY NAME</b>	<b>TYPE</b>	<b>TYPE_FORMAT</b>	<b>IS_KEY</b>
GROUPNAME	GROUPNAME	STRING	64	Y
LMID	LMID	STRING	64	N
GRPNO	GRPNO	NUMBER	10	N
TMSNAME	TMSNAME	STRING	256	N
ENVFILE	ENVFILE	STRING	256	N
TMSCOUNT	TMSCOUNT	NUMBER	10	N
SEC_PRINCIPAL_ NAME	SEC_PRINCIPAL_ NAME	STRING	512	N
SEC_PRINCIPAL_ LOCATION	SEC_PRINCIPAL_ LOCATION	STRING	1024	N
SEC_PRINCIPAL_ PASSVAR	SEC_PRINCIPAL_ PASSVAR	STRING	64	N

SIGNATURE_REQ UIRED	SIGNATURE_REQ UIRED	STRING	64	N
ENCRYPTION_RE QUIRED	ENCRYPTION_RE QUIRED	STRING	64	N
OPENINFO	OPENINFO	STRING	256	N
CLOSEINFO	CLOSEINFO	STRING	256	N
MRM	MRM	STRING	64	N

## Tuxedo Server

<b>TARGET_TYPE</b>	tuxedo_server			
<b>UI_IGNORE</b>	N			
<b>HISTORY_IGNORE</b>	N			
<b>COMPARE_IGNORE</b>	N			
<b>TABLE NAME</b>	TUXEDO_ECM_SERVERS			
<b>SINGLE_ROW</b>	N			
<b>COLUMN NAME</b>	<b>DISPLAY NAME</b>	<b>TYPE</b>	<b>TYPE_FORMAT</b>	<b>IS_KEY</b>
AOUT	AOUT	STRING	256	N
SRVGRP	SRVGRP	STRING	64	Y
SRVID	SRVID	NUMBER	10	Y
CLOPT	CLOPT	STRING	1024	N
SEQUENCE	SEQUENCE	NUMBER	10	N
MIN	MIN	NUMBER	10	N
MAX	MAX	NUMBER	10	N
ENVFILE	ENVFILE	STRING	256	N

CONV	CONV	STRING	64	N
RQADDR	RQADDR	STRING	64	N
RQPERM	RQPERM	NUMBER	10	N
REPLYQ	REPLYQ	STRING	64	N
RPPERM	RPPERM	NUMBER	10	N
RCMD	RCMD	STRING	256	N
MAXGEN	MAXGEN	NUMBER	10	N
GRACE	GRACE	NUMBER	10	N
RESTART	RESTART	STRING	64	N
SYSTEM_ACC ESS	SYSTEM_ACC ESS	STRING	64	N
MAXDISPAC HTHEADS	MAXDISPAC HTHEADS	NUMBER	10	N
MINDISPATC THREADS	MINDISPATC THREADS	NUMBER	10	N
THREADSTAC KSIZE	THREADSTAC KSIZE	NUMBER	10	N
SEC_PRINCIPA L_NAME	SEC_PRINCIPA L_NAME	STRING	512	N
SEC_PRINCIPA L_LOCATION	SEC_PRINCIPA L_LOCATION	STRING	1024	N
SEC_PRINCIPA L_PASSVAR	SEC_PRINCIPA L_PASSVAR	STRING	64	N
SICACHEENTR IESMAX	SICACHEENTR IESMAX	STRING	64	N
CONCURR_ST RATEGY	CONCURR_ST RATEGY	STRING	64	N

## Tuxedo Bridge

<b>TARGET_TYPE</b>	tuxedo_bridge			
<b>UI_IGNORE</b>	N			
<b>HISTORY_IGNORE</b>	N			
<b>COMPARE_IGNORE</b>	N			
<b>TABLE NAME</b>	TUXEDO_ECM_BRIDGE			
<b>SINGLE_ROW</b>	N			
<b>COLUMN NAME</b>	<b>DISPLAY NAME</b>	<b>TYPE</b>	<b>TYPE_FORMAT</b>	<b>IS_KEY</b>
LMID	LMID	STRING	64	Y
NADDR	NADDR	STRING	256	N
BRIDGE	BRIDGE	STRING	256	N
NLSADDR	NLSADDR	STRING	256	N
FADDR	FADDR	STRING	256	N
FRANGE	FRANGE	NUMBER	10	N
MINENCRYPT BITS	MINENCRYPT BITS	STRING	10	N
MAXENCRYPT BITS	MAXENCRYPT BITS	STRING	10	N

## Tuxedo TMS

<b>TARGET_TYPE</b>	tuxedo_TMS
<b>UI_IGNORE</b>	N
<b>HISTORY_IGNORE</b>	N

<b>COMPARE_IGNORE</b>					N
<b>TABLE NAME</b>					TUXEDO_ECM_TMS
<b>SINGLE_ROW</b>					N
<b>COLUMN NAME</b>	<b>DISPLAY NAME</b>	<b>TYPE</b>	<b>TYPE_FORMAT</b>	<b>IS_KEY</b>	
GROUPNAME	GROUPNAME	STRING	64	N	
GRPNO	GRPNO	NUMBER	10	N	
LMID	LMID	STRING	64	N	
TMSNAME	TMSNAME	STRING	256	Y	
TMSCOUNT	TMSCOUNT	NUMBER	10	N	
OPENINFO	OPENINFO	STRING	256	N	
CLOSEINFO	CLOSEINFO	STRING	256	N	

**Note:** Only the TMS configuration in the `GROUPS` section can be monitored from ECM perspective. TMS configuration in the `RMS` section cannot be monitored.

## Tuxedo /Q

### Queue Space

<b>TARGET_TYPE</b>	tuxedo_queue_server
<b>UI_NAME</b>	Tuxedo /Q QSPACE
<b>UI_IGNORE</b>	N
<b>HISTORY_IGNORE</b>	N
<b>COMPARE_IGNORE</b>	N
<b>TABLE NAME</b>	TUXEDO_ECM_SLASH_QUEUE_QSPACE
<b>SINGLE_ROW</b>	Y

<b>MIB CLASS</b>		<b>T_APPQSPACE</b>			
<b>COLUMN NAME</b>	<b>DISPLAY NAME</b>	<b>TYPE</b>	<b>TYPE_FORMAT</b>	<b>IS_KEY</b>	<b>MIB FIELD</b>
APPQSPACENAME	Queue Space Name	STRING	16	N	TA_APPQSPACENAME
QMCONFIG	Queue Space pathname	STRING	128	N	TA_QMCONFIG
LMID	LMID	STRING	32	N	TA_LMID
IPCKEY	IPC Key	NUMBER	10	N	TA_IPCKEY
ERRORQNAME	Error Queue Name	STRING	128	N	TA_ERRORQNAME
MAXACTIONS	Max Action Number	NUMBER	10	N	TA_MAXACTIONS
MAXCURSORS	Max Cursor Number	NUMBER	10	N	TA_MAXCURSORS
MAXHANDLES	Max Handle Number	NUMBER	10	N	TA_MAXHANDLES
MAXMSG	Max Message Number	NUMBER	10	N	TA_MAXMSG
MAXOWNERS	Max Owner Number	NUMBER	10	N	TA_MAXOWNERS
MAXPAGES	Max Page Number	NUMBER	10	N	TA_MAXPAGES
MAXPROC	Max Process Number	NUMBER	10	N	TA_MAXPROC
MAXQUEUES	Max Queue Number	NUMBER	10	N	TA_MAXQUEUES



MAXTMPQUEUES	Max Temp Queue Number	NUMBER	10	N	TA_MAXTMPQUEUES
MAXTRANS	Max Transaction Number	NUMBER	10	N	TA_MAXTRANS
MEMNONPERSIST	Non-persistent Messages Memory	STRING	32	N	TA_MEMNONPERSIST

## Queue

<b>TARGET_TYPE</b>	tuxedo_queue_server				
<b>UI_NAME</b>	Tuxedo /Q QUEUE				
<b>UI_IGNORE</b>	N				
<b>HISTORY_IGNORE</b>	N				
<b>COMPARE_IGNORE</b>	N				
<b>TABLE NAME</b>	TUXEDO_ECM_SLASH_QUEUE_QUEUE				
<b>SINGLE_ROW</b>	N				
<b>MIB CLASS</b>	T_APPQ				
<b>COLUMN NAME</b>	<b>DISPLAY NAME</b>	<b>TYPE</b>	<b>TYPE_FORMAT</b>	<b>IS_KEY</b>	<b>MIB FIELD</b>
APPQNAME	Queue Name	STRING	128	Y	TA_APPQNAME
APPQSPACENAME	Queue Space Name	STRING	16	Y	TA_APPQSPACENAME
QMCONFIG	Queue Space pathname	STRING	128	Y	TA_QMCONFIG

LMID	LMID	STRING	32	Y	TA_LMID
APPQORDER	App Queue Order	STRING	64	N	TA_APPQORDER

## Tuxedo Message Queue (OTMQ)

### Queue Space

<b>TARGET_TYPE</b>	tuxedo_OTMQ_server				
<b>UI_NAME</b>	Tuxedo OTMQ QSPACE				
<b>UI_IGNORE</b>	N				
<b>HISTORY_IGNORE</b>	N				
<b>COMPARE_IGNORE</b>	N				
<b>TABLE NAME</b>	TUXEDO_ECM_OTMQ_QSPACE				
<b>SINGLE_ROW</b>	Y				
<b>MIB CLASS</b>	T_OTMQSPACE				
<b>COLUMN NAME</b>	<b>DISPLAY NAME</b>	<b>TYPE</b>	<b>TYPE_FORMAT</b>	<b>IS_KEY</b>	<b>MIB FIELD</b>
APPQSPACENAME	Queue Space Name	STRING	16	N	TA_APPQSPACENAME
QMCONFIG	Queue Space pathname	STRING	128	N	TA_QMCONFIG
LMID	LMID	STRING	32	N	TA_LMID
IPCKEY	IPC Key	NUMBER	10	N	TA_IPCKEY
FIRSTTMPQ	First temp queue number	NUMBER	10	N	TA_FIRSTTMPQ

ERRORQNAME	Error Queue Name	STRING	128	N	TA_ERRORQNAME
MAXACTIONS	Max Action Number	NUMBER	10	N	TA_MAXACTIONS
MAXCURSORS	Max Cursor Number	NUMBER	10	N	TA_MAXCURSORS
MAXHANDLES	Max Handle Number	NUMBER	10	N	TA_MAXHANDLES
MAXMSG	Max Message Number	NUMBER	10	N	TA_MAXMSG
MAXOWNERS	Max Owner Number	NUMBER	10	N	TA_MAXOWNERS
MAXPAGES	Max Page Number	NUMBER	10	N	TA_MAXPAGES
MAXPROC	Max Process Number	NUMBER	10	N	TA_MAXPROC
MAXQUEUES	Max Queue Number	NUMBER	10	N	TA_MAXQUEUES
MAXTMPQUEUES	Max Temp Queue Number	NUMBER	10	N	TA_MAXTMPQUEUES
MAXTRANS	Max Transaction Number	NUMBER	10	N	TA_MAXTRANS
MEMNONPERSIST	Non-persistent Messages Memory	STRING	32	N	TA_MEMNONPERSIST

## Queue

<b>TARGET_TYPE</b>	tuxedo_OTMQ_server				
<b>UI_NAME</b>	Tuxedo OTMQ QUEUE				
<b>UI_IGNORE</b>	N				
<b>HISTORY_IGNORE</b>	N				
<b>COMPARE_IGNORE</b>	N				
<b>TABLE NAME</b>	TUXEDO_ECM_OTMQ_QUEUE				
<b>SINGLE_ROW</b>	N				
<b>MIB CLASS</b>	T_OTMQ				
<b>COLUMN NAME</b>	<b>DISPLAY NAME</b>	<b>TYPE</b>	<b>TYPE_FORMAT</b>	<b>IS_KEY</b>	<b>MIB FIELD</b>
APPQNAME	Queue Name	STRING	128	Y	TA_APPQNAME
APPQSPACENAME	Queue Space Name	STRING	16	Y	TA_APPQSPACENAME
QMCONFIG	Queue Space pathname	STRING	128	Y	TA_QMCONFIG
LMID	LMID	STRING	32	Y	TA_LMID
APPQORDER	App Queue Order	STRING	64	N	TA_APPQORDER
QUETYPE	Queue Type	STRING	64	N	TA_QUETYPE
ACTIVESTATE	Permanent Active	STRING	16	N	TA_ACTIVESTATE
PRIMQUE	Primary Queue	STRING	64	N	TA_PRIMQUE

## QSpace Alias

<b>TARGET_TYPE</b>	tuxedo_OTMQ_server				
<b>UI_NAME</b>	Tuxedo OTMQ QUEUE ALIAS				
<b>UI_IGNORE</b>	N				
<b>HISTORY_IGNORE</b>	N				
<b>COMPARE_IGNORE</b>	N				
<b>TABLE NAME</b>	TUXEDO_ECM_OTMQ_ALIAS				
<b>SINGLE_ROW</b>	N				
<b>MIB CLASS</b>	T_OTMQNAMING				
<b>COLUMN NAME</b>	<b>DISPLAY NAME</b>	<b>TYPE</b>	<b>TYPE_FORMAT</b>	<b>IS_KEY</b>	<b>MIB FIELD</b>
APPQSPACENAME	Queue Space Name	STRING	32	Y	TA_APPQSPACENAME
APPQNAME	Queue Name	STRING	128	Y	TA_APPQNAME
OTMQALIAS	Queue Name Alias	STRING	1024	Y	TA_OTMQALIAS
OTMQALIASSCOPE	Queue Alias Scope	STRING	16	N	TA_OTMQALIASSCOPE

## Properties.xml Schema

Properties.xml file is a group-level UBBCONFIG file which describes the relationship and parameters of all the servers within groups in an application package. It contains properties in the GROUPS, RMS, SERVERS, and SERVICES sections of a complete UBBCONFIG file and can have multiple groups.

The Properties.xml file is used to generate the final UBBCONFIG file when deploying the application package to a machine and its content can be modified at that time.

[Listing 3-1](#) shows a complete XML schema of Properties.xml:

### Listing 3-1 Properties.xml Schema

---

```
<?xml version="1.0" encoding="ISO-8859-1" ?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:simpleType name="packagetype">
    <xs:restriction base="xs:string">
      <xs:pattern value="TUX"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="stringtype">
    <xs:restriction base="xs:string"/>
  </xs:simpleType>
  <xs:simpleType name="stringtype249">
    <xs:restriction base="xs:string">
      <xs:maxLength value="64"/>
      <xs:pattern value="[^:*, ]+\.(zip)"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="inttype">
    <xs:restriction base="xs:positiveInteger"/>
  </xs:simpleType>
  <xs:simpleType name="rmdtype">
    <xs:restriction base="xs:integer">
      <xs:minInclusive value="1"/>
    </xs:restriction>
  </xs:simpleType>
</xs:schema>
```

```
        <xs:maxInclusive value="31"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="sroidtype">
    <xs:restriction base="xs:integer">
        <xs:minInclusive value="1"/>
        <xs:maxInclusive value="30000"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="grpnotype">
    <xs:restriction base="xs:integer">
        <xs:minInclusive value="1"/>
        <xs:maxInclusive value="29999"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="booleantype">
    <xs:restriction base="xs:string">
        <xs:pattern value="Y|N"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="wordsize">
    <xs:restriction base="xs:string">
        <xs:pattern value="32|64"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="buftypeconvtype">
    <xs:restriction base="xs:string">
```

```

    <xs:pattern value="XML2FML|XML2FML32"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="versionselect">
  <xs:restriction base="xs:string">
    <xs:pattern value="1[1-9](\.[0-9]){3,4}(_VS([0-9]){4}){0,1}"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="rqpermtypetype">
  <xs:restriction base="xs:string">
    <xs:pattern value="0?[0-7]{3}"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="maxgentype">
  <xs:restriction base="xs:integer">
    <xs:minInclusive value="1"/>
    <xs:maxInclusive value="255"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="gracetype">
  <xs:restriction base="xs:integer">
    <xs:minInclusive value="0"/>
    <xs:maxInclusive value="2147483647"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="tsstype">
  <xs:restriction base="xs:integer">

```



```

        <xs:minInclusive value="0" />
        <xs:maxInclusive value="2147483647" />
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="trantimetype">
    <xs:restriction base="xs:integer">
        <xs:minInclusive value="0" />
        <xs:maxInclusive value="2147483647" />
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="maxdistype">
    <xs:restriction base="xs:integer">
        <xs:minInclusive value="1" />
        <xs:maxInclusive value="999" />
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="mindistype">
    <xs:restriction base="xs:integer">
        <xs:minInclusive value="0" />
        <xs:maxInclusive value="999" />
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="sicachetype">
    <xs:restriction base="xs:string">
        <xs:pattern
value="DEFAULT|0|[1-9][0-9]{0,3}|[12][0-9]{4}|3[01][0-9]{3}|32[0-6][0-9]{2
}|327[0-5][0-9]|3276[0-7]" />
    </xs:restriction>

```

```
</xs:simpleType>
<xs:simpleType name="loadtype">
  <xs:restriction base="xs:integer">
    <xs:minInclusive value="1" />
    <xs:maxInclusive value="32767" />
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="blocktimetype">
  <xs:restriction base="xs:integer">
    <xs:minInclusive value="1" />
    <xs:maxInclusive value="32767" />
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="systemaccesstype">
  <xs:restriction base="xs:string">
    <xs:pattern value="FASTPATH|PROTECTED" />
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="sessionroletype">
  <xs:restriction base="xs:string">
    <xs:pattern value="BEGIN|END|NONE" />
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="affscopetype">
  <xs:restriction base="xs:string">
    <xs:pattern value="MACHINE|GROUP|SERVER" />
  </xs:restriction>
</xs:simpleType>
```

```
</xs:simpleType>
<xs:simpleType name="affstricttype">
  <xs:restriction base="xs:string">
    <xs:pattern value="MANDATORY|PRECEDENT"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="priotype">
  <xs:restriction base="xs:integer">
    <xs:minInclusive value="1"/>
    <xs:maxInclusive value="100"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="tmscounttype">
  <xs:restriction base="xs:integer">
    <xs:minInclusive value="2"/>
    <xs:maxInclusive value="256"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="svctotype">
  <xs:restriction base="xs:integer">
    <xs:minInclusive value="0"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="openinfotype">
  <xs:restriction base="xs:string">
    <xs:minLength value="1"/>
    <xs:maxLength value="256"/>
  </xs:restriction>
</xs:simpleType>
```

```

        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="clopttype">
        <xs:restriction base="xs:string">
            <xs:minLength value="1"/>
            <xs:maxLength value="1024"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="rqaddrtype">
        <xs:restriction base="xs:string">
            <xs:minLength value="1"/>
            <xs:maxLength value="30"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="minmaxtype">
        <xs:restriction base="xs:integer">
            <xs:minInclusive value="1"/>
            <xs:maxInclusive value="1000"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:complexType name="servicesection">
        <xs:all>
            <xs:element name="BUFTYPE" type="stringtype" minOccurs="0"
maxOccurs="1"/>
            <xs:element name="BUFTYPECONV" type="buftypeconvtype" minOccurs="0"
maxOccurs="1"/>
            <xs:element name="SIGNATURE_REQUIRED" type="boolean" minOccurs="0"
maxOccurs="1"/>
        </xs:all>
    </xs:complexType>

```

```

    <xs:element name="ENCRYPTION_REQUIRED" type="booleanType"
minOccurs="0"
        maxOccurs="1"/>
    <xs:element name="LOAD" type="loadType" minOccurs="0" maxOccurs="1"/>
    <xs:element name="PRIO" type="prioType" minOccurs="0" maxOccurs="1"/>
    <xs:element name="BLOCKTIME" type="blockTimeType" minOccurs="0"
        maxOccurs="1"/>
    <xs:element name="SVCTIMEOUT" type="svctotype" minOccurs="0"
        maxOccurs="1"/>
    <xs:element name="SESSIONROLE" type="sessionroletype" minOccurs="0"
        maxOccurs="1"/>
    <xs:element name="AFFINITYSCOPE" type="affscopetype" minOccurs="0"
        maxOccurs="1"/>
    <xs:element name="AFFINITYSTRICT" type="affstricttype" minOccurs="0"
        maxOccurs="1"/>
    <xs:element name="AUTOTRAN" type="booleanType" minOccurs="0"
        maxOccurs="1"/>
    <xs:element name="TRANTIME" type="trantimetype" minOccurs="0"
        maxOccurs="1"/>
</xs:all>
    <xs:attribute name="SVCNM" type="stringType" use="required"/>
</xs:complexType>
<xs:complexType name="serversection">
    <xs:all>
        <xs:element name="ENVFILE" type="stringType" minOccurs="0"
maxOccurs="1"/>
        <xs:element name="RCMD" type="stringType" minOccurs="0"
maxOccurs="1"/>

```

```

    <xs:element name="CONV" type="booleanType" minOccurs="0"
maxOccurs="1"/>
    <xs:element name="CLOPT" type="cloptType" minOccurs="0"
maxOccurs="1"/>
    <xs:element name="SEQUENCE" type="intType" minOccurs="0"
maxOccurs="1"/>
    <xs:element name="RQADDR" type="rqaddrType" minOccurs="0"
maxOccurs="1"/>
    <xs:element name="MIN" type="minmaxType" minOccurs="0" maxOccurs="1"/>
    <xs:element name="MAX" type="minmaxType" minOccurs="0" maxOccurs="1"/>
    <xs:element name="RQPERM" type="rqpermType" minOccurs="0"
maxOccurs="1"/>
    <xs:element name="REPLYQ" type="booleanType" minOccurs="0"
maxOccurs="1"/>
    <xs:element name="RPPERM" type="rqpermType" minOccurs="0"
maxOccurs="1"/>
    <xs:element name="MAXGEN" type="maxgenType" minOccurs="0"
maxOccurs="1"/>
    <xs:element name="GRACE" type="graceType" minOccurs="0"
maxOccurs="1"/>
    <xs:element name="RESTART" type="booleanType" minOccurs="0"
maxOccurs="1"/>
    <xs:element name="SYSTEM_ACCESS" type="systemAccessType" minOccurs="0"
maxOccurs="1"/>
    <xs:element name="MAXDISPATCHTHREADS" type="maxdistype" minOccurs="0"
maxOccurs="1"/>
    <xs:element name="MINDISPATCHTHREADS" type="mindistype" minOccurs="0"
maxOccurs="1"/>
    <xs:element name="THREADSTACKSIZE" type="tsstype" minOccurs="0"
maxOccurs="1"/>

```

```

        <xs:element name="SICACHEENTRIESMAX" type="sicachetype" minOccurs="0"
            maxOccurs="1" />
    </xs:all>
    <xs:attribute name="AOUT" type="stringtype" use="required" />
    <xs:attribute name="SRVID" type="srvidtype" use="required" />
</xs:complexType>
<xs:complexType name="rmssection">
    <xs:all>
        <xs:element name="TMSNAME" type="stringtype" minOccurs="0"
maxOccurs="1" />
        <xs:element name="OPENINFO" type="openinfotype" minOccurs="0"
            maxOccurs="1" />
        <xs:element name="CLOSEINFO" type="openinfotype" minOccurs="0"
            maxOccurs="1" />
        <xs:element name="TMSCOUNT" type="tmscounttype" minOccurs="0"
            maxOccurs="1" />
        <xs:element name="AUTO" type="booleantype" minOccurs="0"
maxOccurs="1" />
    </xs:all>
    <xs:attribute name="RMSNAME" type="stringtype" use="required" />
    <xs:attribute name="RMID" type="rmidtype" use="required" />
</xs:complexType>
<xs:complexType name="servicesections">
    <xs:sequence>
        <xs:element name="ServiceSection" type="servicesection" minOccurs="1"
            maxOccurs="unbounded" />
    </xs:sequence>
</xs:complexType>

```

```

<xs:complexType name="serversections">
  <xs:sequence>
    <xs:element name="ServerSection" type="serversection" minOccurs="1"
      maxOccurs="unbounded" />
  </xs:sequence>
</xs:complexType>
<xs:complexType name="rmssections">
  <xs:sequence>
    <xs:element name="RmsSection" type="rmssection" minOccurs="1"
      maxOccurs="unbounded" />
  </xs:sequence>
</xs:complexType>
<xs:complexType name="groupsection">
  <xs:all>
    <xs:element name="ENVFILE" type="stringtype" minOccurs="0"
      maxOccurs="1" />
    <xs:element name="TMSNAME" type="stringtype" minOccurs="0"
      maxOccurs="1" />
    <xs:element name="MRM" type="boolean" minOccurs="0"
      maxOccurs="1" />
    <xs:element name="SIGNATURE_REQUIRED" type="boolean" minOccurs="0"
      maxOccurs="1" />
    <xs:element name="ENCRYPTION_REQUIRED" type="boolean"
      minOccurs="0"
      maxOccurs="1" />
    <xs:element name="OPENINFO" type="openinfotype" minOccurs="0"
      maxOccurs="1" />
    <xs:element name="CLOSEINFO" type="openinfotype" minOccurs="0"

```



```

        maxOccurs="1"/>
<xs:element name="TMSCOUNT" type="tmscounttype" minOccurs="0"
        maxOccurs="1"/>
<xs:element name="RmsSections" type="rmssections" minOccurs="0"
        maxOccurs="1"/>
<xs:element name="ServerSections" type="serversections" minOccurs="0"
        maxOccurs="1"/>
<xs:element name="ServiceSections" type="servicesections"
minOccurs="0"
        maxOccurs="1"/>
</xs:all>
<xs:attribute name="GROUPNAME" type="stringtype" use="required"/>
<xs:attribute name="GRPNO" type="grpnotype" use="required"/>
</xs:complexType>
<xs:complexType name="groups">
<xs:sequence>
<xs:element name="GroupSection" type="groupsection" minOccurs="1"
        maxOccurs="unbounded"/>
</xs:sequence>
</xs:complexType>
<xs:complexType name="applicationproperties">
<xs:all>
<xs:element name="PackageName" type="stringtype249" minOccurs="1"
        maxOccurs="1"/>
<xs:element name="TuxedoVersion" type="versionselect" minOccurs="1"
        maxOccurs="1"/>
<xs:element name="SupportedOS" type="stringtype" minOccurs="1"
        maxOccurs="1"/>

```

## Enterprise Manager for Tuxedo Target Reference

```
<xs:element name="TuxedoWordSize" type="wordsize" minOccurs="1"
            maxOccurs="1"/>
<xs:element name="MachineArch" type="stringtype" minOccurs="1"
            maxOccurs="1"/>
<xs:element name="LibPath" type="stringtype" minOccurs="0"
maxOccurs="1"/>
<xs:element name="Groups" type="groups" minOccurs="1" maxOccurs="1"/>
</xs:all>
<xs:attribute name="type" type="packagetype" use="optional"/>
</xs:complexType>
<xs:element name="ApplicationProperties" type="applicationproperties"/>
</xs:schema>
```

---

# MBeans and JMX Operations

This chapter lists all the MBeans and related operations in JMX Agent.

- [Admin MBean](#)
- [Tuxedo Domain MBean](#)
- [Tuxedo Machine MBean](#)
- [Tuxedo Group MBean](#)
- [Tuxedo Server MBean](#)
- [Tuxedo System Server Mbean](#)
- [Tuxedo Bridge MBean](#)
- [Tuxedo TMS Mbean](#)
- [Tuxedo /T Domain Gateway](#)
- [Tuxedo Mainframe Adapter Gateway for SNA](#)
- [Tuxedo Mainframe Adapter Gateway for TCP](#)
- [Tuxedo Web Service Gateway](#)
- [Tuxedo Workstation Listener](#)
- [Tuxedo Jolt Listener](#)
- [Tuxedo Event Broker](#)

- [Tuxedo Queue Server](#)
- [Tuxedo QTMQ Server](#)
- [Tuxedo ART Batch System Target](#)

## Admin MBean

### MBean Name

DefaultJMXDomain:type=adminBean

### Operations

#### Boot Domain

Change the domain to active state.

**Note:** You must connect the JMX Agent in the master machine, and add `NONTUXAUTH` in the credential list. After it is booted successfully, you must reconnect the JMX Agent without `NONTUXAUTH` in the credential list to invoke other JMX methods.

Input:

`tuxconfig`: The `tuxconfig` path of master machine.

`onlyAppServers`: All servers listed in the `SERVERS` section are booted

`onlyAdminServers`: All administrative servers are booted.

Signature:

```
void bootDomain(String tuxconfig, Boolean onlyAppServers,  
boolean onlyAdminServers) throws USGException, SYSException,  
TUXException
```

#### Shutdown Domain

Make the domain to deactivate state. When `onlyAppServers` and `onlyAdminServers` are false, this method stops all administrative, TMS, and gateway servers, and servers listed in the `SERVERS` section of the configuration file named by the `TUXCONFIG` environment variable, and removes the IPC resources associated with them. For each group, all servers in the `SERVERS` section, if any, are shut down, followed by any associated gateway servers (for foreign groups) and TMS servers. Administrative servers are shut down last.

Application servers without `SEQUENCE` parameters are shut down first in reverse order of the server entries in the configuration file, followed by servers with `SEQUENCE` parameters that are shut down from high to low sequence number. If two or more servers in the `SERVERS` section of the configuration file have the same `SEQUENCE` parameter,

this method may shut down these servers in parallel. Each entry in the SERVERS section may have an optional MIN and MAX parameter.

**Note:** Must connect the JMX Agent in the master machine.

**Input:**

tuxconfig: The tuxconfig path of master machine.

onlyAppServers: All servers listed in the SERVERS section are shut down.

onlyAdminServers: All administrative servers are shut down.

delay: Suspends all selected servers immediately and waits for shutdown confirmation for only delay seconds before forcing the server to shut down by sending a SIGTERM and then a SIGKILL signal to the server.

signal: {null | " " | TERM | KILL}. null|" " is treated as TERM.

force : Shuts down BBLs even if clients are still attached.

**Signature:**

```
void shutdownDomain(String tuxconfig, Boolean onlyAppServers,
boolean onlyAdminServers, Integer delay, String signal, boolean
force) throws USGException, SYSException, TUXException,
JMXConnectionException
```

### Boot Machine

For each group whose associated LMID parameter is lmid, all TMS and gateway servers associated with the group are booted and all servers in the SERVERS section associated with those groups are executed.

**Note:** Must connect the JMX Agent in the master machine, and add “NONTUXAUTH” in the credential list. After it is booted successfully, you must reconnect the JMX Agent without NONTUXAUTH in the credential list to invoke other JMX methods.

**Input**

tuxconfig: The tuxconfig path of master machine.

lmid: The lmid of machine.

isBootBBL: Specify whether the BBL should be started on with logical name lmid.

**Signature**

```
void bootMachine(String tuxconfig, String lmid, Boolean
isBootBBL) throws USGException, SYSException, TUXException
```

### Shutdown Machine

For each group whose associated LMID parameter is lmid, all servers in the SERVERS section associated with the group are shut down, followed by any TMS and gateway servers associated with the group.

**Note:** Must connect the JMX Agent in the master machine.

**Input:**

tuxconfig: The tuxconfig path of master machine.

lmid: The lmid of machine.

delay: Suspends all selected servers immediately and waits for shutdown confirmation for only delay seconds before forcing the server to shut down by sending a SIGTERM and then a SIGKILL signal to the server.

signal: {null | "" | TERM | KILL}. null|"" is treated as TERM.

force : Shuts down BBLs even if clients are still attached.

**Signature**

```
void shutdownMachine (String tuxconfig, String lmid, Integer delay, String signal, Boolean force) throws USGException, SYSException, JMXConnectionException, TUXException
```

**Boot Group**

All TMS and gateway servers for the group whose SRVGRP parameter is grpname are started, followed by all servers in the SERVERS section associated with that group. TMS servers are started based on the TMSNAME and TMSCOUNT parameters for the group entry.

**Note:** Must connect the JMX Agent in the master machine.

**Input**

tuxconfig: The tuxconfig path of the machine which group is located in.

grpname: The name of Tuxedo group.

**Signature**

```
void bootGroup(String tuxconfig, String grpname) throws USGException, SYSException, TUXException
```

**Shutdown Group**

All servers in the SERVERS section associated with the specified group (that is, for which the SRVGRP parameter is set to grpname) are shut down, followed by all TMS and gateway servers for the group. TMS servers are shut down based on the TMSNAME and TMSCOUNT parameters for the group entry. For a foreign group, the gateway servers for the associated entry in the HOST section are shut down based on GATENAME and GATECOUNT. Shutting down a gateway implies not only that the process itself is stopped; it also implies that the administrative service for the gateway and all advertised foreign services are unadvertised.

**Note:** Must connect the JMX Agent in the master machine.

**Input**

tuxconfig: The tuxconfig path of the machine which group is located in.

grpname: The name of group.

delay: Suspends all selected servers immediately and waits for shutdown confirmation for only delay seconds before forcing the server to shut down by sending a SIGTERM and then a SIGKILL signal to the server. Because the SIGKILL signal cannot be trapped, any process that receives it is terminated immediately, regardless of the code being executed by the process at that time. Such behavior may cause structural damage to the bulletin board if the process being stopped was updating the bulletin board when it was terminated.

signal:{null | "" | TERM | KILL}. null is treated as TERM.

#### Signature

```
void shutdownGroup(String tuxconfig, String grpname, Integer
delay, String signal)throws USGException, SYSException,
TUXException, JMXConnectionException
```

### Boot Server

All servers in the SERVERS section whose SRVID parameter is serverID are executed.

Note: Must connect the JMX Agent in the master machine.

#### Input

tuxconfig: The tuxconfig path of the machine which group is located in.

groupname: The namename of Tuxedo group.

serverID: The SVRID

#### Signature

```
void bootServer(String tuxconfig, String groupname, Integer
serverID) throws USGException, SYSException, TUXException
```

### Activate All Servers with Same Name

All servers in the SERVERS section are executed by server name and MIN value. Servers with a MIN=0 value are not executed.

Note: Must connect the JMX Agent in the master machine.

#### Input

tuxconfig: The tuxconfig path of the machine which the group is located in.

aout: The Tuxedo server name

#### Signature

```
void bootServer(String tuxconfig, String aout)throws
USGException, SYSException, TUXException
```

### Shutdown Server

All servers in the `SERVERS` section for which the `SRVID` parameter is set to `serverID` are shut down. Do not enter a value for `SRVID` greater than 30,000; this indicates system processes (that is, TMSs or gateway servers) that should only be shut down via the `shutdownMachine` or `shutdownGroup`.

Note: Must connect the JMX Agent in the master machine.

#### Input

`tuxconfig`: The `tuxconfig` path of the machine which the server is located in.

`grpname`: The name of Tuxedo group.

`serverid`: The `SVRID`

`delay`: Suspends all selected servers immediately and waits for shutdown confirmation for only `delay` seconds before forcing the server to shut down by sending a `SIGTERM` and then a `SIGKILL` signal to the server. Because the `SIGKILL` signal cannot be trapped, any process that receives it is terminated immediately, regardless of the code being executed by the process at that time. Such behavior may cause structural damage to the bulletin board if the process being stopped was updating the bulletin board when it was terminated.

`signal`:`{null | " " | TERM | KILL}`. `null` is treated as `TERM`.

#### Signature

```
void shutdownServer(String tuxconfig, String groupname, Integer  
serverId, Integer delay, String signal)throws USGException,  
SYSException, TUXException
```

### Shutdown All the Servers with Same Name

All servers listed in the `SERVERS` section with the name `aout` are shut down. This method can also be used to shut down System server, TMS and gateway servers.

Note: Must connect the JMX Agent in the master machine.

#### Input

`tuxconfig`: The `tuxconfig` path of the machine which group is located in.

`aout`: The Tuxedo server name.

`delay`: Suspends all selected servers immediately and waits for shutdown confirmation for only `delay` seconds before forcing the server to shut down by sending a `SIGTERM` and then a `SIGKILL` signal to the server. Because the `SIGKILL` signal cannot be trapped, any process that receives it is terminated immediately, regardless of the code being executed by the process at that time. Such behavior may cause structural damage to the bulletin board if the process being stopped was updating the bulletin board when it was terminated.

`signal`:`{null | " " | TERM | KILL}`. `null` is treated as `TERM`.



**Signature**

```
void shutdownServer(String tuxconfig, String aout, Integer
delay, String signal) throws USGException, SYSException,
TUXException
```

## Tuxedo Domain MBean

**MBean Name**

```
"<DOMAINID>_<IPCKEY>:type=tuxedo_domain".
```

**Operations****CreateMachine**

Create a Tuxedo machine instance and an MBean with `tuxedo_machine` type. The machine target will not be booted after the creation action. You need to create the bridge target then boot the machine.

**Input:**

`pmid` The machine `pmid`.  
`lmid` The machine `lmid`.  
`tuxconfig` The machine `tuxconfig`.  
`tuxdir` The Tuxedo installation directory in the created machine.  
`appdir` The application directory for the machine application.

**Signature**

```
void createMachine (String pmid, String lmid, String tuxconfig,
String tuxdir, String appdir) throws MBeanException,
SYSException, TUXException, JMXConnectionException, USGException
```

**GetParameters**

Get values for the attributes in `T_DOMAIN` which has the same `IPCKEY` with this MBean.

**Signature**

```
CompositeData getParameters() throws SYSException,
JMXConnectionException, TUXException, OpenDataException;
```

**GetParameter**

Get value for the attribute in `T_DOMAIN` which has the same `IPCKEY` with this MBean.

**Input:**

`parameterName`: The MIB attribute name.

**Signature**

Object getParameter(String parameterName) throws USGException, TUXException, SYSException, JMXConnectionException;

**SetParameter**

Set value for the attribute in T\_DOMAIN which has the same IPCKEY with this MBean.

**Input:**

parameterName The MIB attribute name.  
parameterValue The MIB attribute value.

**Signature**

void setParameter(String parameterName, Object parameterValue) throws TUXException, USGException, SYSException, JMXConnectionException, MBeanException;

**SetParameters**

Set value for the attributes in T\_DOMAIN which has the same IPCKEY with this MBean.

**Input**

parameters: The list of parameters and values in the format of CompositeData. The itemNames for parameters is the MIB attributes name which are start with "TA\_". The itemTypes is the OpenType corresponding to the MIB attributes type. And the values are the parameter's value.

Following is the type mapping between OpenType and MIB Field Type.

MIB attribute Type	OpenType
string	String
int	Integer
short	Short
long	Long
carray	String

**Signature**

Object setParameters(CompositeData parameters) throws USGException, SYSException, TUXException, JMXConnectionException, MBeanException;

**Get Routings**

Get the routings from T\_ROUTING class.

**Signature**

TabularData getRoutings () throws SYSException, TUXException, JMXConnectionException;

**Add Routing**

Add routing to T\_ROUTING class. Please make sure the MAXRFT and MAXDRT is validate for add routing.

Input:

Parameter Name	Corresponding MIB Attribute
routingName	TA_ROUTINGNAME
routingType	TA_ROUTINGTYPE
bufType	TA_BUFTYPE
field	TA_FIELD
ranges	TA_RANGES

**Signature**

void addRouting(String routingName, String routingType, String bufType, String field, String ranges) throws SYSException, TUXException, JMXConnectionException, OpenDataException;

**Delete Routing**

Delete routing from this domain.

Input:

Parameter Name	Corresponding MIB Attribute
routingName	TA_ROUTINGNAME
bufType	TA_BUFTYPE
field	TA_FIELD
type	TA_TYPE

**Signature**

void deleteRouting(String routingName, String buftype , String field, String type) throws SYSException, TUXException, JMXConnectionException;

**Set Routing Parameters**

Set the attributes value in T\_ROUTING.

Input:

Parameter Name	Corresponding MIB Attribute
routingName	TA_ROUTINGNAME
bufType	TA_BUFTYPE
field	TA_FIELD
type	TA_TYPE
parameters	The list of MIB attributes and values in the format of CompositeData.

**Signature**

```
void setRoutingParameters (String routingName, String buftype,
String field, String type, CompositeData parameters) throws
USGException, TUXException, JMXConnectionException,
SYSException;
```

**Set Routing Parameter**

Set the attribute value in T\_ROUTING.

Input:

Parameter Name	Corresponding MIB Attribute
routingName	TA_ROUTINGNAME
bufType	TA_BUFTYPE
field	TA_FIELD
type	TA_TYPE
parameterName	The MIB attribute Name
parameterValue	The MIB attribute value

**Signature**

```
void setRoutingParameter(String routingName, String buftype,
String field, String type, String parameterName, String
parameterValue) throws JMXConnectionException, SYSException,
USGException, TUXException;
```

**Get Routing Parameter**

Get the attribute's value in T\_ROUTING.

Input:

Parameter Name	Corresponding MIB Attribute
routingName	TA_ROUTINGNAME
bufType	TA_BUFTYPE
field	TA_FIELD
type	TA_TYPE
parameterName	The MIB attribute Name

**Signature:**

```
Object getRoutingParameter(String routingName, String buftype,
String field, String type, String parameterName) USGException,
TUXException, JMXConnectionException, SYSException;
```

**Swap**

Swap the master and backup which is configured in MASTER parameter.

**Signature**

```
void swap() throws TUXException,
JMXConnectionException,SYSException
```

**Tuxedo Machine MBean****MBean Name**

```
"<DOMAINID>_<IPCKEY>:type= tuxedo_machine,LMID=<LMID>"
```

## Operations

### Create Group

Create a Tuxedo group instance and an MBean with `tuxedo_group` type. The created target is not active. You need to invoke the active method for the activation.

#### Signature

```
void createGroup (String groupName, Integer groupNo) throws  
SYSException, MBeanException, USGException, TUXException,  
JMXConnectionException
```

### Create Bridge

Create a Tuxedo Bridge instance and an MBean with `tuxedo_bridge` type. The created target is not active. You need to invoke the active method for the activation.

#### Signature

```
void createBridge (String lmid, String naddr, String nlsaddr)  
throws SYSException, MBeanException, USGException,  
TUXException, JMXConnectionException
```

### GetParameter

Get value for the attribute in `T_MACHINE` which has the same LMID with this MBean.

#### Input:

`parameterName`: The MIB attribute name.

#### Signature

```
Object getParameter(String parameterName) throws USGException,  
TUXException, SYSException, JMXConnectionException;
```

### GetParameters

Get value for all attributes in `T_MACHINE` which has the same LMID with this MBean.

#### Signature

```
CompositeData getParameters() throws SYSException,  
JMXConnectionException, TUXException, OpenDataException;
```

### SetParameter

Set value for the attribute in `T_MACHINE` which has the same LMID with this MBean.

#### Input:

`parameterName` The MIB attribute name.  
`parameterValue` The MIB attribute value.

**Signature**

```
void setParameter(String parameterName, String parameterValue)
throws TUXException, USGException, SYSException,
JMXConnectionException, MBeanException;
```

**SetParameters**

Set value for the attributes in T\_MACHINE which has the same LMID with this MBean.

**Input**

Refer to the input for [“SetParameters” on page 4-8](#).

**Signature**

```
Object setParameters(CompositeData parameters) throws
USGException, SYSException, TUXException,
JMXConnectionException, MBeanException;
```

**deleteRecursively**

Delete all the Tuxedo instances and child instances associated with the MBean

**Signature**

```
void deleteRecursively() throws MBeanException, TUXException,
JMXConnectionException, SYSException, USGException;
```

**Delete**

Delete the Tuxedo instances associated with this MBean.

**Note:** All MBeans which located at the same machine with this target must be deleted first.

**Signature**

```
void delete() throws TUXException, USGException, SYSException,
JMXConnectionException, MBeanException;
```

**Migrate**

All servers running on the machine are migrated to their alternate location. RESTART=Y must be configured in server section for all the servers which need be migrated.

**Signature**

```
void migrate() throws Exception
```

**Clean**

Initiate cleanup/scanning activities on and relating to the indicated machine. If there are dead clients or servers on the machine, they will be detected at this time. If the machine has been partitioned from the application MASTER site, global bulletin board entries for that machine will be removed. This combination is allowed when the application is in the ACTIVE state and the machine is in either the ACTIVE or PARTITIONED state. Successful

return for a non-partitioned machine leaves the state unchanged. Successful return for a partitioned machine leaves the object in the INActive state.

**Signature**

```
void clean() throws MBeanException, JMXConnectionException,
TUXException, SYSException
```

**Get Native Clients**

Get all the native clients which are running on the machine.

**Output**

TablarData columns:

Column Name	Note
TA_CLIENTID	Key
TA_CLTNAME	
TA_USRNAME	
TA_TIMESTART	
TA_IDLETIME	
TA_STATE	

**Signature**

```
TabularData getNativeClients() throws TUXException,
JMXConnectionException, SYSException
```

**Suspend**

Suspend the client from making service requests (tpcall() or tpacall()), initiating conversations (tpconnect()), beginning transactions (tpbegin()), and enqueueing new requests (tpenqueue()). Clients within a transaction will be permitted to make these calls until they abort or commit the current transaction, at which time they will become suspended. Invocations of these routines will result in a TPESYSTEM error return and a system log message being generated indicating the situation. State change allowed only when in the ACTive state. Successful return leaves the object in the SUSpended state.

**Input**

clientId: Client identifier.



**Signature**

```
void suspend(String clientId) throws TUXException, SYSException,
JMXConnectionException
```

**Resume**

Change the client's state from "SUSPended" to "ACTive". Successful return leaves the object in the "ACTive" state.

**Input**

clientId: Client identifier.

**Signature**

```
void resume(String clientId) throws TUXException, SYSException,
JMXConnectionException
```

**Kill Client**

Abortively deactivate the client. State change allowed only when in the "ACTive" or "SUSPended" state. Limitation: The system may not be able to kill the client due to platform or signaling restrictions. In this case, a native client will be abortively terminated at its next access to ATMI.

**Input**

clientId: Client identifier.

**Signature**

```
void killClient(String clientId) throws TUXException,
SYSException, JMXConnectionException
```

**Get Transactions**

Get all the transactions which belong to the machine. Note that transaction attributes are primarily kept local to a site and coordinated via common transaction identifiers by transaction management servers (TMSs).

**Output**

TablarData columns:

Column Name	Note
TA_COORDLMID	
TA_TPTRANID	Key
TA_XID	

Column Name	Note
TA_STATE	
TA_TIMEOUT	
TA_GRP_COUNT	
TA_GRP_INDEX	
TA_GRP_NO	
TA_GSTATE	

**Signature**

```
TabularData getTransactions() throws TUXException,
JMXConnectionException, SYSException;
```

**Abort Transaction**

Abort the transaction for the application. State change allowed only when in the ACTIVE, ABORTONLY, or COMCALLED states. Successful return leaves the transaction in the ABORTED state.

**Input**

TPTRANID: (TA\_TPTRANID)Transaction identifier as returned from tpsuspend() mapped to a string representation.

XID: TA\_XID Transaction identifier as returned from tx\_info() mapped to a string representation.

**Signature**

```
void abortTransaction(StringTPTRANID, String XID) throws
TUXException, JMXConnectionException, SYSException
```

**Get ULOGs**

Get ULOGs in the machine.

**Input**

date: Date of user log file found or to be accessed. In the format of MMDDYY  
 startTime: The time of the user log message represented by this object. The value of this attribute is formed by multiplying the hour by 10,000, adding to that the minute multiplied by 100, and finally adding in the seconds. When used as a key field, this attribute represents the start of the time range to be accessed for messages. In the format of hhhmmss

endTime: The latest time to be considered when accessing this userlog file. In the format of hhmmss

line: The line number of the user log message returned/requested within the user log file. When used as a key field for retrieval, this value indicates the starting line within the log file.

uLogCat: Catalog name from which the message was derived, if any.

serverity: Severity of message, if any.

totalLine: Total Line number for request.

### Output

Column Name	Note
INDEX	Key
TA_MMDDYY	
TA_ULOGTIME	
TA_ULOGLINE	
TA_ULOGMSG	
TA_TPTRANID	
TA_XID	
TA_PID	
TA_THREADID	
TA_CONTEXTID	
TA_SEVERITY	
TA_ULOGCAT	
TA_ULOGMSGNUM	
TA_ULOGPROCNM	

### Signature

TabularData getULog(Integer date, Integer startTime, Integer endTime, Integer line, String uLogCat, String serverity, Integer totalLine) throws JMXConnectionException, TUXException, SYSException

## Tuxedo Group MBean

### MBean Name

```
"<DOMAINID>_<IPCKEY>:type=tuxedo_group,group_name=<GROUPNAME>" .
```

## Operations

### Create Server

Create a Tuxedo Server instance and an MBean with tuxedo\_server/tuxedo\_system\_server/ tuxedo\_domain\_gateway/ tuxedo\_event\_broker/ tuxedo\_jolt\_listener/ tuxedo\_TMA\_gateway\_SNA/ tuxedo\_TMA\_gateway\_TCP/ tuxedo\_LMS/ tuxedo\_webservice\_gateway/ tuxedo\_workstation\_listener type depends on the aoutserver name.

#### Signature

```
void createServer (String aout, Integer srvID) throws  
SYSException, MBeanException, USGException, TUXException,  
JMXConnectionException;
```

### GetParameter

Get value for the attribute in T\_GROUP which has the same group name with this MBean.

#### Input:

parameterName: The MIB attribute name.

#### Signature

```
Object getParameter (String parameterName) throws USGException,  
TUXException, SYSException, JMXConnectionException;
```

### GetParameters

Get values for all attribute in T\_GROUP which has the same group name with this MBean.

#### Signature

```
CompositeData getParameters () throws SYSException,  
JMXConnectionException, TUXException, OpenDataException;
```

### SetParameter

Set value for the attribute in T\_GROUP which has the same group name with this MBean.

#### Input:

parameterName: The MIB attribute name.

parameterValue: The MIB attribute value.

#### Signature:

```
void setParameter (String parameterName, String parameterValue)  
throws TUXException, USGException, SYSException,  
JMXConnectionException, MBeanException;
```

**SetParameters**

Set value for the attributes in T\_ GROUP which has the same group name with this MBean.

**Input**

Refer to the input for [“SetParameters” on page 4-8](#).

**Signature**

```
Object setParameters(CompositeData parameters) throws
USGException, SYSException, TUXException,
JMXConnectionException, MBeanException;
```

**CreateTMS**

Create TMS.

**Input**

Parameter Name	Corresponding MIB Attribute	Notes
rmsName	TA_RMSNAME	Those fields can be set to null for the TMS configured on Group section.
rmid	TA_RMID	
tmsName	TA_TMSNAME	

**Signature**

```
void createTMS (String rmsName, Integer rmid, String tmsName);
```

**deleteRecursively**

Delete all the Tuxedo instances and Child instances associated with the MBean

**Signature**

```
void deleteRecursively () throws MBeanException, TUXException,
JMXConnectionException, SYSException, USGException;
```

**Delete**

Delete all Tuxedo instances associated with the MBean.

**Note:** All MBeans located at this group must be deleted first.

**Signature**

```
void delete() throws TUXException, USGException, SYSException,
JMXConnectionException, MBeanException;
```

### Migrate

If the configuration file specifies the `MIGRATE` option and an alternate location for the group, all servers in the group are migrated to the alternate location.

**Note:** The `RESTRART=Y` must be configured in `ubbconfig` for all the servers which need migration.

Signature

```
void migrate() throws Exception
```

## Tuxedo Server MBean

### MBean Name

```
"<DOMAINID>_<IPCKEY>: tuxedo_server,group_name=< SRVGRP>, SRVID=<SRVID>".
```

### Operations

#### GetParameter

Get value for the attribute in `T_SERVER` which has the same `SRVID` and `SRVGRP` with this MBean.

Input:

parameterName: The MIB attribute name. For example: "TA\_MAX".

Signature

```
Object getParameter(String parameterName) throws USGException,  
TUXException, SYSException, JMXConnectionException;
```

#### GetParameters

Get all attribute and values in `T_SERVER` with the MBean's `SRVID` and `SRVGRP`.

Signature

```
CompositeData getParameters() throws SYSException,  
JMXConnectionException, TUXException, OpenDataException;
```

#### SetParameter

Set value for the attribute in `T_SERVER` which has the same `SRVID` and `SRVGRP` with this MBean.

Input:

parameterName: The MIB attribute name.  
parameterValue: The MIB attribute value.

**Signature:**

```
void setParameter(String parameterName, String parameterValue)
throws TUXException, USGException, SYSException,
JMXConnectionException, MBeanException;
```

**SetParameters**

Set value for the attributes in T\_ SERVER which has the same SRVID and SRVGRP with this MBean.

**Input**

Refer to the input for [“SetParameters” on page 4-8](#).

**Signature**

```
Object setParameters(CompositeData parameters) throws
USGException, SYSException, TUXException,
JMXConnectionException, MBeanException;
```

**Delete**

Delete both the MBean and all Tuxedo instances associated with the MBean.

**Signature**

```
void delete() throws TUXException, USGException, SYSException,
JMXConnectionException, MBeanException;
```

**Set Service parameter**

Set value for the attribute in T\_ SERVICE which has the same SRVID and SRVGRP with this MBean.

**Input**

serviceName: name of service.  
parameterName: The MIB attribute name.  
parameterValue: The MIB attribute value.

**Signature**

```
void setServiceParameter(String serviceName, String
parameterName, String parameterValue) throws TUXException,
SYSException, JMXConnectionException, USGException;
```

**Get Service Parameter**

Get the value of attribute in T\_ SERVICE which has the same SRVID and SRVGRP with this MBean.

**Input**

serviceName: name of service.  
parameterName: The MIB attribute name.

**Signature**

Object getServiceParameter(String serviceName, String parameterName) throws MBeanException, TUXException, JMXConnectionException, SYSException;

**Delete Service**

Delete service from T\_SERVICE.

**Input**

serviceName: name of Tuxedo service.

**Signature**

Object deleteService (String serviceName) throws SYSException, TUXException, USGException, JMXConnectionException, MBeanException;

**Get Service**

Get all the services from T\_SERVICE

**Output**

TablarData columns:

Column Name	Note
TA_ROUTINGNAME	
TA_BUFTYPE	
TA_STATE	
TA_AUTOTRAN	
TA_LOAD	
TA_PRIO	
TA_SVCTIMEOUT	
TA_TRANTIME	
TA_SVCTYPE	
TA_SVCRNAM	



**Signature**

```
TabularData getServices() throws SYSException, TUXException,
JMXConnectionException
```

**Suspend Service**

Limitation: State change not permitted for service names (TA\_SERVICENAME) beginning with the reserved string “\_”.

**Input**

serviceName: TA\_SERVICENAME Service name.

**Signature**

```
void suspendService(String serviceName) throws USGException,
JMXConnectionException, TUXException, SYSException
```

**Resume Service**

Activate (advertise) the service instance. State change allowed only when in the “INActive”, “SUSPended” or “INValid” states. For the purpose of determining permissions for this state transition, the active object permissions are considered (that is, --x--x--x). Successful return leaves the object in the “ACTive” state.

Limitation: State change not permitted for service names (TA\_SERVICENAME) beginning with the reserved string “.”.

**Input**

serviceName: TA\_SERVICENAME

**Signature**

```
void resumeService(String serviceName) throws USGException,
JMXConnectionException, TUXException, SYSException
```

**Tuxedo System Server Mbean**

Following server be modeled as system server MBean.

AUTHSVR
GAUTHSVR
KAUTHSVR
LAUTHSVR
TMMETADATA

TMQFORWARD
DMADM
GWADM
JREPSVR

## MBean Name

```
"<DOMAINID>_<IPCKEY>:type=tuxedo_system_server,group_name=<GROUPNAME>,SRVID=<SRVID>" .
```

## Operations

### GetParameter

Get value for the attribute in T\_SERVER which has the same SRVID and SRVGRP with this MBean.

Input:

parameterName: The MIB attribute name. For example: "TA\_MAX".

Signature

```
Object getParameter(String parameterName) throws USGException,  
TUXException, SYSException, JMXConnectionException;
```

### GetParameters

Get all attribute and values in T\_SERVER which has the same SRVID and SRVGRP with this MBean.

Signature

```
CompositeData getParameters() throws SYSException,  
JMXConnectionException, TUXException, OpenDataException;
```

### SetParameter

Set value for the attribute in T\_SERVER which has the same SRVID and SRVGRP with this MBean.

Input:

parameterName: The MIB attribute name.

parameterValue: The MIB attribute value.

**Signature:**

```
void setParameter(String parameterName, String parameterValue)
throws TUXException, USGException, SYSEException,
JMXConnectionException, MBeanException;
```

**SetParameters**

Set value for the attributes in T\_SERVER which has the same SRVID and SRVGRP with this MBean.

**Input**

Refer to the input for [“SetParameters” on page 4-8](#).

**Signature**

```
Object setParameters(CompositeData parameters) throws
USGException, SYSEException, TUXException,
JMXConnectionException, MBeanException;
```

**Delete**

Delete both the MBean and all Tuxedo instances associated with the MBean.

**Signature**

```
void delete() throws TUXException, USGException, SYSEException,
JMXConnectionException, MBeanException;
```

## Tuxedo Bridge MBean

**MBean Name**

```
"<DOMAINID>_<IPCKEY>:type= tuxedo_bridge, LMID=<LMID>"
```

LMID: specify the LMID parameter associated with the Tuxedo Machine where the bridge is running.

**Operations****GetParameter**

Get value for the attribute in T\_BRIDGE which has the same LMID with this MBean.

**Input:**

parameterName: The MIB attribute name. For example: “TA\_SENTNUM”.

**Signature**

```
Object getParameter(String parameterName) throws USGException,
TUXException, SYSEException, JMXConnectionException;
```

### GetParameters

Get all attribute and values in T\_BRIDGE with which has the same LMID with this MBean.

Signature

```
CompositeData getParameters() throws SYSException,  
JMXConnectionException, TUXException, OpenDataException;
```

### Get Remote Link Parameter

Get remote link`s parameter value.

Input:

remoteLMID: The LMID for remote machine.

parameterName: The MIB attribute Name in T\_BRIDGE

Signature

```
Object getRemoteLinkParameter(String remoteLMID, String  
parameterName) throws TUXException, JMXConnectionException,  
SYSException;
```

### Get Remote Links

Get all network connections in this bridge server.

Output

Column Name	Note
TA_LMID	Key
TA_STATE	String

Signature

```
TabularData getRemoteLinks ()throws TUXException,  
JMXConnectionException, SYSException
```

### Set Remote Link Parameters

Set the parameter for remote link in T\_BRIDGE class

Signature

```
setRemoteLinkParameters(String remoteLMID, CompositeData  
parameters) throws TUXException, JMXConnectionException,  
SYSException, USGException
```

**Suspend Remote Link**

Suspend the remote link by closing the connection between the indicated logical machines. State change allowed only when in the ACTIVE state. Successful return leaves the object in the SUSPENDED state. Limitation: Note that since the statistics reported are from the viewpoint of the source logical machine, resetting those statistics will cause them to be out of sync with the statistics reported by the destination logical machine for the same connection.

**Input**

remoteLmid: Remote machine's LMID.

**Signature**

```
void suspend (String remoteLmid) throws USGException,
             TUXException, SYSEException, JMXConnectionException;
```

**Resume Remote Link**

Reactivate the connection. This operation will fail if remoteLmid is null, if the remoteLmid is equals to the bridge Mean's lmid, if either of the two machines is not active, or if the source logical machine is not reachable. For the purpose of determining permissions for this state transition, the active object permissions are considered (that is, --x--x--x). Successful return leaves the object in the PENDING state.

**Input**

remoteLmid: Remote machine's LMID.

**Signature**

```
void resume(String remoteLmid) throws USGException,
          TUXException, SYSEException, JMXConnectionException
```

**Deactivate Remote Link**

Close the connection between the indicated logical machines. This operation will fail if only remoteLmid is null, if the remoteLmid is equals to the bridge mbean's lmid or if the two machines are not connected. State change allowed only when in the ACTIVE state. Successful return leaves the object in the INACTIVE state.

**Input**

remoteLmid: Remote machine's LMID.

**Signature**

```
void deactivate(String remoteLmid) throws USGException,
          TUXException, SYSEException, JMXConnectionException
```

## Tuxedo TMS Mbean

### MBean Name

```
"<DOMAINID>_<IPCKEY>:type=tuxedo_TMS,group_name=<GROUPNAME>,aout=<TMSNAME>,rmsname=<RMSNAME>"
```

RMSNAME: specifies the RMSNAME parameter associated with the Tuxedo TMS.

### Operations

#### GetParameter

Get value for the attribute in T\_SERVER which has the same SRVID, SRVGRP, RMSNAME and TMSNAME with this MBean.

#### Input:

parameterName: The MIB attribute name.

#### Signature

```
Object getParameter(String parameterName) throws USGException, TUXException, SYSException, JMXConnectionException;
```

#### GetParameters

Get all attribute and values in T\_SERVER which has the same SRVID, SRVGRP, RMSNAME and TMSNAME with this MBean.

#### Signature

```
CompositeData getParameters() throws SYSException, JMXConnectionException, TUXException, OpenDataException;
```

#### SetParameter

Set value for the attribute in T\_SERVER which has the same SRVID, SRVGRP, RMSNAME and TMSNAME with this MBean.

#### Input:

parameterName: The MIB attribute name.

parameterValue: The MIB attribute value.

#### Signature:

```
void setParameter(String parameterName, String parameterValue) throws TUXException, USGException, SYSException, JMXConnectionException, MBeanException;
```

**SetParameters**

Set value for the attributes in T\_SERVER which has the same SRVID, SRVGRP, RMSNAME and TMSNAME with this MBean.

**Input**

Refer to the input for [“SetParameters” on page 4-8](#).

**Signature**

```
Object setParameters(CompositeData parameters) throws
USGException, SYSException, TUXException,
JMXConnectionException, MBeanException;
```

**Delete**

Delete both the MBean and all Tuxedo instances associated with the MBean.

**Signature**

```
void delete() throws TUXException, USGException, SYSException,
JMXConnectionException, MBeanException;
```

**Tuxedo /T Domain Gateway****MBean Name**

```
"<DOMAINID>_<IPCKEY>:type=
tuxedo_domain_gateway,group_name=<GROUPNAME>,SRVID=<SRVID>" .
```

**Operations****GetParameter**

Refer to [“GetParameter” on page 4-20](#).

**GetParameters**

Refer to [“GetParameters” on page 4-20](#).

**SetParameter**

Refer to [“SetParameter” on page 4-20](#).

**SetParameters**

Refer to [“SetParameters” on page 4-21](#).

**Delete**

Refer to [“Delete” on page 4-21](#).

## Tuxedo Mainframe Adapter Gateway for SNA

### MBean Name

```
"<DOMAINID>_<IPCKEY>:type=
tuxedo_TMA_gateway_SNA,group_name=<GROUPNAME>,SRVID=<SRVID>" .
```

### Operations

#### **GetParameter**

Refer to [“GetParameter” on page 4-20](#).

#### **GetParameters**

Refer to [“GetParameters” on page 4-20](#).

#### **SetParameter**

Refer to [“SetParameter” on page 4-20](#).

#### **SetParameters**

Refer to [“SetParameters” on page 4-21](#).

#### **Delete**

Refer to [“Delete” on page 4-21](#).

## Tuxedo Mainframe Adapter Gateway for TCP

### MBean Name

```
"<DOMAINID>_<IPCKEY>:type=
tuxedo_TMA_gateway_TCP,group_name=<GROUPNAME>,SRVID=<SRVID>" .
```

### Operations

#### **GetParameter**

Refer to [“GetParameter” on page 4-20](#).

#### **GetParameters**

Refer to [“GetParameters” on page 4-20](#).

#### **SetParameter**

Refer to [“SetParameter” on page 4-20](#).

#### **SetParameters**

Refer to [“SetParameters” on page 4-21](#).



**Delete**

Refer to [“Delete” on page 4-21](#).

**Tuxedo Web Service Gateway****MBean Name**

```
"<DOMAINID>_<IPCKEY>:type=
tuxedo_webservice_gateway,group_name=<GROUPNAME>,SRVID=<SRVID>" .
```

**Operations****GetParameter**

Refer to [“GetParameter” on page 4-20](#).

**GetParameters**

Refer to [“GetParameters” on page 4-20](#).

**SetParameter**

Refer to [“SetParameter” on page 4-20](#).

**SetParameters**

Refer to [“SetParameters” on page 4-21](#).

**Delete**

Refer to [“Delete” on page 4-21](#).

**Tuxedo Workstation Listener****MBean Name**

```
"<DOMAINID>_<IPCKEY>:type=
tuxedo_workstation_listener,group_name=<GROUPNAME>,SRVID=<SRVID>" .
```

**Operations****GetParameter**

Get value for the attribute in T\_WSL .

**Input:**

parameterName: The MIB attribute name.

**Signature**

```
Object getParameter(String parameterName) throws USGException,
TUXException, SYSException, JMXConnectionException;
```

### **GetParameters**

Get all attribute and values in T\_ WSL.

#### Signature

```
CompositeData getParameters() throws SYSException,  
JMXConnectionException, TUXException, OpenDataException;
```

### **SetParameter**

Set value for the attribute in T\_ WSL.

#### Input:

parameterName: The MIB attribute name.  
parameterValue: The MIB attribute value.

#### Signature:

```
void setParameter(String parameterName, String parameterValue)  
throws TUXException, USGException, SYSException,  
JMXConnectionException, MBeanException;
```

### **SetParameters**

Set value for the attributes in T\_ WSL.

#### Input

Refer to the input for [“SetParameters” on page 4-8](#).

#### Signature

```
Object setParameters(CompositeData parameters) throws  
USGException, SYSException, TUXException,  
JMXConnectionException, MBeanException;
```

### **Delete**

Refer to [“Delete” on page 4-21](#).

### **Get Handler Parameter**

Get attribute value in T\_ WSH.

#### Input:

clientId: TA\_CLIENTID  
parameterName: The MIB attribute name. For example: “TA\_HWCLIENTS”.

#### Signature

```
Object getHandlerParameter(String clientId, String  
parameterName) throw USGException, TUXException,  
JMXConnectionException, SYSException;
```

**Get Handlers**

Get all handlers associated with the WSL.

**Input**

clientId: If clientId is null, all handlers will be return.

**Signature**

```
TabularData getHandlers(String clientId) throws TUXException,
JMXConnectionException, SYSException;
```

**Suspend Handler**

Change the State of WSH to “SUSPended”. Note: State changes to the “SUSPended” state are transitive to all clients associated with this WSH as is the resetting of a “SUSPended” WSH to “ACTive”. Additionally, “SUSPended” WSH clients will not be assigned any additional incoming clients by the WSL.

**Input:**

clientId: Client identifier for this WSH.

**Signature:**

```
void suspendHandler (String clientId) throws TUXException,
JMXConnectionException, SYSException, USGException,
MBeanException;
```

**Resume Handler**

Set the State of WSH to “ACTive”.

**Input**

clientId: Client identifier for this WSH.

**Signature**

```
void resumeHandler (String clientId) throws TUXException,
JMXConnectionException, SYSException, USGException,
MBeanException;
```

**Kill Handler**

Set the State of WSH to “DEAD”, and all connections being handled by the targeted WSH to be dropped abortively.

**Input**

clientId: Client identifier for this WSH.

**Signature**

```
void killHandler (String clientId) throws TUXException,
JMXConnectionException, SYSException, MBeanException,
USGException;
```

### Get Clients

Get all the clients associated with the WSH.

#### Input

wshClientID: WSH's identifier.

#### Signature

```
TabularData getWSClients(String wshClientID) throws  
TUXException, JMXConnectionException, SYSException
```

### Suspend Client

Suspend the client object from making service requests (tpcall() or tpacall()), initiating conversations (tpconnect()), beginning transactions (tpbegin()), and enqueueing new requests (tpenqueue()). Clients within a transaction will be permitted to make these calls until they abort or commit the current transaction, at which time they will become suspended. Invocations of these routines will result in a TPESYSTEM error return and a system log message being generated indicating the situation. State change allowed only when in the ACTIVE state. Successful return leaves the object in the SUSPENDED state.

#### Input:

clientId: Client identifier.

#### Signature

```
Void suspendClient(String clientId) throws TUXException,  
JMXConnectionException, SYSException;
```

### Resume Client

Activate a SUSPENDED client object. State change allowed only when in the SUSPENDED state. Successful return leaves the object in the ACTIVE state.

#### Input:

clientId: Client identifier.

#### Signature:

```
void resumeClient (String clientId) throws TUXException,  
JMXConnectionException, SYSException;
```

### Kill Client

Abortively deactivate the client object. State change allowed only when in the ACTIVE or SUSPENDED state. The system may not be able to kill the client due to platform or signaling restrictions. In this case, a Workstation client's connection to a WSH will be preemptively torn down.

#### Input

clientId: Client identifier.

**Signature**

```
Void killClient(String clientId) throws TUXException,
JMXConnectionException, SYSException;
```

## Tuxedo Jolt Listener

**MBean Name**

```
"<DOMAINID>_<IPCKEY>:type=
tuxedo_jolt_listener,group_name=<GROUPNAME>,SRVID=<SRVID>".
```

**Operations****GetParameter**

Get value for the attribute in T\_JSL .

**Input:**

parameterName: The MIB attribute name.

**Signature**

```
Object getParameter(String parameterName) throws USGException,
TUXException, SYSException, JMXConnectionException;
```

**GetParameters**

Get all attribute and values in T\_ JSL.

**Signature**

```
CompositeData getParameters() throws SYSException,
JMXConnectionException, TUXException, OpenDataException;
```

**SetParameter**

Set value for the attribute in T\_ JSL.

**Input:**

parameterName: The MIB attribute name.

parameterValue: The MIB attribute value.

**Signature:**

```
void setParameter(String parameterName, String parameterValue)
throws TUXException, USGException, SYSException,
JMXConnectionException, MBeanException;
```

### **SetParameters**

Set value for the attributes in T\_JSL.

#### **Input**

Refer to the input for [“SetParameters” on page 4-8](#).

#### **Signature**

```
Object setParameters(CompositeData parameters) throws  
USGException, SYSException, TUXException,  
JMXConnectionException, MBeanException;
```

### **Delete JSL**

Refer to [“Delete” on page 4-21](#).

### **Get Handlers**

Get all handlers associated with the JSL.

#### **Signature**

```
TabularData getHandlers() throws TUXException,  
JMXConnectionException, SYSException;
```

### **Suspend Handler**

Change the State of JSH to “SUSPended”.

#### **Input**

clientId: Client identifier for JSH.

#### **Signature**

```
void suspendHandler (String clientId) throws TUXException,  
JMXConnectionException, SYSException;
```

### **Resume Handler**

Activate a SUSPended JSH object.

#### **Input**

clientId: Client identifier for JSH.

#### **Signature**

```
void resumeHandler (String clientId) throws TUXException,  
JMXConnectionException, SYSException;
```

## Tuxedo Event Broker

### MBean Name

```
"<DOMAINID>_<IPCKEY>:type=
tuxedo_event_broker,group_name=<GROUPNAME>,SRVID=<SRVID>" .
```

### Operations

#### **GetParameter**

Refer to [“GetParameter” on page 4-20](#).

#### **GetParameters**

Refer to [“GetParameters” on page 4-20](#).

#### **SetParameter**

Refer to [“SetParameter” on page 4-20](#).

#### **SetParameters**

Refer to [“SetParameters” on page 4-21](#).

#### **Delete**

Refer to [“Delete” on page 4-21](#).

## Tuxedo Queue Server

### MBean Name

```
"<DOMAINID>_<IPCKEY>:type=
tuxedo_queue_server,group_name=<GROUPNAME>,SRVID=<SRVID>" .
```

### Operations

#### **GetParameter**

Refer to [“GetParameter” on page 4-20](#).

#### **GetParameters**

Refer to [“GetParameters” on page 4-20](#).

#### **SetParameter**

Refer to [“SetParameter” on page 4-20](#).

#### **SetParameters**

Refer to [“SetParameters” on page 4-21](#).

**Delete**

Refer to [“Delete” on page 4-21.](#)

**Tuxedo QTMQ Server**

**MBean Name**

```
"<DOMAINID>_<IPCKEY>:type=
tuxedo_OTMQ_server,group_name=<GROUPNAME>,SRVID=<SRVID>" .
```

**Operations**

**GetParameter**

Refer to [“GetParameter” on page 4-20.](#)

**GetParameters**

Refer to [“GetParameters” on page 4-20.](#)

**SetParameter**

Refer to [“SetParameter” on page 4-20.](#)

**SetParameters**

Refer to [“SetParameters” on page 4-21.](#)

**Delete**

Refer to [“Delete” on page 4-21.](#)

**Create Queue**

Input

Parameter Name	Value	Note
qname	string [1..127]	Queue Name. Required input field.
qorder	PRIO   TIME   LIFO   FIFO   EXPIR   null	Queue order. Optional input field. The default value is FIFO.
outoforder	NONE   TOP   MSGID   null	Out-of-ordering enqueueing. Optional input field. The default value is NONE.
maxRetries	A number and >= 0 && <= 4 byte long.	Max Retry number. Optional input field. The default value is 0.



retryDelay	A number and $\geq 0$ && $\leq 4$ byte long	Retry delay in seconds. Optional input field. The default value is 0.
defaultDeliveryPolicy	persist   nonpersist   null	Default delivery policy. Optional input field. The default value is persist
cmd	string[0..127]   null	The command to be automatically executed when the high water mark for persistent (disk-based) messages is reached. Optional input field.
defaultExpirationTime	{+seconds   NONE}	Expiration time for messages enqueued with no explicit expiration time. Optional input field. The format is +seconds where seconds is the number of seconds allowed to lapse between the time that the queue manager successfully completes the operation and the time that the message is to expire. If seconds is set to zero (0) the message expires immediately. The value of this attribute may also be set to the string NONE. The NONE string indicates that messages enqueued to the queue with no explicit expiration time do not expire. You may change the expiration time for messages already in a queue with the TA_EXPIRETIME attribute of the T_OTMQMSG class in the APPQ_MIB.
qType	{P S M U null}	Optional input field. The default value is U.
primaryQueue	string[1..127] null	Primary Queue. Optional input field.
isPermanentActive	{Y N null}	Permanent Active/or not. Optional input field. The default value is "Y".
confirmStyle	{EO EI II null}	Confirm style. Optional input field. The default value is EO

### Signature

```
Void createQueue(String qname, String qorder, String outoforder,
Integer maxRetries, Integer retryDelay, String
defaultDeliveryPolicy, String cmd, String
defaultExpirationTime, String qType, String primaryQueue,
Boolean isPermanentActive, String confirmStyle) throws
TUXException, JMXConnectionException, SYSException,
USGException;
```

## Tuxedo ART Batch System Target

### MBean Name

```
"<DOMAINID>_<IPCKEY>:type= tuxedo_batch_system,name=Batch_System".
```

### Operations

#### getBatches

Displays the existing jobs.

#### Input:

```
batchName: job name
batchID: job id
batchClass: jobs class
batchOwner: job owner
```

#### Output:

Column Name	Note
JES2_JOB_ID	Job ID
JES2_JOB_NAME	Job Name
JES2_JOB_STATUS	Job Status
JES2_JOB_SUBMITTIME	The time when the job is submitted
JES2_JOB_EXEETIME	The time when the job is executed
JES2_JOB_ENDTIME	The time when the job is ended
JES2_JOB_CLASS	Job class
JES2_JOB_TYPRUN	Job TYPRUN definition
JES2_JOB_PRTY	Job priority
JES2_JOB_SCRIPT	Job script file name
JES2_JOB_OWNER	Job owner
JES2_JOB_EXEEMAC	The machine name that the job is/was running on
JES2_JOB_CURRENT	Current running step

Column Name	Note
JES2_JOB_EXECSTATUS	Job executing status
JES2_JOB_MSG	Job executing message
JES2_JOB_FILEINFO	Job file accessing information
JES2_JOB_TYPE	Job type
JES2_JOB_CPUINFO	CPU usage in each step
JES2_JOB_USRSEC	User CPU usage seconds
JES2_JOB_USRUSEC	User CPU usage microseconds
JES2_JOB_SYSSEC	System CPU usage seconds
JES2_JOB_SYSUSEC	System CPU usage microseconds

**Signature:**

```
TabularData getBatches(String batchName, Integer batchID, String
batchClass, String batchOwner)throws MBeanException
```

**getBatchFiles**

Gets job script files under the job repository.

**Output:**

Column Name	Note
JES2_JOB_SCRIPT	Job script file name
JES2_JOB_NAME	Job name
JES2_JOB_PRTY	Job priority
JES2_JOB_CLASS	Job class
JES2_JOB_RESTARTOPTION	Restart Option
JES2_JOB_TYPRUN	Job TYPRUN definition

Column Name	Note
JES2_JOB_VERSION	Job version
JES2_JOB_STARTLABEL	Job start label

**Signature:**

TabularData getBatchFiles()throws MBeanException

**submitBatch**

Submits a job

**Input:**

batchScript: job script file name  
 batchOwner: job owner  
 batchEJROption: EJROption  
 batchShellOption: shell option  
 batchDBLogin: database connection (MT\_DB\_LOGIN)  
 batchMTEnv: environment variables

**Output:**

Column Name	Note
JES2_JOB_ID	Job ID
JES2_JOB_NAME	Job name
JES2_JOB_TYPRUN	Job TYPRUN definition
JES2_JOB_ERROR	Error message when failing

**Signature:**

TabularData submitBatch(String batchScript, String batchOwner, String batchEJROption, String batchShellOption, String batchDBLogin, String batchMTEnv) throws TUXException, SYSException, JMXConnectionException, USGException,

**cancelBatch**

Cancels job(s)

**Input:**

Refer to the input of [“getBatches” on page 4-40](#).

Output:

Column Name	Note
JES2_JOB_ID	Job ID
JES2_JOB_NAME	Job name
JES2_JOB_ERROR	Error message when failing

Signature:

```
TabularData cancelBatch(String batchName, Integer batchId,
String batchClass, String batchOwner) throws SYSException,
TUXException, JMXConnectionException
```

### **purgeBatch**

Purges job(s)

Input:

Refer to the input of [“getBatches” on page 4-40](#).

Output:

Refer to the output of [“cancelBatch” on page 4-42](#).

Signature:

```
TabularData purgeBatch(String batchName, Integer batchId,
String batchClass, String batchOwner) throws SYSException,
TUXException, JMXConnectionException
```

### **holdBatch**

Holds job(s)

Input:

Refer to the input of [“getBatches” on page 4-40](#)

Output:

Refer to the output of [“cancelBatch” on page 4-42](#)

Signature:

```
TabularData holdBatch(String batchName, Integer batchId,
String batchClass, String batchOwner) throws SYSException,
TUXException, JMXConnectionException
```

### **releaseBatch**

Releases job(s)

Input:

Refer to the input of “getBatches” on page 4-40

Output:

Refer to the output of “cancelBatch” on page 4-42

Signature:

TabularData releaseBatch(String batchName, Integer batchId, String batchClass, String batchOwner) throws SYSException, TUXException, JMXConnectionException

### **getBatchSysOuts**

Gets the job sysout

Input:

batchID: job id

Output:

<b>Column Name</b>	<b>Note</b>
JES2_JOB_SCRIPT	Job log file name
JES2_FILE_CONTENT	Job log file content

Signature:

TabularData getBatchSysOuts(Integer batchId) throws MBeanException

### **getGDGFiles**

Gets the job GDG file content.

Input:

batchID: job id  
filename: GDG file name

Output:

<b>Column Name</b>	<b>Note</b>
JES2_JOB_STATUS	Job status
JES2_FILE_CONTENT	GDG file content

**Signature:**

`CompositeData getGDGFiles(String bachID, String fileName)` throws  
`MBeanException`

## MBeans and JMX Operations



# TXST Command and Variable Reference

This chapter contains the following sections:

- [TXST Command Categories Overview](#)
- [Browse Commands](#)
- [Control Commands](#)
- [Editing Commands](#)
- [Information Commands](#)
- [Life Cycle Commands](#)
- [TXST Variable Reference](#)
- [Jython Class for Tuxedo Mbeans](#)

## TXST Command Categories Overview

TXST commands are divided into the following categories.

Command Category	Description
Browse Commands	Navigate the hierarchy of configuration or runtime beans and control the prompt display.

Control Commands	Connect to or disconnect from JMX agent or Tuxedo Domain. Exit TXST.
Editing Commands	Create or delete Mbean. Get or set parameters of Mbean.
Information Commands	Interrogate Mbeans and configuration of TXST.
Life Cycle Commands	Start, stop, suspend, resume, and migrate specified Mbean.

## Browse Commands

### cd

Use with TXST: online(connected to domain)

#### Description

Navigates the hierarchy of beans. This command uses a model that is similar to navigating a file system in a Windows or UNIX command shell. For example, to navigate back to a bean, enter `cd('../')`. The character string  `'../'` (dot-dot), refers to the directory immediately above the current directory. To get back to the root bean after navigating to a bean that is deep in the hierarchy, enter `cd('/')`.

You can navigate to beans in the current hierarchy and to any child or instance.

The `cd` command returns a stub of the bean instance, if one exists. In the event of an error, the command returns a `TXSTException`.

#### Syntax

```
cd ( mbeanName )
```

Argument	Definition
mbeanName	Path to the bean in the namespace.

## Examples

The following example navigates the hierarchy of beans. The first command navigates to the simple bean instance, the second, to the GROUP1 bean instance, and the last back up two levels to the original directory location.

```
txst:simpapp_38075: /> cd('lmid1')
txst:simpapp_38075:/lmid1> cd('lmid1')
txst:simpapp_38075:/lmid1> cd('GROUP1')
txst:simpapp_38075:/lmid1/GROUP1> cd('../..')
txst:simpapp_38075: />
```

## prompt

Use with TXST: online(connected to domain)

### Description

Toggles the display of path information at the prompt, when entered without an argument. This command is useful when the prompt becomes too long due to the length of the path.

You can also explicitly specify on or off as an argument to the command. When you specify off, TXST hides the TXST prompt and defaults to the Jython prompt. By default, the TXST prompt displays the navigation path information.

When you disable the prompt details, to determine your current location in the hierarchy, you can use the pwd command, as described in pwd.

### Syntax

```
prompt(onoff = None)
```

Argument	Definition
onoff	<p>Optional. Hides or displays TXST prompt. Valid values include off or on.</p> <p>The off argument hides the TXST prompt.</p> <p>If you run <code>prompt('off')</code>, when using TXST online, the prompt defaults to the Jython prompt. You can create a new prompt using Jython syntax. For more information about programming using Jython, see <a href="http://www.jython.org">http://www.jython.org</a>. In this case, if you subsequently enter the prompt command without arguments, TXST displays the TXST command prompt without the path information. To redisplay the path information, enter <code>prompt()</code> again, or enter <code>prompt('on')</code>.</p> <p>The on argument displays the default TXST prompt, including the path information.</p>

## Examples

The following example hides and then redisplay the path information at the prompt.

```
txst:simpapp_38075> cd('simple')
txst: simpapp_38075/simple> cd('GROUP1')

txst: simpapp_38075/simple/GROUP1> prompt('off')
>>>prompt()
txst: simpapp_38075/simple/GROUP1>
```

## pwd

Use with TXST: offline or online

## Description

Displays the current location in the bean hierarchy. This command is useful when you have turned off the prompt display of the path information using the `prompt` command, as described in `prompt`.

## Syntax

```
pwd()
```

## Examples

The following example displays the current location in the bean hierarchy.

```
txst:simpapp_38075/simple/GROUP1> pwd()
' /simple/GROUP1'
```

# Control Commands

## connect

Use with TXST: offline

### Description

Connects TXST to a Tuxedo Domain or JMX agent.

If the monitored Tuxedo domain enables authentication and Authorization, TXST must provide credentials when it attaches a Tuxedo domain. If authentication passed, the following tasks are executed afterwards. If authentication failed, the connection is rejected. For now, we only support plaintext password.

### SECURITY

- APP\_PW

Provide tuxedo application password for authentication.

- USR\_AUTH,ACL,MANDATORY\_ACL

Provide application password, user name and user password for authentication

The client name of Tuxedo users used by TXST must be 'tpsadm', otherwise connect will fail with authentication.

The client must connect master machine, otherwise it might have no right to execute 'start' command.

In the event of an error, the command returns a TXSTException.

## Syntax

```
connect(url, domainId, ipckey, appPassword, userName, password)
```

Argument	Definition
url	Listen address and listen port of the server instance, specified using the following format: [protocol://]listen-address:listen-port. If you only supply the argument url, it will connect to jmx instead of domain.
domainId	[optional]The domain's id defined in UBB.
ipckey	[optional]The ipckey defined in UBB. Value is string.
userName	[optional]Name representing the client.
password	[optional]Used for user authentication.
appPasswd	[optional]Application password.

## Examples

```
txst: /offline> connect('//slce04cn03.us.oracle.com:5037', 'simpapp',
'38075')
```

```
txst:simpapp_38075:/>
```

Above example shows how to connect to domain.

Or

```
txst: /offline> connect('//slce04cn03.us.oracle.com:5037')
```

```
txst: slce04cn03.us.oracle.com_5037:/>
```

This is an instance of connecting to jmx.

## connectDomain

Use with TXST: online(connected to JMX agent)

## Description

Connects TXST to a Tuxedo Domain from JMX agent. You must connect to jmx before invoking this command. Except without argument url, for the other information, please refer connect.

## Syntax

```
connectDomain(domainId, ipckey, appPassword, userName, password)
```

Argument	Definition
domainId	The domain's id defined in UBB.
ipckey	The ipckey defined in UBB.
userName	[optional]Name representing the client.
password	[optional]Used for user authentication.
appPasswd	[optional]Application password.

## Examples

```
txst:bjlinux16.cn.oracle.com_5037>connectDomain('simpapp', '58103')
txst:simpapp_58103:/>
```

## disconnectDomain

Use with TXST: online(connected to domain)

### Description

Disconnect TXST from a Tuxedo domain instance and go back to jmx agent connection.

In the event of an error, the command returns a TXSTException.

### Syntax

```
disconnectDomain()
```

### Examples

```
txst:simpapp_38075:/simple/GROUP1>disconnectDomain()
txst:bjlinux16.cn.oracle.com_5037>
```

## disconnect

Use with TXST: online

## Description

Disconnects TXST from a Tuxedo instance. The disconnect command does not cause TXST to exit the interactive scripting shell; it closes the current Tuxedo instance connection and resets all the variables while keeping the interactive shell alive.

In the event of an error, the command returns a TXSTException.

## Syntax

```
disconnect()
```

## Examples

```
txst:simpapp_38075:/simple/GROUP1>disconnect()  
txst:/offline>
```

## exit

Use with TXST: online or offline

## Description

Exits TXST from the user session and closes the scripting shell. By default, TXST calls `system.exit(0)`. If you would like to exit with a different exit code, you can specify a value using the `exitcode` argument.

## Syntax

```
exit( [exitcode])
```

Argument	Definition
exitcode	Optional. Exit code to set when exiting TXST.

## Examples

```
txst:simpapp_38075:/>exit(1);  
c:\jython\bin>
```



# Editing Commands

## create

Use with TXST: online(connected to domain)

### Description

Creates a bean of the specified type for the current bean.

The create command returns a stub for the newly created bean except for queue.

In the event of an error, the command returns a TXSTException.

### Syntax

```
create(name, childtype, **argv)
```

Argument	Definition
name	Name of the bean that you are creating. You can specify the full pathname of bean. Meaning of name is different from childtype:  Machine->pmid.  Group->groupName.  Bridge->lmid.  Server->aout.  TMS->tmsName.  Queue->qname.
childtype	Type of bean that you are creating. The valid value should be MACHINE, GROUP, BRIDGE, SERVER, TMS or QUEUE.
argv	The other additional parameters for this bean.

**Note:** argv, the additional parameters depend on the childMBeanType.

Except creating queue, the return value will be the instance of Mbean which you create. For queue, the return value will be None.

- Machine
  - lmid
  - tuxconfig
  - tuxdir
  - appdir
- Group
  - groupNo
- Bridge
  - naddr
  - nlsaddr
- Server
  - srvID
- TMS
  - rmsName
  - rmid
- Queue
  - qorder
  - outoforder
  - maxRetries
  - retryDelay
  - defaultDeliveryPolicy
  - cmd
  - defaultExpirationTime
  - qType
  - primaryQueue
  - isPermanentActive
  - comfirmStyle

## Examples

The following example creates a bean of type server named simpserv for the current bean, storing the stub as server1:

```
txst:simpapp_38075:/simple/GROUP1> srv1 = create("simserv", "SERVER",
srvID =40)
```

```
txst:simpapp_38075:/simple/GROUP1> ls('c')
```

```
childBean:
```

```

server                                simpserv_1
server                                simpserv_2
server                                simpserv_40
```

## delete

Use with TXST: online(connected to domain)

### Description

Deletes an instance of a bean of the specified type for the current bean.

In the event of an error, the command returns a TXSTException.

**Note:** All targets which belong to this bean must be deleted first.

### Syntax

```
delete(name, force)
```

Argument	Definition
name	Name of the bean to delete.
force	[Optional] If force is True, it will delete the specified bean and all the targets belong to it. Otherwise, it will fail if there are targets belong to this bean. The default value for this argument is False.

## Examples

The following example deletes the bean of type server named simpserv\_1:

```

txst:simpapp_38075:/simple/GROUP1>delete("simplserv_40")
txst:simpapp_38075:/simple/GROUP1>ls('c')

childBean:
      server                simplserv_1
      server                simplserv_2
    
```

## get

Use with TXST: online(connected to domain)

### Description

Returns the value of the specified attribute, or the dictionary of the specified attributes

In the event of an error, the command returns a TXSTException.

**Note:** You can list all attributes and their current values by entering ls('b').

### Syntax

```
get(attrs=None, path=None)
```

Argument	Definition
attrs	<p>Name of the attribute to be displayed. You can specify the full pathname of the attribute. If no pathname is specified, the attribute is displayed for the current object. If fullpath is set, attrs must not include pathname.</p> <p>You can specify a set of attribute's name, if so, the attribute's name must not include pathname.</p> <p>You also needn't specify the attributes, if so, get() will return all the attributes' value.</p>
path	<p>Optional. You can specify the object's pathname. The object can be others rather than current object. If not setting pathname, the attribute is displayed for the current object.</p>

### Examples

```
txst:simpapp_38075:/simple/GROUP1> dic = get(["TA_CURLMID", "TA_STATE"])
```

```
txst:simpapp_38075:/simple/GROUP1> print dic
{'TA_CURLMID': u'simple', 'TA_STATE': u'ACTIVE'}
```

Or

```
txst:simpapp_38075:/> dic = get(["TA_CURLMID","TA_STATE"],
path="/simple/GROUP1")
txst:simpapp_38075:/> print dic
{'TA_CURLMID': u'simple', 'TA_STATE': u'ACTIVE'}
```

## set

Use with TXST: online(connected to domain)

### Description

Sets the specified attribute value for the specified bean

You can list all attributes and their current values by entering ls('b')

In the event of an error, the command returns a TXSTException.

### Syntax

```
set(attrs, [path])
```

Argument	Definition
attrs	The dictionary which stores the attributes and their values.
path	Optional. You can specify the object's pathname. The object can be others rather than current object. If not setting pathname, the attribute is set for the current object.

Attributes:

attrName	Name of the attribute to be set. It is the key in dictionary
value	Value of the attribute to be set. It is the value in dictionary

## Examples

```
txst:simpapp_38075:/simple/>a = {"TA_SEC_PRINCIPAL_NAME":"SEC"}
```

```
txst:simpapp_38075:/simple/>set (a)
```

or

```
txst:simpapp_38075:/>a = {"TA_SEC_PRINCIPAL_NAME":"SEC"}
```

```
txst:simpapp_38075:/>set (a, "/simple")
```

# Information Commands

## find

Use with TXST: online(connected to domain)

### Description

Finds MBeans in the hierarchy.

TXST returns the pathname to the MBean that is specified by name.

In the event of an error, the command returns a `TXSTException`.

### Syntax

```
find([name], [beanType], [path])
```

Argument	Definition
name	Name of the MBean that you want to find. It is a Jython regular expression. If you want to match the name entirely, please add "^" at the beginning and add "\$" at the end. For example. "^simplserv_1\$"
beanType	Optional. Type of the MBean to find. If type is not set, it will search for all Mbeans which is specified by name. 'machine', 'group' or 'server' is valid.
path	Optional. You can specify the object's pathname. The object can be others rather than current object. If not setting pathname, the attribute is set for the current object.

## Examples

```
txst:simpapp_38075:/simple/GROUP1>find(name='simpserv',type='server')
/simple/GROUP1/simpserv_1
/simple/GROUP1/simpserv_2
```

## getMBean

Use with TXST: online(connected to domain)

### Description

Returns the MBean by browsing to the specified path.

In the event of an error, the command returns a TXSTException.

### Syntax

```
getMBean(path)
```

Argument	Definition
path	Path name to the MBean in the current hierarchy.

## Examples

The following example returns the MBean specified by the path.

```
txst:simpapp_38075:/simple/GROUP1>com=getMBean("/simple/GROUP1/simpserv_1"
)
txst:simpapp_38075:/simple/GROUP1>com.getType()
'server'
```

## getPath

### Description

Returns the MBean's path for the specified MBean instance

In the event of an error, the command returns a TXSTException.

## Syntax

```
getPath(bean)
```

Argument	Definition
bean	MBean instance for which you want to return the MBean path.

## Examples

The following example returns the MBean specified by the path.

```
txst:simpapp_38075:/simple/GROUP1>com=getMBean("/simple/GROUP1/simpserv_1"
)
txst:simpapp_38075:/simple/GROUP1>cd('.')
txst:simpapp_38075:/simple>path=getPath(com)
txst:simpapp_38075:/simple>print path
GROUP1/simpserv_1
```

## lookup

Use with TXST: online(connected to domain)

## Description

Looks up the specified MBean. The MBean must be a child of the current MBean

In the event of an error, the command returns a TXSTException.

## Syntax

```
lookup(name, [childtype])
```



Argument	Definition
name	Name of the MBean that you want to lookup. It is a Jython regular expression. If you want to match the name entirely, please add "^" at the beginning and add "\$" at the end. For example. "^simpserv_1\$"
childtype	Optional. The type of the MBean that you want to lookup. The type which depends on current MBean should be as below: Domain->'machine' Machine->'bridge', 'group' Group->'server'

## Examples

The following example looks up the specified server, `simpserv_1`, and stores the returned stub in the `sbean` variable.

```
txst:simpapp_38075:/simple/GROUP1>sbean=lookup( '^simpserv_1$', 'server' )
txst:simpapp_38075:/simple/GROUP1>sbean[0].getName()
`simpserv_1`
```

or

```
txst:simpapp_38075:/simple/GROUP1>sbean=lookup( "simpserv", 'server' )
txst:simpapp_38075:/simple/GROUP1>sbean[0].getName()
`simpserv_1`
txst:simpapp_38075:/simple/GROUP1>sbean[1].getName()
`simpserv_2`
```

## ls

Use with TXST: `online(connected to domain)`

### Description

Lists all the child beans and/or attributes for the current bean.

You can optionally control the output by specifying an argument. If no argument is specified, the command lists all child beans and attributes in the domain. The output is returned as a string.

In the event of an error, the command returns a `TXSTException`.

## Syntax

```
ls( ['a' | 'c' | 'b' ], [path] )
```

Argument	Definition
a	Optional. Displays all the attribute names and values for the current bean.
c	Optional. Displays all the child beans that are contained in the current bean. This argument is the default.
b	Optional. Displays all parameter names and values for the current bean.
s	Optional. Display additional info for the current Mbean. Each type mbean may have different additional info.
Path	Optional. Path name to the MBean in the current hierarchy for which you want to list all child beans and attributes.

## Examples

The following example displays all the child beans, and attribute names and values for the MBean `GROUP1`:

```
txst:simpapp_38075:/simple/GROUP1>ls()
```

## redirect

Use with TXST: `online(connected to domain)`

## Description

Redirects TXST output to the specified filename.

In the event of an error, the command returns a `TXSTException`.

## Syntax

```
redirect(outputFile, [toStdOut])
```

Argument	Definition
outputFile	Name of the file to which you want to record the TXST commands. The filename can be absolute or relative to the directory from which you enter the command.
toStdOut	Optional. Boolean value specifying whether the output should be sent to stdout. This argument defaults to true, indicating that the output will be sent to stdout.

### Limitation:

After invoking `redirect` when `toStdOut` is `TRUE`, `sys.stdout` is assigned to TXST's internal Pyobject which only supports the following functions: `write()`, `writelines()`, `flush()`, `close()`

After invoking `redirect` when `toStdOut` is `FALSE`, `sys.stdout` is assigned to `FileOutputStream`'s object.

## Examples

The following example begins redirects TXST output to the `logs/txst.log` file in the current directory:

```
txst:simpapp_38075: /> redirect('./logs/txst.log')
```

## startRecording

Use with TXST: `online(connected to domain)`

### Description

Records all user interactions with TXST. This command is useful for capturing commands for replay. In the event of an error, the command returns a `TXSTException`.

### Limitation:

This command doesn't take effect when TXST works as a Jython Module, because the interpreter is `InteractiveInterpreter` but not `TXSTInterpreter`. This command depends on `TXSTInterpreter`.

## Syntax

```
startRecording(recordFile)
```

Argument	Definition
recordFile	Name of the file to which you want to record the commands. The filename can be absolute or relative to the directory from which you invoked TXST.

## Examples

The following example begins recording commands in the record.py file:

```
txst:simpapp_38075: /> startRecording('c:/myScripts/record.py')
```

## stopRecording

Use with TXST: online(connected to domain)

### Description

Stops recording TXST commands. For information about starting a recording

In the event of an error, the command returns a TXSTException.

Limitation:

This command doesn't take effect when TXST works as a Jython Module, because the interpreter is InteractiveInterpreter but not TXSTInterpreter. This command depends on TXSTInterpreter.

### Syntax

```
stopRecording()
```

### Examples

```
txst:simpapp_38075: /> stopRecording()
```

## stopRedirect

Use with TXST: online(connected to domain)

## Description

Stops the redirection of TXST output to a file, if redirection is in progress.

In the event of an error, the command returns a TXSTException.

## Syntax

```
stopRedirect()
```

## Examples

```
txst:simpapp_38075: /> stopRedirect()
```

## easeSyntax

Use with TXST: online or offline

## Description

This command allow users to invoke some commands without typing the parenthese.

If you want to turn off the easy syntax mode, just simply issue this command again.

The supported commands are as follows:

```
cd, ls, find, connect, startRecording, migrate, resume, shutdown, start,
suspend, prompt, disconnect, pwd, stopRecording, stopRedirect, easeSyntax,
exit.
```

## Syntax

```
easeSyntax()
```

## Examples

```
txst:simpapp_58103: /> easeSyntax()
```

```
easeSyntax on now.
```

```
txst:simpapp_58103: /> ls c
```

```
childBean:
```

```
    tuxedo_machine
```

```
L1
```

# Life Cycle Commands

## migrate

Use with TXST: online(connected to domain)

### Description

Migrates the servers in the specified scope to an alternate location. This command only is supported by Machine MBean and Group's.

In the event of an error, the command returns a TXSTException.

### Syntax

```
migrate( name )
```

Argument	Definition
name	Optional. Name of the Machine MBean or Group's in which the server should be migrated. If not specified, this argument default is current MBean.

### Examples

```
txst:simpapp_38075:/simple/GROUP1> migrate()
```

or

```
txst:simpapp_38075:/> migrate("/simple/GROUP1")
```

## resume

Use with TXST: online(connected to domain)

### Description

Resume an object that is suspended.

In the event of an error, the command returns a TXSTException.

### Syntax

```
resume( targetName, Mbean )
```

Argument	Definition
targetName	The Name of object to resume Machine->client Server->service Bridge->remoteLmid WSH->handler JSH->handler
Mbean	Optional. Name of the MBean which object will be suspend. The argument defaults to the current MBean. Support the following MBeans: Machine, Server, Bridge, WSH, JSH

## Examples

Resume the client named 'clientID' which belongs to machine 'simple':

```
txst:simpapp_38075:/simple> resume("clientID")
```

or

```
txst:simpapp_38075:/> resume("clientID", "/simple")
```

## shutdownDomain

Use with TXST: online(connected to domain)

### Description

Gracefully shutdown the tuxedo domain. If domain is shutdown successfully, TXST will disconnect from domain and go back to connect jmx.

In the event of an error, the command returns a TXSTException.

### Notes:

- JMX client must connect to master node, otherwise this command will fail.
- TXST must connect to domain, otherwise this command will fail.

## Syntax

```
shutdownDomain()
```

## Examples

```
txst:simpapp_58103:/>shutdownDomain()
Shutting down server processes ...
      Server Id = 1 Group Id = GROUP1 Machine = L1:      SIGTERM
Shutting down admin processes ...
      Server Id = 0 Group Id = L1 Machine = L1:          shutdown succeeded
2 processes stopped.
txst:bjlinux16.cn.oracle.com_5037>
```

## startDomain

Use with TXST: online(connected to JMX agent)

### Description

Start the tuxedo domain. If invoking is success, you can connect to domain.

In the event of an error, the command returns a TXSTException.

### Notes:

- TXST must connect to JMX agent, otherwise this command will fail.
- This command will fail if TXST is connected to domain.

## Syntax

```
startDomain(tuxconfig)
```

Argument	Definition
tuxconfig	The TUXCONFIG of tuxedo instance.



## Examples

```
txst:bjlinux16.cn.oracle.com_5037>startDomain('/nfs/users/bosguo/workspace
/txst/simpapp/tuxconfig')
INFO: Oracle Tuxedo, Version 12.1.3.0.0 beta, 64-bit, Patch Level (none)
Booting admin processes ...
exec BBL -A :
    process id=1996 ... Started.
Booting server processes ...
exec server -A :
    process id=1999 ... Started.
2 processes started.
txst:bjlinux16.cn.oracle.com_5037>
```

## shutdown

Use with TXST: online(connected to domain)

### Description

Gracefully shuts down the specified object

In the event of an error, the command returns a TXSTException.

**Note:** JMX client must connect to master node, otherwise this command will fail.

### Syntax

```
shutdown( name )
```

Argument	Definition
name	Optional. Name of the MBean to shutdown. This argument specifies the MBean with two ways. First, name could be the valid path of the Mbean. For instance, '/SITE1/QUEGRP' is a path of group. If no specified, this argument default is current MBean. TMS is not supported by this method. Second, name could contain the information of 'AOUT' and the location which the related servers are located in. These two parts must be connected by ':'. And this method is only valid for Server. For instance, '/SITE1: simpserv' means the servers which belong to 'SITE1'. Support the following MBeans: Machine, Group, Server

## Examples

```
shutdown the server `simpserv_01`
txst:simpapp_38075:/simple/GROUP1/simpserv_01> shutdown()

#simpserv_01 is shutdown.

or

shutdown the servers which AOUT is `simpserv` in machine simple
txst:simpapp_38075:/simple>shutdown("/simple:simpserv")

#simpserv_01, simpserv_02 are shutdown.
```

## start

Use with TXST: online(connected to domain)

### Description

Start the specified object

In the event of an error, the command returns a TXSTException.

**Note:** JMX client must connect to master node, otherwise this command will fail.

## Syntax

```
start ( name )
```

Argument	Definition
name	Optional. Name of the MBean to start. This argument specifies the MBean with two ways. First, name could be the valid path of the Mbean. For instance, '/SITE1/QUEGRP' is a path of group. If no specified, this argument default is current MBean. TMS is not supported by this method. Second, name could contain the information of 'AOUT' and the location which the related servers are located in. These two parts must be connected by '.'. This method is only valid for Server . For instance, '/SITE1:simpserv' means the servers which belong to 'SITE1'. Support the following MBeans: Machine, Group, Server

## Examples

```
boot the server 'simpserv_01'
txst:simpapp_38075:/simple/GROUP1/simpserv_01> start()

#simpserv_01 is booted.

or

boot the server which AOUT is 'simpserv'
txst:simpapp_38075:/simple>start("/simple:simpserv")

#simpserv_01, simpserv_02 are booted.
```

## suspend

Use with TXST: online(connected to domain)

## Description

Suspends the specified object.

In the event of an error, the command returns a TXSTException.

## Syntax

```
suspend(targetName, Mbean)
```

Argument	Definition
targetName	The Name of object to suspend Machine->client Server->service Bridge->remoteLmid WSH->handler JSH->handler
Mbean	Optional. Name of the MBean which object will be suspend. The argument defaults to the current MBean. Support the following MBeans: Machine, Server, Bridge, WSH, JSH

## Examples

Suspend the client named 'clientID' which belongs to machine 'simple'

```
txst:simpapp_38075:/simple> suspend("clientID")
```

or

```
txst:simpapp_38075:/> suspend("clientID", "simple")
```

# TXST Variable Reference

Following table describes TXST variables and their common usage.

Variable	Description
cmo	Current Management Object. The cmo variable is set to the bean instance to which you navigate using TXST. You use this variable to perform any create, get, set, or invoke method on the current bean instance. By default, this variable is initialized to the root of all configuration management objects, DomainMBean.
connected	Boolean value specifying whether TXST is connected to a running server. TXST sets this variable to true when connected to a running server; otherwise, TXST sets it to false.
domainMbean	Name of the domain to which TXST is connected.
exitonerror	Boolean value specifying whether TXST terminates script execution when it encounters an exception. This variable defaults to true, indicating that script execution is terminated when TXST encounters an error. This variable is not applicable when running TXST in interactive mode.
mbsc	MBeanServerConnection object that corresponds to the current location in the hierarchy.
recording	Boolean value specifying whether TXST is recording commands. TXST sets this variable to true when the startRecording command is entered; otherwise, TXST sets this variable to false.

## Jython Class for Tuxedo Mbeans

In TXST, all the Tuxedo Mbeans have corresponding Jython class. Jython class has a set of function to implements corresponding Mbean's operations. This section describes the Jython class in TXST.

### Mbean

This is the root class for other classes in TXST. It provides a set of basic operation.

## **getName**

get the object's name

## **getType**

get the object's type

## **getMbeanName**

get the MBean's objectName.

# **DomainMbean**

Inherited from MBean

## **CreateMachine**

### Syntax

```
CreateMachine(pmid, lmid, tuxconfig, tuxdir, appdir)
```

This function invokes JMX interface createMachine of Domain Mbean. For more information, refer to [Tuxedo Domain MBean](#).

## **GetParameters**

### Syntax

```
GetParameters()
```

### Output

A dictionary which includes all attributes and values.

This function invokes JMX interface getParameters of Domain Mbean. For more information, refer to [Tuxedo Domain MBean](#).

## GetParameter

### Syntax

```
GetParameter(name)
```

This function invokes JMX interface `getParameter` of Domain Mbean. For more information, refer to [Tuxedo Domain MBean](#).

## SetParameters

### Syntax

```
SetParameters(data)
```

### Input

data: A dictionary which includes the attributes and values to be set.

This function invokes JMX interface `setParameters` of Domain Mbean. For more information, refer to [Tuxedo Domain MBean](#).

## SetParameter

### Syntax

```
SetParameter(name, value)
```

This function invokes JMX interface `setParameter` of Domain Mbean. For more information, refer to [Tuxedo Domain MBean](#).

## GetRoutings

### Syntax

```
GetRoutings()
```

### Output

A list includes all attributes and values of all routings.

This function invokes JMX interface `getRouting` of Domain Mbean. For more information, refer to [Tuxedo Domain MBean](#).

## Add Routing

### Syntax

```
AddRouting(routingName, routingType, bufType, field, ranges)
```

This function invokes JMX interface `addRouting` of Domain Mbean. For more information, refer to [Tuxedo Domain MBean](#).

## DeleteRouting

### Syntax

```
DeleteRouting(routingName, buftype, field, type)
```

This function invokes JMX interface `deleteRouting` of Domain Mbean. For more information, refer to [Tuxedo Domain MBean](#).

## SetRoutingParameter

### Syntax

```
SetRoutingParameter(routingName, buftype, field, type,  
parameterName, parameterValue)
```

This function invokes JMX interface `setRoutingParameter` of Domain Mbean. For more information, refer to [Tuxedo Domain MBean](#).

## SetRoutingParameters

### Syntax

```
SetRoutingParameters(routingName, buftype, field, ta_type, attrs)
```

### Input

`attrs`: A dictionary includes the attributes and values to be set.

This function invokes JMX interface `setRoutingParameters` of Domain Mbean. For more information, refer to [Tuxedo Domain MBean](#).



## GetRoutingParameter

### Syntax

```
GetRoutingParameter (routingName, buftype, field, type, parameterName)
```

### Output

A dictionary includes the attribute and the value.

This function invokes JMX interface `getRoutingParameter` of Domain Mbean. For more information, refer to [Tuxedo Domain MBean](#).

## Swap

### Syntax

```
Swap ( )
```

This function invokes JMX interface `swap` of Domain Mbean. For more information, refer to [Tuxedo Domain MBean](#).

## Tuxedo\_Domain

### Syntax

```
Tuxedo_Domain()
```

### Output

```
TUXEDO_ECM_DOMAIN_MBEAN
```

Field Name	Description
------------	-------------

## TXST Command and Variable Reference

TA_AUTOTRAN	For information about these MIB attributes in T_DOMAIN refer to <a href="#">Oracle Tuxedo File Formats, Data Descriptions, MIBs, and System Processes Reference</a> .
TA_TRANTIME	
TA_IPCKEY	
TA_MASTER	
TA_MODEL	
TA_DOMAINID	
TA_UID	
TA_GID	
TA_PERM	
TA_MAXACCESSERS	
TA_MAXSERVERS	
TA_MAXSERVICES	
TA_MAXGROUPS	
TA_MAXNETGROUPS	
TA_MAXMACHINES	
TA_MAXQUEUES	
TA_MAXACLGROUPS	
TA_MAXGTT	
TA_MAXCONV	
TA_MAXBUFTYPE	
TA_MAXBUFSTYPE	
TA_MAXDRT	
TA_MAXRFT	
TA_MAXRTDATA	
TA_MAXSPDATA	

TA_MAXTRANTIME	For information about these MIB attributes in T_DOMAIN refer to <a href="#">Oracle Tuxedo File Formats, Data Descriptions, MIBs, and System Processes Reference</a> .
TA_CMTRET	
TA_LDBAL	
TA_SYSTEM_ACCESS	
TA_OPTIONS	
TA_USIGNAL	
TA_SECURITY	
TA_SSL_RENEGOTIATION	
TA_AUTHSVC	
TA_SCANUNIT	
TA_SANITYSCAN	
TA_DBBLWAIT	
TA_BBLQUERY	
TA_BLOCKTIME	
TA_NOTIFY	
TA_SEC_PRINCIPAL_NAME	
TA_SEC_PRINCIPAL_LOCATION	
TA_SEC_PRINCIPAL_PASSVAR	
TA_SIGNATURE_AHEAD	
TA_SIGNATURE_BEHIND	
TA_SIGNATURE_REQUIRED	
TA_ENCRYPTION_REQUIRED	

## MachineMbean

Inherited from MBean

### CreateGroup

#### Syntax

```
CreateGroup(groupName, groupNo)
```

This function invokes JMX interface `createGroup` of Machine Mbean.

## CreateBridge

### Syntax

```
CreateBridge(lmid,naddr,nlsaddr)
```

This function invokes JMX interface `createBridge` of Machine Mbean.

## GetParameters

### Syntax

```
GetParameters()
```

### Output

A dictionary which includes all attributes and values.

This function invokes JMX interface `getParameters` of Machine Mbean.

## GetParameter

### Syntax

```
GetParameter(name)
```

This function invokes JMX interface `getParameter` of Machine Mbean.

## SetParameters

### Syntax

```
SetParameters(data)
```

### Input

`data`: A dictionary which includes the attributes and values to be set.

This function invokes JMX interface `setParameters` of Machine Mbean.

## SetParameter

### Syntax

```
SetParameter(name, value)
```

This function invokes JMX interface setParameter of Machine Mbean.

## DeleteRecursively

### Syntax

```
DeleteRecursively()
```

Invokes JMX interface deleteRecursively of Machine Mbean.

## Delete

### Syntax

```
Delete()
```

Invokes JMX interface delete of Machine Mbean.

## Migrate

### Syntax

```
Migrate()
```

Invokes JMX interface migrate of Machine Mbean.

## Clean

### Syntax

```
Clean()
```

Invokes JMX interface clean of Machine Mbean.

## GetNativeClients

### Syntax

```
GetNativeClients()
```

Invokes JMX interface `getNativeClients` of Machine Mbean.

## Suspend

### Syntax

```
Suspend(clientId)
```

Invokes JMX interface `suspend` of Machine Mbean.

## Resume

### Syntax

```
Resume(clientId)
```

Invokes JMX interface `resume` of Machine Mbean.

## KillClient

### Syntax

```
KillClient(clientId)
```

Invokes JMX interface `killClient` of Machine Mbean.

## GetTransactions

### Syntax

```
GetTransactions()
```

### Output

A list includes all transactions' attributes.

This function invokes JMX interface `get Transactions` of Machine Mbean.

## AbortTransaction

### Syntax

```
AbortTransaction(transId,xId)
```

Invokes JMX interface abortTransaction of Machine Mbean.

## GetUlog

### Syntax

```
GetUlog(date, startTime, endTime, line, ulogCat, serverity, totalLine)
```

### Output

A list includes all attributes of ulogs.

Invokes JMX interface getULog of Machine Mbean.

## Client\_Connections

### Syntax

```
Client_Connections()
```

### Output

```
CLIENT_CONNECTION_NUMBER_MBEAN
```

Field Name	Description
TA_CURCLIENTS	Native Clients Number
TA_CURWSCLIENTS	Workstation Clients Number
TA_CURJOLTCLIENTS	Jolt Clients Number

## Machine\_Operation\_Statistics

### Syntax

```
Machine_Operation_Statistics ()
```

## Output:

MACHINE\_OPERATION\_STATISTICS\_MBEAN

Field Name	Description
TA_NUMCONV	Following MIB attribute in T_Machine is returned. For information about attribute definition, refer to <a href="#">Oracle Tuxedo File Formats, Data Descriptions, MIBs, and System Processes Reference</a> .
TA_NUMDEQUEUE	
TA_NUMENQUEUE	
TA_NUMPOST	
TA_NUMREQ	
TA_NUMSUBSCRIBE	
TA_NUMTRAN	
TA_NUMTRANABT	
TA_NUMTRANCMT	
TA_WKCOMPLETED	
TA_TIMESTART	
TA_CURTIME	

**Tuxedo\_machines**

## Syntax

Tuxedo\_machines()

## Output

TUXEDO\_ECM\_MACHINE\_MBEAN

Field Name	Description
------------	-------------



TA_P MID	For information about these MIB attributes in T_MACHINE, refer to <a href="#">Oracle Tuxedo File Formats, Data Descriptions, MIBs, and System Processes Reference</a> .
TA_L MID	
TA_APPDIR	
TA_TUXCONFIG	
TA_TUXDIR	
TA_UID	
TA_GID	
TA_PERM	
TA_BRTHREADS	
TA_MAXACCESSERS	
TA_MAXWSCLIENTS	
TA_MAXACLCACHE	
TA_MAXCONV	
TA_MAXPENDINGBYTES	
TA_MAXGTT	
TA_TYPE	
TA_CMPLIMIT	
TA_TMNETLOAD	
TA_SPINCOUNT	
TA_TLOGDEVICE	
TA_TLOGOFFSET	
TA_TLOGNAME	
TA_TLOGSIZE	
TA_ULOGPFX	
TA_TUXOFFSET	

TA_ENVFILE	For information about these MIB attributes in T_MACHINE, refer to <a href="#">Oracle Tuxedo File Formats, Data Descriptions, MIBs, and System Processes Reference</a> .
TA_SEC_PRINCIPAL_NAME	
TA_SEC_PRINCIPAL_LOCATION	
TA_SEC_PRINCIPAL_PASSVAR	
TA_SIGNATURE_REQUIRED	
TA_ENCRYPTION_REQUIRED	
TA_SICACHEENTRIESMAX	

## GroupMbean

Inherited from MBean

### CreateServer

#### Syntax

```
CreateServer(aout, srvID)
```

Invokes JMX interface createServer of Group Mbean.

### GetParameters

#### Syntax

```
GetParameters()
```

#### Output

A dictionary which includes all attributes and values.

This function invokes JMX interface getParameters of Group Mbean.

### GetParameter

#### Syntax

```
GetParameter(name)
```

This function invokes JMX interface `getParameter` of Group Mbean.

## SetParameters

### Syntax

```
SetParameters(data)
```

### Input

`data`: A dictionary which includes the attributes and values to be set.

This function invokes JMX interface `setParameters` of Group Mbean.

## SetParameter

### Syntax

```
SetParameter(name, value)
```

This function invokes JMX interface `setParameter` of Group Mbean.

## CreateTMS

### Syntax

```
CreateTMS(rmsName, rmid, tmsName)
```

Invokes JMX interface `createTMS` of Group Mbean.

## DeleteRecursively

### Syntax:

```
DeleteRecursively()
```

Invokes JMX interface `deleteRecursively` of Group Mbean.

## Delete

### Syntax

```
Delete()
```

Invokes JMX interface delete of Group Mbean.

## Migrate

### Syntax

```
Migrate()
```

Invokes JMX interface migrate of Group Mbean.

## Tuxedo\_groups

### Syntax

```
Tuxedo_groups()
```

### Output

```
TUXEDO_ECM_GROUPS_MBEAN
```

Field Name	Description
------------	-------------

TA_SRVGRP	For information about these MIB attributes in T_GROUP, refer to <a href="#">Oracle Tuxedo File Formats, Data Descriptions, MIBs, and System Processes Reference</a> .
TA_LMID	
TA_GRPNO	
TA_TMSNAME	
TA_ENVFILE	
TA_TMSCOUNT	
TA_SEC_PRINCIPAL_NAME	
TA_SEC_PRINCIPAL_LOCATION	
TA_SEC_PRINCIPAL_PASSVAR	
TA_SIGNATURE_REQUIRED	
TA_ENCRYPTION_REQUIRED	
TA_OPENINFO	
TA_CLOSEINFO	
TA_MRM	

## BridgeMbean

Inherited from MBean

### GetParameters

#### Syntax

```
GetParameters()
```

#### Output

A dictionary which includes the attributes.

This function invokes JMX interface `getParameters()` of Bridge Mbean.

## GetParameter

### Syntax

```
GetParameter (name)
```

This function invokes JMX interface `getParameter()` of Bridge Mbean.

## GetRemoteLinks

### Syntax

```
GetRemoteLinks ()
```

### Output

A list which includes the attributes.

This function invokes JMX interface `getRemoteLinks ()` of Bridge Mbean.

## GetRemoteLinkParameter

### Syntax

```
GetRemoteLinkParameter(lmid, name)
```

This function invokes JMX interface `getRemoteLinkParameter ()` of Bridge Mbean.

## SetRemoteLinkParameters

### Syntax

```
SetRemoteLinkParameters (lmid, data)
```

### Input

data: A dictionary which includes the attributes.

This function invokes JMX interface `setRemoteLinkParameters ()` of Bridge Mbean.

## SuspendRemoteLink

### Syntax

```
SuspendRemoteLink (lmid)
```

This function invokes JMX interface suspend () of Bridge Mbean.

## ResumeRemoteLink

### Syntax

```
ResumeRemoteLink (lmid)
```

This function invokes JMX interface resume () of Bridge Mbean.

## DeactivateRemoteLink

### Syntax

```
DeactivateRemoteLink (lmid)
```

This function invokes JMX interface deactive () of Bridge Mbean.

## Bridge\_Remote\_Link\_Statistics

### Syntax

```
Bridge_Remote_Link_Statistics()
```

### Output

```
REMOTE_LINK_STATISTICS_MBEAN
```

Field Name	Description
TA_LMID	Destination logical machine identifier (LMID2) for network connection.
TA_MONINBOUNDNUM	Total Inbound Network Messages since bridge was started.
TA_MONOUTBOUNDNUM	Total Outbound Network Messages since bridge was started.

TA_MONINBOUNDBYT	Total Inbound Network Messages size in bytes since bridge was stated.
TA_MONOUTBOUNDBYT	Total Outbound Network Messages size in bytes since bridge was stated.
TA_SENTNUM	Number of messages sent from the source logical machine to the destination logical machine.
TA_SENTBYT	Number of bytes sent from the source logical machine to the destination logical machine.
TA_SENDDNUM	Number of messages sends from the source logical machine to the destination logical machine.
TA_SENDBYT	Number of bytes sends from the source logical machine to the destination logical machine.
TA_TIMERESTART	Restart Time, in seconds, since 00:00:00 UTC, January 1, 1970
TA_CURTIME	Current time, in seconds, since 00:00:00 UTC, January 1, 1970
TA_CONTIME	Connection time, in seconds, since 00:00:00 UTC, January 1, 1970

## Bridge\_Queue\_Statistics

### Syntax

```
Bridge_Queue_Statistics()
```

### Output

```
BRIDGE_QUEUE_STATISTICS_MBEAN
```

Field Name	Description
TA_MSG_QNUM	Number of messages currently on the queue.



## Tuxedo\_ECM\_Bridge

### Syntax

```
Tuxedo_ECM_Bridge()
```

### Output

```
TUXEDO_ECM_BRIDGE_MBEAN
```

Field Name	Description
TA_LMID	For information about these MIB attributes in T_MACHINE, refer to <a href="#">Oracle Tuxedo File Formats, Data Descriptions, MIBs, and System Processes Reference</a> .
TA_NADDR	
TA_BRIDGE	
TA_NLSADDR	
TA_FADDR	
TA_FRANGE	
TA_MINENCRYPTBITS	
TA_MAXENCRYPTBITS	

## ServerMbean

Inherited from MBean

### GetParameters

#### Syntax

```
GetParameters()
```

#### Output

A dictionary which includes all attributes and values.

This function invokes JMX interface getParameters of Server Mbean.

## GetParameter

### Syntax

```
GetParameter(name)
```

This function invokes JMX interface `getParameter` of Server Mbean.

## SetParameters

### Syntax

```
SetParameters(data)
```

### Input

`data`: A dictionary which includes the attributes and values to be set.

This function invokes JMX interface `setParameters` of Server Mbean.

## SetParameter

### Syntax

```
SetParameter(name, value)
```

This function invokes JMX interface `setParameter` of Server Mbean.

## Delete

### Syntax

```
Delete()
```

This function invokes JMX interface `delete` of Server Mbean.

## SetServiceParam

### Syntax

```
SetServiceParam(serviceName, parameterName, parameterValue)
```

Invokes JMX interface `setServiceParameter` of Server Mbean.

## GetServiceParam

### Syntax

```
GetServiceParam(serviceName,parameterName)
```

### Output

A dictionary includes the attribute name and value.

Invokes JMX interface getServiceParameter of Server Mbean.

## DeleteService

### Syntax

```
DeleteService(serviceName)
```

Invokes JMX interface deleteService of Server Mbean.

## GetServices

### Syntax

```
GetServices()
```

### Output

A list includes all services' attributes.

Invokes JMX interface getServices of Server Mbean.

## SuspendService

### Syntax

```
SuspendService(serviceName)
```

Invokes JMX interface suspendService of Server Mbean.

## ResumeService

### Syntax

```
ResumeService(serviceName)
```

Invokes JMX interface resumeService of Server Mbean.

## Server\_Statistics

### Syntax

```
Server_Statistics()
```

### Output

```
SERVER_STATISTICS_MBEAN
```

Field Name	Description
------------	-------------

TA_BASESRVID	For information about these MIB attributes in T_SERVER, refer to <a href="#">Oracle Tuxedo File Formats, Data Descriptions, MIBs, and System Processes Reference</a> .
TA_SRVID	
TA_STATE	
TA_NUMDISPATCHTHRE ADS	
TA_NUMCONV	
TA_NUMDEQUEUE	
TA_NUMENQUEUE	
TA_NUMPOST	
TA_NUMREQ	
TA_NUMSUBSCRIBE	
TA_NUMTRAN	
TA_NUMTRANABT	
TA_NUMTRANCMT	
TA_TOTWORKL	
TA_TIMERESTART	
TA_CURTIME	

## Service\_Statistics

### Syntax:

```
Service_Statistics()
```

### Output

```
SERVICE_STATISTICS_MBEAN
```

Field Name	Description
TA_SERVICENAME	Service name
TA_SRVID	Unique (within the server group) server identification number.
TA_TOTMSGSIEMEGA	Total Message size since service was started. The unit is Mega
TA_TOTMSGSIZEBYTE	Total Message size, since service was started, in byte mod 1048576.
TA_TOTEXECTIMESEC	Total execution time since service was started. The unit is seconds.
TA_TOTEXECTIMEUSEC	Total execution time, since service was started, in microseconds mod 1000000.
TA_TOTCPUIMESEC	Total CPU time since service was started. The unit is seconds.
TA_TOTCPUIMEUSEC	Total CPU time, since service was started, in microseconds mod 1000000.
TA_TOTSUCCNUM	Total successes request number since service was started.
TA_TOTSFAILNUM	Total system failure request number since service was started.
TA_TOTUFALLNUM	Total user failure request number since service was started.
TA_TIMERESTART	Time, in seconds, since 00:00:00 UTC, January 1, 1970, as returned by the time(2) system call on T_SERVER:TA_LMID, when the server was last started or restarted.
TA_CURTIME	Current time, in seconds, since 00:00:00 UTC, January 1, 1970, as returned by the time(2) system call on T_SERVER:TA_LMID.

## IPC\_Queue\_Statistics

### Syntax

```
IPC_Queue_Statistics()
```

## Output

IPC\_QUEUE\_STATISTICS\_MBEAN

Field Name	Description
TA_RQADDR	Symbolic address of the request queue for an active server offering this service. See T_SERVER:TA_RQADDR for more information on this attribute.
TA_SRVID	Unique (within the server group) server identification number for an active server offering this service. See T_SERVER:TA_SRVID for more information on this attribute.
TA_MSG_QNUM	Number of messages currently on the queue.

## Tuxedo\_servers

### Syntax

Tuxedo\_servers()

### Output

TUXEDO\_ECM\_SERVERS\_MBEAN

Field Name	Description
TA_SERVERNAME	For information about these MIB attributes in T_SERVER, refer to <a href="#">Oracle Tuxedo File Formats, Data Descriptions, MIBs, and System Processes Reference</a> .
TA_SRVGRP	
TA_SRVID	
TA_CLOPT	
TA_SEQUENCE	
TA_MIN	
TA_MAX	
TA_ENVFILE	

TA_CONV	For information about these MIB attributes in T_SERVER, refer to <a href="#">Oracle Tuxedo File Formats, Data Descriptions, MIBs, and System Processes Reference</a> .
TA_RQADDR	
TA_RQPERM	
TA_REPLYQ	
TA_RPPERM	
TA_RCMD	
TA_MAXGEN	
TA_GRACE	
TA_RESTART	
TA_SYSTEM_ACCESS	
TA_MAXDISPATCHTHREADS	
TA_MINDISPATCHTHREADS	
TA_THREADSTACKSIZE	
TA_SEC_PRINCIPAL_NAME	
TA_SEC_PRINCIPAL_LOCATION	
TA_SEC_PRINCIPAL_PASSWORD	
TA_SICACHEENTRIESMAX	
TA_CONCURR_STRATEGY	

## SystemServerMbean

Inherited from MBean



## GetParameters

### Syntax

```
GetParameters()
```

### Output:

A dictionary which includes all attributes and values.

This function invokes JMX interface `getParameters` of System Server Mbean.

## GetParameter

### Syntax

```
GetParameter(name)
```

This function invokes JMX interface `getParameter` of System Server Mbean.

## SetParameters

### Syntax

```
SetParameters(data)
```

### Input

`data`: A dictionary which includes the attributes and values to be set.

This function invokes JMX interface `setParameters` of System Server Mbean.

## SetParameter

### Syntax

```
SetParameter(name, value)
```

This function invokes JMX interface `setParameter` of System Server Mbean.

## Delete

### Syntax

```
Delete()
```

This function invokes JMX interface delete of System Server Mbean.

## System\_Server\_Number

### Syntax

```
System_Server_Number()
```

### Output

```
SYSTEM_SERVER_NUMBER_MBEAN
```

Field Name	Description
TA_SRVID	For information about these MIB attributes in T_SERVER, refer to <a href="#">Oracle Tuxedo File Formats, Data Descriptions, MIBs, and System Processes Reference</a> .
TA_BASESRVID	
TA_STATE	

## TMSMbean

Inherited from MBean

## GetParameters

### Syntax

```
GetParameters()
```

### Output

A dictionary which includes the attributes.

This function invokes JMX interface getParameters() of TMS Mbean.

## GetParameter

### Syntax

```
GetParameter(name)
```

This function invokes JMX interface `getParameter()` of TMS Mbean.

## SetParameters

### Syntax

```
SetParameters(data)
```

### Input

data: A dictionary which includes the attributes.

This function invokes JMX interface `setParameters()` of TMS Mbean.

## SetParameter

### Syntax

```
SetParameter(name, value)
```

This function invokes JMX interface `setParameter()` of TMS Mbean.

## Delete

### Syntax:

```
Delete()
```

This function invokes JMX interface `delete()` of TMS Mbean.

## TMS\_Transaction\_Statistics

### Syntax:

```
TMS_Transaction_Statistics()
```

Output:

TMS\_TRANSACTION\_STATISTICS\_MBEAN

Field Name	Description
TA_SRVID	For information about these MIB attributes in T_SERVER, refer to <a href="#">Oracle Tuxedo File Formats, Data Descriptions, MIBs, and System Processes Reference</a> .
TA_BASESRVID	
TA_GRPNO	
TA_NUMTRANABT	
TA_NUMTRANCMT	
TA_TIMERESTART	
TA_CURTIME	
TA_STATE	

## Tuxedo\_TMS

Syntax

Tuxedo\_TMS ( )

Output

Field Name	Description
------------	-------------

TA_SRVGRP	For information about the MIB attributes, refer to <a href="#">Oracle Tuxedo File Formats, Data Descriptions, MIBs, and System Processes Reference</a> .
TA_GRPNO	
TA_LMID	
TA_TMSNAME	
TA_TMSCOUNT	
TA_OPENINFO	
TA_CLOSEINFO	

## TDomainGatewayMbean

Inherited from MBean

### GetParameters

#### Syntax

```
GetParameters()
```

#### Output

A dictionary which includes the attributes.

This function invokes JMX interface `getParameters()` of /T domain gateway Mbean.

### GetParameter

#### Syntax

```
GetParameter(name)
```

This function invokes JMX interface `getParameter()` of /T domain gateway Mbean.

### SetParameters

#### Syntax

```
SetParameters(data)
```

## Input

data: A dictionary which includes the attributes.

This function invokes JMX interface setParameters() of /T domain gateway Mbean.

## SetParameter

### Syntax

```
SetParameter(name, value)
```

This function invokes JMX interface setParameter() of /T domain gateway Mbean.

## Delete

### Syntax

```
Delete()
```

This function invokes JMX interface delete() of /T domain gateway Mbean.

## Remote\_Link\_Statistics

### Syntax

```
Remote_Link_Statistics()
```

## Output

REMOTE\_LINK\_STATISTICS\_MBEAN

Field Name	Description
TA_DMRACCESSPOINT	Remote Domain ID
TA_STATE	Connection Status
TA_MONINBOUNDNUM	Number of inbound network messages
TA_MONOUTBOUNDNUM	Number of outbound network messages
TA_MONINBOUNDBYT	Inbound network message size in bytes

TA_MONOUTBOUNDBYT	Outbound network message size in bytes
TA_MONNUMPEND	Pending Network Messages
TA_MONBYTESEND	Pending Network Messages Bytes
TA_MONNUMWAITRPLY	Outstanding Network Requests
TA_CONTIME	Connection time, in seconds, since 00:00:00 UTC, January 1, 1970

## Domain\_Gateway\_Transaction\_Statistics

### Syntax:

```
Domain_Gateway_Transaction_Statistics()
```

### Output:

```
DOMAIN_GATEWAY_TRANSACTION_STATISTICS_MBEAN
```

Field Name	Description
TA_NUMTRANCMT	For information about the MIB attributes, refer to <a href="#">Oracle Tuxedo File Formats, Data Descriptions, MIBs, and System Processes Reference</a> .
TA_NUMTRANABT	
TA_TIMERESTART	
TA_CURTIME	

## EventBrokerMbean

Inherited from MBean

### GetParameters

#### Syntax

```
GetParameters()
```

## Output

A dictionary which includes the attributes.

This function invokes JMX interface `getParameters()` of event broker Mbean.

## GetParameter

### Syntax

```
GetParameter(name)
```

This function invokes JMX interface `getParameter()` of event broker Mbean.

## SetParameters

### Syntax

```
SetParameters(data)
```

### Input

data: A dictionary which includes the attributes.

This function invokes JMX interface `setParameters()` of event broker Mbean.

## SetParameter

### Syntax

```
SetParameter(name, value)
```

This function invokes JMX interface `setParameter()` of event broker Mbean.

## Delete

### Syntax

```
Delete()
```

This function invokes JMX interface `delete()` of event broker Mbean.



## Event\_Statistics

### Syntax

```
Event_Statistics()
```

### Output

```
EVENT_STATISTICS_MBEAN
```

Field Name	Description
TA_MONEVTSVCNUM	Notified Events
TA_MONEVTUNSOLNUM	Notified Events by Unsolicited Message
TA_MONEVTQUEENUM	Notified Events by Queue Message
TA_MONEVTCMDNUM	Notified Events by Command Line
TA_MONEVTULOGNUM	Notified Events by USERLOG
TA_TIMERESTART	Restart Time, in seconds, since 00:00:00 UTC, January 1, 1970
TA_CURTIME	Current time, in seconds, since 00:00:00 UTC, January 1, 1970

## QueueServerMbean

Inherited from MBean

### GetParameters

#### Syntax

```
GetParameters()
```

#### Output

A dictionary which includes the attributes.

This function invokes JMX interface `getParameters()` of OTMQ Mbean.

## GetParameter

### Syntax

```
GetParameter(name)
```

This function invokes JMX interface `getParameter()` of OTMQ Mbean.

## SetParameters

### Syntax

```
SetParameters(data)
```

### Input

data: A dictionary which includes the attributes.

This function invokes JMX interface `setParameters()` of OTMQ Mbean.

## SetParameter

### Syntax

```
SetParameter(name, value)
```

This function invokes JMX interface `setParameter()` of OTMQ Mbean.

## Delete

### Syntax

```
Delete()
```

This function invokes JMX interface `delete()` of OTMQ Mbean.

## Queue\_Space\_Statistics

### Syntax

```
Queue_Space_Statistics()
```

## Output

QUEUE\_SPACE\_STATISTICS\_MBEAN

Field Name	Description
TA_APPQSPACENAME	Following MIB Attributes in T_APPQSPACE is returned. For information about the attributes, refer to <a href="#">Oracle Tuxedo File Formats, Data Descriptions, MIBs, and System Processes Reference</a> .
TA_STATE	
TA_CURACTIONS	
TA_CURCURSORS	
TA_CURHANDLES	
TA_CURMEMNONPERSIST	
TA_CURMSG	
TA_CURPROC	
TA_CURQUEUES	
TA_CURTMPQUEUES	
TA_CURTRANS	

## Queue\_Space\_Peak

### Syntax

Queue\_Space\_Peak ( )

### Output

QUEUE\_SPACE\_PEAK\_MBEAN

Field Name	Description
------------	-------------

TA_APPQSPACENAME	Following MIB Attributes in T_APPQSPACE is returned. For information about the attributes, refer to <a href="#">Oracle Tuxedo File Formats, Data Descriptions, MIBs, and System Processes Reference</a> .
TA_HWACTIONS	
TA_HWCURSORS	
TA_HWHANDLES	
TA_HWMEMNONPERSIST	
TA_HWMSG	
TA_HWOWNERS	
TA_HWPROC	
TA_HWQUEUES	
TA_HWTMPQUEUES	
TA_HWTRANS	

## Queue\_Statistics

### Syntax

```
Queue_Statistics()
```

### Output

```
QUEUE_STATISTICS_MBEAN
```

Field Name	Description
TA_APPQNAME	Following MIB Attributes in T_APPQ is returned. For information about the attributes, refer to <a href="#">Oracle Tuxedo File Formats, Data Descriptions, MIBs, and System Processes Reference</a> .
TA_APPQSPACENAME	
TA_CURBLOCKS	
TA_CURNONPERSISTBYTES	
TA_CURMSG	
TA_CURNONPERSISTMSG	
TA_CURNONPERSISTMSG	

## Tuxedo\_Q\_QSPACE

### Syntax

```
Tuxedo_Q_QSPACE( )
```

### Output

```
TUXEDO_ECM_SLASH_QUEUE_QSPACE_MBEAN
```

Field Name	Description
TA_APPQSPACENAME	Following MIB Attributes in T_APPQSPACE is returned. For information about the attributes, refer to <a href="#">Oracle Tuxedo File Formats, Data Descriptions, MIBs, and System Processes Reference</a> .
TA_QMCONFIG	
TA_LMID	
TA_IPCKEY	
TA_ERRORQNAME	
TA_MAXACTIONS	
TA_MAXCURSORS	
TA_MAXHANDLES	
TA_MAXMSG	
TA_MAXOWNERS	
TA_MAXPAGES	
TA_MAXPROC	
TA_MAXQUEUES	
TA_MAXTMPQUEUES	
TA_MAXTRANS	
TA_MEMNONPERSIST	

## Tuxedo\_Q\_QUEUE

### Syntax

```
Tuxedo_Q_QUEUE ( )
```

### Output

```
TUXEDO_ECM_SLASH_QUEUE_QUEUE_MBEAN
```

Field Name	Description
TA_APPQNAME	Following MIB Attributes in T_APPQ is returned. For information about the attributes, refer to <a href="#">Oracle Tuxedo File Formats, Data Descriptions, MIBs, and System Processes Reference</a> .
TA_APPQSPACENAME	
TA_QMCONFIG	
TA_LMID	
TA_APPQORDER	

## WebServiceGatewayMbean

### GetParameter

#### Syntax

```
GetParameter (parameterName)
```

This function invokes JMX interface `getParameter(parameterName)` of Tuxedo Web Service Gateway Mbean.

### GetParameters

#### Syntax

```
GetParameters (parameterName)
```

This function invokes JMX interface `getParameters(parameterName)` of Tuxedo Web Service Gateway Mbean.

## SetParameter

### Syntax

```
SetParameter(parameterName, parameterValue)
```

This function invokes JMX interface `setParameter(parameterName, parameterValue)` of Tuxedo Web Service Gateway Mbean.

## SetParameters

### Syntax

```
SetParameters(date)
```

### Input

The parameter “data” type is dictionary which includes parameter names and values. It’ll be converted to `CompositeData` type to invoke JMX interface.

This function invokes JMX interface `setParameters(parameters)` of Tuxedo Web Service Gateway Mbean.

## Delete

### Syntax

```
Delete()
```

This function invokes JMX interface `delete()` of Tuxedo Web Service Gateway Mbean.

## Web\_Service\_Gateway\_Statistics

### Syntax

```
Web_Service_Gateway_Statistics()
```

### Output

```
WEBSERVICE_GATEWAY_STATISTICS_MBEAN
```

## TXST Command and Variable Reference

<b>Field Name</b>	<b>Description</b>
TA_MONTHRNUM	Active Threads
TA_MONINTALTIME	Inbound Process Time
TA_MONINREQNUM	Inbound request number
TA_MONOUTREQNUM	Outbound request number
TA_MONOUTALTIME	Outbound Process Time
TA_MONINOWFAIL	Inbound One-Way Failures
TA_MONINOWSUCC	Inbound One-Way Successes
TA_MONINRPCFAIL	Inbound RPC Failures
TA_MONINRPCSUCC	Inbound RPC Successes
TA_MONOUTOWFAIL	Outbound One-Way Failures
TA_MONOUTOWSUCC	Outbound One-Way Successes
TA_MONOUTRPCFAIL	Outbound RPC Failures
TA_MONOUTRPCSUCC	Outbound RPC Successes
TA_MONINBOUNDPEND	Inbound Pending Requests
TA_MONOUTBOUNDPEND	Outbound Pending Requests
TA_TIMERESTART	Restart Time, in seconds, since 00:00:00 UTC, January 1, 1970
TA_CURTIME	Current time, in seconds, since 00:00:00 UTC, January 1, 1970



# WorkstationListenerMbean

## GetParameter

### Syntax

```
GetParameter(parameterName)
```

This function invokes JMX interface `getParameter(parameterName)` of Tuxedo Workstation Listener Mbean.

## GetParameters

### Syntax

```
GetParameters()
```

### Output

The original type is `CompositeData` and the final output type is converted to dictionary.

This function invokes JMX interface `getParameters()` of Tuxedo Workstation Listener Mbean.

## SetParameter

### Syntax

```
SetParameter(parameterName, parameterValue)
```

This function invokes JMX interface `setParameter(parameterName, parameterValue)` of Tuxedo Workstation Listener Mbean.

## SetParameters

### Syntax

```
SetParameters(data)
```

### Input

The parameter “data” type is dictionary which includes parameter names and values. It'll be converted to `CompositeData` type to invoke JMX interface.

This function invokes JMX interface `setParameters(parameters)` of Tuxedo Workstation Listener Mbean.

## Delete

### Syntax

```
Delete()
```

This function invokes JMX interface `delete()` of Tuxedo Workstation Listener Mbean.

## Get Handler Parameter

### Syntax

```
GetHandlerParameter(clientId, parameterName)
```

This function invokes JMX interface `getHandlerParameter()` of Tuxedo Workstation Listener Mbean.

## Get Handlers

### Syntax

```
GetHandlers(ClientId)
```

### Output

The original type is `TabularData` and the final output type is converted to list.

This function invokes JMX interface `getHandlers(clientId)` of Tuxedo Workstation Listener Mbean.

## Suspend Handler

### Syntax

```
SuspendHandler(clientId)
```

This function invokes JMX interface `suspendHandler(clientId)` of Tuxedo Workstation Listener Mbean.

## Resume Handler

### Syntax

```
ResumeHandler(clientId)
```

This function invokes JMX interface `resumeHandler(clientId)` of Tuxedo Workstation Listener Mbean.

## Kill Handler

### Syntax

```
KillHandler(clientId)
```

This function invokes JMX interface `killHandler(clientId)` of Tuxedo Workstation Listener Mbean.

## Get Clients

### Syntax

```
GetClients(wshClientID)
```

### Output

The original type is `TabularData` and the final output type is converted to list.

This function invokes JMX interface `getWSClients(clientId)` of Tuxedo Workstation Listener Mbean.

## Suspend Client

### Syntax

```
SuspendClient(clientId)
```

This function invokes JMX interface `suspendClient(clientId)` of Tuxedo Workstation Listener Mbean.

## Resume Client

### Syntax

```
ResumeClient(clientId)
```

This function invokes JMX interface `resumeClient(clientId)` of Tuxedo Workstation Listener Mbean.

## Kill Client

### Syntax

```
KillClient(clientId)
```

This function invokes JMX interface `killClient(clientId)` of Tuxedo Workstation Listener Mbean.

## Workstation\_Listener\_Statistics

### Syntax

```
Workstation_Listener_Statistics()
```

### Output

```
LISTENER_STATISTICS_MBEAN
```

Field Name	Description
TA_CURHANDLERS	This field displays the number of currently active handlers associated with this workstation listener (WSL).
TA_CURCLIENTS	This field displays the number of clients, both native and workstation, currently logged in to this machine.
TA_TOTNUMREQ	Total Request Number
TA_OUTSREQNUM	Outstanding Requests

TA_TIMERESTART	This field displays the amount of time since restart.
TA_CURTIME	This field displays the current time (in seconds) since 00:00:00 UTC, January 1, 1970

## JoltListenerMbean

### GetParameter

#### Syntax

```
GetParameter(parameterName)
```

This function invokes JMX interface `getParameter(parameterName)` of Tuxedo Jolt Listener Mbean.

### GetParameters

#### Syntax

```
GetParameters()
```

#### Output

The original type is `CompositeData` and the final output type is converted to dictionary.

This function invokes JMX interface `getParameters()` of Tuxedo Jolt Listener Mbean.

### SetParameter

#### Syntax

```
SetParameter(parameterName, parameterValue)
```

This function invokes JMX interface `setParameter(parameterName, parameterValue)` of Tuxedo Jolt Listener Mbean.

## SetParameters

### Syntax

```
SetParameters(date)
```

### Input:

The parameter “data” type is dictionary which includes parameter names and values. It’ll be converted to CompositeData type to invoke JMX interface.

This function invokes JMX interface setParameters(parameters) of Tuxedo Jolt Listener Mbean.

## Delete JSL

### Syntax

```
Delete ( )
```

This function invokes JMX interface delete() of Tuxedo Jolt Listener Mbean.

## Get Handlers

### Syntax

```
GetHandlers( )
```

### Output

The original type is TabularData and the final output type is converted to list.

This function invokes JMX interface getHandlers() of Tuxedo Jolt Listener Mbean.

## Suspend Handler

### Syntax

```
SuspendHandler(clientId)
```

This function invokes JMX interface suspendHandler(clientId) of Tuxedo Jolt Listener Mbean.

## Resume Handler

### Syntax

```
ResumeHandler(clientId)
```

This function invokes JMX interface `resumeHandler(clientId)` of Tuxedo Jolt Listener Mbean.

## Jolt\_Listener\_Statistics

### Syntax

```
Jolt_Listener_Statistics()
```

### Output

```
LISTENER_STATISTICS_MBEAN
```

Field Name	Description
TA_CURHANDLERS	Active Handlers
TA_CURCLIENTS	Clients
TA_TOTREQNUM	Requests
TA_OUTSREQNUM	Outstanding Requests
TA_TIMERESTART	Restart Time, in seconds, since 00:00:00 UTC, January 1, 1970
TA_CURTIME	Current time, in seconds, since 00:00:00 UTC, January 1, 1970

## ARTBatchSystemMbean

Inherited from MBean

### GetBatches

#### Syntax

```
GetBatches(batchName, batchID, batchClass, batchOwner)
```

## Output

A list which contains result.

This function invokes JMX interface `getBatches()` of ART batch system Mbean.

## CancelBatch

### Syntax

```
CancelBatch(batchName, batchID, batchClass, batchOwner)
```

### Output

A list which contains result.

This function invokes JMX interface `cancelBatch()` of ART batch system.

## PurgeBatch

### Syntax

```
PurgeBatch(batchName, batchID, batchClass, batchOwner)
```

### Output

A list which contains result.

This function invokes JMX interface `purgeBatch()` of ART batch system Mbean.

## HoldBatch

### Syntax

```
HoldBatch(batchName, batchID, batchClass, batchOwner)
```

### Output

A list which contains result.

This function invokes JMX interface `holdBatch ()` of ART batch system Mbean.



## ReleaseBatch

### Syntax

```
ReleaseBatch(batchName, batchID, batchClass, batchOwner)
```

### Output

A list which contains result.

This function invokes JMX interface `releaseBatch()` of ART batch system Mbean.

## GetBatchSysOuts

### Syntax

```
GetBatchSysOuts(batchID)
```

### Output

A list which contains result.

This function invokes JMX interface `getBatchSysOuts()` of ART batch system Mbean.

## SubmitBatch

### Syntax

```
SubmitBatch (batchScript, batchOwner, batchEJROption,  
             batchShelloption, batchDBLogin, batchMTEnv)
```

### Output

A list which contains result.

This function invokes JMX interface `submitBatch()` of ART batch system Mbean.

## GetGDGFiles

### Syntax

```
GetGDGFiles(batched, fileName)
```

## Output

A dictionary which contains result.

This function invokes JMX interface `getGDGFiles()` of ART batch system Mbean.

## **GetBatchFiles**

### Syntax

```
GetBatchFiles()
```

### Output

A list which contains result.

This function invokes JMX interface `getBatchFiles ()` of ART batch system Mbean.