TCAP Management

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Transaction Capabilities Application Part , from ITU-T recommendations Q.771-Q.775 or ANSI T1.114 is a protocol for Signalling System 7 networks. Its primary purpose is to facilitate multiple concurrent dialogs between the same sub-systems on the same machines, using Transaction IDs to differentiate these, similar to the way TCP ports facilitate multiplexing connections between the same IP addresses on the Internet.

Using CLI

You can manage all TCAP stack properties through the Command Line Interface by using the `tcap` command.

Using GUI

The GUI will allow you to manage your TCAP configurations efficiently using a user-friendly interface. Open a Web Browser and navigate to http://localhost:8080/jss7-management-console/. Click on the 'TCAP' link in the left panel. The main panel will display the names of all configured TCAP Management units. To configure or view the settings of a particular TCAP Management Unit you must click on the name of that unit. The GUI will look similar to the figure below.

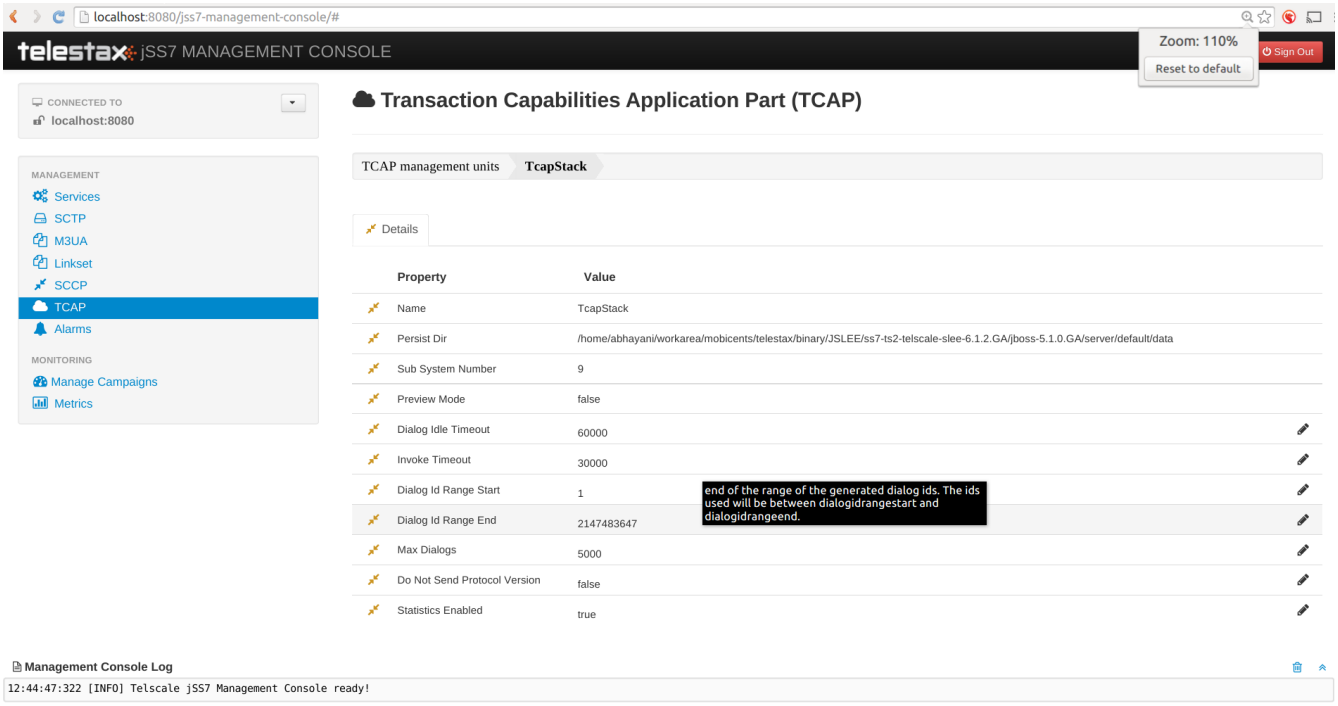

Figure 1. GUI - TCAP Management

The first tab will display the properties of the TCAP Management unit. These details displayed here are fetched from the XML descriptor file *jboss-beans.xml*, which is located at *$JBOSS_HOME/server/profile_name/deploy/mobicents-ss7-service/META-INF*, where `profile_name` is the server profile name. These properties can be modified here in the GUI. To modify them you must click the pencil, change value and save. The GUI will then display the modified values.

TCAP stack properties

Dialog Idle Timeout

Using CLI

You can set the 'dialogidletimeout' by issuing the command `tcap set dialogidletimeout` with appropriate parameters as described below. You can verify this by issuing the command `tcap get dialogidletimeout` which will display the value set for this property.

```
Name
    tcap set dialogidletimeout

SYNOPSIS
    tcap set dialogidletimeout <dialogidletimeout> stackname <stack-name>

DESCRIPTION
    Sets millisecond value for dialog timeout. It specifies how long
    dialog can be idle - not receive/send any messages

PARAMETERS

    Standard Parameters

    <dialogidletimeout>   -   Timeout in milliseconds.

    Optional Parameters

    <stack-name>  -   Name of the stack on which this command is executed.
                    If not passed, the first stack configured in ShellExecutor
                    will be used.

EXAMPLES
    tcap set dialogidletimeout 30000
```

Using GUI

On TCAP management page, click on pencil against the 'Dialog Idle Timeout' property and text box becomes editable. Change value and save.

Dialog Id Rang End

Using CLI

You can set the 'dialogidrangeend' by issuing the command `tcap set dialogidrangeend` with appropriate parameters as described below. You can verify this by issuing the command `tcap get`

`dialogidrangeend` which will display the value set for this property.

```
Name
    tcap set dialogidrangeend

SYNOPSIS
    tcap set dialogidrangeend <dialogidrangeend> stackname <stack-name>

DESCRIPTION
    End of the range of the generated dialog ids. The id's used will be
    between dialogidrangestart and dialogidrangeend.

PARAMETERS

    Standard Parameters

    <dialogidrangeend>    -   Dialog id range end.

    Optional Parameters

    <stack-name>  -   Name of the stack on which this command is executed.
                    If not passed, the first stack configured in ShellExecutor
                    will be used.

EXAMPLES
    tcap set dialogidrangeend 30000000
```

Using GUI

On TCAP management page, click on pencil against the 'Dialog Id Range End' property and text box becomes editable. Change value and save.

Dialog Id Range Start

Using CLI

You can set the 'dialogidrangestart' by issuing the command `tcap set dialogidrangestart` with appropriate parameters as described below. You can verify this by issuing the command `tcap get dialogidrangestart` which will display the value set for this property.

```
Name
    tcap set dialogidrangestart

SYNOPSIS
    tcap set dialogidrangestart <dialogidrangestart> stackname <stack-name>

DESCRIPTION
    Start of the range of the generated dialog ids. The id's used will be
    between dialogidrangestart and dialogidrangeend.

PARAMETERS

    Standard Parameters

    <dialogidrangestart>  -   Dialog id range start.

    Optional Parameters

    <stack-name>  -   Name of the stack on which this command is executed.
                    If not passed, the first stack configured in ShellExecutor
                    will be used.

EXAMPLES
    tcap set dialogidrangestart 1
```

Using GUI

On TCAP management page, click on pencil against the 'Dialog Id Range Start' property and text box becomes editable. Change value and save.

Do Not Send Protocol Version

Using CLI

You can set the 'donotsendprotocolversion' by issuing the command `tcap set donotsendprotocolversion` with appropriate parameters as described below. You can verify this by issuing the command `tcap get donotsendprotocolversion` which will display the value set for this property.

```
Name
    tcap set donotsendprotocolversion

SYNOPSIS
    tcap set donotsendprotocolversion <true | false> stackname <stack-name>

DESCRIPTION
    If set to true Protocol Version is not send in User Data part of Dialog

PARAMETERS

    Standard Parameters

    <donotsendprotocolversion>    -   If true doesn't send the protocol version

    Optional Parameters

    <stack-name>  -   Name of the stack on which this command is executed.
                    If not passed, the first stack configured in ShellExecutor
                    will be used.

EXAMPLES
    tcap set donotsendprotocolversion false
```

Using GUI

On TCAP management page, click on pencil against the 'Do Not Send Protocol Version' property and text box becomes editable. Change value and save.

Invoke Timeout

Using CLI

You can set the 'invoketimeout' by issuing the command `tcap set invoketimeout` with appropriate parameters as described below. You can verify this by issuing the command `tcap get invoketimeout` which will display the value set for this property.

```
Name
    tcap set invoketimeout

SYNOPSIS
    tcap set invoketimeout <invoketimeout> stackname <stack-name>

DESCRIPTION
    Sets the Invoke timeout for this invoke. Peer should respond back
    within invoke timeout, else stack will callback TCListener
    for application to take corrective. invoketimeout should always be
    less than dialogidletimeout

PARAMETERS

    Standard Parameters

    <invoketimeout>       -   Sets the Invoke timeout in milliseconds

    Optional Parameters

    <stack-name>  -   Name of the stack on which this command is executed.
                    If not passed, the first stack configured in ShellExecutor
                    will be used.

EXAMPLES
    tcap set invoketimeout 30000
```

Using GUI

On TCAP management page, click on pencil against the 'Invoke Timeout' property and text box becomes editable. Change value and save.

Max Dialogs

Using CLI

You can set the 'maxdialogs' by issuing the command `tcap set maxdialogs` with appropriate parameters as described below. You can verify this by issuing the command `tcap get maxdialogs` which will display the value set for this property.

```
Name
    tcap set maxdialogs

SYNOPSIS
    tcap set maxdialogs <maxdialogs> stackname <stack-name>

DESCRIPTION
    Sets the maximum number of dialogs allowed to be alive at a given
    time. If not set, a default value of 5000 dialogs will be used.
    If stack ranges provided, maximum number dialogs naturally cannot
    be greater than the provided range, thus, it will be normalized to
    range delta (end - start).

PARAMETERS

    Standard Parameters

    <maxdialogs>  -   Sets the maximum concurrent dialogs alive at any given
                        point in time.

    Optional Parameters

    <stack-name>  -   Name of the stack on which this command is executed.
                    If not passed, the first stack configured in ShellExecutor
                    will be used.

EXAMPLES
    tcap set maxdialogs 30000000
```

Using GUI

On TCAP management page, click on pencil against the 'Max Dialogs' property and text box becomes editable. Change value and save.

Preview Mode

You can modify the settings for the parameter 'previewmode' only when the TCAP Stack is not running. In addition, this parameter cannot be modified through the CLI or GUI. You will have to invoke the setter function directly from the source code.

If you are using the JBoss Application Server, then you can set this parameter by adding a property (as shown below) to the XML descriptor file *jboss-beans.xml*, which is located at *$JBOSS_HOME/server/profile_name/deploy/mobicents-ss7-service/META-INF*, where `profile_name` is the server profile name.

```
/*Add property for the parameter 'previewmode' to jboss-beans.xml file and specify
true or false*/
<property name="previewMode">true</property>
```

The current settings of the parameter can be viewed in the GUI or by invoking the appropriate CLI command as described below.

Using CLI

You can retrieve the current settings of the parameter 'previewmode' by issuing the command `sctp get previewmode`. However as explained above, you cannot modify the settings through the CLI.

```
Name
    tcap get previewmode

SYNOPSIS
    tcap get previewmode

DESCRIPTION
    This command is used to retrieve the current settings of the parameter
    'previewMode'. The 'previewMode' parameter is used for special processing
    mode.

    When Preview Mode is set to true:
    - In TCAP level the stack only listens for incoming messages and
    sends nothing.
    - Methods like send(), close(), sendComponent() and other such methods
    do nothing.
    - A TCAP Dialog is temporary. The TCAP Dialog is discarded after
    any incoming message like TC-BEGIN or TC-CONTINUE has been processed.
    - For any incoming messages (including TC-CONTINUE, TC-END, TC-ABORT) a new
    TCAP Dialog is created (and then deleted).
    - There are no timers and timeouts.

    The settings of this parameter can be modified only when the TCAP Stack is
    not running. To modify this parameter you must invoke the setter function
    directly from the code or if you are using the JBoss AS, you can add a
    property to the XML descriptor file jboss-beans.xml. You cannot change the
    settings through the CLI.
```

Using GUI

In the TCAP management page, you can view the current settings of the 'Preview Mode' property. But as explained above, you cannot change the settings in the GUI. For more details about this parameter, refer to the detailed description about the parameter in the above section for CLI.

Statistics Enabled

Using CLI

You can set the 'statisticsenabled' by issuing the command `tcap set statisticsenabled` with appropriate parameters as described below. You can verify this by issuing the command `tcap get statisticsenabled` which will display the value set for this property.

```
Name
    tcap set statisticsenabled

SYNOPSIS
    tcap set statisticsenabled <true | false> stackname <stack-name>

DESCRIPTION
    If set to true, statistics is enabled. Its recommended to keep this off
    for better performance and enabled statistics only when needed.

PARAMETERS

    Standard Parameters

    <statisticsenabled>   -   If true, statistics is enabled

    Optional Parameters

    <stack-name>  -   Name of the stack on which this command is executed.
                    If not passed, the first stack configured in ShellExecutor
                    will be used.

EXAMPLES
    tcap set statisticsenabled false
```

Using GUI

On TCAP management page, click on pencil against the 'Statistics Enabled' property and text box becomes editable. Change value and save.