

Phone Control: configurable timeout for TAPI Library and line monitoring initialization

to version Application Suite 201x (any version)

Applies to

IAS Winter 2019 or newer

Description

Bug symptoms:

- While authenticating with Attendant Console, user receives a message of incorrect credentials (username and password) even if these are correct.
- At lines TAPI monitoring start, something goes wrong and log file **Var\Log\ApplicationSuite.Phone.ControlService\ApplicationSuite.log.txt** ends with the following line:

```
INFO { 10} [ApplicationSuite] [SvTapiManager] Initializing main TAPI object.
```

Cause

Bug root cause is related to the fact that if TAPI monitoring freezes, Phone Control remains locked in a not-ready state and Console, having exceeded its unanswered timeouts from server, returns an error message. In addition to that, if TAPI initialization is unlocked after a certain time, agent is wrongly shown as connected event if he is not.

The only work-around consists in turning off services and restart Phone Control.

Solution

Two configuration parameters have been added:

- Phone Control TAPI Library initialization timeout
- Phone Control line monitoring initialization timeout

TAPI Library initialization timeout parameter configuration

A new configurable parameter has been introduced to allow setting of the Phone Control TAPI library initialization timeout. This parameter is configured by default using the key `tapi.initializationTimeout.minutes` in the configuration file `\Apps \ ApplicationSuite \ Settings \ ApplicationSuite.Phone.Control.schema.xml`

```
<!-- TAPI Manager Initialization Timeout expressed in minutes ( if 0 or less, timeout will be set to max value) -->
<preference key="tapi.initializationTimeout.minutes" defvalue="10" type="System.Int32" attributes="" />
```

Parameter override can be handled, as usual, by adding to the corresponding settings file `ApplicationSuite.Phone.Control.config.xml` a type key as follows:

```
<preference key="tapi.initializationTimeout.minutes" value="1" />
```

Parameter is in minutes and its default value is 10.

If the value is set to 0 (or any negative number), the system will use the maximum available value (24 days, 20 hours, 31 minutes and 23 seconds).

If TAPI monitoring starting does not end successfully within the indicated timeout, Phone Control generates an error. In this case it is necessary to switch off the service.

Line monitoring initialization Timeout parameter configuration

In addition to the above, a further configurable parameter has been introduced to set the timeout for the Attendant Server to monitor a TAPI line. This parameter is configured by default with the

Attendant.Core.ConsoleServer.PhoneControl.ConnectionTimeout.Seconds key in the configuration file
\Apps\Attendant\Settings\Attendant.schema.xml

```
<!-- PhoneControl: TAPI line initialization expressed in seconds ( if 0 or less, timeout will be set to max value) -->
<preference key="Attendant.Core.ConsoleServer.PhoneControl.ConnectionTimeout.Seconds" defvalue="17" type="System.Int32" />
```

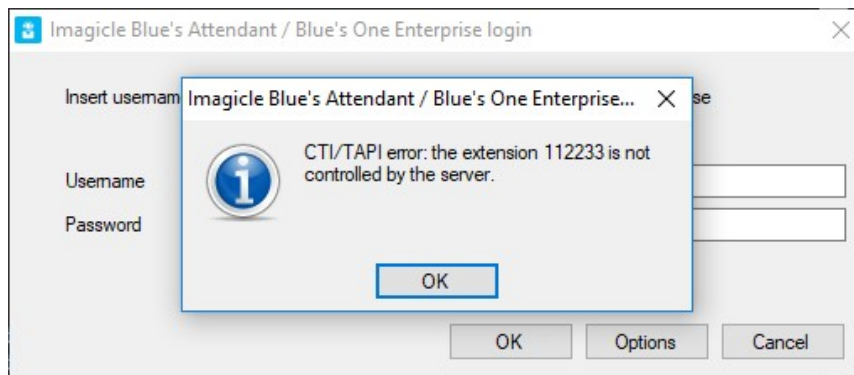
The override can be executed, as usual, by adding to the corresponding settings file **Attendant.config.xml** a key of the type

```
<preference key="Attendant.Core.ConsoleServer.PhoneControl.ConnectionTimeout.Seconds" value="10" />
```

The parameter is in second and its default value is 17. This key must always be set to a value minor than client-side timeout, configurable by the AuthenticationTimeout key in the **Attendant.Client.schema.xml** file (default value 20 seconds).

If the value is set to 0 (or any negative number), the system will use the maximum available value, (24 days, 20 hours, 31 minutes and 23 seconds).

If TAPI monitoring starting does not end successfully within the indicated timeout, Attendant Server generates an error and, after receiving an "Init Complete" message from the client, returns an empty list of controlled lines, which results into the following error message from the client (Error message shown by Attendant Console in case of failure in checking TAPI line within the configured timeout)



Troubeshooting

TAPI Library Initialization Timeout

Log file **Var\Log\ApplicationSuite.Phone.ControlService\ApplicationSuite.log.txt**, when TAPI library is successfully loaded, shows the following logging (timeout is set to 1 minute in the example below: Phone control log with successful TAPI library initialization. Timeout set to 1 minute.)

```
1024 11:14:08.631 INFO { 10} [ApplicationSuite] [SvTapiManager] Initializing main TAPI object.
1024 11:14:08.638 INFO { 10} [ApplicationSuite] [TapiManager] Tapi manager initialization timeout set: Timeout {00:01:00}
1024 11:14:08.644 INFO { 12} [ApplicationSuite] [TapiManager] Tapi Initialization thread started
1024 11:14:08.690 INFO { 12} [ApplicationSuite] [TapiManager] Tapi Initialization thread completed
1024 11:14:08.691 INFO { 10} [ApplicationSuite] [TapiManager] Tapi initialization completed successfully
```

Phone control log with timeout TAPI library initialization (In the example below: Phone control log with timeout unsuccessful TAPI library initialization. Timeout set to 1 minute)

```
1024 10:46:55.500 INFO { 16} [ApplicationSuite] [SvTapiManager] Initializing main TAPI object.
1024 10:46:55.500 INFO { 16} [ApplicationSuite] [TapiManager] Tapi manager initialization timeout set: Timeout {00:01:00}
1024 10:46:55.500 INFO { 18} [ApplicationSuite] [TapiManager] Tapi Initialization thread started
1024 10:47:55.500 ERROR { 16} [ApplicationSuite] [TapiManager] Tapi initialization has not completed within timeout, aborting thread: Timeout {00:01:00}, Thread id {18}
1024 10:47:55.500 ERROR { 18} [ApplicationSuite] [TapiManager] Tapi initialization has failed within timeout: Timeout {00:01:00}, {
Exception Type {System.Threading.ThreadAbortException}
Message {Thread was being aborted.}
StackTrace {
    at System.Threading.Thread.SleepInternal(Int32 millisecondsTimeout)
    at System.Threading.Thread.Sleep(Int32 millisecondsTimeout)
    at System.Threading.Thread.Sleep(TimeSpan timeout)
    at ApplicationSuite.Phone.Control.TAPI.ATAPI.TapiManager.<>c__DisplayClass15_0.<Initialize>b__0() in E:\Sviluppo\GIT\ApplicationSuite\StoneCME\Source\Apps\ApplicationSuite\PhoneControl\TAPI.ATAPI.TapiManager.cs:line 159
}
1024 10:47:55.516 ERROR { 16} [ApplicationSuite] [SvTapiMonitor] Unable to initialize Tapi: {
Exception Type {System.TimeoutException}
Message {Tapi initialization timed out.}
StackTrace {
    at ApplicationSuite.Phone.Control.TAPI.ATAPI.TapiManager.Initialize() in E:\Sviluppo\GIT\ApplicationSuite\StoneCME\Source\Apps\ApplicationSuite\Component\Assembly\App
    at ApplicationSuite.Phone.Control.SvTapiManager..ctor(ILoggerFactory loggerFactory, ITapiManagerFactory tapiManagerFactory) in E:\Sviluppo\GIT\ApplicationSuite\StoneC
    at ApplicationSuite.Phone.Control.SvTapiMonitor..ctor(ILoggerFactory loggerFactory, ITapiManagerFactory tapiManagerFactory, Type lineFactoryType, Object clientContext
}
```

In case a timeout occurs, the following logs are produced

- in **Var\Log\Attendant.Core.ConsoleServerService\Attendant.log.txt** (Attendant Server Log â Application Suite in case of timeout unsuccessful TAPI library inialization):

```
1024 12:03:03.353 ERROR { 11} [ApplicationSuite] [SvClientRemoted`1] An error occurred during remote execution: {
Exception Type {System.TimeoutException}
Message {Tapi initialization timed out.}
StackTrace {
    at ApplicationSuite.Base.Library.SvResilientClientRemoted`1.<>c__DisplayClass7_0.<.ctor>b__0() in E:\Sviluppo\GIT\ApplicationSuite\StoneCME\Source\Apps\ApplicationSuite\Component\Assembly\
    at ApplicationSuite.Base.Library.SvClientRemoted`1.Reconnect() in E:\Sviluppo\GIT\ApplicationSuite\StoneCME\Source\Apps\ApplicationSuite\Component\Assembly\
}
```

- in **Var\Log\Attendant.Core.ConsoleServerService\Attendant.log.txt** (Attendant Server Log â Attendant in case of timeout unsuccessful TAPI library inialization):

```
1024 12:02:03.322 ERROR { 5} [Attendant] [ClientManager:(192.168.150.69:11312\lucao\Unknown)] GetClientData - DoLoginProcedure Error: System.TimeoutException: Tapi initialization timed out
at ApplicationSuite.Base.Library.SvResilientClientRemoted`1.<>c__DisplayClass7_0.<.ctor>b__0() in E:\Sviluppo\GIT\ApplicationSuite\StoneCME\Source\Apps\ApplicationSuite\Component\Assembly\
at ApplicationSuite.Base.Library.SvClientRemoted`1.Reconnect() in E:\Sviluppo\GIT\ApplicationSuite\StoneCME\Source\Apps\ApplicationSuite\Component\Assembly\
at ApplicationSuite.Base.Library.SvResilientClientRemoted`1.Reconnect() in E:\Sviluppo\GIT\ApplicationSuite\StoneCME\Source\Apps\ApplicationSuite\Component\Assembly\
at Attendant.Core.ConsoleServer.PhoneControl.SvPhoneControlGuest.Start() in E:\Sviluppo\GIT\ApplicationSuite\StoneCME\Source\Apps\Attendant\Component\Assembly\Attendant.Core.ConsoleServer\
at Attendant.Core.ConsoleServer.Private.SvClientHost.SubscribeLine(SvUser user) in E:\Sviluppo\GIT\ApplicationSuite\StoneCME\Source\Apps\Attendant\Component\Assembly\Attendant.Core.Conso
at Attendant.Core.ConsoleServer.Private.SvClientHost.DoLoginProcedure(String username, String password, AttendantClientType clientType, Boolean isInBackupmode) in E:\Sviluppo\GIT\Appli
at Attendant.Core.ConsoleServer.Clients.Private.ClientManager.UserLogin(String userName, String encryptedPwd, AttendantClientType clientType, enBacErrorCodess errorNumber) in E:\Sviluppo\G
```

Line Monitoring Inizialization Timeout

Log file **Var\Log\Attendant.Core.ConsoleServerService\Attendant.log.txt**, in case of line monitoring inialization timeout, shows the following log lines (Attendant Server Log â Attendant in case of timeout unsuccessful line monitoring inialization):

```
1119 10:27:15.099 INFO { 38} [Attendant] [ClientManager:(192.168.150.69:1395\lucao\Unknown)] Login request username=lucao for client type=BacEnt (raw=BAC)
1119 10:27:15.100 INFO { 38} [Attendant] [SvClientHost] DoLoginProcedure(lucao): Attempting login on client type BacEnt (normale mode)
1119 10:27:15.131 INFO { 38} [Attendant] [SvClientHost] SubscribeLine(lucao): trying to subscribe to phone control the extension 112233 (Device name='')
1119 10:27:15.133 INFO { 38} [Attendant] [SvPhoneControlGuest] (Subscription: Address=112233) (conference enabled) Object created: Listener (Subscription: Address=112233) (conference enabled)
1119 10:27:15.133 TRACE { 38} [Attendant] [SvPhoneControlGuest] (Subscription: Address=112233) (conference enabled) is starting. Line Factory:Attendant.Core.ConsoleServer.PhoneControl.SvPhoneControlConferenceLineFactory
1119 10:27:15.138 INFO { 42} [Attendant] [SvPhoneControlGuest] (Subscription: Address=112233) (conference enabled) starting resilient reconnection procedure thread
1119 10:27:15.140 INFO { 42} [Attendant] [SvPhoneControlGuest] (Subscription: Address=112233) (conference enabled) resilient reconnection procedure has failed within timeout, aborting thread: Timeout {00:00:15}, Thread id {42}
1119 10:27:15.282 ERROR { 42} [Attendant] [SvPhoneControlGuest] (Subscription: Address=112233) (conference enabled) Resilient reconnection procedure has failed within timeout: Timeout {00:00:15}, {
Exception Type {System.Threading.ThreadAbortException}
Message {Thread was being aborted.}
StackTrace {
    at System.Threading.Thread.SleepInternal(Int32 millisecondsTimeout)
    at System.Threading.Thread.Sleep(Int32 millisecondsTimeout)
    at System.Threading.Thread.Sleep(TimeSpan timeout)
    at Attendant.Core.ConsoleServer.PhoneControl.SvPhoneControlGuest.<>c__DisplayClass19_0.<Reconnect>b__0() in E:\Sviluppo\GIT\ApplicationSuite\StoneCME\Source\Apps\Attendant\Component\Assembly\Attendant.Core.ConsoleServer\PhoneControl\SvPhoneControlGuest.cs:line 189
}
```

In addition, after receiving the message of **Init_complete** from the Client, the following line is produced (Attendant Server Log â Attendant sending to client an empty list of controlled lines):

```
1119 10:27:31.000 INFO { 8} [Attendant] [ServerConnectionStateMachine] (192.168.150.69:1395\lucao) CurrentConnectionState - <<CLIENT INIT COMPLETED>>
1119 10:27:31.001 ERROR { 8} [Attendant] [ClientManager:(192.168.150.69:1395\lucao\BacEnt)] BacMessage CCLineCallData - non è stata trovata la linea , restituisco al client la struttura CallControlLineCallData vuota
```