

# Troubleshoot Finesse Agent State Change Delayed

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## Introduction

This document provides information on how to troubleshoot the agent status delays seen on the Finesse Agent Desktop.

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## Prerequisites

### Requirements

Cisco recommends that you have knowledge of these topics:

- Cisco Unified Contact Center Enterprise (UCCE)
- Cisco Finesse

### Components Used

The information in this document is based on these software versions:

- Finesse 11.5
- UCCE 11.5

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, ensure that you understand the potential impact of any command.

## Problem

When the Agent receive a call (Inbound / Outbound), the change of state from Ready --> Reserved --> Talking is delayed.

# Troubleshoot

To troubleshoot this type of issue, you can pull these logs from the Finesse server and client:

- Finesse Desktop WebServices Logs
- Finesse Client Side Logs

Finesse Client logs

CTI Message received for the agent State Change:

```
0051203603: 10.106.81.82: Apr 14 2017 14:01:17.196 -0700: %CCBU_CTIMessageEventExecutor-0-6-
DECODED_MESSAGE_FROM_CTI_SERVER: %[cti_message=CTIAgentStateEvent [skillGroupState=7 (BUSY_OTHER),
stateDuration=0, skillGroupNumber=29808, skillGroupPriority=0, agentState=8 (RESERVED), eventReasonCode=0,
numFltSkillGroups=0, CTIClientSignature=Finesse, agentID=1234, agentExtension=1234, agentInstrument=1234,
agentID_Long=null, duration=null, nextAgentState=null, fltSkillGroupNumberList=[], fltSkillGroupIDList=[], fltSkillGroupPriorityList=[],
fltSkillGroupStateList=[], MRDId=1, agentMode=1]CTIMessageBean [invokeID=null, cti_sequence_id=865941, msgID=30,
timeTracker={"id":"AgentStateEvent","CTI_MSG_RECEIVED":1492203677196,"CTI_MSG_DISPATCH":1492203677196},
msgName=AgentStateEvent, deploymentType=CCE]][cti_response_time=0][dispatch_phase=DnD-CHECKPOINT-3B]: Decoded
Message to Finesse from backend cti server
```

However only after 14 seconds, Finesse puts the agent in Reserved State:

```
001345281: 10.106.81.82: Apr 14 2017 14:01:31.936 -0700: %CCBU_CoreImpl-worker187-6-
XMPP_PUBLISH_ASYNCHRONOUS: %[NodId=/finesse/api/User/1234][Payload=&lt;Update&gt; &lt;data&gt; &lt;user&gt;
&lt;dialogs&gt;/finesse/api/User/1234/Dialogs&lt;/dialogs&gt; &lt;extension&gt;1234&lt;/extension&gt;
&lt;firstName&gt;Test&lt;/firstName&gt; &lt;lastName&gt;Test&lt;/lastName&gt; &lt;loginId&gt;1234&lt;/loginId&gt;
&lt;loginName&gt;Test&lt;/loginName&gt; &lt;mediaType&gt;1&lt;/mediaType&gt; &lt;pendingState&gt;&lt;/pendingState&gt;
&lt;roles&gt; &lt;role&gt;Agent&lt;/role&gt; &lt;/roles&gt; &lt;settings&gt;
&lt;/wrapUpOnIncoming&gt;OPTIONAL&lt;/wrapUpOnIncoming&gt; &lt;/settings&gt; &lt;state&gt;RESERVED&lt;/state&gt;

&lt;stateChangeTime&gt;2017-04-14T21:01:31.935Z&lt;/stateChangeTime&gt;

&lt;teamId&gt;5056&lt;/teamId&gt;

&lt;teamName&gt;Test&lt;/teamName&gt;

&lt;uri&gt;/finesse/api/User/1234&lt;/uri&gt;

&lt;/user&gt;

&lt;/data&gt;

&lt;event&gt;PUT&lt;/event&gt;

&lt;requestId&gt;ad6996dc-db0b-4f45-8e3a-0e975519f4db&lt;/requestId&gt;

&lt;source&gt;/finesse/api/User/1234&lt;/source&gt;

&lt;/Update&gt;]: Publishing XMPP Message Asynchronously
```

Now if you see what that the agent was doing at that time, you can see that the agent tried to change the state to Not Ready State just 1 minutes 14 seconds before the call arrival on the Desktop and it was delayed by Finesse.

```
001345281: 10.106.81.82: Apr 14 2017 14:01:31.936 -0700: %CCBU_CoreImpl-worker187-6-
XMPP_PUBLISH_ASYNCHRONOUS: %[NodId=/finesse/api/User/1234][Payload=&lt;Update&gt; &lt;data&gt; &lt;user&gt;
&lt;dialogs&gt;/finesse/api/User/1234/Dialogs&lt;/dialogs&gt; &lt;extension&gt;1234&lt;/extension&gt;
&lt;firstName&gt;Test&lt;/firstName&gt; &lt;lastName&gt;Test&lt;/lastName&gt; &lt;loginId&gt;1234&lt;/loginId&gt;
&lt;loginName&gt;Test&lt;/loginName&gt; &lt;mediaType&gt;1&lt;/mediaType&gt; &lt;pendingState&gt;&lt;/pendingState&gt;
&lt;roles&gt; &lt;role&gt;Agent&lt;/role&gt; &lt;/roles&gt; &lt;settings&gt;
&lt;/wrapUpOnIncoming&gt;OPTIONAL&lt;/wrapUpOnIncoming&gt; &lt;/settings&gt; &lt;state&gt;RESERVED&lt;/state&gt;
```

```
<stateChangeTime>2017-04-14T21:01:31.935Z</stateChangeTime>

<teamId>5056</teamId>

<teamName>Test</teamName>

<uri>/finesse/api/User/1234</uri>

</user>

</data>

<event>PUT</event>

<requestId>ad6996dc-db0b-4f45-8e3a-0e975519f4db</requestId>

<source>/finesse/api/User/1234</source>

</Update>]: Publishing XMPP Message Asynchronously
```

### Here agent tried again.

```
001345281: 10.106.81.82: Apr 14 2017 14:01:31.936 -0700: %CCBU_CoreImpl-worker187-6-
XMPP_PUBLISH_ASYNCRONOUS: %[NodeId=/finesse/api/User/1234][Payload=<Update> <data> <user>
<dialogs>/finesse/api/User/1234/Dialogs</dialogs> <extension>1234</extension>
<firstName>Test</firstName> <lastName>Test</lastName> <loginId>1234</loginId>
<loginName>Test</loginName> <mediaType>1</mediaType> <pendingState></pendingState>
<roles> <role>Agent</role> </roles> <settings>
<wrapUpOnIncoming>OPTIONAL</wrapUpOnIncoming> </settings> <state>RESERVED</state>
```

```
<stateChangeTime>2017-04-14T21:01:31.935Z</stateChangeTime>

<teamId>5056</teamId>

<teamName>Test</teamName>

<uri>/finesse/api/User/1234</uri>

</user>

</data>

<event>PUT</event>

<requestId>ad6996dc-db0b-4f45-8e3a-0e975519f4db</requestId>

<source>/finesse/api/User/1234</source>

</Update>]: Publishing XMPP Message Asynchronously
```

### Now in the Desktop WebServices Logs:

#### Finesse received the **Not Ready** request from the agent.

```
001345281: 10.106.81.82: Apr 14 2017 14:01:31.936 -0700: %CCBU_CoreImpl-worker187-6-
XMPP_PUBLISH_ASYNCRONOUS: %[NodeId=/finesse/api/User/1234][Payload=<Update> <data> <user>
<dialogs>/finesse/api/User/1234/Dialogs</dialogs> <extension>1234</extension>
<firstName>Test</firstName> <lastName>Test</lastName> <loginId>1234</loginId>
<loginName>Test</loginName> <mediaType>1</mediaType> <pendingState></pendingState>
<roles> <role>Agent</role> </roles> <settings>
<wrapUpOnIncoming>OPTIONAL</wrapUpOnIncoming> </settings> <state>RESERVED</state>
```

```
<stateChangeTime>2017-04-14T21:01:31.935Z</stateChangeTime>

<teamId>5056</teamId>

<teamName>Test</teamName>
```

```
<uri>/finesse/api/User/1234</uri>

</user>

</data>

<event>PUT</event>

<requestId>ad6996dc-db0b-4f45-8e3a-0e975519f4db</requestId>

<source>/finesse/api/User/1234</source>

</Update>]: Publishing XMPP Message Asynchronously
```

### Again it is the same set of events for the second **Not Ready** request:

```
001345281: 10.106.81.82: Apr 14 2017 14:01:31.936 -0700: %CCBU_CoreImpl-worker187-6-
XMPP_PUBLISH_ASYNC: [%Nodel=/finesse/api/User/1234][Payload=<Update> <data> <user>
<dialogs>/finesse/api/User/1234/Dialogs</dialogs> <extension>1234</extension>
<firstName>Test</firstName> <lastName>Test</lastName> <loginId>1234</loginId>
<loginName>Test</loginName> <mediaType>1</mediaType> <pendingState></pendingState>
<roles> <role>Agent</role> </roles> <settings>
<wrapUpOnIncoming>OPTIONAL</wrapUpOnIncoming> </settings> <state>RESERVED</state>

<stateChangeTime>2017-04-14T21:01:31.935Z</stateChangeTime>

<teamId>5056</teamId>

<teamName>Test</teamName>

<uri>/finesse/api/User/1234</uri>

</user>

</data>

<event>PUT</event>

<requestId>ad6996dc-db0b-4f45-8e3a-0e975519f4db</requestId>

<source>/finesse/api/User/1234</source>
```

```
</Update>]: Publishing XMPP Message Asynchronously
```

### Only after 1 min 2 secs, Finesse started processing the request:

```
001345281: 10.106.81.82: Apr 14 2017 14:01:31.936 -0700: %CCBU_CoreImpl-worker187-6-
XMPP_PUBLISH_ASYNC: [%Nodel=/finesse/api/User/1234][Payload=<Update> <data> <user>
<dialogs>/finesse/api/User/1234/Dialogs</dialogs> <extension>1234</extension>
<firstName>Test</firstName> <lastName>Test</lastName> <loginId>1234</loginId>
<loginName>Test</loginName> <mediaType>1</mediaType> <pendingState></pendingState>
<roles> <role>Agent</role> </roles> <settings>
<wrapUpOnIncoming>OPTIONAL</wrapUpOnIncoming> </settings> <state>RESERVED</state>

<stateChangeTime>2017-04-14T21:01:31.935Z</stateChangeTime>

<teamId>5056</teamId>

<teamName>Test</teamName>

<uri>/finesse/api/User/1234</uri>

</user>

</data>
```

```
<event>PUT</event>

<requestId>ad6996dc-db0b-4f45-8e3a-0e975519f4db</requestId>

<source>/finesse/api/User/1234</source>
```

</Update>]: Publishing XMPP Message Asynchronously

Now if dig further into the Desktop WebServices logs, you can see that system events are frequently received with systemEventId=10 which indicates (SYS\_INSTRUMENT\_OUT\_OF\_SERVICE - An Enterprise Agent device target has been removed from service. SystemEventArgs1 contains the PeripheralID of the peripheral, and SystemEventText contains the AgentInstrument that was removed from service. )

```
001345281: 10.106.81.82: Apr 14 2017 14:01:31.936 -0700: %CCBU_CoreImpl-worker187-6-
XMPP_PUBLISH_ASYNC: [%NodId=/finesse/api/User/1234][Payload=<Update> <data> <user>
<dialogs>/finesse/api/User/1234/Dialogs</dialogs> <extension>1234</extension>
<firstName>Test</firstName> <lastName>Test</lastName> <loginId>1234</loginId>
<loginName>Test</loginName> <mediaType>1</mediaType> <pendingState></pendingState>
<roles> <role>Agent</role> </roles> <settings>
<wrapUpOnIncoming>OPTIONAL</wrapUpOnIncoming> </settings> <state>RESERVED</state>
```

```
<stateChangeTime>2017-04-14T21:01:31.935Z</stateChangeTime>
```

```
<teamId>5056</teamId>
```

```
<teamName>Test</teamName>
```

```
<uri>/finesse/api/User/1234</uri>
```

```
</user>
```

```
</data>
```

```
<event>PUT</event>
```

```
<requestId>ad6996dc-db0b-4f45-8e3a-0e975519f4db</requestId>
```

```
<source>/finesse/api/User/1234</source>
```

</Update>]: Publishing XMPP Message Asynchronously

In Finesse System Events are critical Events and which are processed if no other events are in execution queue. All other pending events will be backed up due to this condition and it will result in general slowness of event processing.

Also Finesse is randomly seeing a delay in CLEAR\_CONNECTION command of about one minute, which are timing out (CF\_REQUEST\_TIMEOUT\_REJECTION). This is for the Same extension for which Finesse is getting a SystemEvent.

Here is the specific example what happened in Finesse for one of the instance:

Finesse Web service received the request and sent it to the ICM CTI server

```
001345281: 10.106.81.82: Apr 14 2017 14:01:31.936 -0700: %CCBU_CoreImpl-worker187-6-
XMPP_PUBLISH_ASYNC: [%NodId=/finesse/api/User/1234][Payload=<Update> <data> <user>
<dialogs>/finesse/api/User/1234/Dialogs</dialogs> <extension>1234</extension>
<firstName>Test</firstName> <lastName>Test</lastName> <loginId>1234</loginId>
<loginName>Test</loginName> <mediaType>1</mediaType> <pendingState></pendingState>
<roles> <role>Agent</role> </roles> <settings>
<wrapUpOnIncoming>OPTIONAL</wrapUpOnIncoming> </settings> <state>RESERVED</state>
```

```
<stateChangeTime>2017-04-14T21:01:31.935Z</stateChangeTime>
```

```
<teamId>5056</teamId>
<teamName>Test</teamName>
<uri>/finesse/api/User/1234</uri>
</user>
</data>
<event>PUT</event>
<requestId>ad6996dc-db0b-4f45-8e3a-0e975519f4db</requestId>
<source>/finesse/api/User/1234</source>
</Update>]: Publishing XMPP Message Asynchronously
```

## PG CTI server received the request

```
001345281: 10.106.81.82: Apr 14 2017 14:01:31.936 -0700: %CCBU_CoreImpl-worker187-6-
XMPP_PUBLISH_ASYNC: [NodId=/finesse/api/User/1234][Payload=<Update> <data> <user>
<dialogs>/finesse/api/User/1234/Dialogs</dialogs> <extension>1234</extension>
<firstName>Test</firstName> <lastName>Test</lastName> <loginId>1234</loginId>
<loginName>Test</loginName> <mediaType>1</mediaType> <pendingState></pendingState>
<roles> <role>Agent</role> </roles> <settings>
<wrapUpOnIncoming>OPTIONAL</wrapUpOnIncoming> </settings> <state>RESERVED</state>
<stateChangeTime>2017-04-14T21:01:31.935Z</stateChangeTime>
<teamId>5056</teamId>
<teamName>Test</teamName>
<uri>/finesse/api/User/1234</uri>
</user>
</data>
<event>PUT</event>
<requestId>ad6996dc-db0b-4f45-8e3a-0e975519f4db</requestId>
<source>/finesse/api/User/1234</source>
```

```
</Update>]: Publishing XMPP Message Asynchronously
```

However due to an JTAPI exception, the call didn't get disconnected normally.

```
001345281: 10.106.81.82: Apr 14 2017 14:01:31.936 -0700: %CCBU_CoreImpl-worker187-6-
XMPP_PUBLISH_ASYNC: [NodId=/finesse/api/User/1234][Payload=<Update> <data> <user>
<dialogs>/finesse/api/User/1234/Dialogs</dialogs> <extension>1234</extension>
<firstName>Test</firstName> <lastName>Test</lastName> <loginId>1234</loginId>
<loginName>Test</loginName> <mediaType>1</mediaType> <pendingState></pendingState>
<roles> <role>Agent</role> </roles> <settings>
<wrapUpOnIncoming>OPTIONAL</wrapUpOnIncoming> </settings> <state>RESERVED</state>
<stateChangeTime>2017-04-14T21:01:31.935Z</stateChangeTime>
<teamId>5056</teamId>
<teamName>Test</teamName>
<uri>/finesse/api/User/1234</uri>
```

```
</user>;
</data>;
<event>PUT</event>;
<requestId>ad6996dc-db0b-4f45-8e3a-0e975519f4db</requestId>;
<source>/finesse/api/User/1234</source>;
</Update>]: Publishing XMPP Message Asynchronously
Eventually the call gets cleared on ICM side.
```

```
001345281: 10.106.81.82: Apr 14 2017 14:01:31.936 -0700: %CCBU_CoreImpl-worker187-6-
XMPP_PUBLISH_ASYNCRONOUS: %[NodeId=/finesse/api/User/1234][Payload=<Update> <data> <user>
<dialogs>/finesse/api/User/1234/Dialogs</dialogs> <extension>1234</extension>
<firstName>Test</firstName> <lastName>Test</lastName> <loginId>1234</loginId>
<loginName>Test</loginName> <mediaType>1</mediaType> <pendingState></pendingState>
<roles> <role>Agent</role> </roles> <settings>
<wrapUpOnIncoming>OPTIONAL</wrapUpOnIncoming> </settings> <state>RESERVED</state>
<stateChangeTime>2017-04-14T21:01:31.935Z</stateChangeTime>
<teamId>5056</teamId>
<teamName>Test</teamName>
<uri>/finesse/api/User/1234</uri>
</user>;
</data>;
<event>PUT</event>;
<requestId>ad6996dc-db0b-4f45-8e3a-0e975519f4db</requestId>;
<source>/finesse/api/User/1234</source>;
</Update>]: Publishing XMPP Message Asynchronously
```

## Conclusion

The reason why all the agent State Event is delayed is because when Finesse sends the 'ClearConnectionReq' to CTI Server, CTI Server sends the request to Peripheral Gateway (PG) Open Peripheral Controller (OPC) service, which sends the request to CUCM via the PG Peripheral Interface Manager (PIM) / PG JTAPI Gateway (JGW). CTI Server waits for the response from CUCM (which eventually failed), Finesse starts getting the SystemEvents which takes priority and hence the Delay to respond to the agent state request.

## Resolution

The resolution of this problem is tracked by these defects which are fixed in Finesse 11.5(1) ES4

[CSCve12017](#) For ICM (pg.cucm)

[CSCve11977](#) For Finesse