

# **TN029 Controlling STBs via JSON Interface**

## **Tech Note**

### **Issue 2.2**

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## 1 Introduction

Tripleplay has a Triplecare XMLRPC interface which provides the ability to control STB's remotely however this requires some technical expertise to setup.

An easier way to do it for interfacing to remote control solutions such as Crestron is to utilise the JSON/XMLRPC handler which abstracts away all of the internal details.

This document describes the interface which is applicable to the Asterix or later releases.<sup>1</sup>

For a full list and descriptions of the available XmlRpc methods please refer to the "TripleCare Web Service API 4.0" or later document.

### 1.1 STB ID number

Commands are sent to a specific STB using its ID number. To obtain the ID number, browse to the "Client Management → Set Top Boxes" page in triplecare. Hover over the "View" button. The browser will display the URL. The number following view= is the STB ID number.

### 1.2 URL Encoding

Throughout this document the URL's specified use quotation marks (e.g. "). Some software tools (like Outlook, Word) like to automatically change the quotation marks from the standard ASCII quotation mark to the unicode left and right quotation marks to improve readability. Compare the quotation marks used in the following URL examples:

**With unicode left and right quotes:**

```
http://<serverIP>/triplecare/JsonRpcHandler.php?
call={"jsonrpc":"2.0","method":"Reboot","params":[1]}
```

**With the ASCII quotes:**

```
http://<serverIP>/triplecare/JsonRpcHandler.php?
call={"jsonrpc": "2.0", "method": "Reboot", "params": [1]}
```

It is important that whenever you are using quotation marks in URL's that you use the ASCII quotation mark character, otherwise the JSON RPC handler will complain that the JSON received is invalid. To ensure that the command will always work you can replace the quotation mark with the HTTP escape code %22 like in the following URL.

```
http://<serverIP>/triplecare/JsonRpcHandler.php?call={%22jsonrpc
%22:%222.0%22,%22method%22:%22Reboot%22,%22params%22:[1]}
```

Whilst this ensures that the URL wont be modified by email clients it does affect the readability of the URL.

<sup>1</sup>Note, this version uses the `JsonRpcHandler` call which is now the preferred interface. The older `JsonXmlRpcBridge` call is still supported.

## 2 STB Control Functions

### 2.1 General

All of the functions are in the format of a function call to the JSON/XMLRPC handler with a method and the necessary parameters.

```
http://<serverIP>/triplecare/JsonRpcHandler.php?
call={"jsonrpc":"2.0","method":"methodA","params":[x,y,z]}
```

In all of the cases, it should return a "true" if everything was fine, otherwise it will return a faultCode. For example, if you try to access at STB that doesn't exist, then you'll get back the following fault code:

```
{"faultCode":300,"faultString":"Client Id not registered"}
```

The following are a selection of examples using the Triplecare XmlRpc API.

### 2.2 Channel Up

The Channel Up method call has the following parameters:

- method: ChannelUp
- Parameters: STB ID number

```
http://<serverIP>/triplecare/JsonRpcHandler.php?
call={"jsonrpc":"2.0","method":"ChannelUp","params":[<STB ID
number>]}
```

For example, this would control the STB with ID = 1 and perform a Channel Up command:

```
http://<serverIP>/triplecare/JsonRpcHandler.php?
call={"jsonrpc":"2.0","method":"ChannelUp","params":[1]}
```

### 2.3 Channel Down

The Channel Down method has the following parameters:

- method: ChannelDown
- Parameters: STB ID number

```
http://<serverIP>/triplecare/JsonRpcHandler.php?
call={"jsonrpc":"2.0","method":"ChannelDown","params":[<STB ID
number>]}
```

For example, this would control the STB with ID = 1 and perform a Channel Down command

```
http://<serverIP>/triplecare/JsonRpcHandler.php?
call={"jsonrpc":"2.0","method":"ChannelDown","params":[1]}
```

### 2.4 Channel Select

The Channel Select method has the following parameters:

- method: SelectChannel
- Parameters: STB ID number, Channel Number

```
http://<serverIP>/triplecare/JsonRpcHandler.php?
call={"jsonrpc":"2.0","method":"SelectChannel","params":[<STB ID
number>,<channel number>]}
```

For example, this would control the STB with ID = 1 and change to channel number 2

```
http://<serverIP>/triplecare/JsonRpcHandler.php?  
call={"jsonrpc":"2.0","method":"SelectChannel","params":[1,2]}
```

## 2.5 Reboot the STB

For example to reboot an STB use this:

```
http://<serverIP>/triplecare/JsonRpcHandler.php?  
call={"jsonrpc":"2.0","method":"Reboot","params":[1]}
```

Will reboot the STB with client with Id=1

## 2.6 Play a VoD Asset

For example to play an existing VoD asset use this:

```
http://<serverIP>/triplecare/JsonRpcHandler.php?  
call={"jsonrpc":"2.0","method":"ChangePortalPage","params":  
[1,"watch_video",  
{"vodItem":"Indiana_Jones_and_the_Kingdom_of_the_Crystal_Skull"}]}
```

Would play the asset "Indiana\_Jones\_and\_the\_Kingdom\_of\_the\_Crystal\_Skull" on the client with Id=1

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