

R a i n b o w C T I & M e d i a B r i d g e (N E C I S 4 0 0 0) -

A D M I N I S T R A T I O N G U I D E

Rainbow CTI & Media Bridge



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Index

1	Document History	5
2	Introduction	6
2.1	<i>Overview - The Product</i>	6
2.2	<i>Overview - The Guide</i>	6
2.3	<i>Architecture Diagram</i>	7
3	Configuration	8
3.1	<i>Administration - Startup</i>	8
3.2	<i>Configuration Settings</i>	12
3.2.1	Rainbow Settings	13
3.2.2	Proxy Settings	14
3.2.3	Equipment Settings	14
3.3	<i>PABX Settings</i>	16
3.3.1	Connectivity Settings	16
3.3.2	SIP Trunk Settings	17
3.4	<i>Media Gateway</i>	19
3.4.1	Media Settings	19
3.4.2	Remote Extensions Numbering Plan	20
3.4.3	Caller ID Policy for VOIP calling	20
3.5	<i>Starting and Stopping Rainbow CTI & Media Bridge Service</i>	22
4	Calls and Extensions	24
4.1	<i>Dashboard</i>	24
4.2	<i>Extensions & User Entries</i>	25
4.2.1	CTI & VOIP	27
4.2.2	Add Extension	30
4.3	<i>Monitored Extensions</i>	32
4.4	<i>Unsuccessful monitoring of extensions</i>	36
4.5	<i>Seeing active calls in the system</i>	39
4.6	<i>Seeing active users in the system</i>	41
5	General	48
5.1	<i>System Settings</i>	48
5.1.1	Traces	49
5.1.2	SMTP Settings	50
5.2	<i>Business Partner</i>	52

5.3 Report an Issue..... 54

6 Change Password..... 57

1 Document History

Edition	Date	Changes / Comments / Details
01	31/05/2021	Initial Administration Guide.

2 Introduction

2.1 Overview - The Product

Rainbow CTI & Media Bridge works with a number of telephone systems e.g. Cisco Call Manager, Avaya IP Office, NEC 3C etc. This document describes the administration of Rainbow CTI and Media Bridge for NEC IS4000.

Rainbow CTI & Media Bridge application is installed on a local machine in customer premises. It connects with Rainbow Server to push the list of extensions so that they can be associated to Rainbow Users for CTI and VOIP calling, and it also interacts with third-party telephone systems to monitor those extensions for signaling information and call controls.

For other third-party telephony systems, please refer to their respective documentation available at <https://support.openrainbow.com>.

This document is a step-by-step guide for any technical engineer to configure the software.

2.2 Overview - The Guide

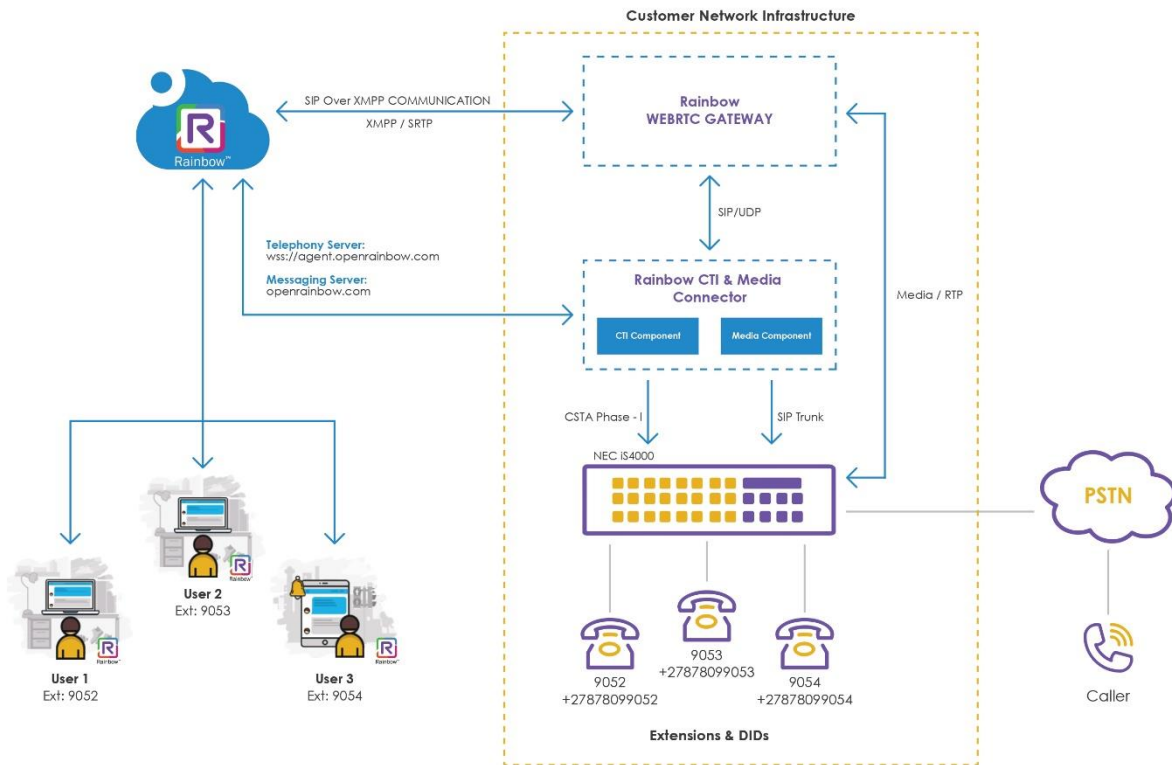
The Admin guide comes into effect once the installation is finished and its target audiences are System Administrators. This guide will walk through the administrative steps required for initial configuration and subsequent software maintenance.

The guide begins with an overview along with screenshots of the application to give the reader an understanding of the user interface design.

A “Table of Contents” is provided at the beginning of this guide with hyperlinks for the ease of navigation.

2.3 Architecture Diagram


Rainbow - CTI & Media Bridge

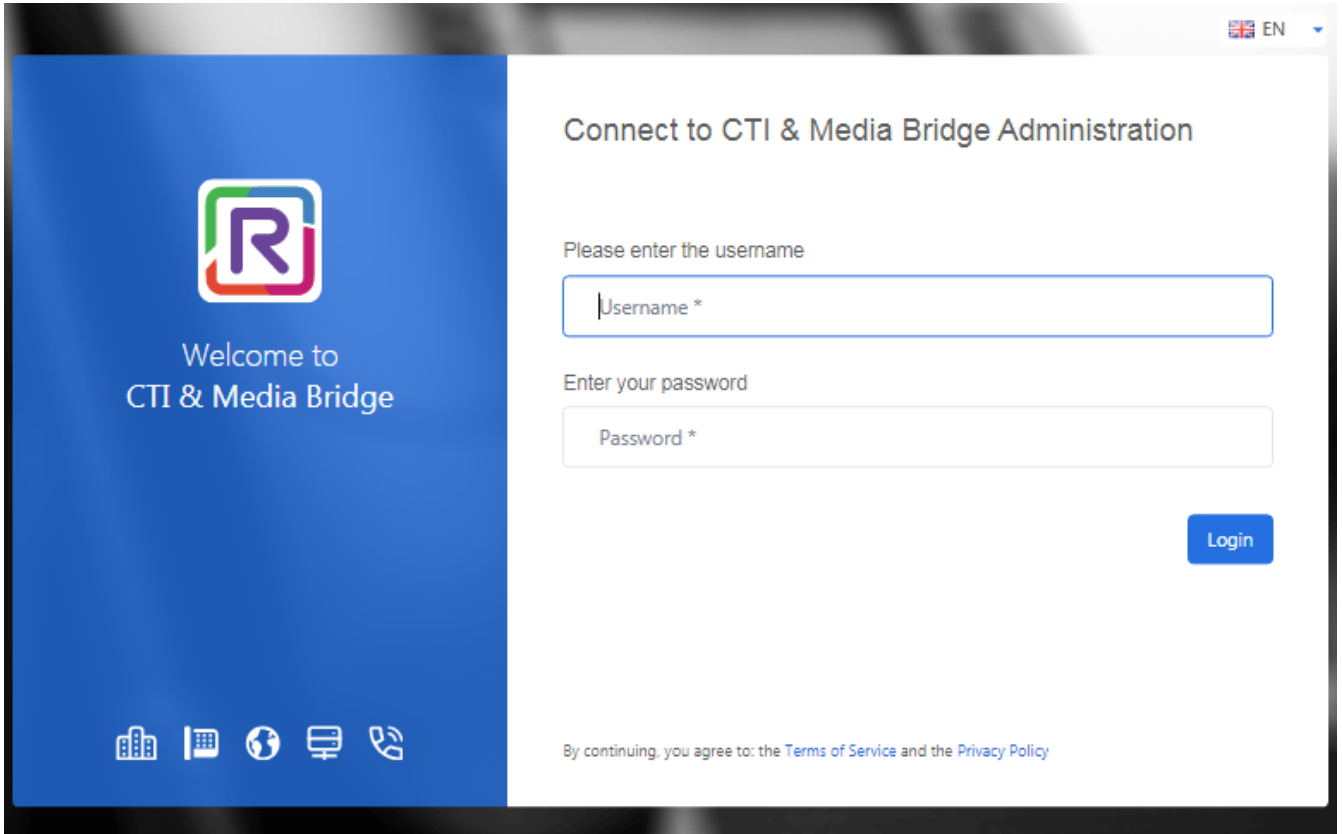


3 Configuration

3.1 Administration - Startup

Launch Rainbow CTI & Media Bridge web administration interface by clicking on the shortcut

icon  on the Windows desktop. This will display a login screen as shown below:



Please enter following credentials when you are logging into the Rainbow CTI & Media Bridge for the first time after installation:

Username: admin

Password: admin

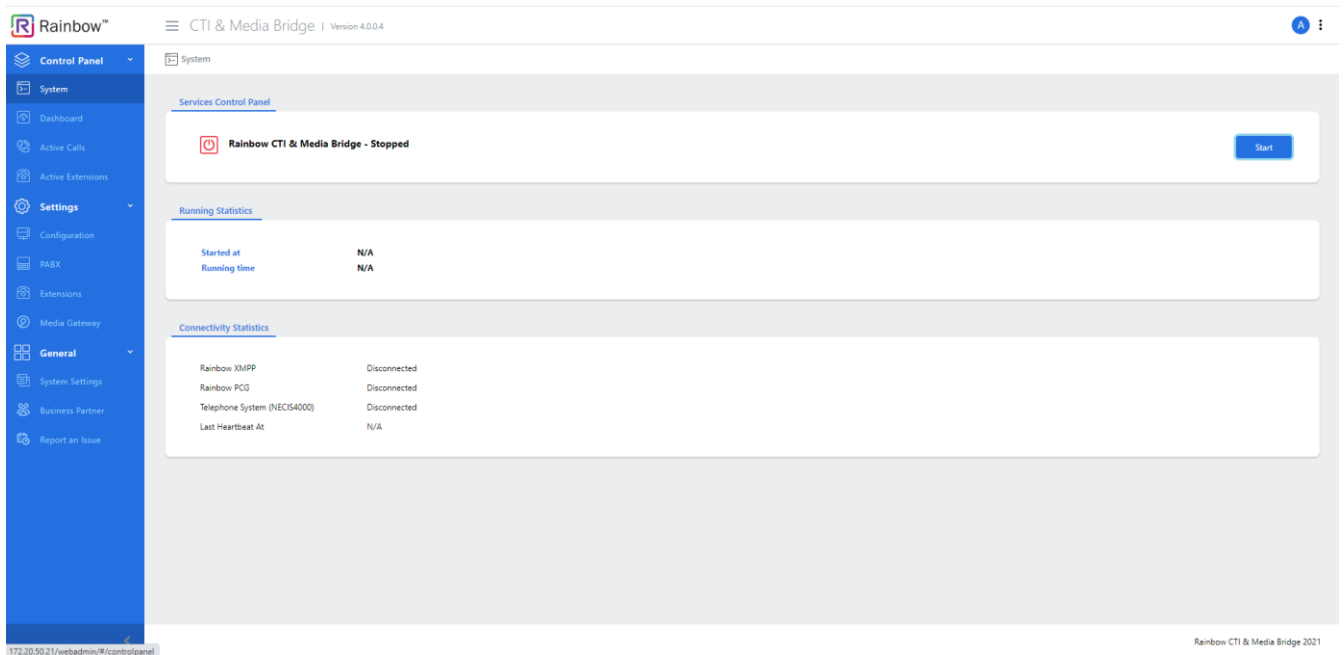
Once logged in, a web interface is displayed that will allow you to navigate around application using the left vertical panel.

The options are grouped under the following categories:

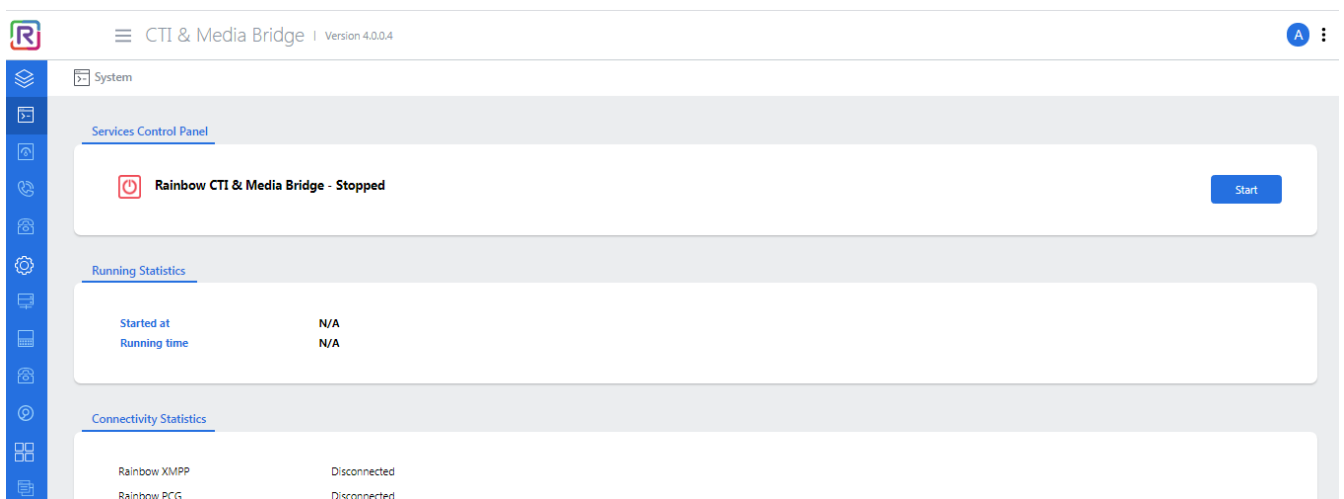
- Control Panel
- Settings
- General

The options can be collapsed and expanded by clicking on the above categories.

There is also a slider control at the bottom that can be used to minimize or maximize the left hand panel.




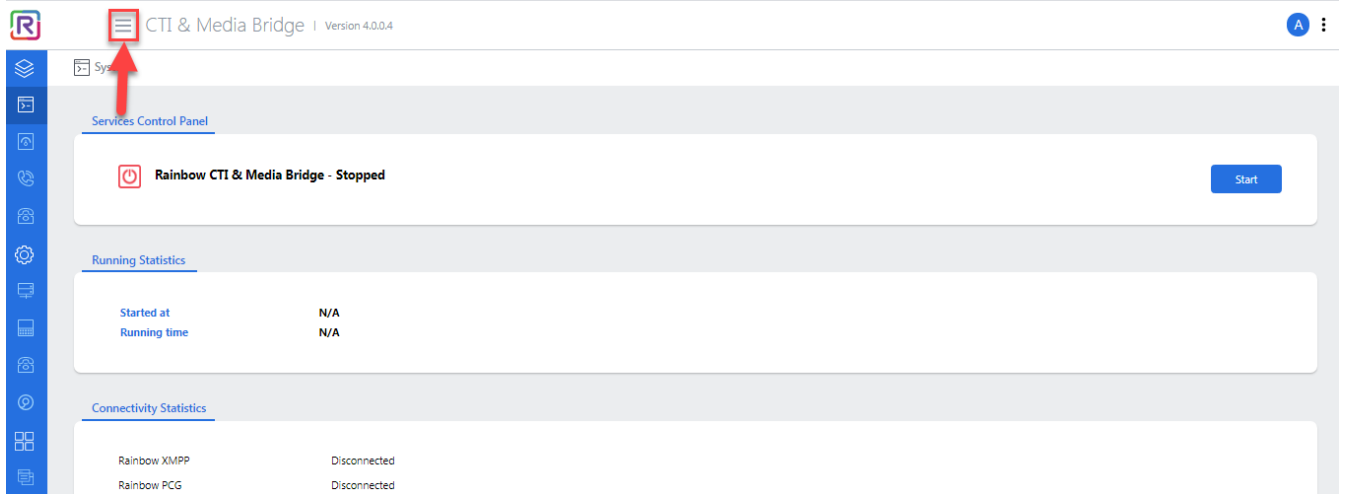
Screenshot-Slider Control with Left Hand Panel Displayed



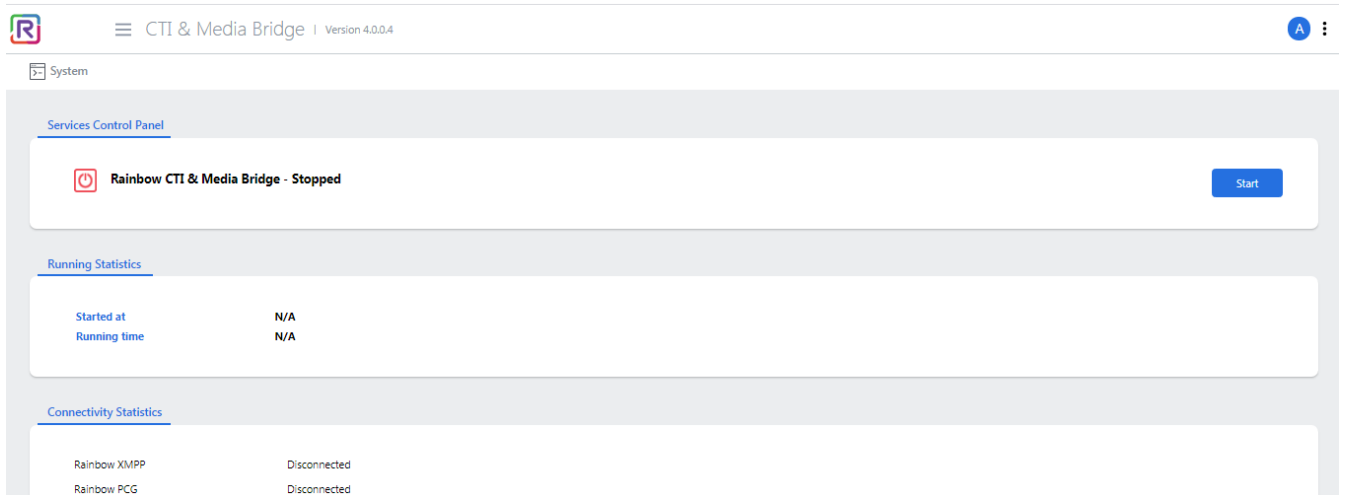
Screenshot-Slider Control with Left Hand Panel Hidden

Similarly, click on the slider control again to show the left hand panel.

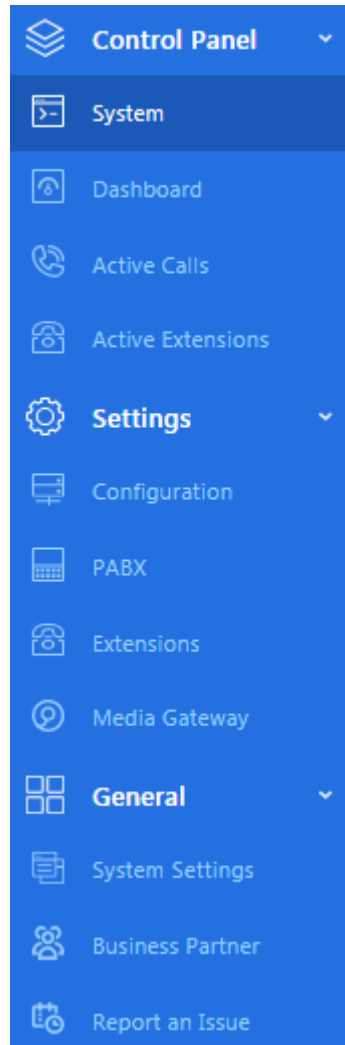
You can also click on  icon next to application title as highlighted below:



This action will hide the entire left panel as shown below:



Below is the full view of that left panel:



Screenshot - Complete list of links in left menu

For every click on the left menu, the main page to the right will change to the corresponding display. As an administrator, it is your responsibility to provide requisite configuration details in each section and customize the application according to your particular requirements. We recommend that you work on these links, in the following order:

- Configuration
- PABX
- Media Gateway
- System
- System Settings

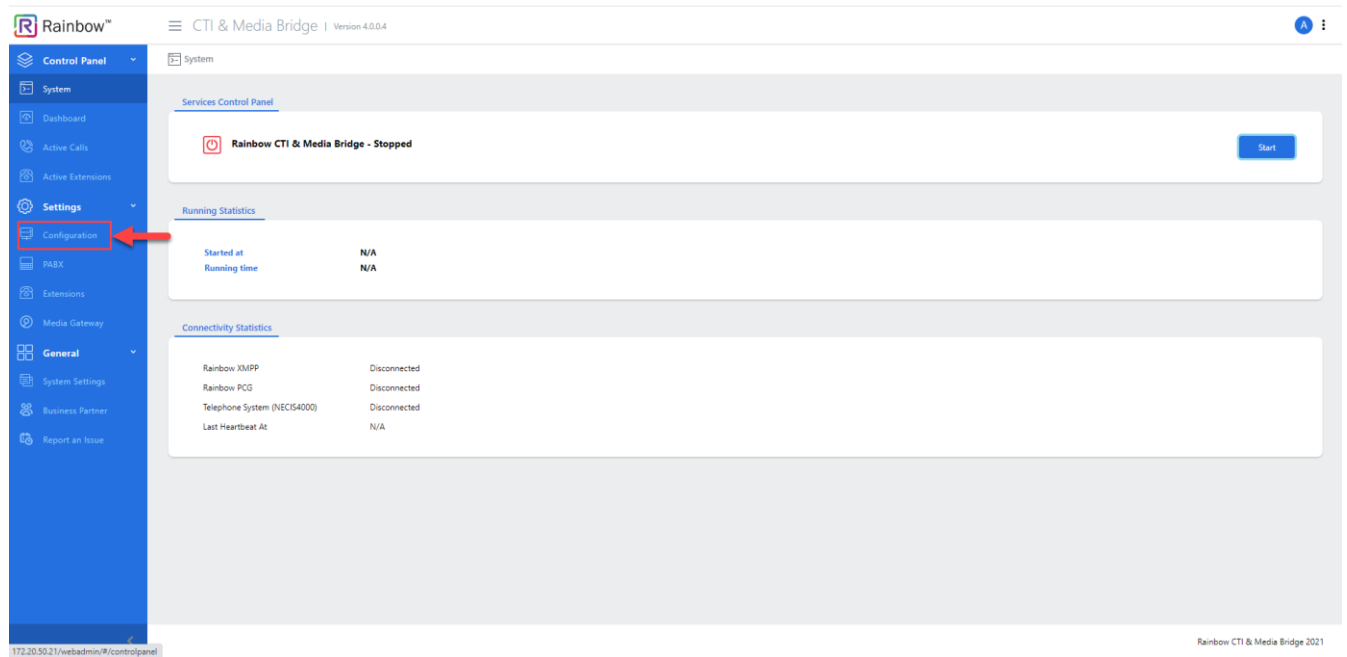
Once you have provided required information in each section, please click on Update/Save button for that section.

Noe: The administration application can also be opened by entering a URL i.e. <http://<IP address>/webAdmin/> e.g. <http://172.20.1.121/webadmin>

3.2 Configuration Settings

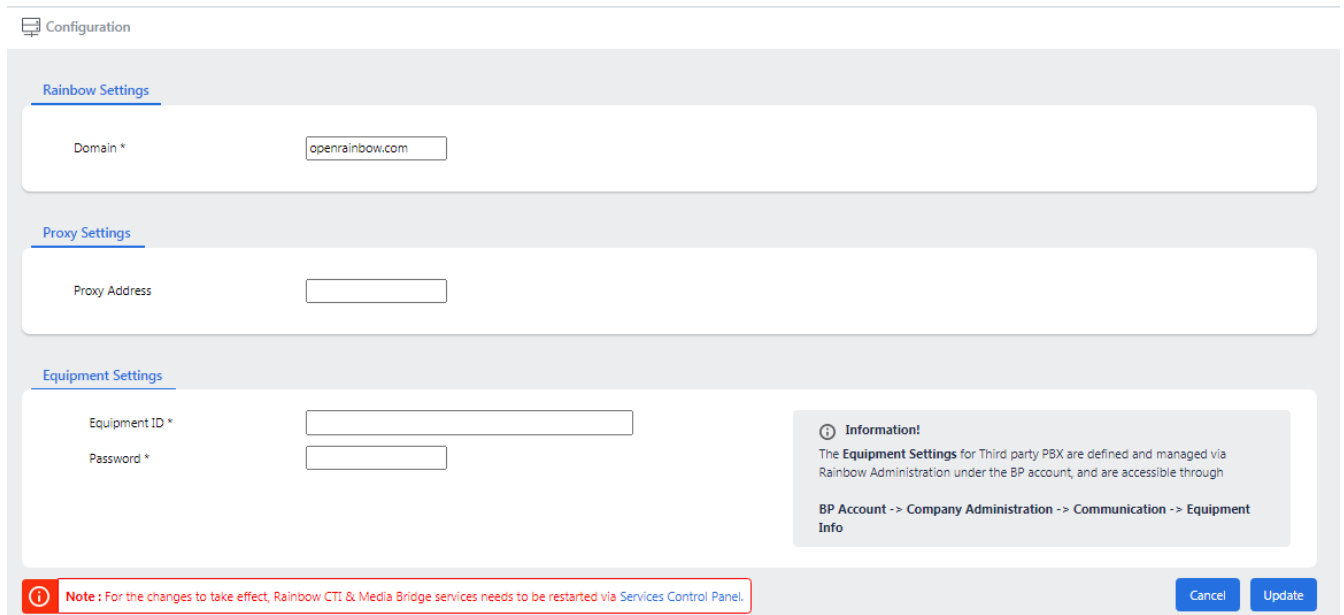
Rainbow CTI & Media Bridge is required to connect with the main Rainbow Server to enable telephony integration. The configuration settings are entered usually during the first time setup; however, they can be updated at any time, if needed.

Go to configuration page by clicking on the Configuration tab from the left menu, as shown below.



Screenshot-System

You will be presented with the screen, as shown below:



Configuration

Rainbow Settings

Domain *

Proxy Settings

Proxy Address

Equipment Settings

Equipment ID *

Password *

Information!
The **Equipment Settings** for Third party PBX are defined and managed via Rainbow Administration under the BP account, and are accessible through
BP Account -> Company Administration -> Communication -> Equipment Info

Note: For the changes to take effect, Rainbow CTI & Media Bridge services needs to be restarted via Services Control Panel.

Cancel Update

Rainbow CTI & Media Bridge 2021

Screenshot-Configuration

The relevant page is displayed which has the following main sections.

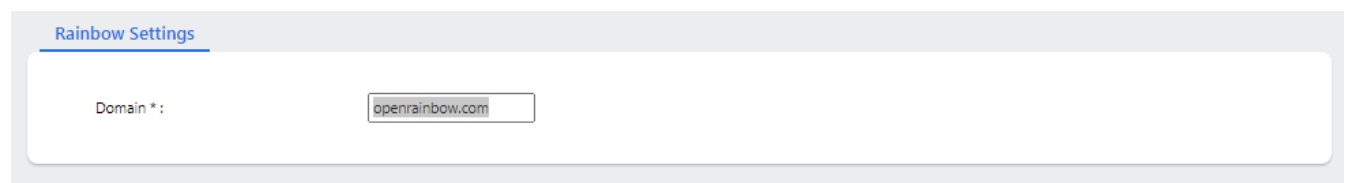
- **Rainbow Settings**
- **Proxy Settings**
- **Equipment Settings**

A screenshot of each section is illustrated below and a separate explanation for each is written underneath the item.

3.2.1 Rainbow Settings

Rainbow fulfillment team with your company's subscription confirmation will provide these settings. The default value for this section is set to 'openrainbow.com', which is valid for the production sites.

Please enter the provided information accordingly, as shown below for illustration.



Rainbow Settings

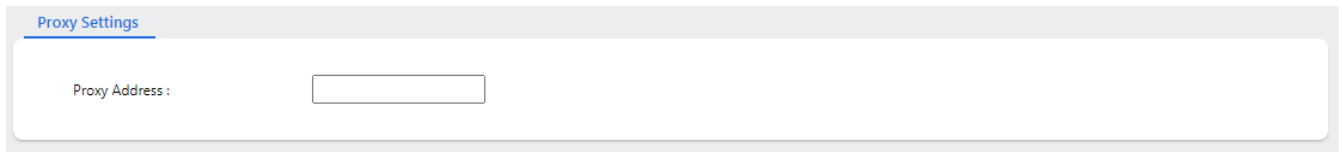
Domain * :

Screenshot-Rainbow Settings

3.2.2 Proxy Settings

If a company has a proxy setup in place for outgoing traffic, the proxy address shall be provided as part of the configuration. It is important to note that this field is optional.

Please enter the provided information accordingly, as shown below for illustration.



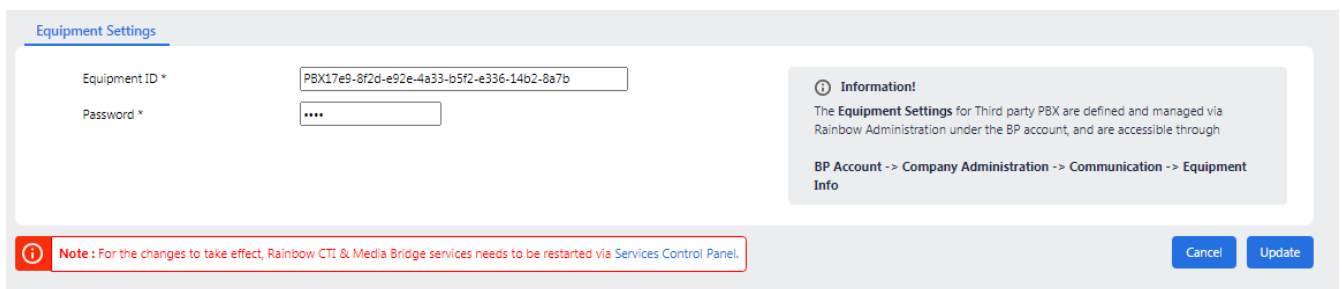
The screenshot shows a web form titled "Proxy Settings". It contains a single input field labeled "Proxy Address :". The field is currently empty.

Screenshot- Proxy Settings

3.2.3 Equipment Settings

Equipment ID is generated by Rainbow system and shall be provided by Rainbow fulfillment team/business partner with your company's subscription confirmation.

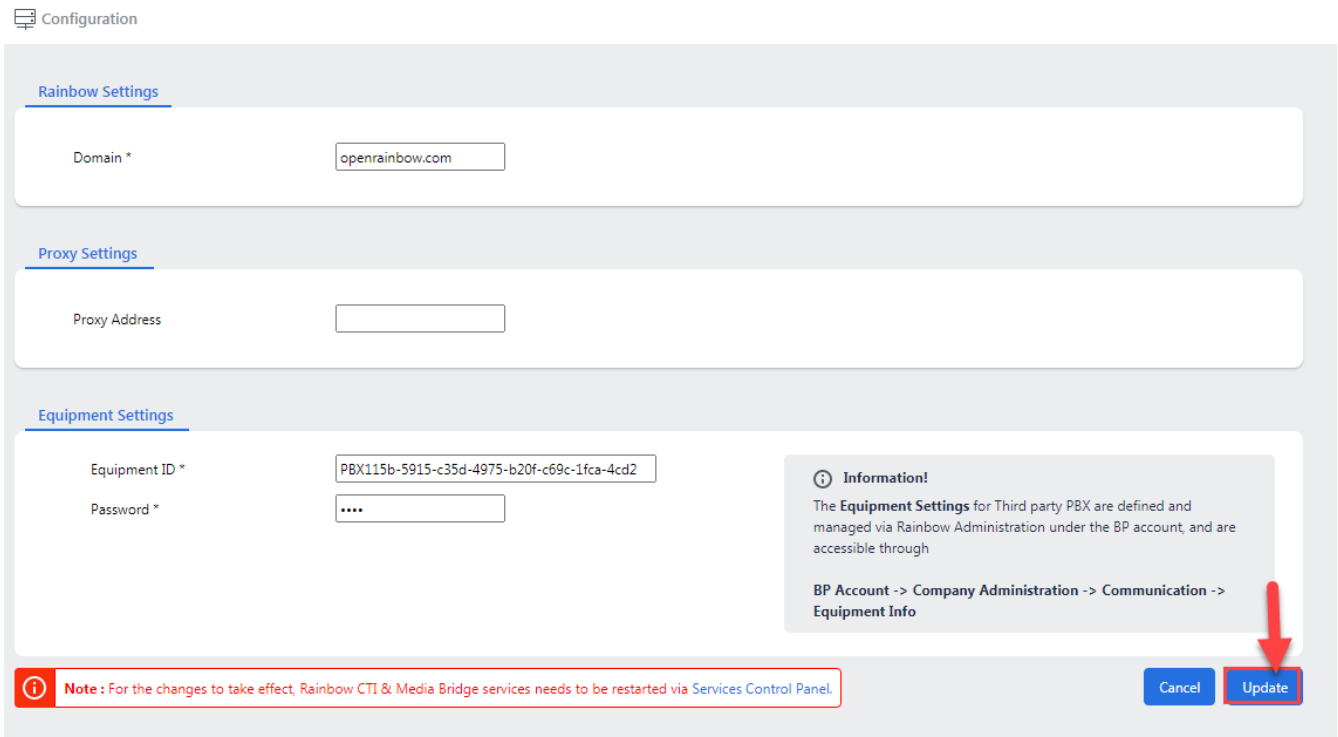
Please enter the provided information accordingly, as shown below for illustration.



The screenshot shows a web form titled "Equipment Settings". It contains two input fields: "Equipment ID *" with the value "PBX17e9-8f2d-e92e-4a33-b5f2-e336-14b2-8a7b" and "Password *" with masked characters "****". To the right of the form is an "Information!" box with the following text: "The **Equipment Settings** for Third party PBX are defined and managed via Rainbow Administration under the BP account, and are accessible through BP Account -> Company Administration -> Communication -> Equipment Info". At the bottom left, there is a red "Note" box: "Note : For the changes to take effect, Rainbow CTI & Media Bridge services needs to be restarted via Services Control Panel." At the bottom right, there are two buttons: "Cancel" and "Update".

Screenshot-Equipment Settings

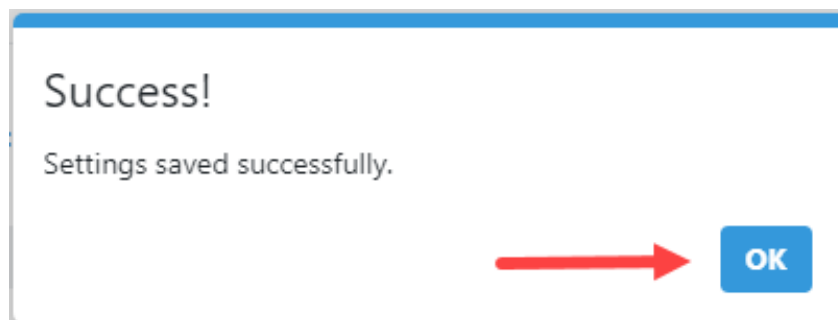
Finally, once you have entered the details into each field, click **Update**, as shown below.



Rainbow CTI & Media Bridge 2021

Screenshot-Configuration

You will be presented with the popup window, click **OK**, as shown below.



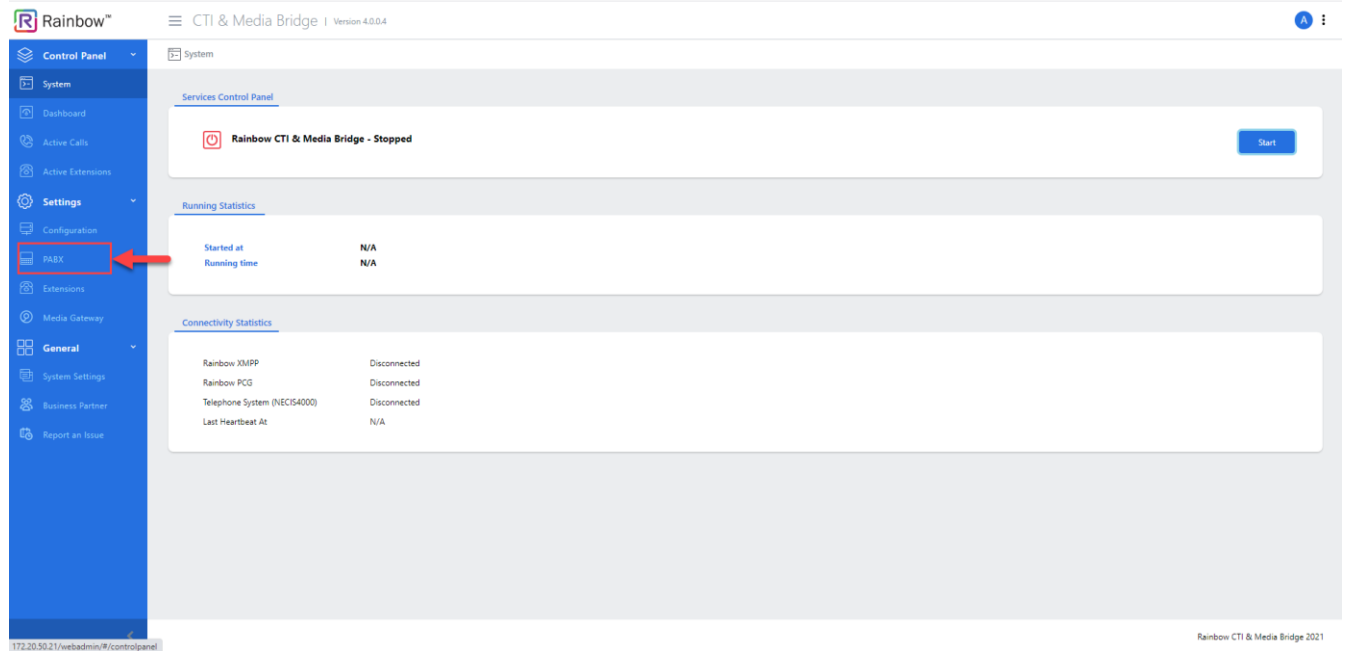
Screenshot-Message from application

NOTE: Once successfully configured, do not change these settings unless advised by Rainbow Support team.

3.3 PABX Settings

Rainbow CTI & Media Bridge is required to connect to NEC IS4000 telephone system to get phonebook information and also to get telephony events and perform call controls.

Click on the PABX tab from the left menu on the screen, as shown.



Screenshot- System

The relevant page is displayed which has the following main sections.

- **Connectivity Settings**
- **SIP Trunk Settings**

A screenshot of each section is illustrated below and a separate explanation for each is written underneath the item.

3.3.1 Connectivity Settings

Friendly Name field is usually the name that organization has given to the installed telephone system and it is only for better readability purposes. This becomes particularly useful when there are more than one telephony systems in an organization and in that case only IP addresses do not help the administrators to quickly identify the respective systems.

The default value for this field is set to 'NEC IS4000' but it can be changed.

IP Address and Port:

Please provide IP address and port as well for connecting with NEC IS4000.

Voice Gateway IP:

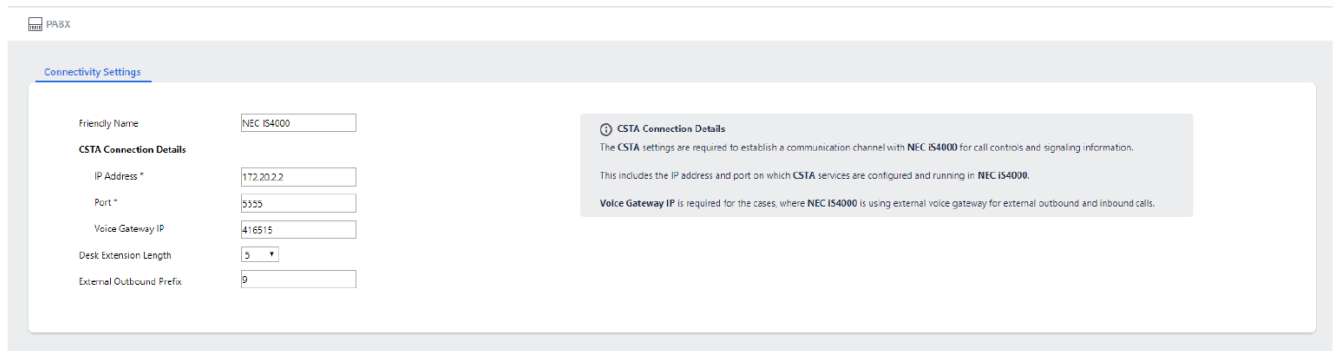
Provide IP Address for Voice Gateway in case NEC IS4000 is using an external voice gateway.

Desk Extension Length:

Enter the number of characters that an extension will comprise of in this field e.g. if extensions in your organization range between 100-999 then you will select 3 as your desk extension length.

External Outbound Prefix

Enter the prefix that must be affixed with extension when used for external outbound calls.

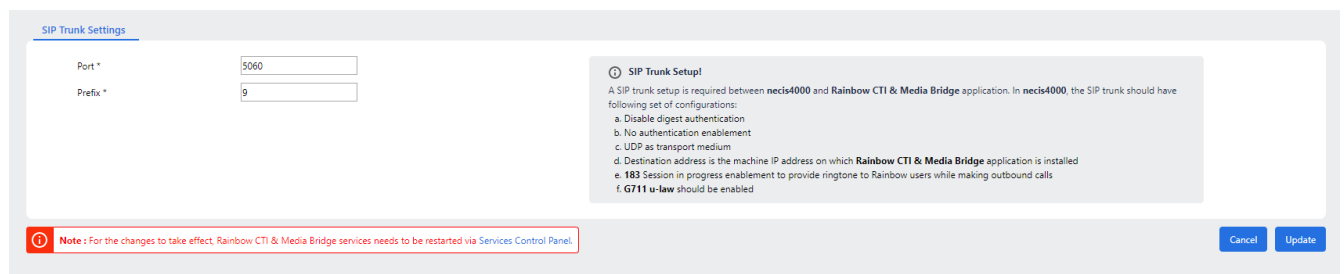


The screenshot shows the 'Connectivity Settings' page for PABX. It includes a 'Friendly Name' field with 'NEC IS4000'. Under 'CSTA Connection Details', there are fields for 'IP Address *' (172.20.2.2), 'Port *' (5555), 'Voice Gateway IP' (416515), 'Desk Extension Length' (5), and 'External Outbound Prefix' (9). A callout box titled 'CSTA Connection Details' explains that these settings are required for establishing a communication channel with NEC IS4000 and that the Voice Gateway IP is required for external voice gateway use.

Screenshot- PABX

3.3.2 SIP Trunk Settings

Provide configurations for SIP Trunk setup in this sections that are required for connectivity between NEC IS4000 and Rainbow CTI & Media Bridge application. Provide SIP Trunk port address and prefix that will be affixed with the extensions operating with SIP Trunk server.

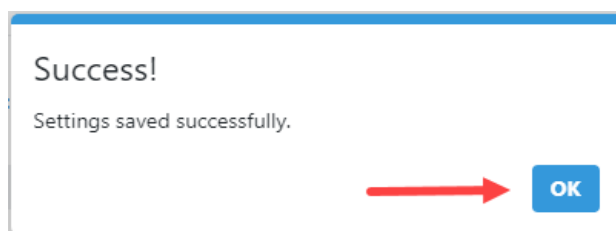


The screenshot shows the 'SIP Trunk Settings' page. It has fields for 'Port *' (5060) and 'Prefix *' (9). A callout box titled 'SIP Trunk Setup!' provides a list of configurations: a. Disable digest authentication, b. No authentication enablement, c. UDP as transport medium, d. Destination address is the machine IP address on which Rainbow CTI & Media Bridge application is installed, e. 183 Session in progress enablement to provide ringtone to Rainbow users while making outbound calls, f. G711 u-law should be enabled. A red note at the bottom states: 'Note: For the changes to take effect, Rainbow CTI & Media Bridge services needs to be restarted via Services Control Panel.' There are 'Cancel' and 'Update' buttons at the bottom right.

Screenshot- SIP Trunk Settings

Once you have entered the details into each field, click **Update**.

You will be presented with the popup window, click **OK**, as shown below.



Screenshot-Message from Application

NOTE: *Once successfully configured, restart the Rainbow CTI & Media Bridge service for changes to take effect.*

3.4 Media Gateway

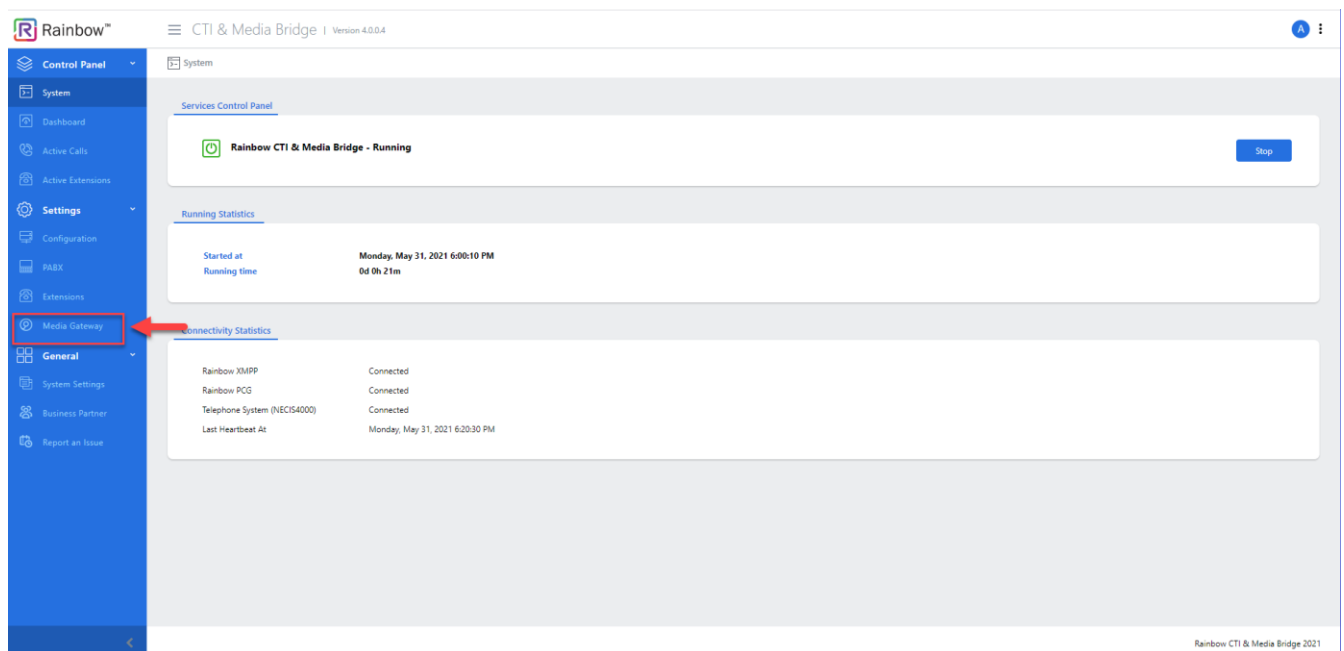
Rainbow CTI and Media Bridge works as a middleware between Rainbow and ALE WebRTC Gateway so that users (with CTI capability) can receive and take their desk extension (PABX) calls onto their rainbow applications.

It is important that Rainbow WebRTC Gateway is correctly configured before setting up Media Gateway. Media Gateway configuration is necessary if users are setup to receive their business phone calls on their Rainbow applications.

For more detailed information on webRTC Gateway configuration, please check:

<https://support.openrainbow.com/hc/en-us/articles/360019337180-WebRTC-gateway-installation-and-configuration-for-third-party-PBX>

Click on the Media Gateway tab from the left menu on the screen, as shown:



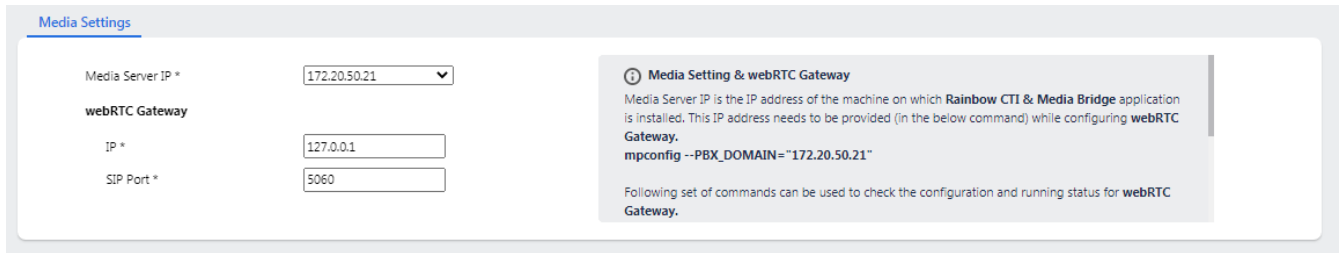
Screenshot-System

The relevant page is displayed which has the following main sections.

- **Media Settings**
- **Remote Extensions Numbering Plan**
- **Caller ID Policy for VOIP calling**

3.4.1 Media Settings

Please select the IP address using which the Media Gateway services will be communicating to webRTC Gateway. Also provide the IP address and port on which webRTC Gateway services are running. In most cases, Port will remain the same i.e. 5060 and so only IP address of the webRTC Gateway needs to be provided.



Screenshot - Media Gateway Settings

3.4.2 Remote Extensions Numbering Plan

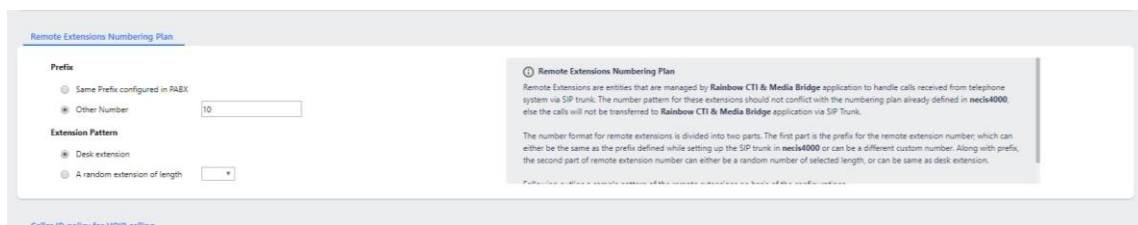
Remote Extensions are entities that are managed by Rainbow CTI & Media Bridge application to handle calls received from telephone system via SIP trunk. Remote Extension Prefix is required so that internal extensions do not conflict with PBX existing dial plan).

Prefix

You can either select the prefix of these remote extensions same as SIP Trunk prefix configured in PABX settings section or you can assign some other prefix by selecting the appropriate option.

Extension Pattern

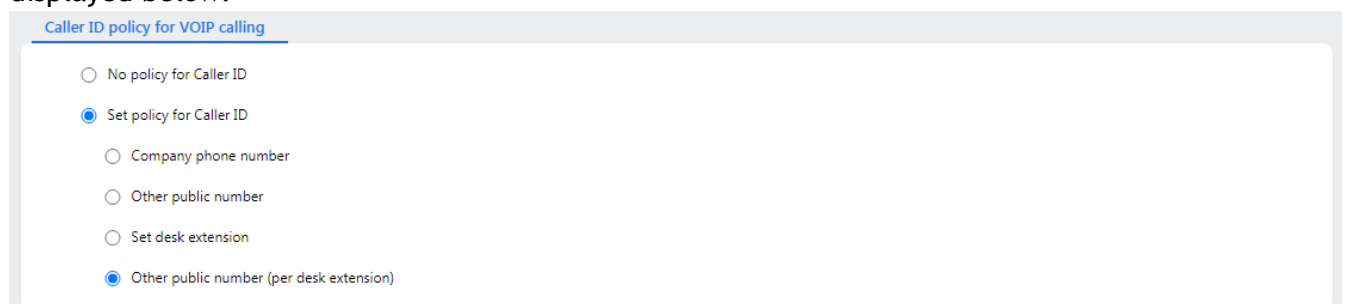
Select whether you want to use similar extension pattern as opted in PABX settings or do you want to use a random extension length. If you opt for a random extension length, then please do mention the exact length from the drop down next to this option.



Screenshot-Remote Extensions Numbering Plan Settings

3.4.3 Caller ID Policy for VOIP calling

You can select a particular policy for Caller ID option in this section. Simply opt for first option if you don't want to adopt a policy. If you select the second option, another menu opens up as displayed below:



Screenshot-Caller ID policy for VOIP Calling

Company Phone Number

Enter company phone number that you want to display as caller ID when a call is received on another extension from your extension.

Other Public Number

Enter some random public number that you want to display as caller ID when a call is received on another extension from your extension.

Set Desk extension

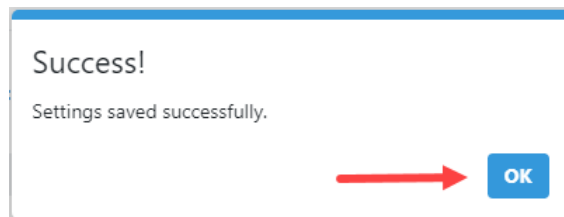
Select this option if you want to display your assigned desk extension as caller ID when a call is received on another extension from your extension.

Other Public Number (per desk extension)

Select this option if you want to display some other public number that is assigned as your desk extension as caller ID when a call is received on another extension from your extension.

Once you have entered the details into each field, click **Update**.

You will be presented with the popup window, click **OK**, as shown below.



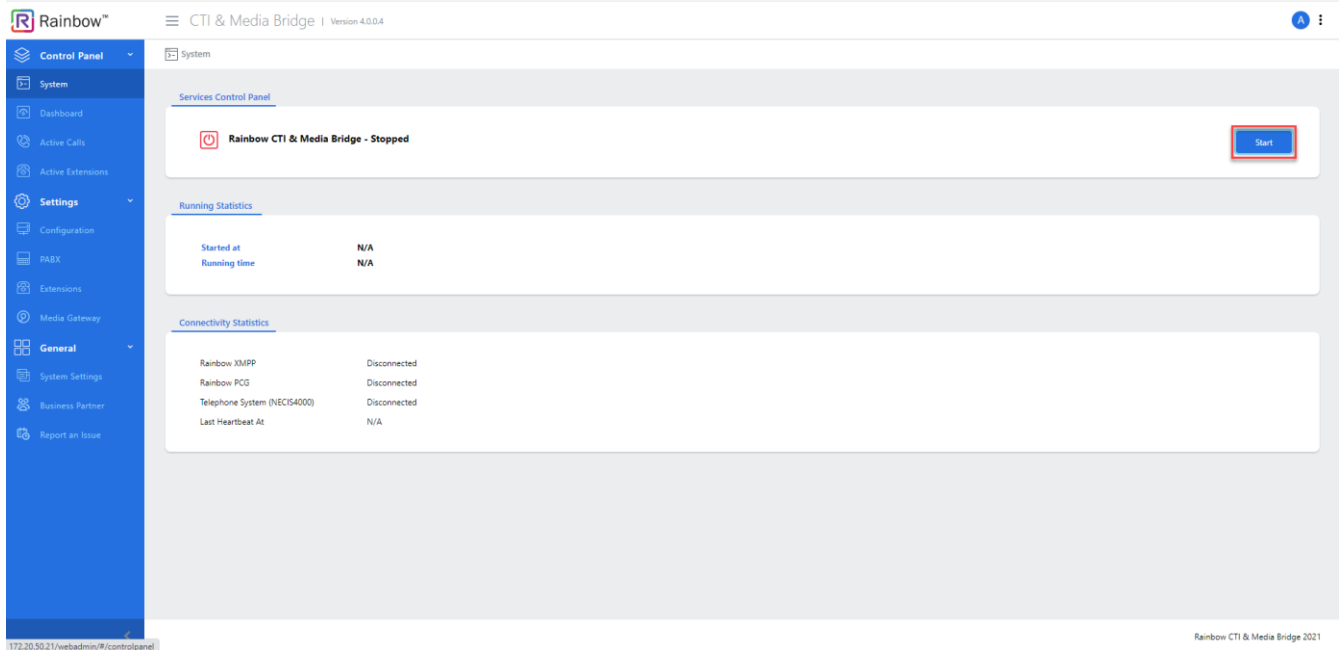
Screenshot-Message from Application

3.5 Starting and Stopping Rainbow CTI & Media Bridge Service

Once the configuration is updated, Rainbow CTI & Media Bridge Service can be started to establish a connection with Rainbow Server.

Go to system screen by clicking on “**System**”

The “**System**” screen provides an easy interface to start or stop the service without the need to go to Windows Services Control Manager.

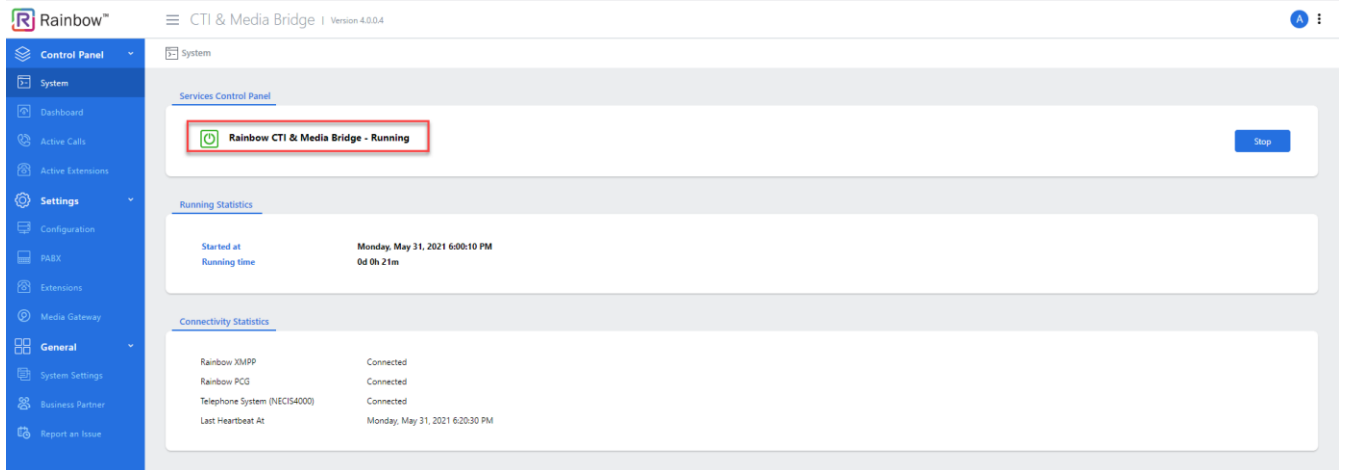


Screenshot - System

The Service screen displays the status of the Rainbow CTI & Media Bridge service. Using this screen, you can either start or stop the service.

On the left, you will see an LED indicating the current state of the service. A **Green** LED icon indicates that this service is running. A **Red** LED icon indicates that it is stopped. You can find the Stop or Start button on the right. Click that button to either start or stop the service.

The figure below shows the state when Rainbow CTI & Media Bridge service is in running state.

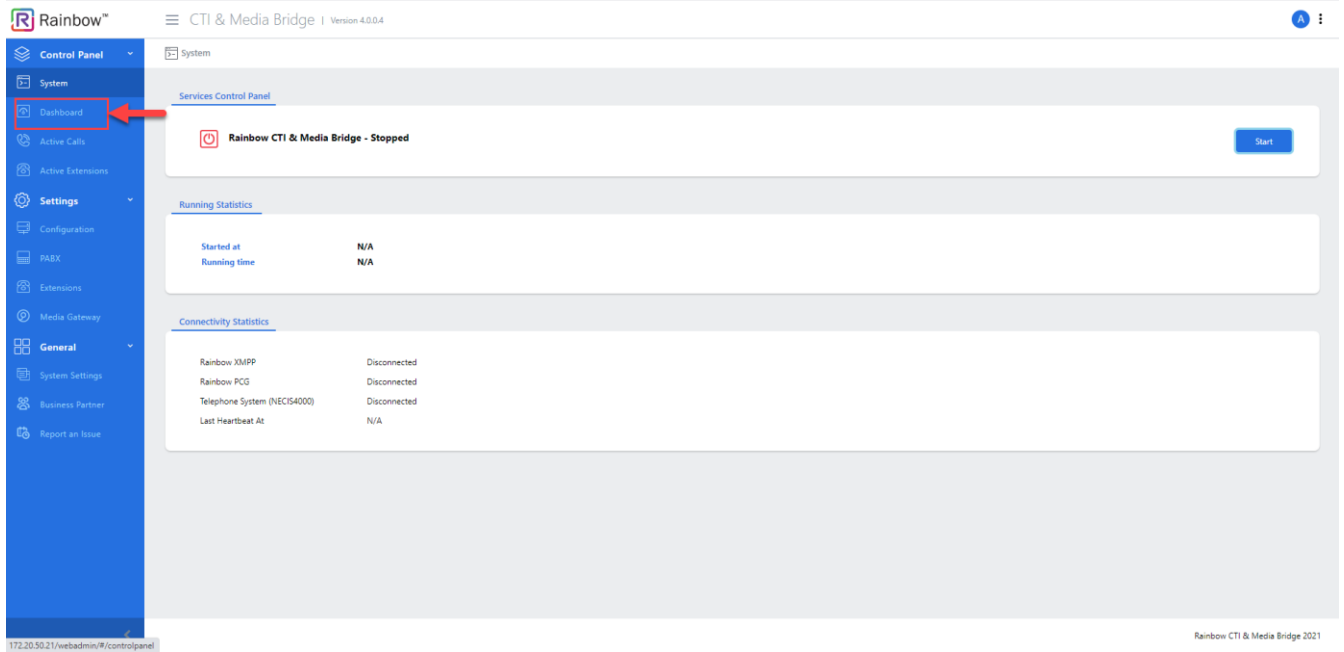


Screenshot- System

4 Calls and Extensions

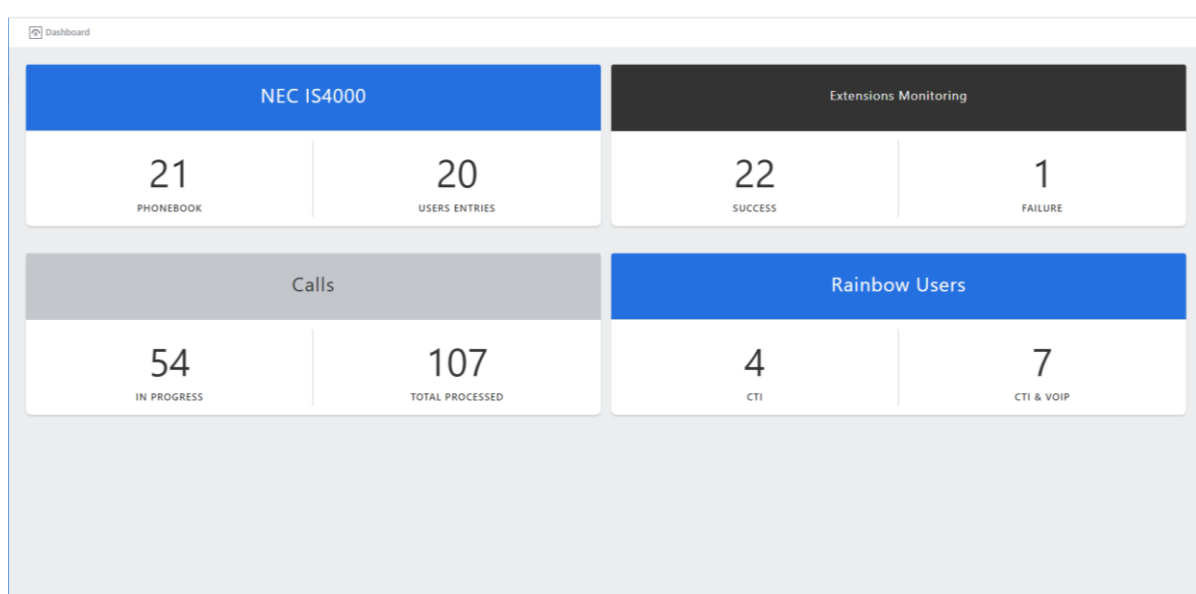
4.1 Dashboard

Rainbow CTI & Media Bridge has a number of pre-selected statistics such as **CTI Connector connection status**, **Monitored & Un-monitored extensions list** and **On-going Calls**. To view statistics, click on the **Dashboard** from the left menu, as shown below.



Screenshot -System

You will be presented with the screen, as shown below.



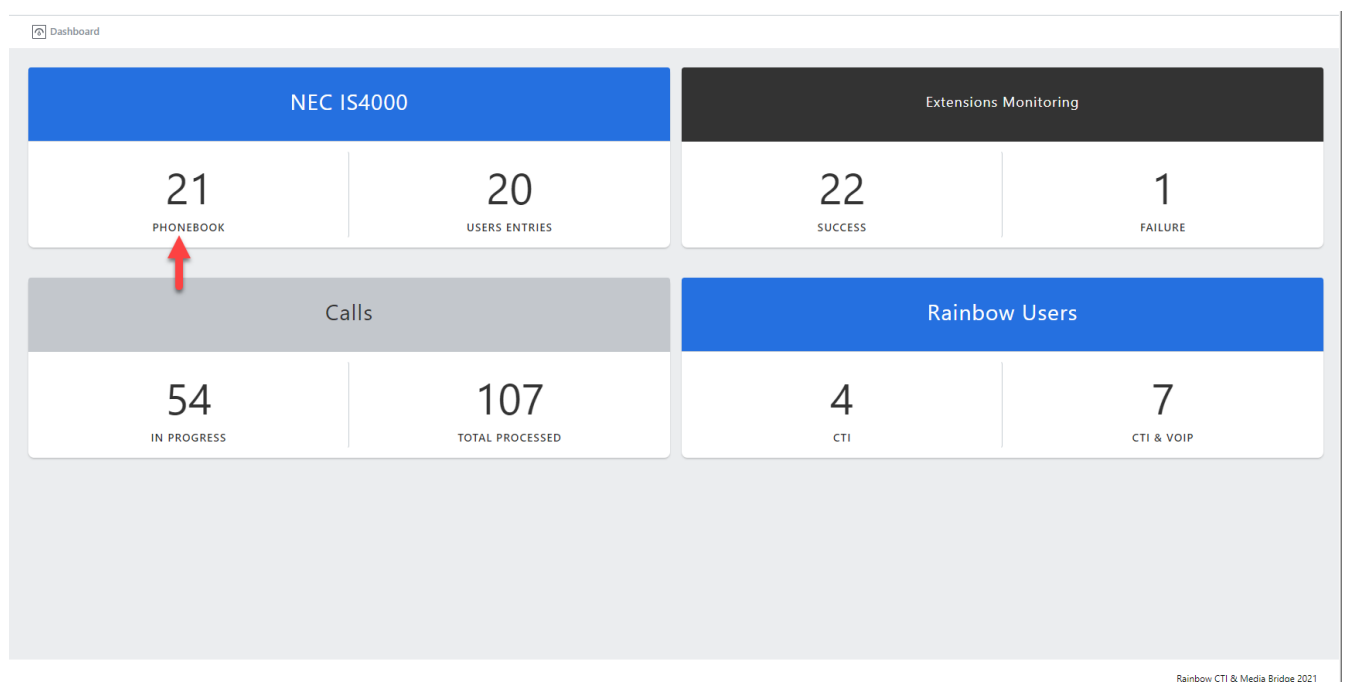
Screenshot-Dashboard

The dashboard tab provides wealth of information that can fast track troubleshooting.

4.2 Extensions & User Entries

Rainbow CTI & Media Bridge retrieves the list of total extensions/users entries available in NEC IS4000 PBX and sends that information to Rainbow Server. This information is then made available in Rainbow Enterprise configuration.

If you want to see the list of telephone extensions/Users entries, click on the **PHONEBOOK**, as shown below.



Screenshot-Dashboard

You will be presented with the screen, as shown below

Extension	Operating Mode	DDI	Rainbow User ID	Remote Extension
1000	CTI & VOIP		132sfd325eee	31000
1001	CTI & VOIP			31001
1002	CTI			31002
1003	CTI & VOIP			31003
1004	CTI			31004
1005	CTI & VOIP			31005
1006	CTI			31006
1007	CTI & VOIP			31007
1008	CTI			31008
1009	CTI & VOIP		213zxc212vbn	31009

Note: For the changes to take effect, Rainbow CTI & Media Bridge services needs to be restarted via Services Control Panel.

Rainbow CTI & Media Bridge 2021

Screenshot- Extensions

You can also go to extensions screen by clicking on the Extensions tab from the left menu, as shown.

System

Services Control Panel

Rainbow CTI & Media Bridge - Stopped [Start]

Running Statistics

Started at	N/A
Running time	N/A

Connectivity Statistics

Rainbow XMPP	Disconnected
Rainbow PCG	Disconnected
Telephone System (NECS4000)	Disconnected
Last Heartbeat At	N/A

Screenshot- System

You will be presented with the screen, as shown below

Extensions

All CTI CTI & VOIP Search

Extension	Operating Mode	DDI	Rainbow User ID	Remote Extension
1000	CTI & VOIP		132sfd325eee	31000
1001	CTI & VOIP			31001
1002	CTI			31002
1003	CTI & VOIP			31003
1004	CTI			31004
1005	CTI & VOIP			31005
1006	CTI			31006
1007	CTI & VOIP			31007
1008	CTI			31008
1009	CTI & VOIP		213zxc212vbn	31009

< 1 2 > 10 rows per page

Note: For the changes to take effect, Rainbow CTI & Media Bridge services needs to be restarted via Services Control Panel. Cancel Update Edit Add Extension

Rainbow CTI & Media Bridge 2021

Screenshot- Extensions

4.2.1 CTI & VOIP

VOIP introduces a routing menu Other Number in the Rainbow application to forward the PBX calls to a second extension configured with an external or internal number. It is based on Virtual Extension device on the Media Gateway.

Note: Every new extension will have CTI & VOIP set as operating mode.

If you want to handle any specific desk extension (PABX) call onto rainbow interface both in terms of signaling and voice then select CTI option from the drop down menu after clicking on **Edit** button. Once you have set the options, click **Update** as shown below:

Extensions

All CTI CTI & VOIP Search

Extension	Operating Mode	DDI	Rainbow User ID	Remote Extension
1000	CTI & VOIP		132sfd325eee	31000
1001	CTI & VOIP			31001
1002	CTI			31002
1003	CTI & VOIP			31003
1004	CTI			31004
1005	CTI & VOIP			31005
1006	CTI			31006
1007	CTI & VOIP			31007
1008	CTI			31008
1009	CTI & VOIP		213zxc212vbn	31009

10 rows per page

Note : For the changes to take effect, Rainbow CTI & Media Bridge services needs to be restarted via Services Control Panel.

Cancel Update **Edit** Add Extension

Rainbow CTI & Media Bridge 2021

Screenshot- Edit Button on Extensions Page

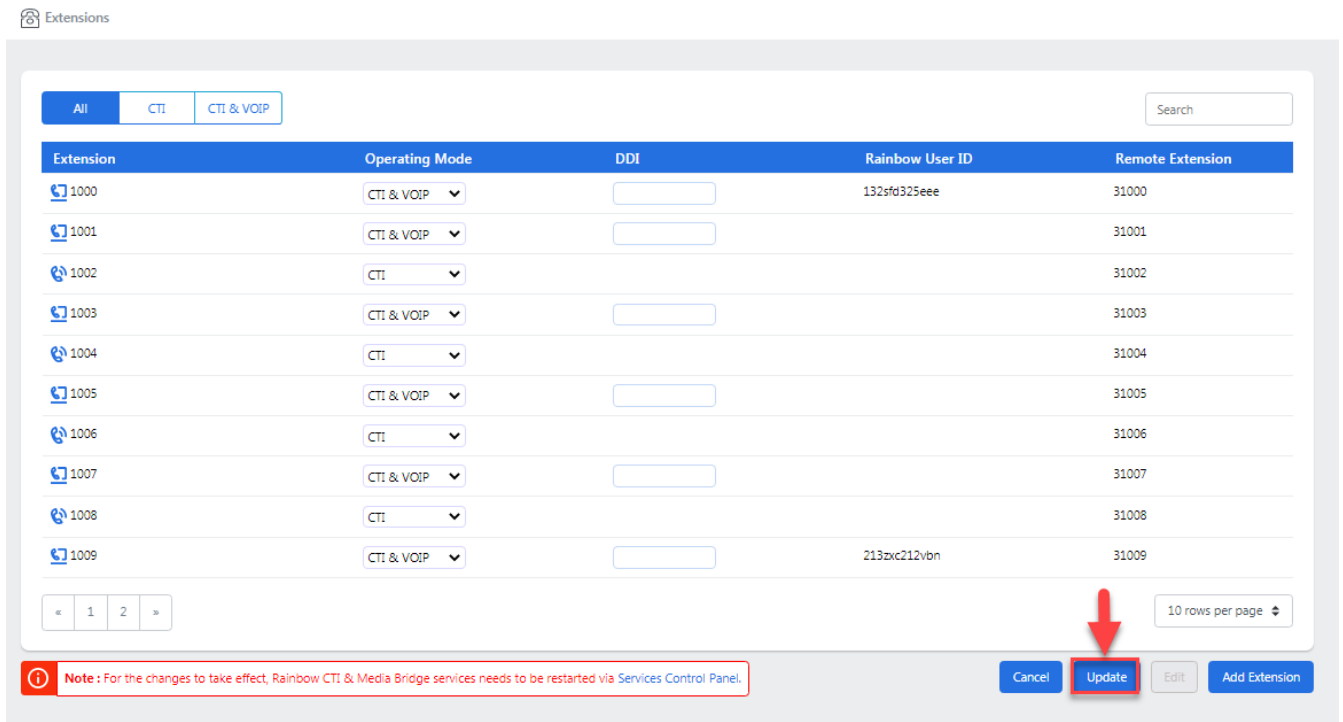
Extensions

All CTI CTI & VOIP Search

Extension	Operating Mode	DDI	Rainbow User ID	Remote Extension
1000	CTI & VOIP		132sfd325eee	31000
1001	CTI			31001
1002	CTI			31002
1003	CTI & VOIP			31003
1004	CTI			31004
1005	CTI & VOIP			31005
1006	CTI			31006
1007	CTI & VOIP			31007
1008	CTI			31008
1009	CTI & VOIP		213zxc212vbn	31009

10 rows per page

Screenshot - Updating Operating Mode of an Extension



Extension	Operating Mode	DDI	Rainbow User ID	Remote Extension
1000	CTI & VOIP		132sfd325eee	31000
1001	CTI & VOIP			31001
1002	CTI			31002
1003	CTI & VOIP			31003
1004	CTI			31004
1005	CTI & VOIP			31005
1006	CTI			31006
1007	CTI & VOIP			31007
1008	CTI			31008
1009	CTI & VOIP		213zxc212vbn	31009

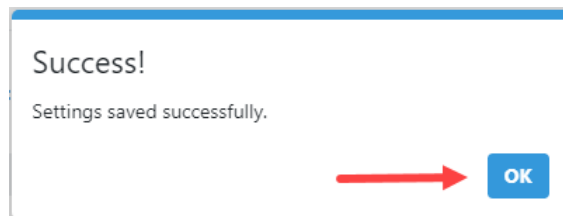
Note: For the changes to take effect, Rainbow CTI & Media Bridge services needs to be restarted via Services Control Panel.

Buttons: Cancel, Update, Edit, Add Extension

Rainbow CTI & Media Bridge 2021

Screenshot-Updating Extensions

You will be presented with the popup window, click **OK**, as shown below.



Screenshot-Message from Application

While updating the Operating Mode of added extensions, you can also set DDI information for these extensions. If Operating Mode is set as **CTI & VOIP** then DDI information can be manually added and if operating mode is set as **CTI**, then DDI information cannot be altered and the value stored in **CTI & VOIP** mode is stored in the extension as shown below:

Extensions

All CTI CTI & VOIP Search

Extension	Operating Mode	DDI	Rainbow User ID	Remote Extension
1000	CTI & VOIP	321	132sfd325eee	31000
1001	CTI & VOIP	365		31001
1002	CTI			31002
1003	CTI & VOIP			31003
1004	CTI			31004
1005	CTI & VOIP			31005
1006	CTI			31006
1007	CTI & VOIP			31007
1008	CTI			31008
1009	CTI & VOIP		213zxc212vbn	31009

Rainbow CTI & Media Bridge 2021

Screenshot- Extensions

4.2.2 Add Extension

You can also add new extensions by clicking on the Add Extensions button available at the bottom of the page as highlighted below:

Extensions

All CTI CTI & VOIP Search

Extension	Operating Mode	DDI	Rainbow User ID	Remote Extension
10 rows per page				

Note: For the changes to take effect, Rainbow CTI & Media Bridge services needs to be restarted via Services Control Panel.

Cancel Update Edit **Add Extension**

Screenshot- Extensions

Following page is displayed when you click on Add Extensions button:

Extension

Information

Extension *

DDI

Note: For the changes to take effect, Rainbow CTI & Media Bridge services needs to be restarted via Services Control Panel.

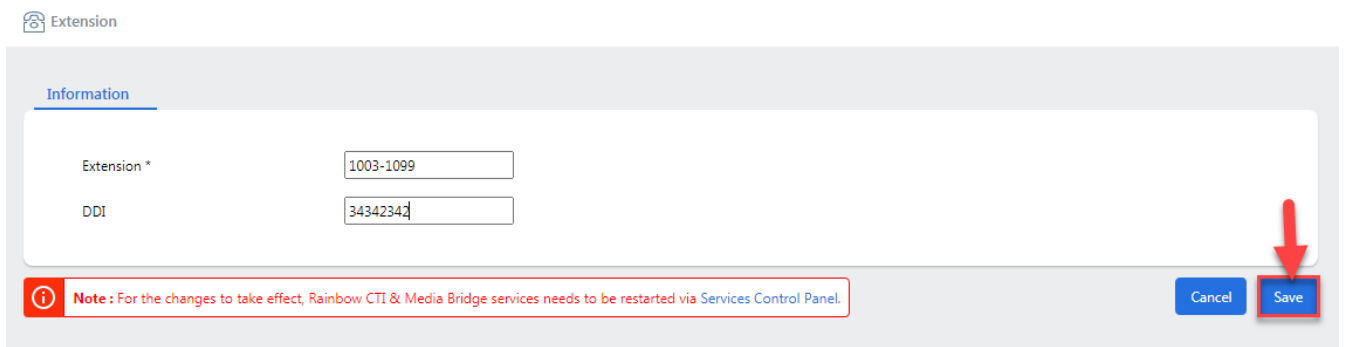
Cancel Save

Screenshot- Add Extensions

Extension - You can provide a single extension or a range of extensions (100 - 125) in this field.

DDI - Provide a DDI that you want to be assigned to all the newly added extensions.

Once done, click on Save Button as highlighted below:



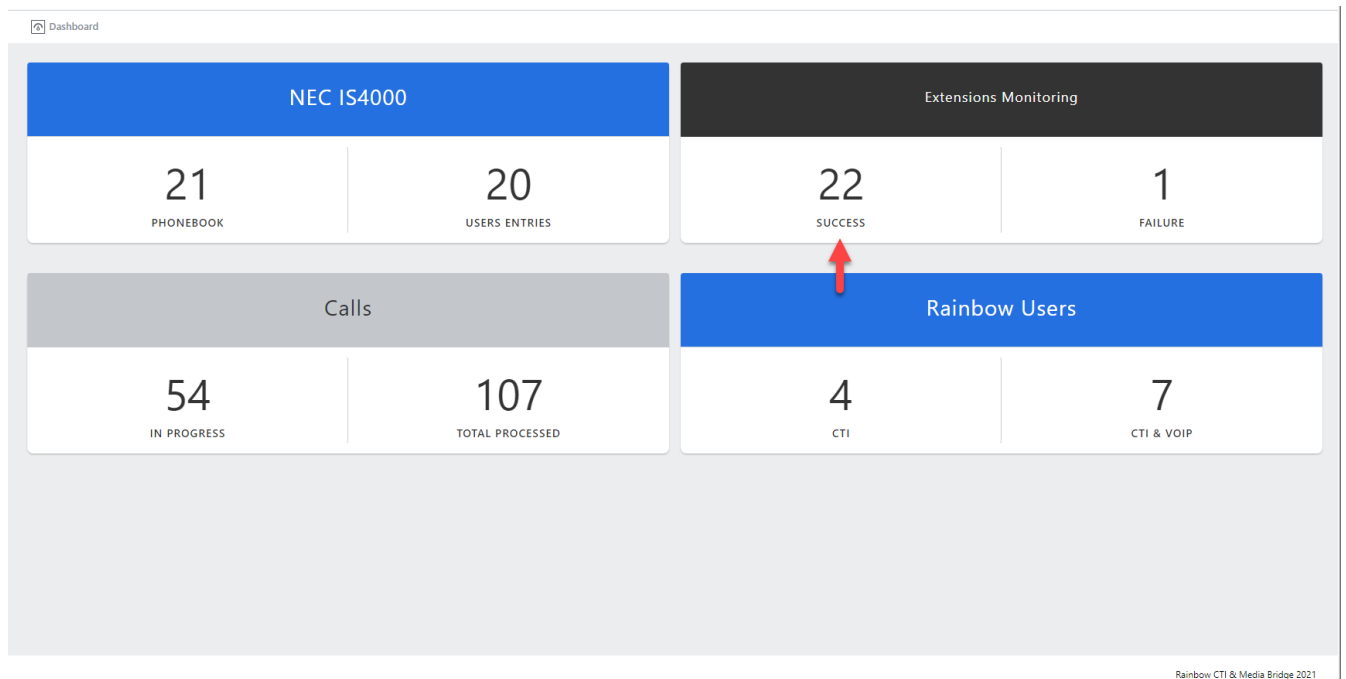
The screenshot shows a web interface for configuring an extension. At the top left, there is a breadcrumb 'Extension' with a home icon. Below it is the 'Information' tab. The form contains two input fields: 'Extension *' with the value '1003-1099' and 'DDI' with the value '34342342'. At the bottom left, a red-bordered note box contains the text: 'Note: For the changes to take effect, Rainbow CTI & Media Bridge services needs to be restarted via Services Control Panel.' At the bottom right, there are two buttons: 'Cancel' and 'Save'. A red arrow points to the 'Save' button.

Screenshot- Add Extensions

4.3 Monitored Extensions

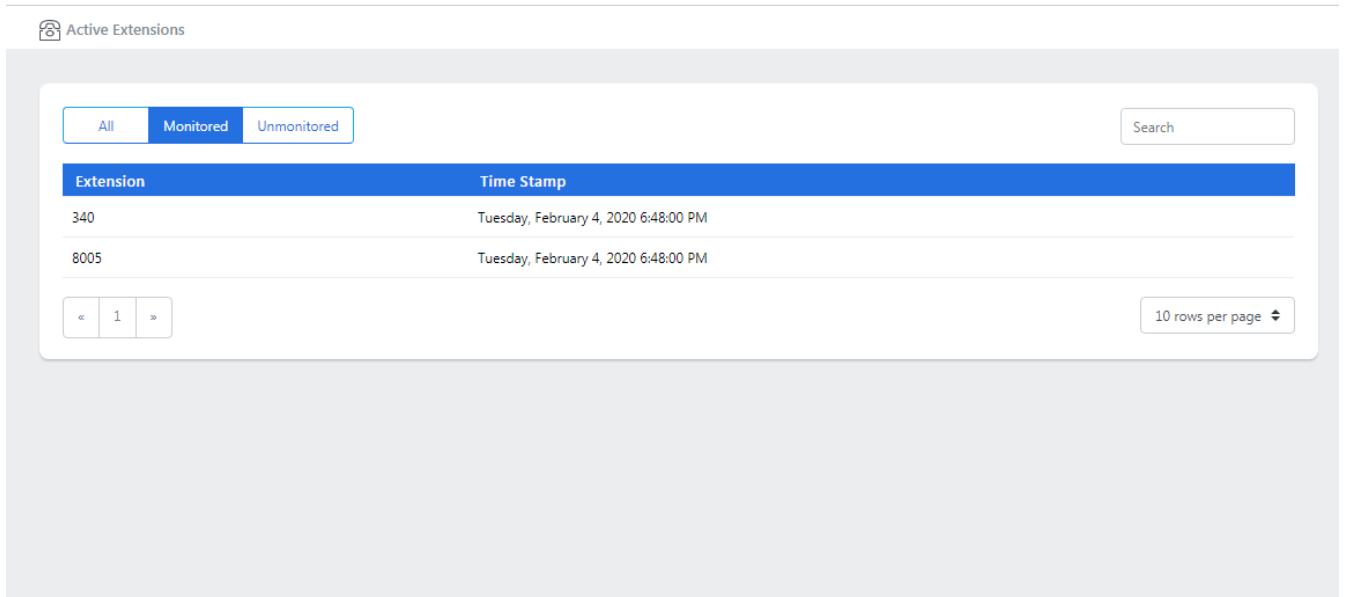
Once necessary configuration is done in Rainbow Enterprise configuration, the information of telephone extensions that need to be monitored is sent to CTI & Media Bridge. The “Monitored Extensions” shows the total number of extensions that are successfully registered for monitoring by CTI & Media Bridge.

If you want to see the list of telephone extensions monitored, click on the SUCCESS from **Extension Monitoring** widget, as shown below.



Screenshot-Dashboard

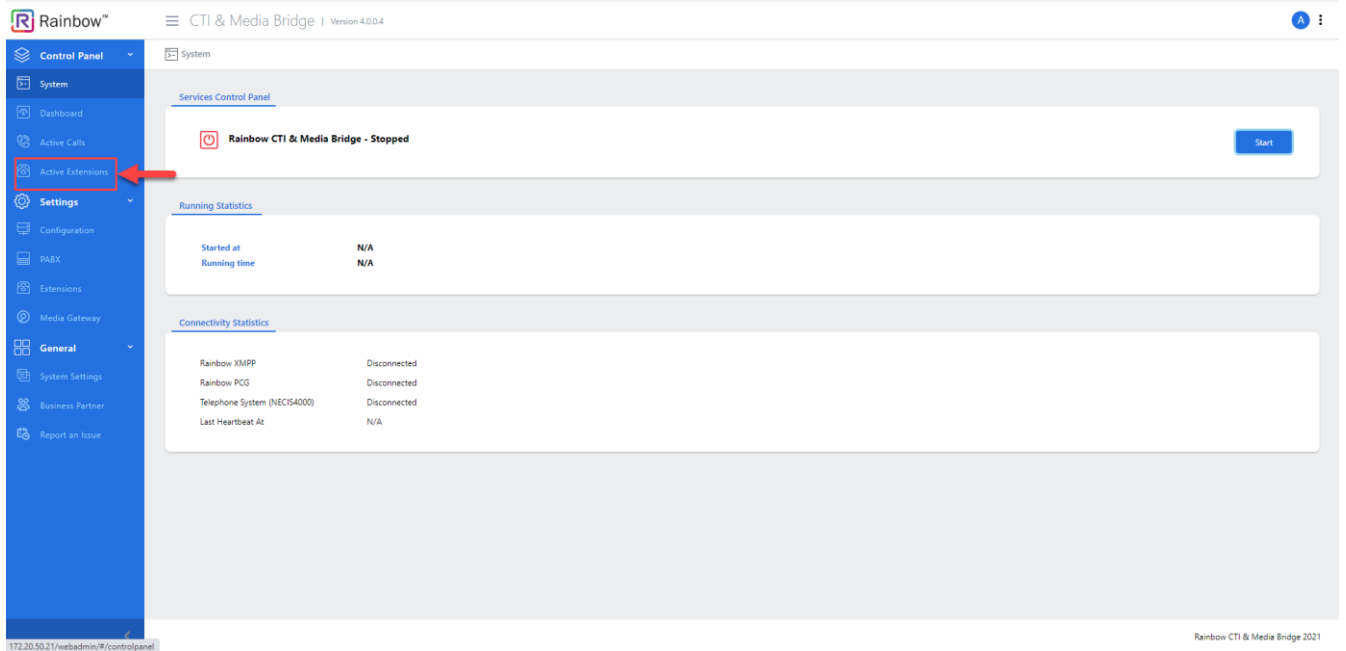
You will be presented with the screen, as shown below



Rainbow CTI & Media Bridge 2021

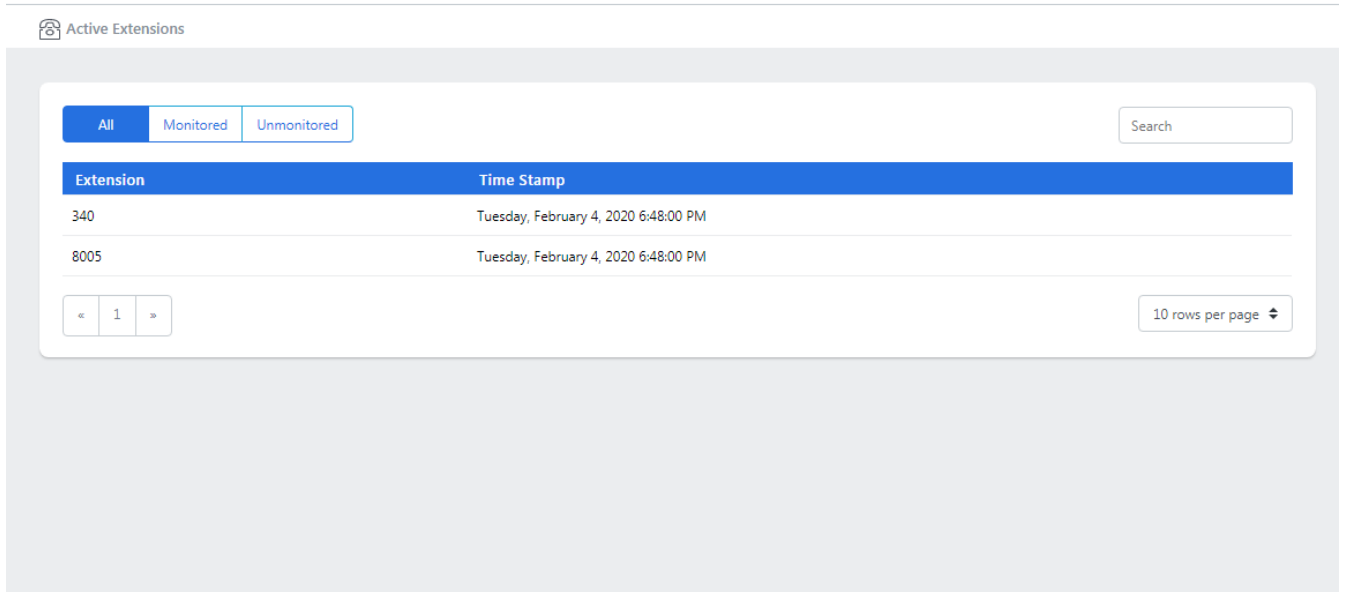
Screenshot-Monitored Extensions

You can also go to statistics screen by clicking on the Active Extension tab from the left menu, as shown.



Screenshot-System

You will be presented with the list of all both monitored and unmonitored extensions, as shown below:



Active Extensions

All Monitored Unmonitored Search

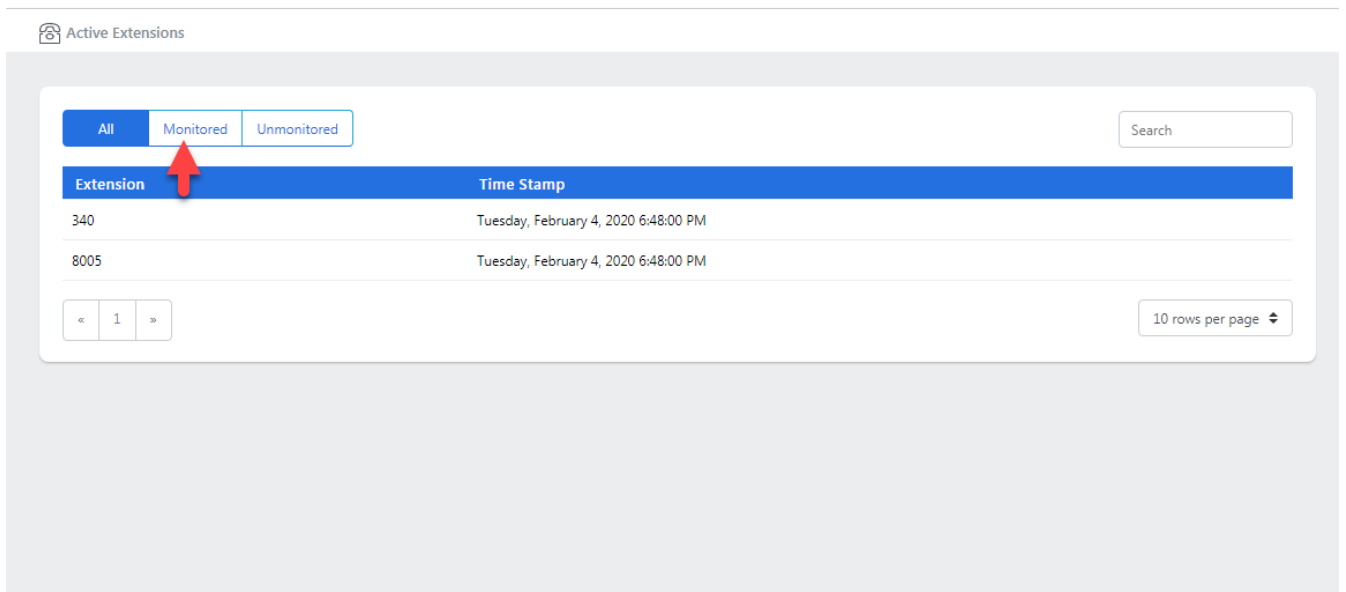
Extension	Time Stamp
340	Tuesday, February 4, 2020 6:48:00 PM
8005	Tuesday, February 4, 2020 6:48:00 PM

< 1 > 10 rows per page

Rainbow CTI & Media Bridge 2021

Screenshot-Active Extensions

Click on the Monitored tab from top menu, as shown below.



Active Extensions

All Monitored Unmonitored Search

Extension	Time Stamp
340	Tuesday, February 4, 2020 6:48:00 PM
8005	Tuesday, February 4, 2020 6:48:00 PM

< 1 > 10 rows per page

Rainbow CTI & Media Bridge 2021

Screenshot-Active Extensions

You will be presented with the monitored extensions, as shown below

Active Extensions

All Monitored Unmonitored

Extension	Time Stamp
340	Tuesday, February 4, 2020 6:48:00 PM
8005	Tuesday, February 4, 2020 6:48:00 PM

< 1 >

Rainbow CTI & Media Bridge 2021

Screenshot-Monitored Extensions

Key in the extension number in order to search for a specific monitored extension, as shown below.

Active Extensions

All Monitored Unmonitored

Extension	Time Stamp
8005	Tuesday, February 4, 2020 6:48:00 PM

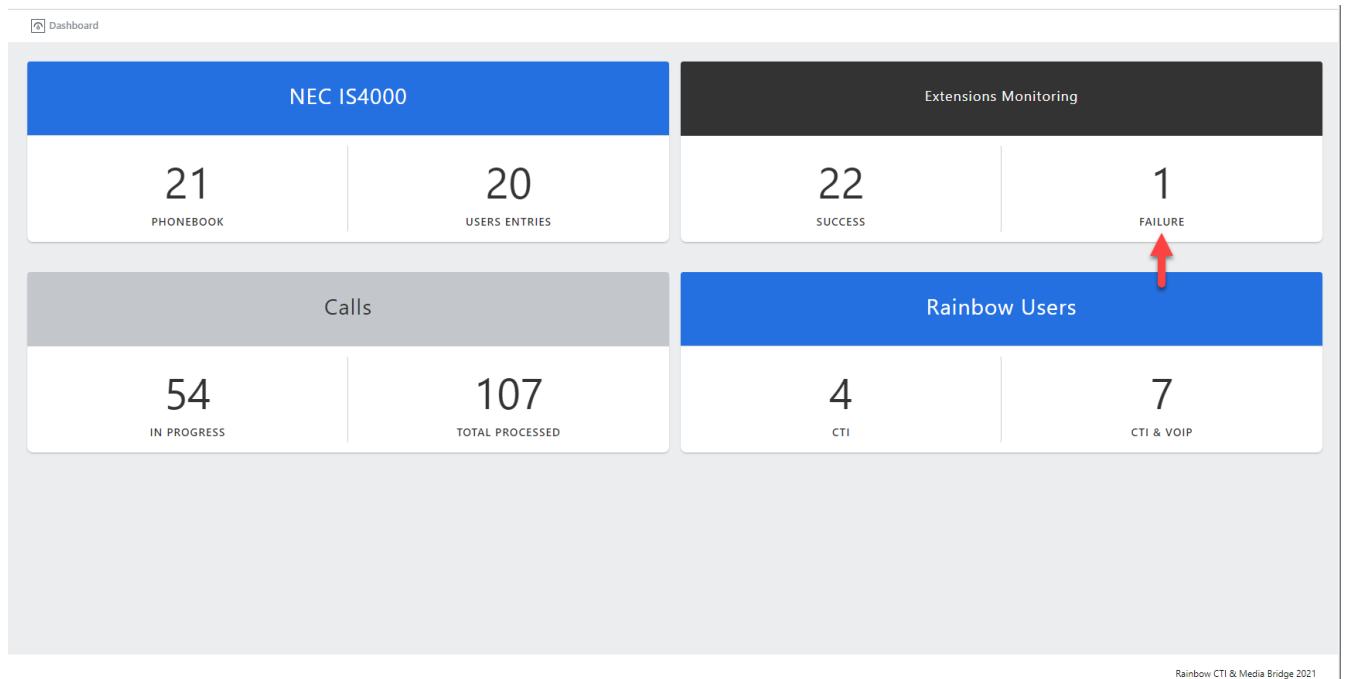
< 1 >

Screenshot-Monitored Extensions

4.4 Unsuccessful monitoring of extensions

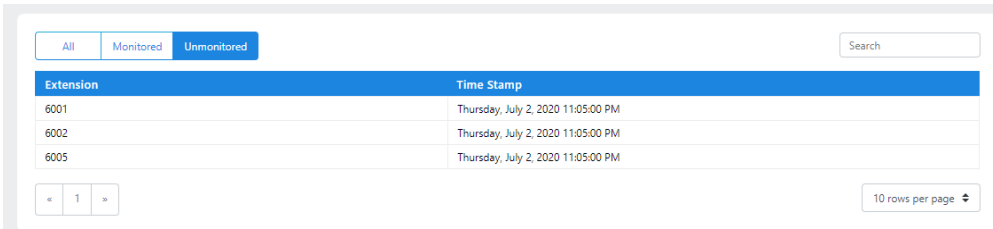
There could be many reasons due to which CTI & Media Bridge may not be able to monitor an extension. The reasons could range from missing configuration to a faulty phone cable.

This section gives the total number of extensions that could not be monitored. If you want to see the list of telephone extensions that are not monitored, click on **FAILURE** from **Extension Monitoring** widget, as shown below:



Screenshot-Dashboard

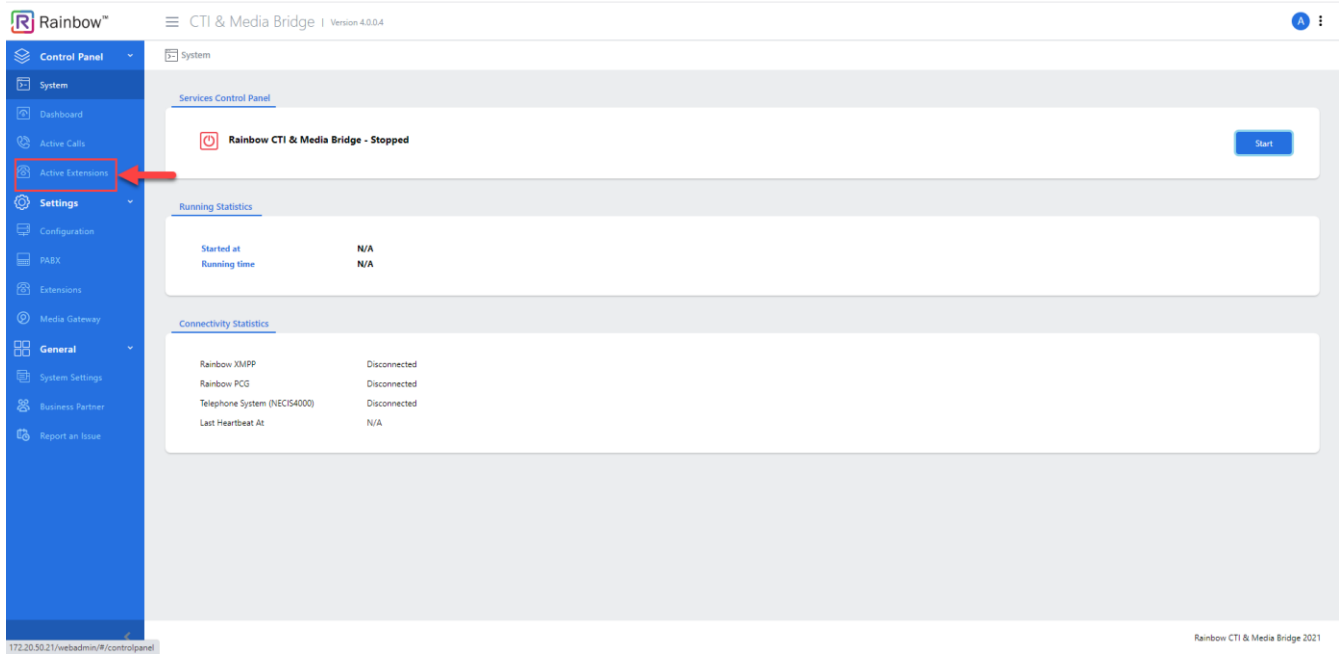
You will be presented with the screen, as shown below



Extension	Time Stamp
6001	Thursday, July 2, 2020 11:05:00 PM
6002	Thursday, July 2, 2020 11:05:00 PM
6005	Thursday, July 2, 2020 11:05:00 PM

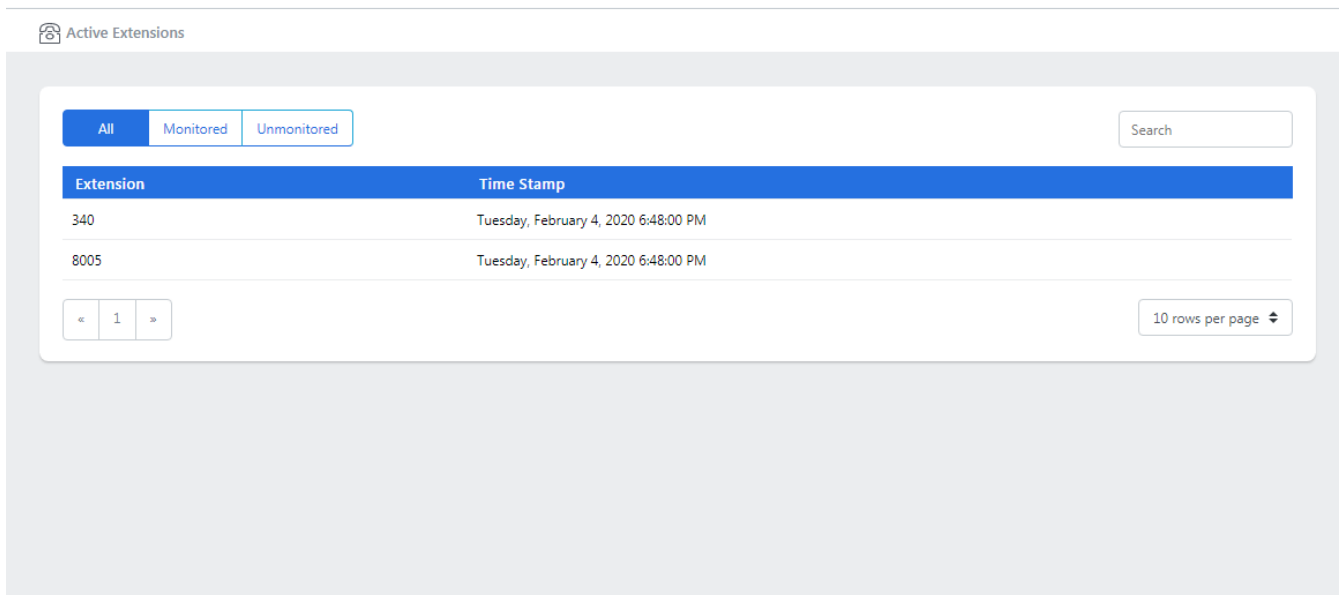
Screenshot-Unmonitored Extensions

You can also go to active extensions screen by clicking on the Active Extensions tab from the left menu, as shown below:



Screenshot-System

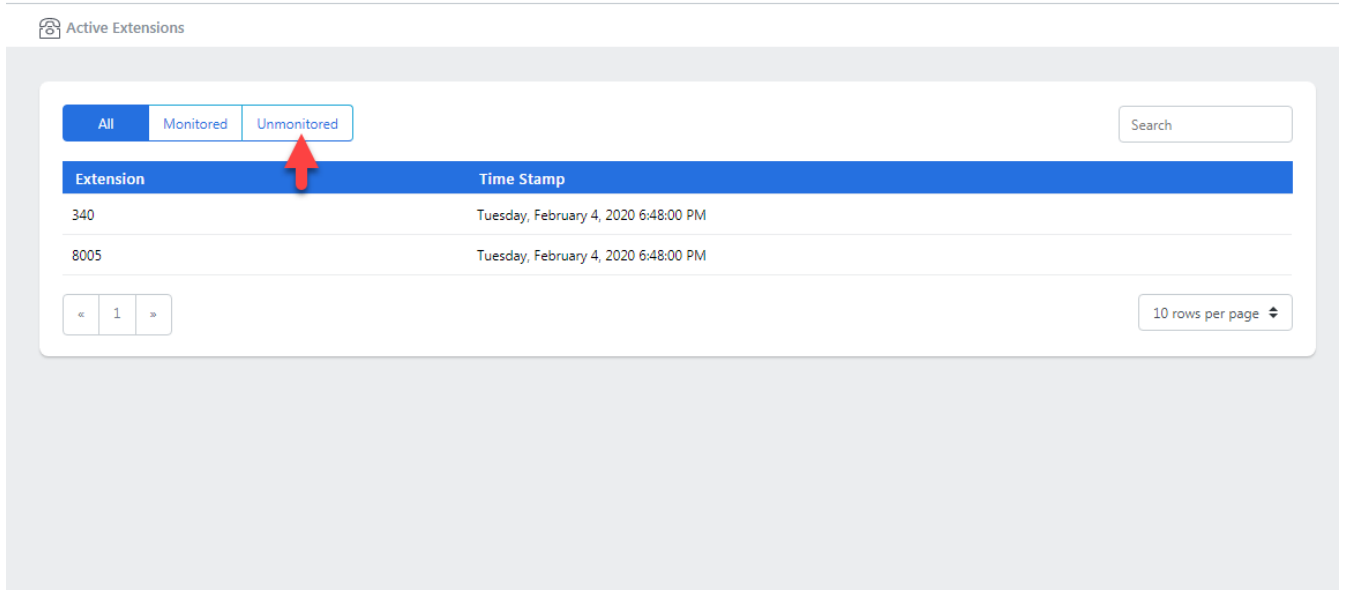
You will be presented with the list of both monitored and unmonitored extensions, as shown below:



Rainbow CTI & Media Bridge 2021

Screenshot-Active Extensions

Click on the Unmonitored tab from top menu, as shown.



Active Extensions

All Monitored Unmonitored Search

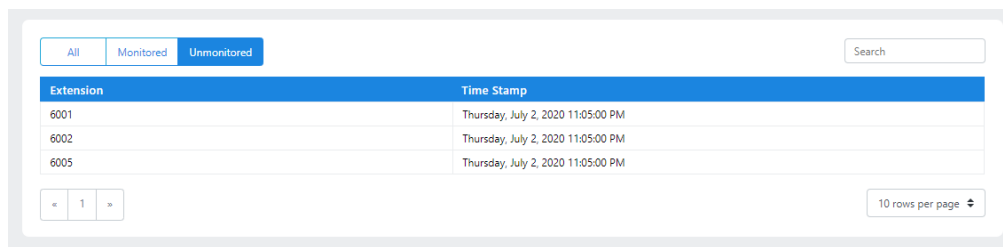
Extension	Time Stamp
340	Tuesday, February 4, 2020 6:48:00 PM
8005	Tuesday, February 4, 2020 6:48:00 PM

< 1 > 10 rows per page

Rainbow CTI & Media Bridge 2021

Screenshot-Active Extensions

You will be presented with the list of unmonitored extensions, as shown below:



All Monitored Unmonitored Search

Extension	Time Stamp
6001	Thursday, July 2, 2020 11:05:00 PM
6002	Thursday, July 2, 2020 11:05:00 PM
6005	Thursday, July 2, 2020 11:05:00 PM

< 1 > 10 rows per page

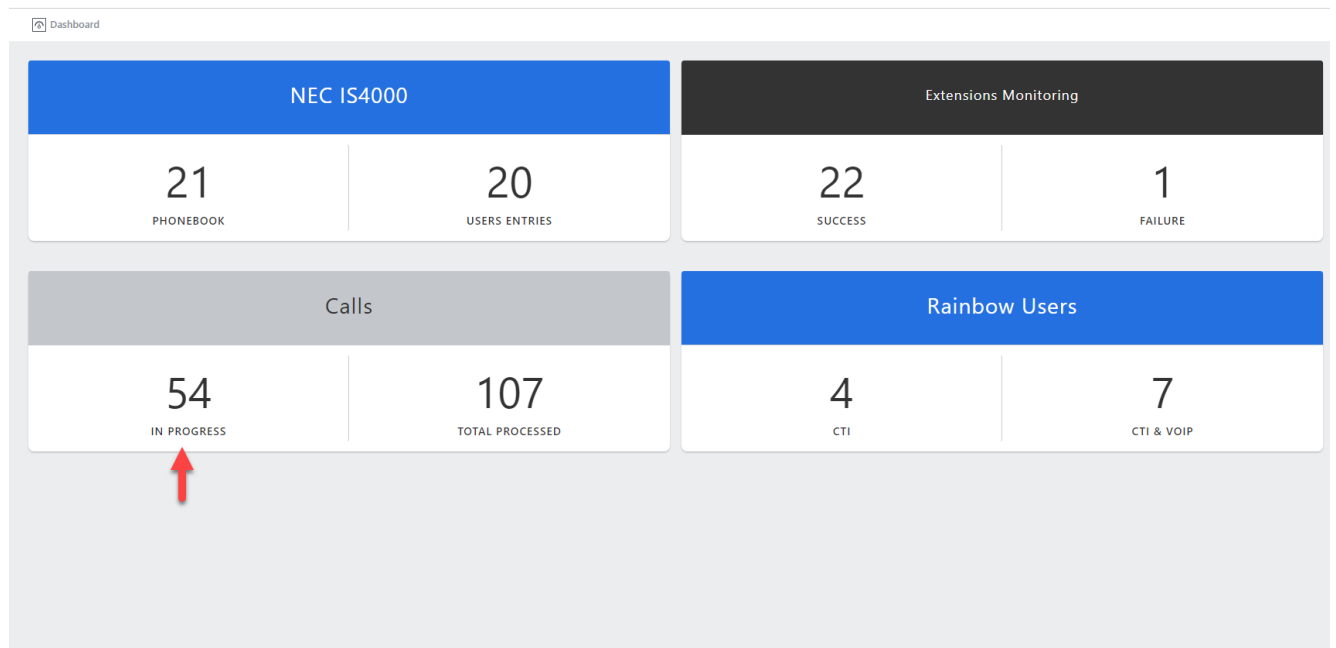
Screenshot-Unmonitored Extensions

Key in the extension number in order to search for a specific unmonitored extension.

4.5 Seeing active calls in the system

Rainbow CTI & Media Bridge provides a way to see the currently in-progress calls in the system. This may be needed during troubleshooting to see if certain calls are being recognized and correctly passed on to Rainbow Server.

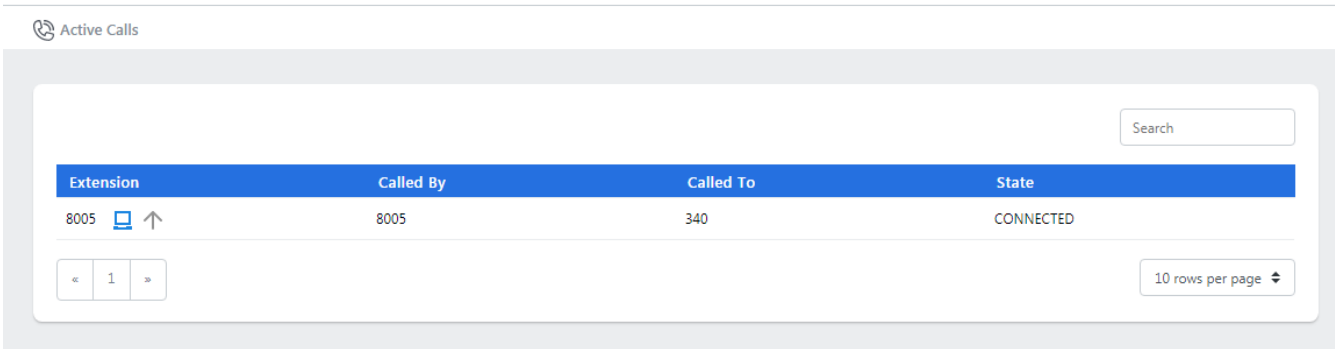
To see the details of the **calls in progress**; click on “**IN PROGRESS**” from **Calls** widget, as shown below.





Rainbow CTI & Media Bridge 2021

Screenshot-Dashboard

You will be presented with the screen with calls' current state, as shown below.



The Active Calls screen displays a table with the following data:



Extension	Called By	Called To	State
8005  	8005	340	CONNECTED

Additional UI elements include a search bar, a pagination control showing '1' of 1 page, and a '10 rows per page' dropdown menu.

Screenshot-Active Calls

Connected calls will be shown, as below.

Active Calls

Extension	Called By	Called To	State
8005  	8005	340	CONNECTED

< 1 >
10 rows per page ▾

Screenshot- Active Calls

The **“Total Processed”** stat shows the total number of calls; Rainbow CTI & Media Bridge service has processed since its last restart.

Dashboard

NEC IS4000

21

PHONEBOOK

20

USERS ENTRIES

Extensions Monitoring

22

SUCCESS

1

FAILURE


Calls

54

IN PROGRESS

107

TOTAL PROCESSED



Rainbow Users

4

CTI

7

CTI & VOIP

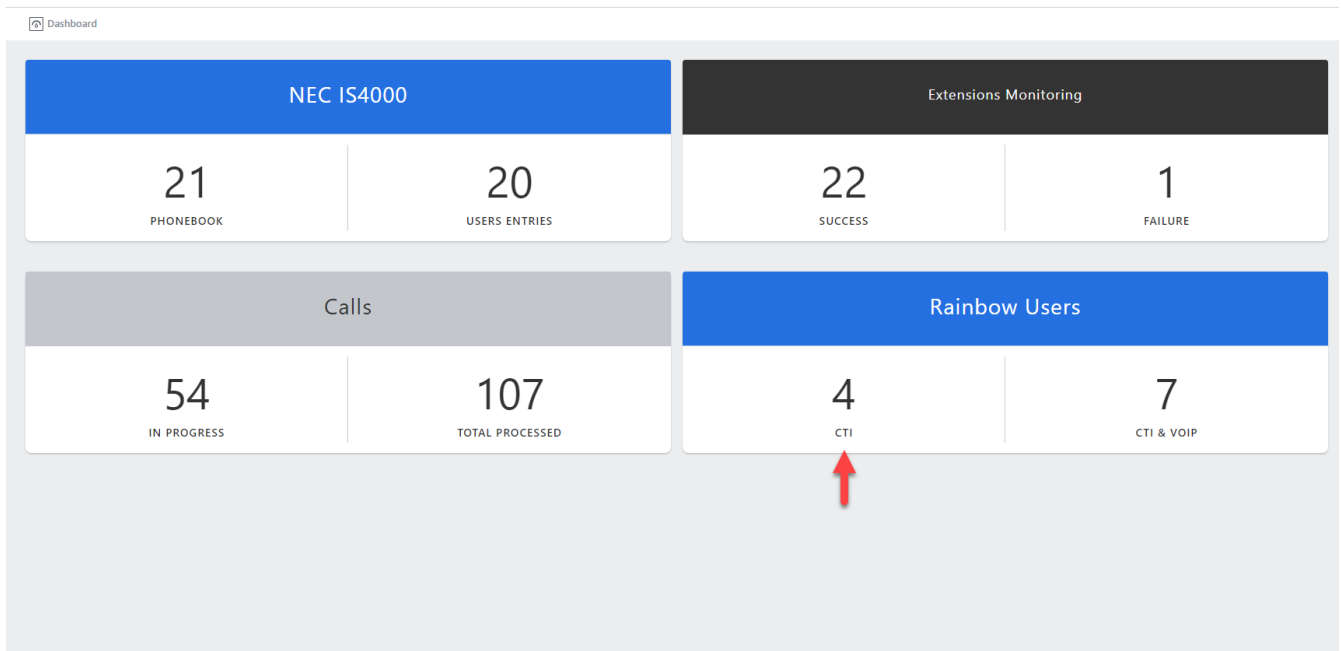
Rainbow CTI & Media Bridge 2021

Screenshot-Dashboard

4.6 Seeing active users in the system

Rainbow CTI & Media Bridge provides a way to see the currently active users in the system (CTI users as well as CTI & VOIP users).

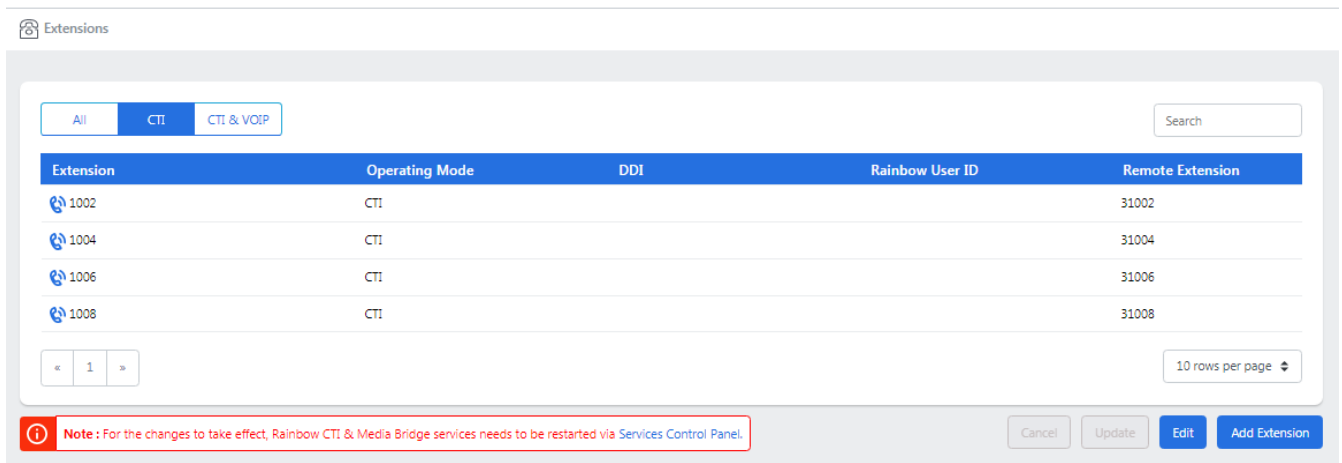
To see the details of the CTI users; click on “CTI” from **Rainbow Users** widget, as shown below.



Rainbow CTI & Media Bridge 2021

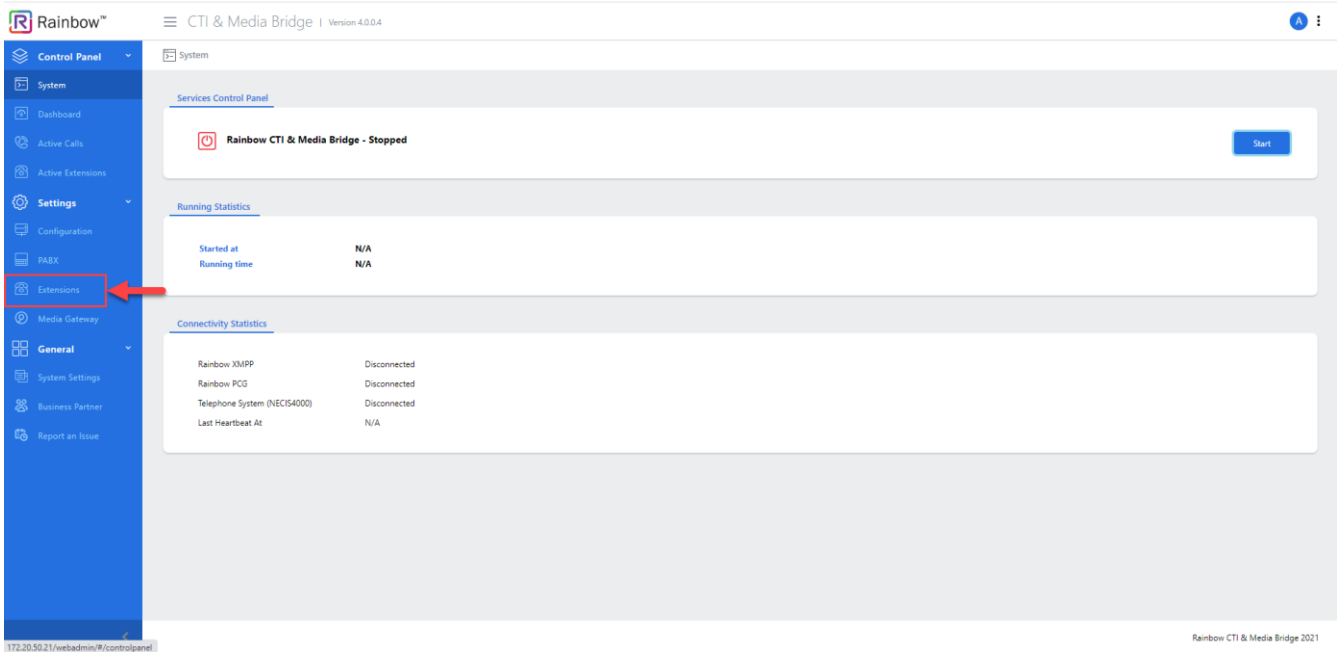
Screenshot-Dashboard

You will be presented with the screen with Rainbow users using CTI extension, as shown below.



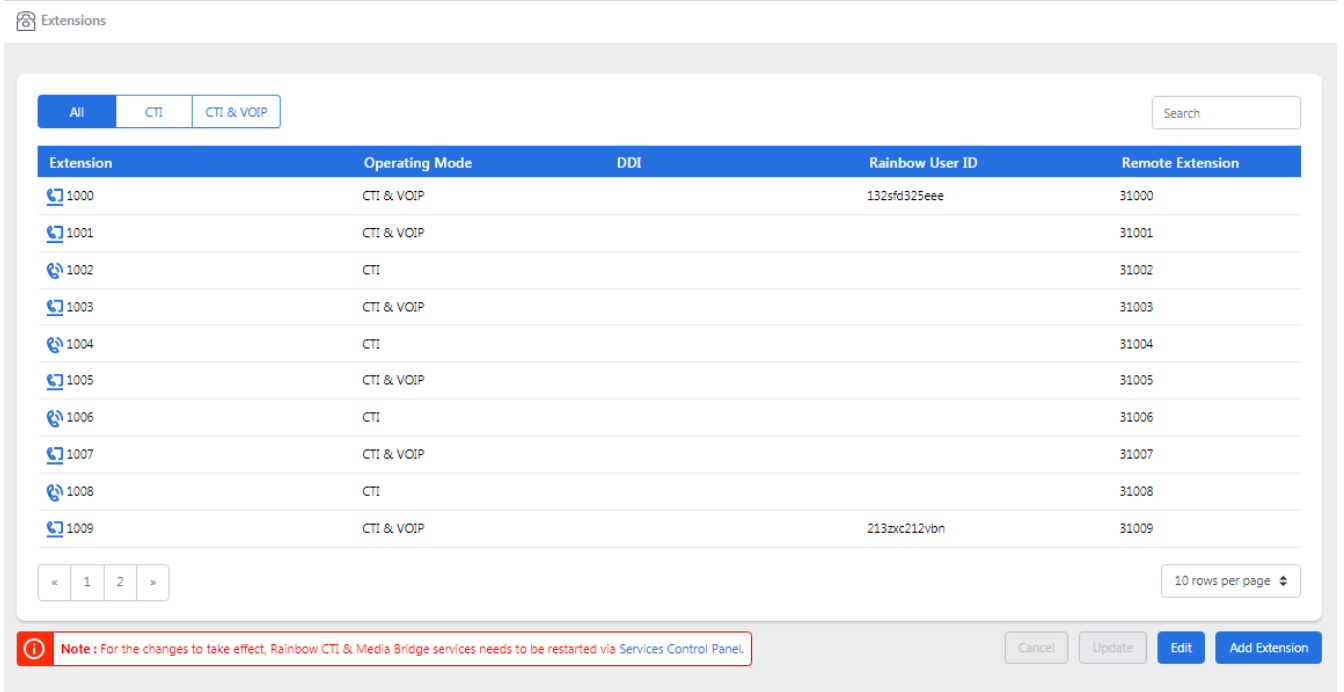
Screenshot- CTI Extensions

You can also go to statistics screen by clicking on the Extension tab from the left menu, as shown.



Screenshot-System

You will be presented with the list of all user both CTI and CTI & VOIP extensions, as shown below:



Screenshot- Extensions

Click on the **CTI** tab from top menu, as shown below.

Extensions

All CTI CTI & VOIP

Extension	Operating Mode	DDI	Rainbow User ID	Remote Extension
1000	CTI & VOIP		132sfd325eee	31000
1001	CTI & VOIP			31001
1002	CTI			31002
1003	CTI & VOIP			31003
1004	CTI			31004
1005	CTI & VOIP			31005
1006	CTI			31006
1007	CTI & VOIP			31007
1008	CTI			31008
1009	CTI & VOIP		213zc212vbn	31009

< 1 2 > 10 rows per page

Note: For the changes to take effect, Rainbow CTI & Media Bridge services needs to be restarted via Services Control Panel. Cancel Update Edit Add Extension

Rainbow CTI & Media Bridge 2021

Screenshot- Extensions

You will be presented with the CTI extensions, as shown below

Extensions

All CTI CTI & VOIP

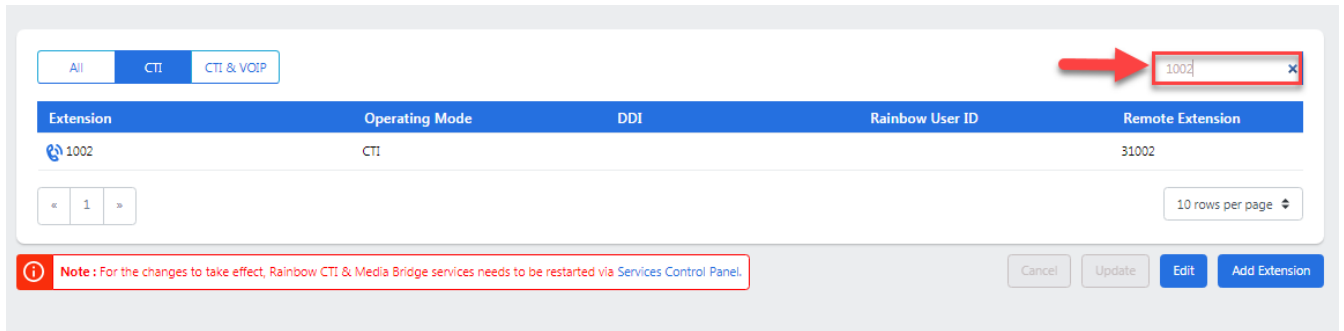
Extension	Operating Mode	DDI	Rainbow User ID	Remote Extension
1002	CTI			31002
1004	CTI			31004
1006	CTI			31006
1008	CTI			31008

< 1 > 10 rows per page

Note: For the changes to take effect, Rainbow CTI & Media Bridge services needs to be restarted via Services Control Panel. Cancel Update Edit Add Extension

Screenshot- CTI Extensions

Key in the extension number in order to search for a specific monitored extension, as shown below.

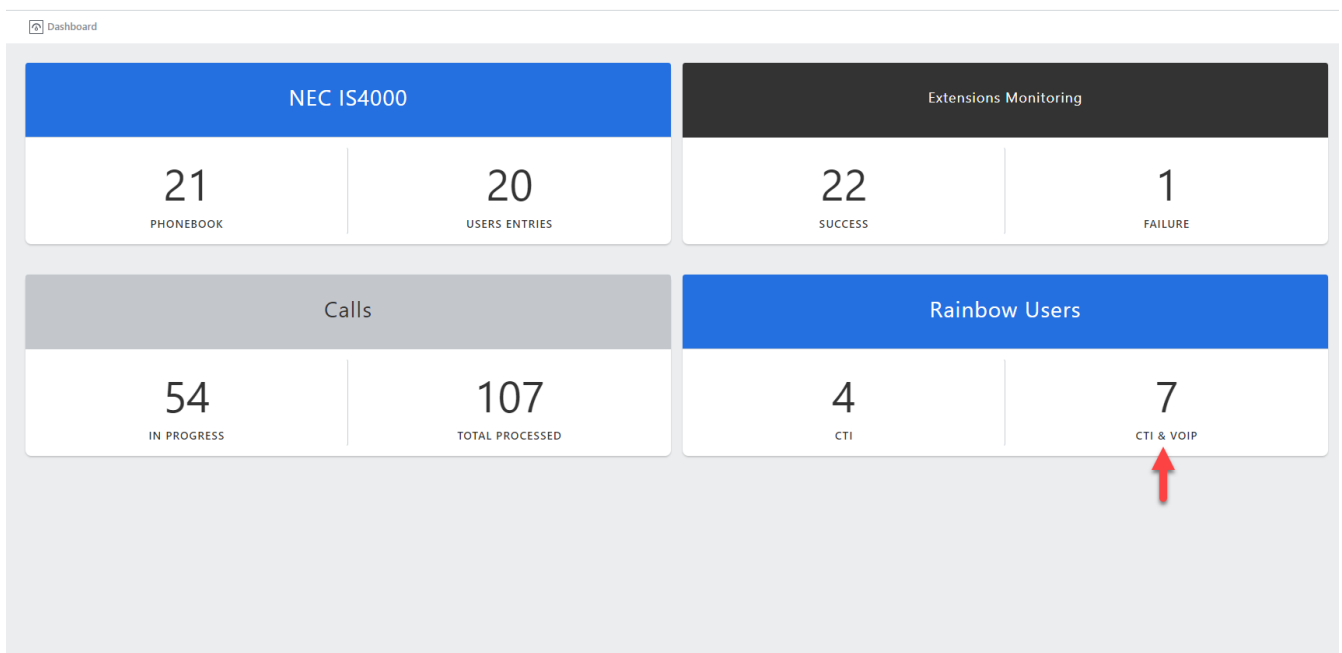


Extension	Operating Mode	DDI	Rainbow User ID	Remote Extension
1002	CTI			31002

Note: For the changes to take effect, Rainbow CTI & Media Bridge services needs to be restarted via Services Control Panel.

Screenshot-CTI Extensions

To see the details of the CTI & VOIP users; click on “CTI & VOIP” from **Rainbow Users** widget, as shown below.



Dashboard

NEC IS4000		Extensions Monitoring	
21 PHONEBOOK	20 USERS ENTRIES	22 SUCCESS	1 FAILURE

Calls		Rainbow Users	
54 IN PROGRESS	107 TOTAL PROCESSED	4 CTI	7 CTI & VOIP

Screenshot-Dashboard

You will be presented with the screen with Rainbow users using CTI & VOIP extension, as shown below.

Extensions

All CTI **CTI & VOIP** 1002

Extension	Operating Mode	DDI	Rainbow User ID	Remote Extension
1000	CTI & VOIP		132sfd325eee	31000
1001	CTI & VOIP			31001
1003	CTI & VOIP			31003
1005	CTI & VOIP			31005
1007	CTI & VOIP			31007
1009	CTI & VOIP		213zxc212vbn	31009
1225	CTI & VOIP	1001	132sfd325eee	31225

10 rows per page

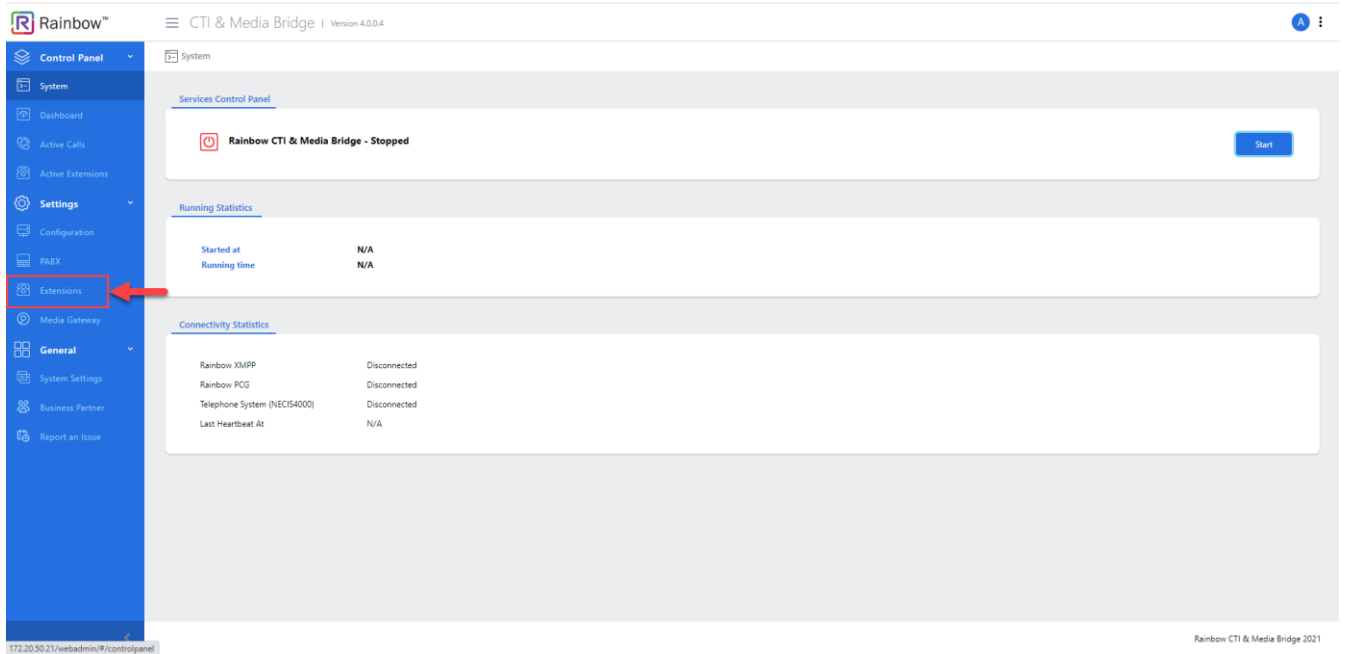
Note: For the changes to take effect, Rainbow CTI & Media Bridge services needs to be restarted via Services Control Panel.

Cancel Update Edit Add Extension

Rainbow CTI & Media Bridge 2021

Screenshot-CTI & VOIP Extensions

You can also go to statistics screen by clicking on the Extension tab from the left menu, as shown.



Rainbow™ CTI & Media Bridge 1 Version 4.0.0.4

System

Services Control Panel

Rainbow CTI & Media Bridge - Stopped Start

Running Statistics

Started at	N/A
Running time	N/A

Connectivity Statistics

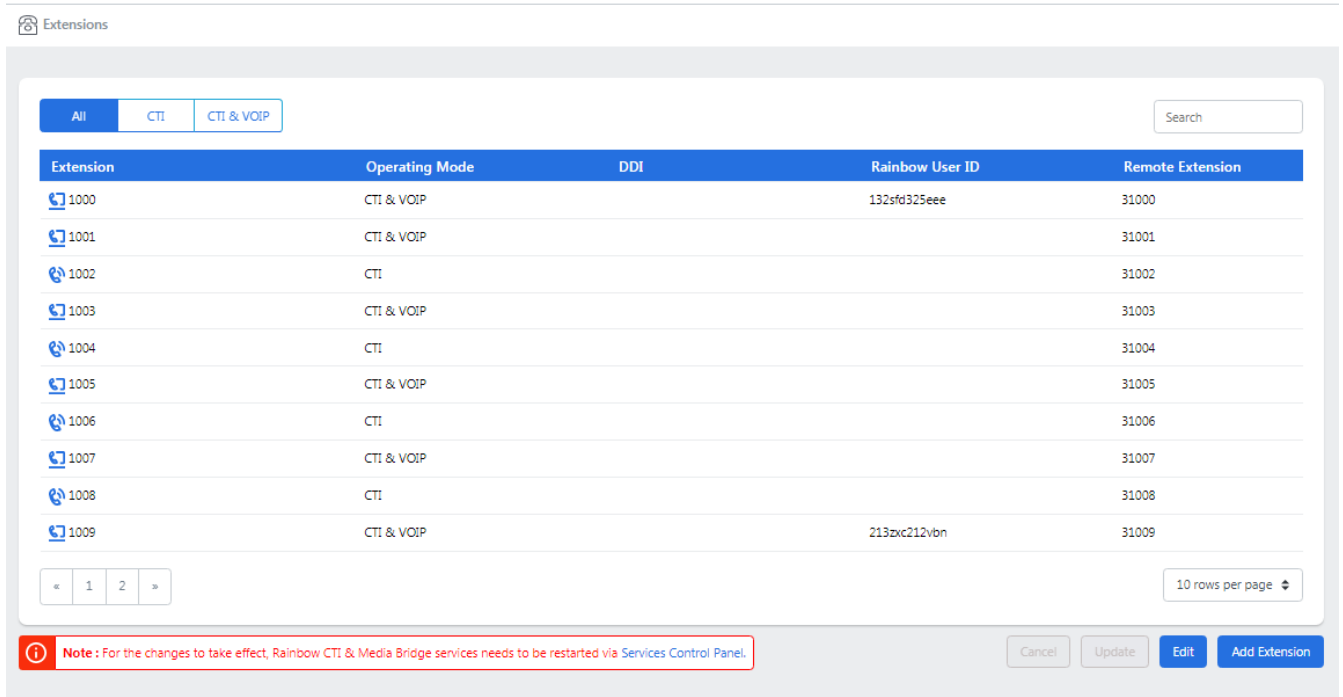
Rainbow XMPP	Disconnected
Rainbow PCG	Disconnected
Telephone System (NECIS4000)	Disconnected
Last Heartbeat At	N/A

132.20.50.21/webadmin/#/controlpanel

Rainbow CTI & Media Bridge 2021

Screenshot-System

You will be presented with the list of all user both CTI and CTI & VOIP extensions, as shown below:



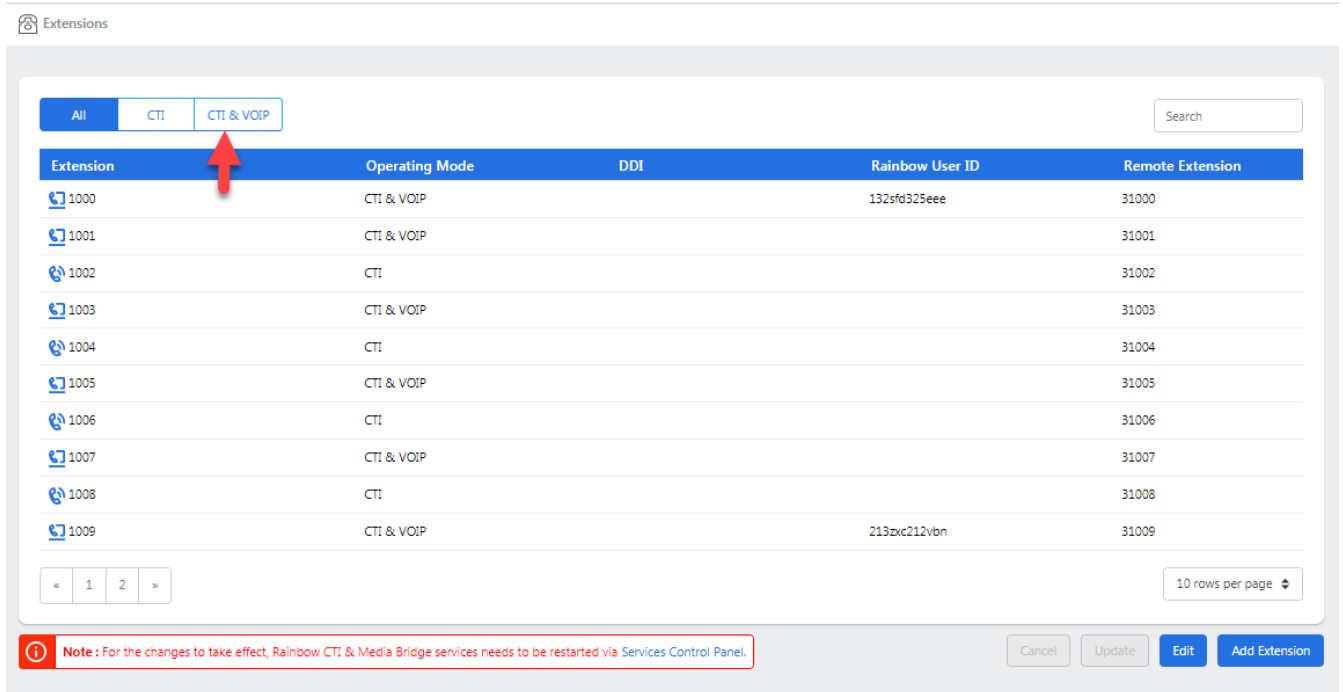
The screenshot shows the 'Extensions' management interface. At the top, there are tabs for 'All', 'CTI', and 'CTI & VOIP'. A search bar is located on the right. Below the tabs is a table with the following columns: Extension, Operating Mode, DDI, Rainbow User ID, and Remote Extension. The table contains 10 rows of data for extensions 1000 through 1009. At the bottom of the table, there are navigation controls (page 1 of 2) and a '10 rows per page' dropdown. Below the table, there is a red-bordered note box with an information icon and the text: 'Note: For the changes to take effect, Rainbow CTI & Media Bridge services needs to be restarted via Services Control Panel.' To the right of the note are buttons for 'Cancel', 'Update', 'Edit', and 'Add Extension'.

Extension	Operating Mode	DDI	Rainbow User ID	Remote Extension
1000	CTI & VOIP		132sfd325eee	31000
1001	CTI & VOIP			31001
1002	CTI			31002
1003	CTI & VOIP			31003
1004	CTI			31004
1005	CTI & VOIP			31005
1006	CTI			31006
1007	CTI & VOIP			31007
1008	CTI			31008
1009	CTI & VOIP		213zxc212vbn	31009

Rainbow CTI & Media Bridge 2021

Screenshot- Extensions

Click on the **CTI & VOIP** tab from top menu, as shown below.

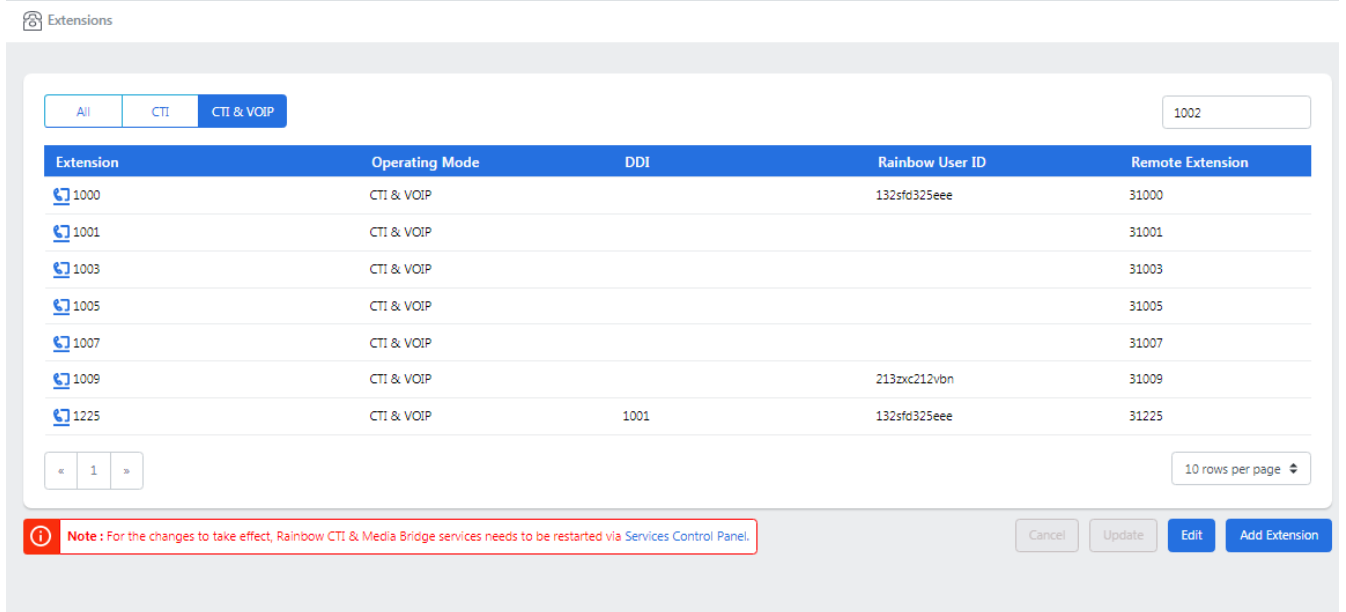


This screenshot is identical to the one above, but with a red arrow pointing to the 'CTI & VOIP' tab in the top navigation menu, indicating the step to be taken.

Rainbow CTI & Media Bridge 2021

Screenshot- Extensions

You will be presented with the **CTI & VOIP** extensions, as shown below



Extensions

All CTI CTI & VOIP 1002

Extension	Operating Mode	DDI	Rainbow User ID	Remote Extension
1000	CTI & VOIP		132sfd325eee	31000
1001	CTI & VOIP			31001
1003	CTI & VOIP			31003
1005	CTI & VOIP			31005
1007	CTI & VOIP			31007
1009	CTI & VOIP		213zxc212vbn	31009
1225	CTI & VOIP	1001	132sfd325eee	31225

10 rows per page

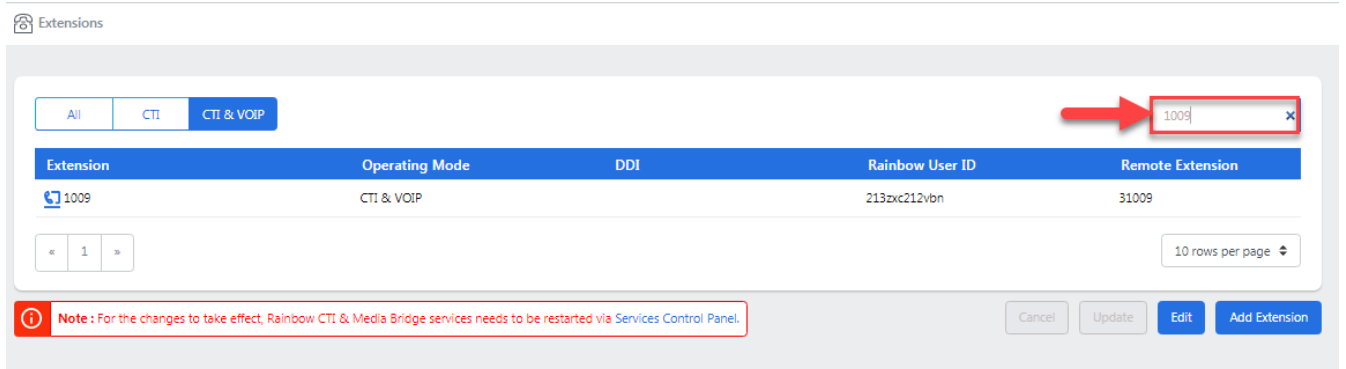
Note: For the changes to take effect, Rainbow CTI & Media Bridge services needs to be restarted via Services Control Panel.

Cancel Update Edit Add Extension

Rainbow CTI & Media Bridge 2021

Screenshot- CTI & VOIP Extensions

Key in the extension number in order to search for a specific monitored extension, as shown below.



Extensions

All CTI CTI & VOIP 1009

Extension	Operating Mode	DDI	Rainbow User ID	Remote Extension
1009	CTI & VOIP		213zxc212vbn	31009

10 rows per page

Note: For the changes to take effect, Rainbow CTI & Media Bridge services needs to be restarted via Services Control Panel.

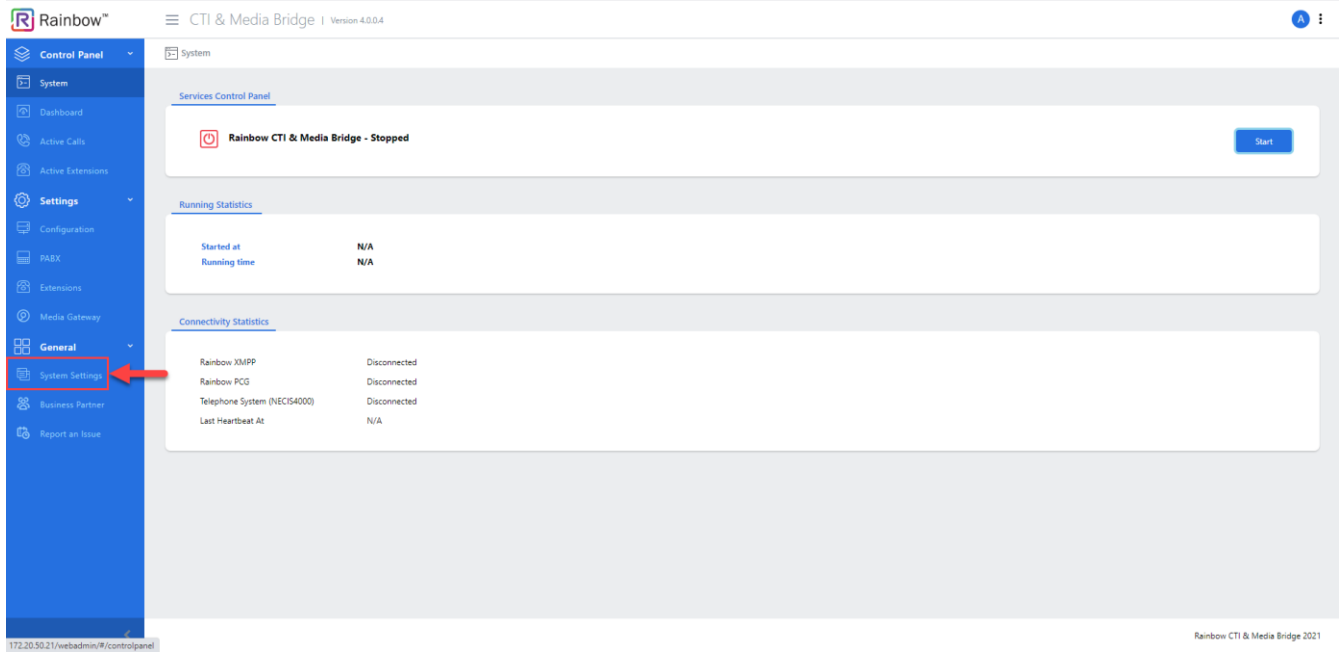
Cancel Update Edit Add Extension

Screenshot-CTI & VOIP Extensions

5 General

5.1 System Settings

In order to setup traces and SMTP settings, click on System settings option in the left-hand menu as shown below:



The screenshot displays the Rainbow CTI & Media Bridge administration interface. The left-hand menu is expanded to 'General', and 'System Settings' is highlighted with a red box and an arrow. The main content area shows the 'System' page with a 'Services Control Panel' indicating the service is stopped, 'Running Statistics' showing 'Started at' and 'Running time' as 'N/A', and 'Connectivity Statistics' showing 'Rainbow XMPP', 'Rainbow PCG', and 'Telephone System (NECS4000)' as 'Disconnected', and 'Last Heartbeat At' as 'N/A'.

Screenshot-System

Following screen will be displayed:

System Settings

Traces

Location *

File Size * (Kbs)

No of Files *

General

Telephony

Communication

Error

SMTP Settings

Server *

Port *

Username

Password

Sender Email Address *

SSL Enabled

[Test SMTP Settings](#)

Note: For the changes to take effect, Rainbow CTI & Media Bridge services needs to be restarted via Services Control Panel.

[Cancel](#) [Update](#)

Rainbow CTI & Media Bridge 2021

Screenshot - System Settings

5.1.1 Traces

The first section of System settings page is concerned with configuration of traces. A combination of Traces categories can be selected to generate logs only for the relevant information that is needed for troubleshooting. Once you have entered the details into each field, click **Update**, as shown below

Traces

Location *

File Size * (Kbs)

No of Files *

General

Telephony

Communication

Error

Screenshot-Traces

NOTE: *The more comprehensive the traces are, the more CPU resources are used up by the server. Please be careful when setting up tracing level.*

NOTE: *Traces do not need to be enabled during usual functional activities. If there is an issue being experienced then support engineers can set the appropriate trace levels. CTI & Media Bridge service restart is required after updating the traces configuration.*

5.1.2 SMTP Settings

Rainbow CTI & Media Bridge provides the ability to send emails to business partners whenever an issue is encountered in the application. In order to activate this email feature, you need to provide details of the SMTP server that will be used to send the emails.

To configure SMTP settings, you need to provide the following information:

Server:

This is IP address domain name of your SMTP server.

Port:

This is the port used for sending emails by SMTP server.

Username:

This is the username used when sending emails from Rainbow CTI & Media Bridge to your SMTP Server.

Password:

This is the password used when sending email from Rainbow CTI & Media Bridge to your SMTP server.

Sender Email Address:

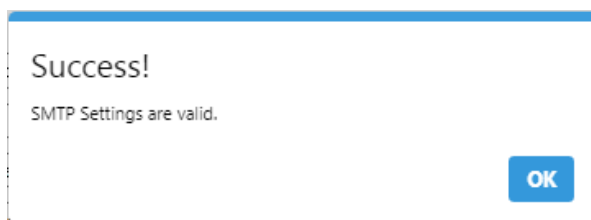
This is the email address used for sending the emails.

SSL Enabled:

This is the connection that will be used for sending emails from secure SMTP server. This option should be checked, if you're using TLS enabled secure SMTP server.

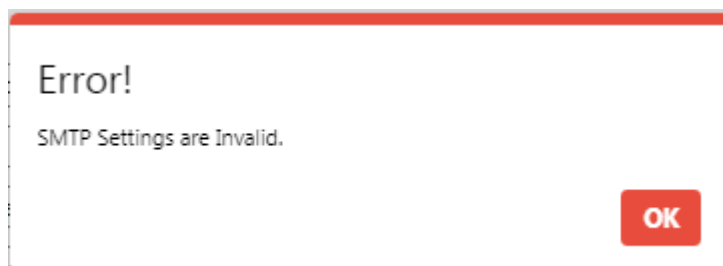
Note: *Username and password are optional fields for cases where Authentication is not setup for outgoing SMTP server.*

A special button by the name of Test SMTP settings is available at the bottom of the section. Click on it and if the settings are valid, following pop up window will be displayed:



Screenshot-Message from Application

In case of invalid SMTP settings, following pop up window will be displayed:



Screenshot-Message from Application

Once you have provided required information in Traces section and SMTP settings section, click on Update button as shown below:

System Settings

Traces

Location *

File Size * (Kbs)

No of Files *

General

Telephony

Communication

Error

SMTP Settings

Server *

Port *

Username

Password

Sender Email Address *

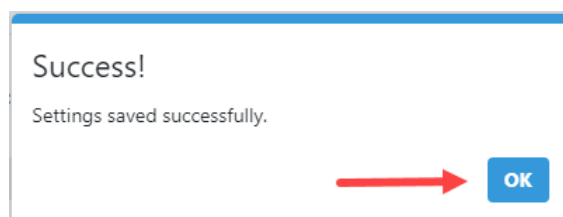
SSL Enabled

Note: For the changes to take effect, Rainbow CTI & Media Bridge services needs to be restarted via Services Control Panel.

Rainbow CTI & Media Bridge 2021

Screenshot - System Settings

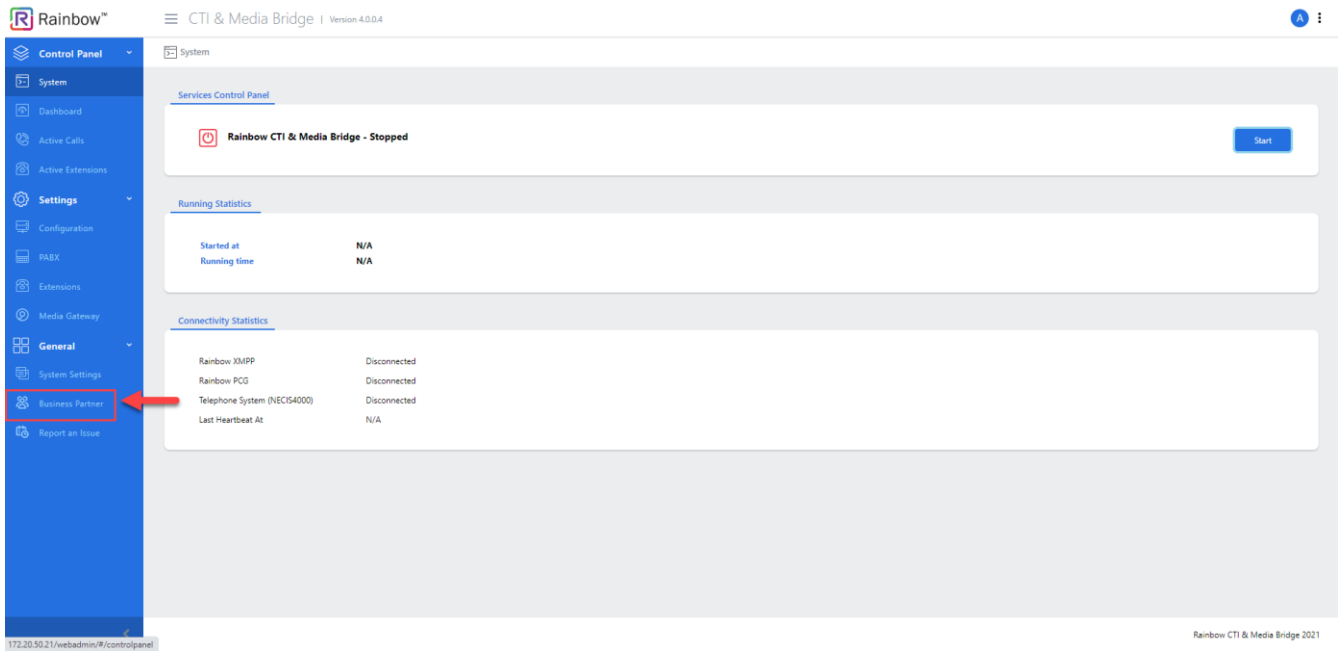
You will be presented with the popup window, click **OK**, as shown below.



Screenshot-Message from Application

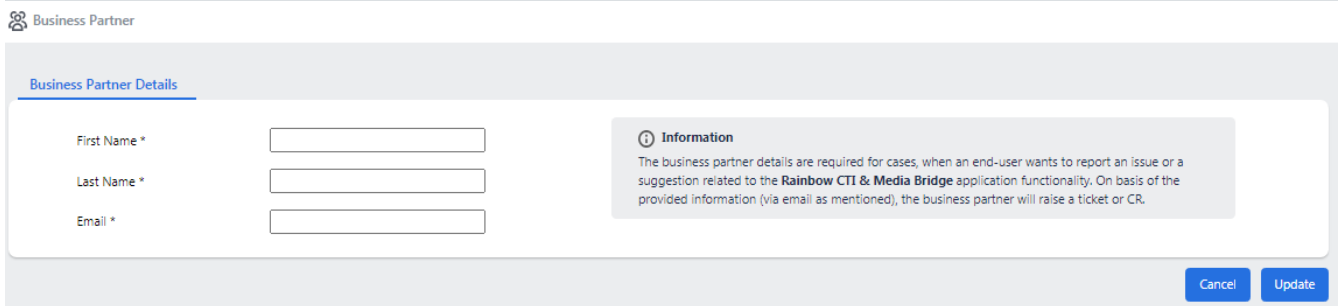
5.2 Business Partner

Rainbow CTI & Media Bridge enables users to send emails to their businesses partners whenever a technical issue is encountered through Report an Issue section. Information provided in Business partner section is used to send an email to your cornered partner. In order to provide contact information for your partner, click on Business Partner option in left hand menu as shown below:



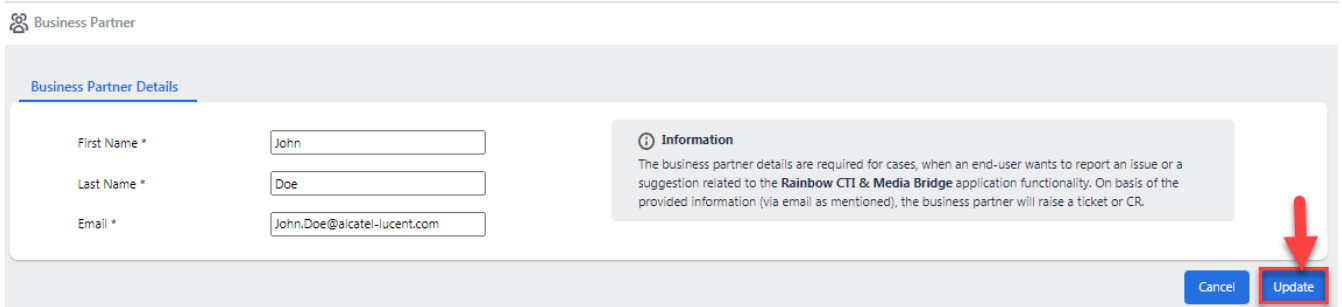
Screenshot - System

Following page will be displayed:



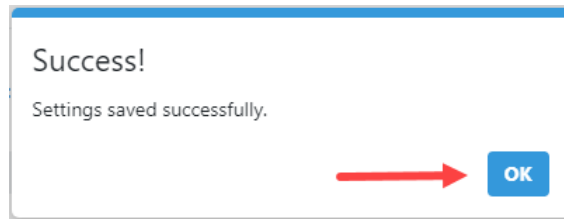
Screenshot - Business Partner

All the fields in this page are self-explanatory. Once the required information is entered, click on the update button as displayed below:



Screenshot - Business Partner

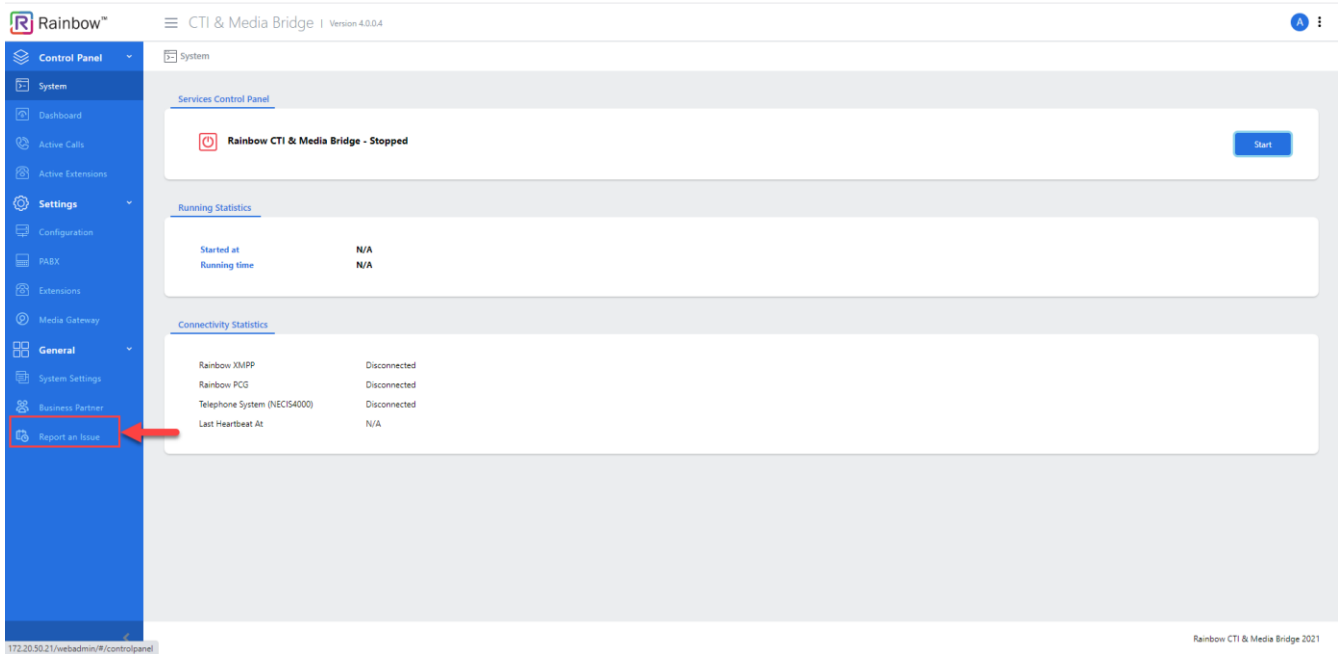
You will be presented with the popup window, click OK, as shown below.



Screenshot-Message from Application


5.3 Report an Issue

Users of Rainbow CTI & Media Bridge are empowered to report any technical issue to their business partner from within the application. For this, click on Report an Issue option from the left menu as shown below:



Screenshot - System

Following screen will be displayed:

 Report an Issue

Issue Details

Site/Customer Name

Issue Occurrence

Summary

Description

Environment
(operating system, software platform and/or hardware specifications (include as appropriate for the issue))

Affected Platform

Rainbow Web Application

Rainbow Desktop Application

Rainbow Mobile Application (iOS)

Rainbow Mobile Application (Android)

Rainbow CTI & Media Bridge Administration

Logs Attachments

Rainbow CTI & Media Bridge Logs

Rainbow Web/Desktop Application Logs

webRTC Gateway Logs

Screenshot - Report an Issue

Provide the necessary information in the following fields:

Site /Customer Name:

Provide name of site or customer in this field.

Issue Occurrence:

Select an option that gives a general ideal of how many times does this particular issue occurs. Following options are available:

- Always
- Intermittent
- Rarely

Summary:

Provide a short subject or summary of the technical issue that you are facing.

Description:

Provide a detailed description of the technical issue that you are facing.

Environment:

Provide details about the environment in which the technical issue has been raised.

Affected platform:

Select the platform in which the technical issue has been raised.

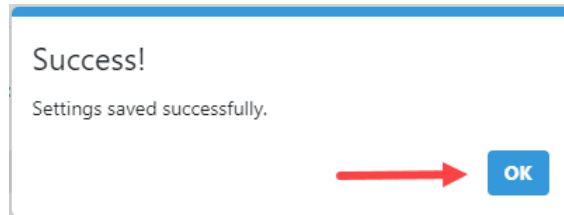
Logs Attachments

Select the appropriate logs that should be sent as attachments with the email to Business Partner.

Note: *While reporting an issue, it is advisable to attach the logs (from the required module) as it will help to better understand the problem. However, it is not mandatory and an issue can be reported (via an email) without attaching any logs.*


Once you have provided the necessary information, click on **Submit** button.

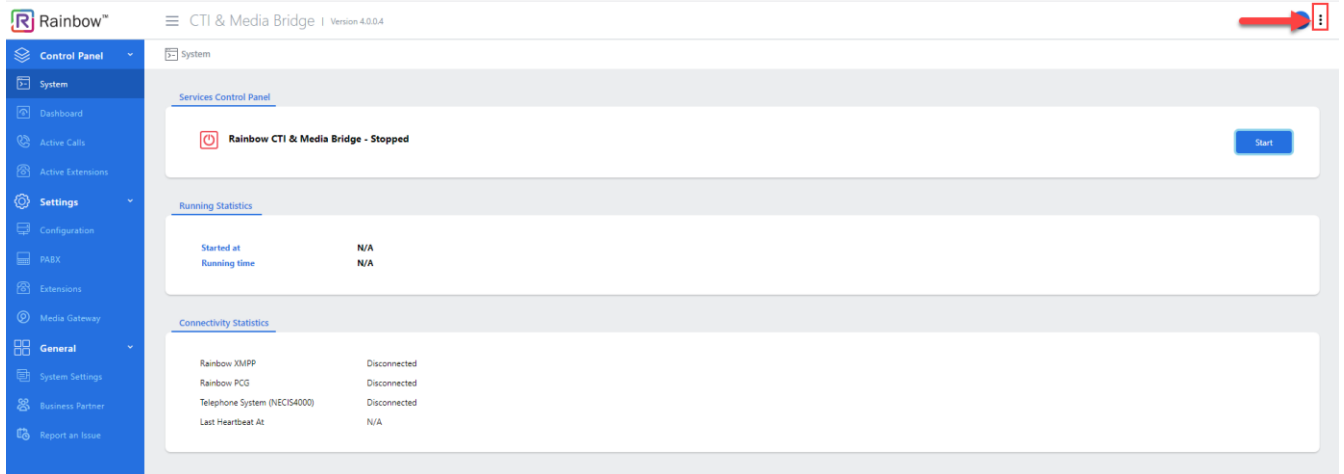
You will be presented with the popup window, click **OK**, as shown below.



Screenshot-Message from Application

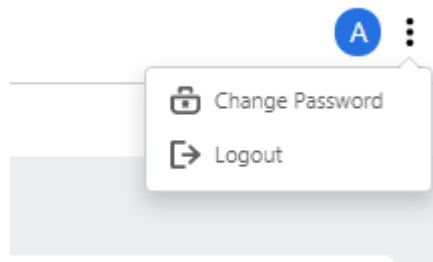
6 Change Password

Users of Rainbow CTI & Media Bridge application can change their account password by clicking on the  icon displayed in the top right corner of any screen as highlighted below:



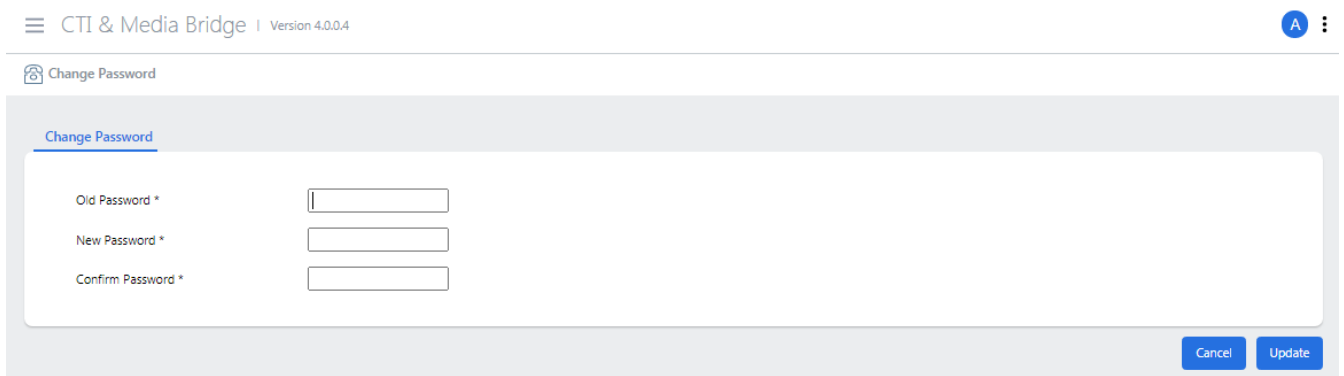
Screenshot-System

Following menu opens up when you click on this icon:



Screenshot- Drop Down Menu

Click on Change Password option and following screen is displayed:

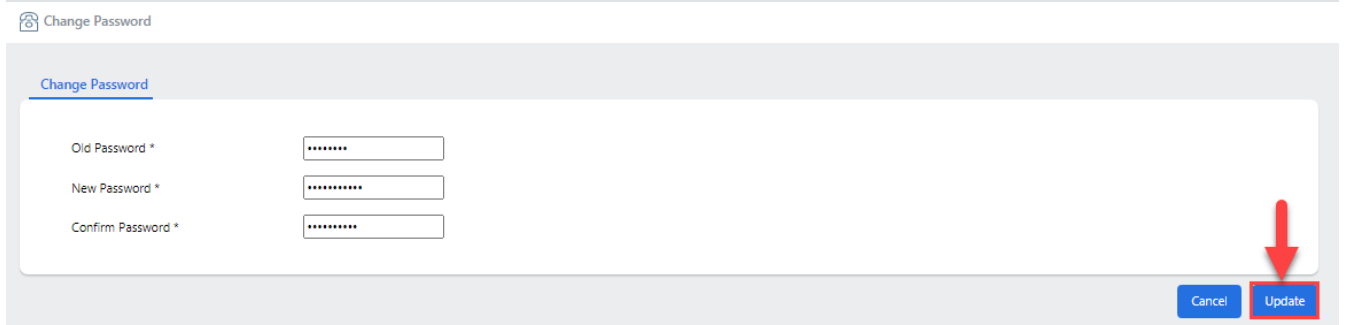


Screenshot- Change Password

All the fields are self-explanatory.

Note: *New password must consist of more than 7 characters.*

Once you have provided required information. Click on Update button as displayed below:



Change Password

Change Password

Old Password *

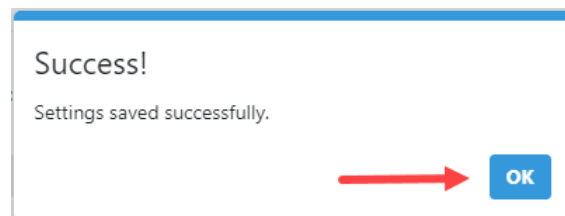
New Password *

Confirm Password *

Cancel Update

Screenshot- Change Password

You will be presented with the popup window, click **OK**, as shown below.



Screenshot-Message from Application

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