



BYOC



Twilio Configuration Guide



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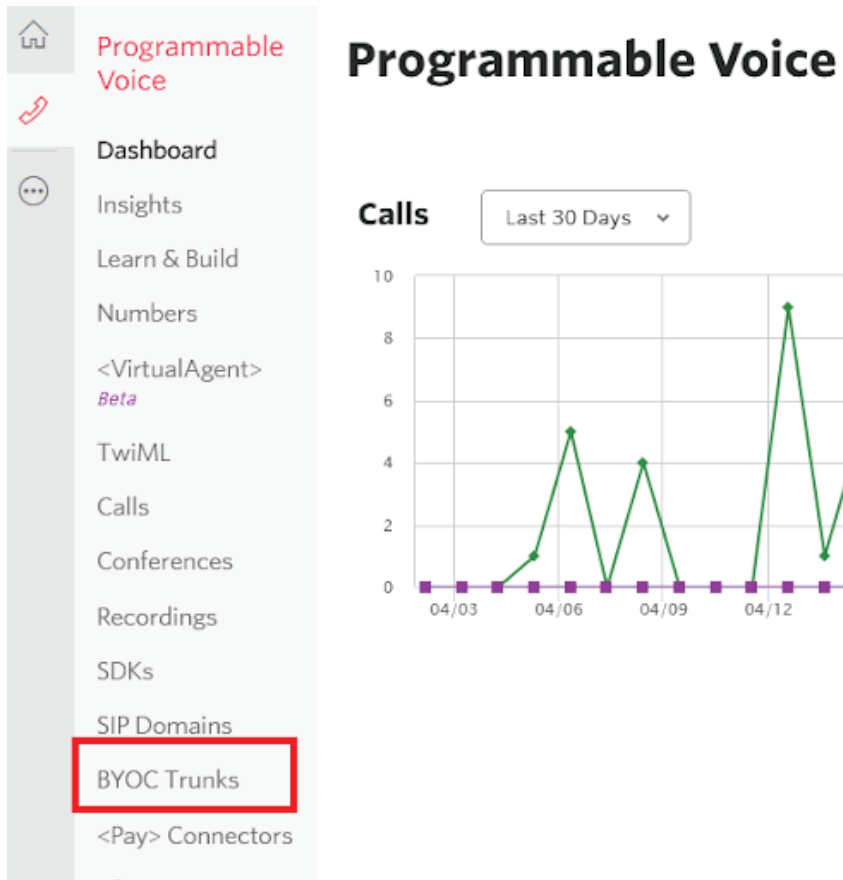
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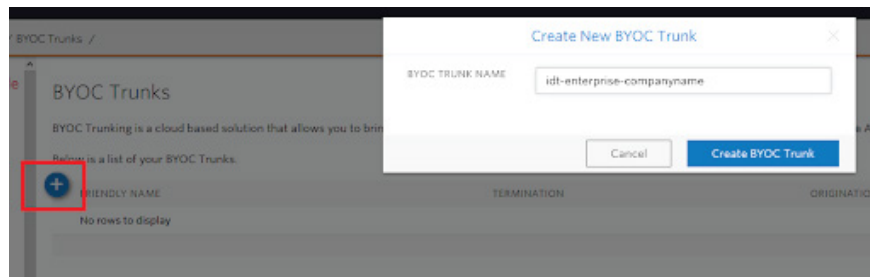
Make a Test Call

Setup Trunk

In Twilio, navigate to **Programmable Voice** and click on **BYOC Trunks**.

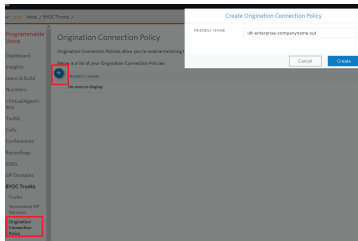


Click on the blue “+” sign, then enter a BYOC trunk name (e.g., idt-enterprise-companyname), and click “Create BYOC Trunk.”

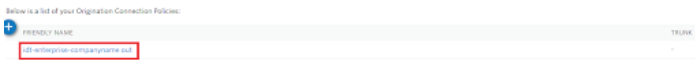


Setup Origination Connection Policy

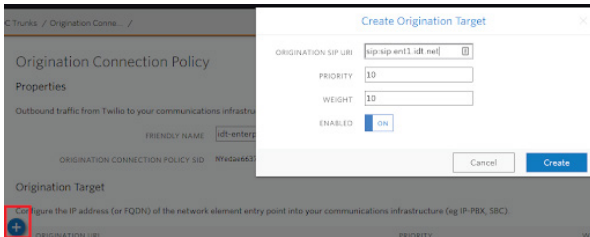
In the **Programmable Voice** section of Twilio, click on **Origination Connection Policy** and then the blue “+” sign. Next, enter a name for the policy (e.g., `idt-enterprise-companyname out`) and click “Create.”



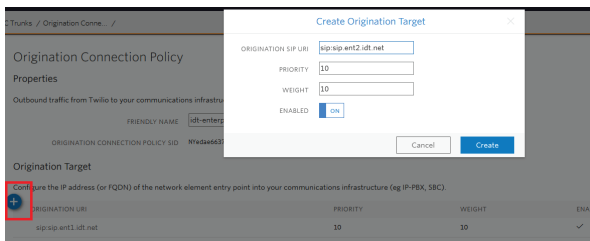
Once created, click on your newly created Origination Connection Policy, and you will see the policy’s configuration page.



We will now add 2 Origination Targets. Click on the blue “+” **sign and enter `sip:sip.ent1.idt.net`** for the Origination SIP URI, leaving the rest of the values as default, and click “Create.”



After creating the first Origination Target, add another one with the Origination SIP URI set to **`sip:sip.ent2.idt.net`**, leaving the rest of the values as default.

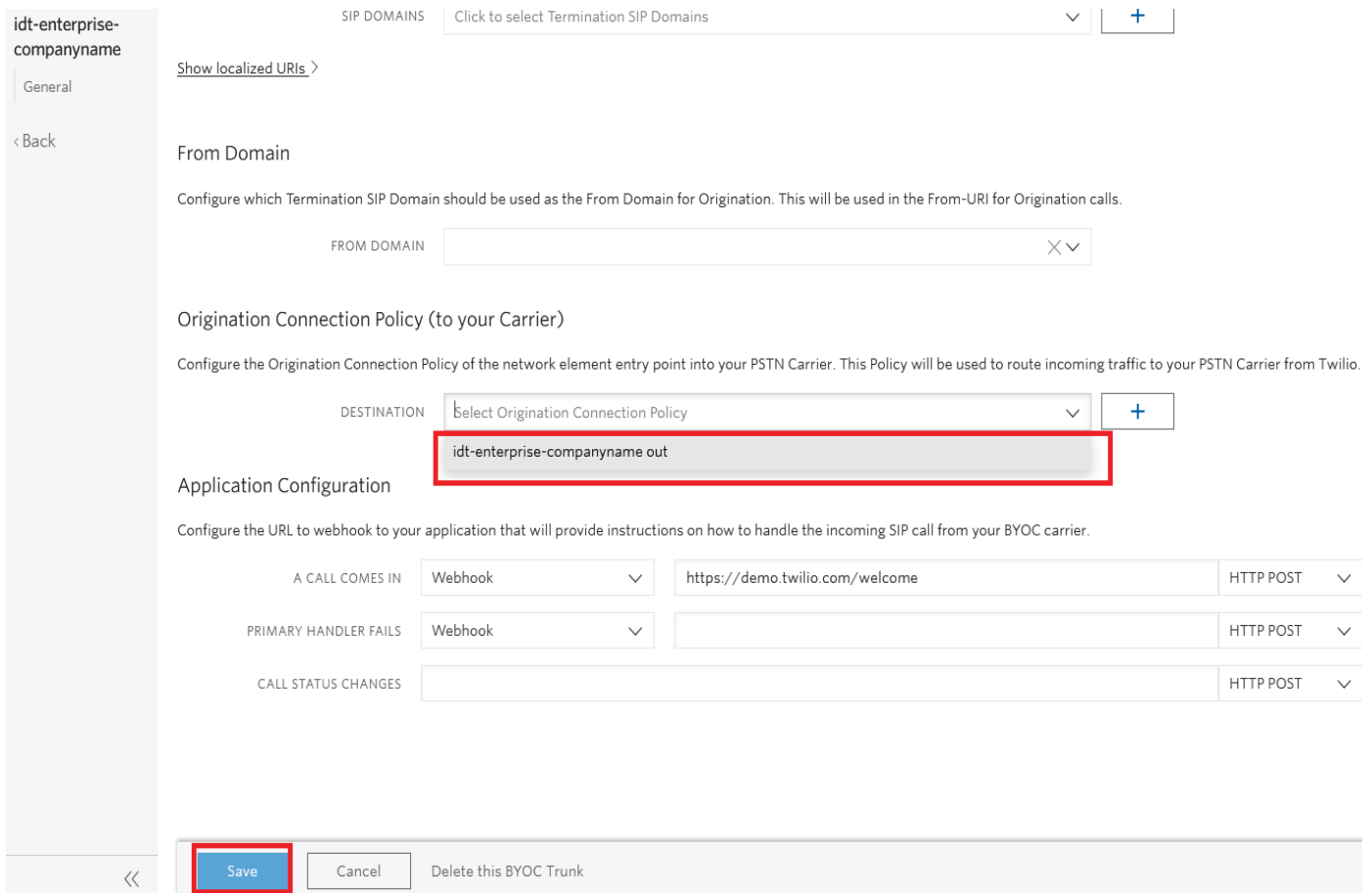


Once completed, your policy’s Origination Targets should look as follows:

ORIGINATION URI	PRIORITY	WEIGHT	ENABLED	
sip:sip.ent1.idt.net	10	10	✓	✗
sip:sip.ent2.idt.net	10	10	✓	✗

Assign Origination Connection Policy to Trunk

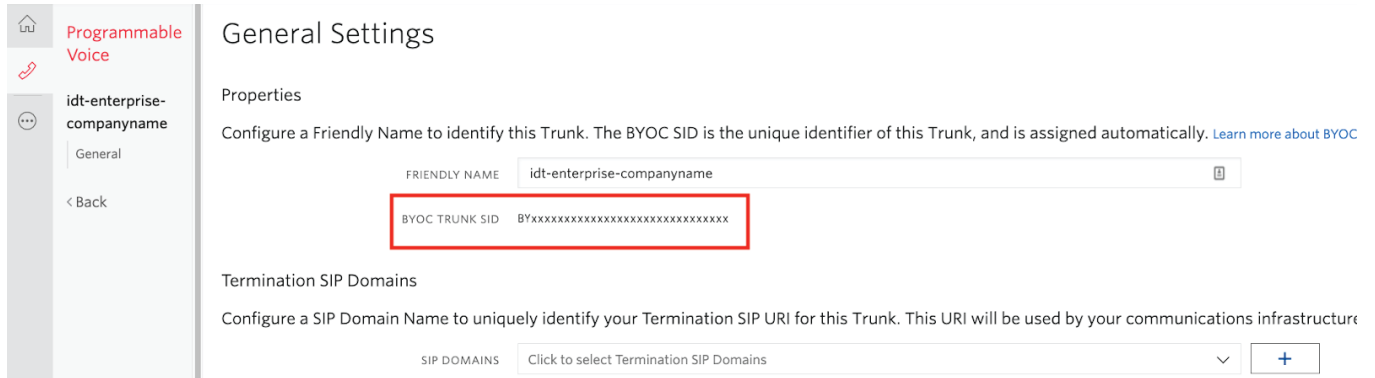
In the **Programmable Voice** section of Twilio, click on **BYOC Trunks** and click on the IDT Enterprise trunk you created earlier. Then, under General Settings, within the subsection Origination Connection Policy (to your Carrier), select your newly created Origination Connection Policy and then click “Save.”



The screenshot shows the Twilio configuration interface for a BYOC Trunk. The left sidebar contains the company name 'idt-enterprise-companyname' and a 'General' tab. The main content area is titled 'From Domain' and includes a dropdown for 'FROM DOMAIN'. Below this is the 'Origination Connection Policy (to your Carrier)' section, which has a dropdown menu for 'DESTINATION' currently set to 'Select Origination Connection Policy'. A red box highlights the selected option 'idt-enterprise-companyname out'. At the bottom, there is an 'Application Configuration' section with three rows for 'A CALL COMES IN', 'PRIMARY HANDLER FAILS', and 'CALL STATUS CHANGES', each with a 'Webhook' dropdown and a URL field. A red box highlights the 'Save' button at the bottom left of the page.

Making Calls via API

In the **Programmable Voice** section of Twilio, click on **BYOC Trunks**, click on your IDT Enterprise trunk you created earlier, and take note of your trunk's BYOC Trunk SID.

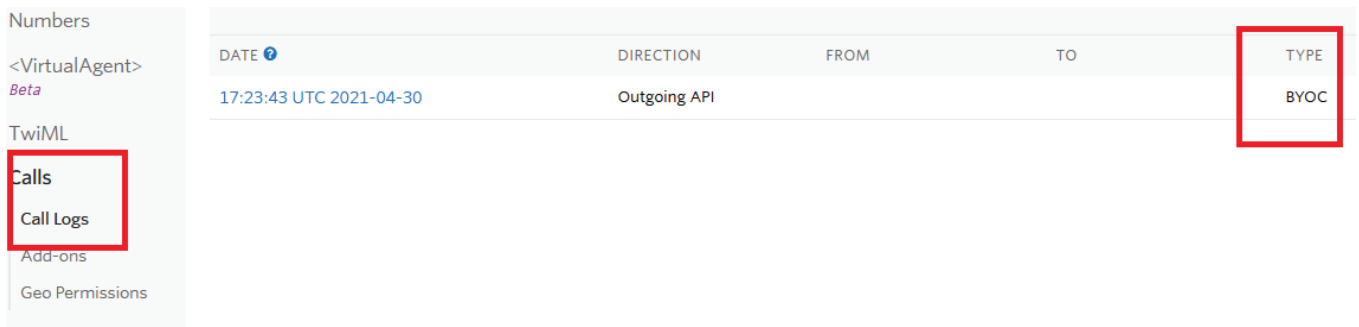


Using your preferred method of calling Twilio API from Twilio API Docs, add the Byoc parameter to your call with your BYOC Trunk SID as the value.

For example in curl:

```
curl --location --request POST
'https://api.twilio.com/2010-04-01/Accounts/<ACCOUNT_SID>/Calls.json' \
--header 'Authorization: Basic SUPER_SECRET' \
--header 'Content-Type: application/x-www-form-urlencoded' \
--data-urlencode 'Url=http://demo.twilio.com/docs/voice.xml' \
--data-urlencode 'To=+12345678900' \
--data-urlencode 'From=+18003331122' \
--data-urlencode 'Byoc=<BYOC_TRUNK_SID>'
```

If the call was completed successfully through BYOC interconnect, you should see the call appear in the **Call Logs** as BYOC type.



Making Calls via SIP

To demonstrate how to make calls via SIP, we will be setting up a call forwarding example that will forward all SIP calls through our BYOC trunk.

Twilio allows you to use IP and Digest authentication to interact with your Twilio resources. In this example, we will use only IP authentication.

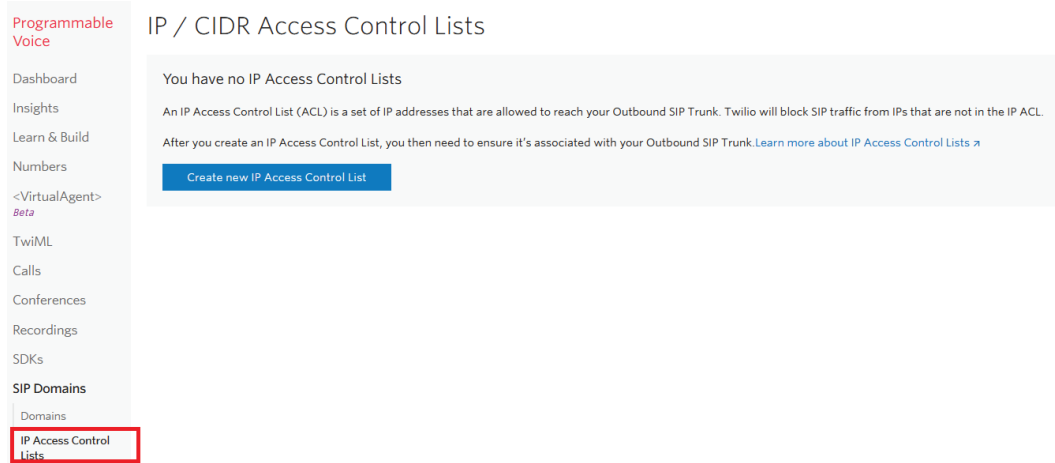
Note:

If your SIP client requires the use of the digest authentication method, in the **Programmable Voice** section of Twilio, click on **Credentials List** under **SIP Domains** to add user credentials. Then in the “Setup SIP Domain” section of this guide, use the newly created credential list for “voice authentication.” You will then need to enter the SIP credentials in your client to initiate calls. You can use IP or digest authentication, or a combination of both to protect your SIP domain.

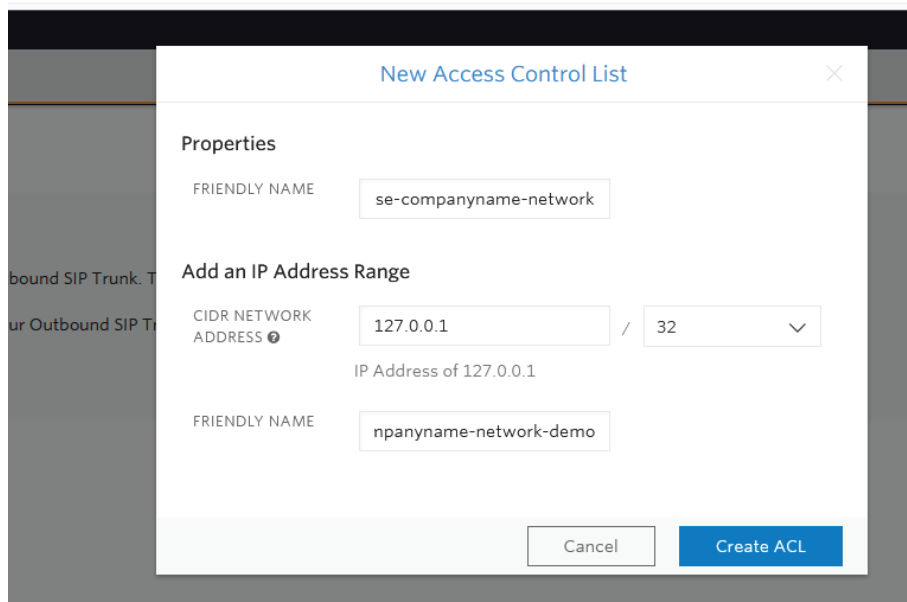


- **Setup IP ACL**

In the **Programmable Voice** section of Twilio, click on **SIP Domains** and then **IP Access Control Lists**, and finally, **Create new IP Access Control List**.

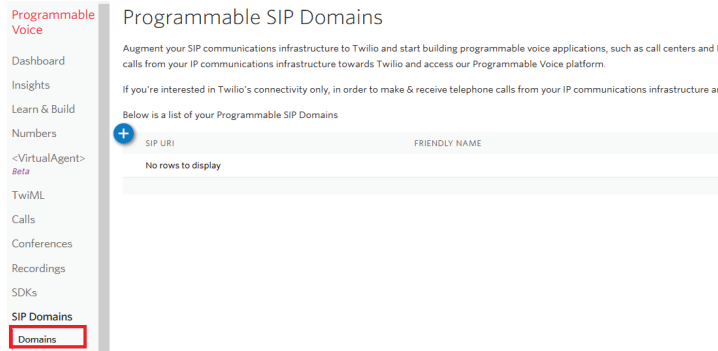


In the **Access Control List** popup, enter a name, the IP address range(s), and associated friendly name(s) that you will be using to call Twilio via SIP. Then click “Create ACL.”

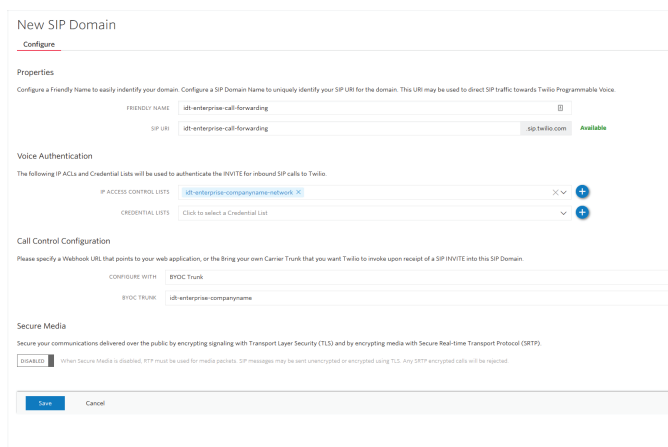


• Setup SIP Domain

Once created, under the **SIP Domains** section, click on **Domains** and click on the blue “+” sign.



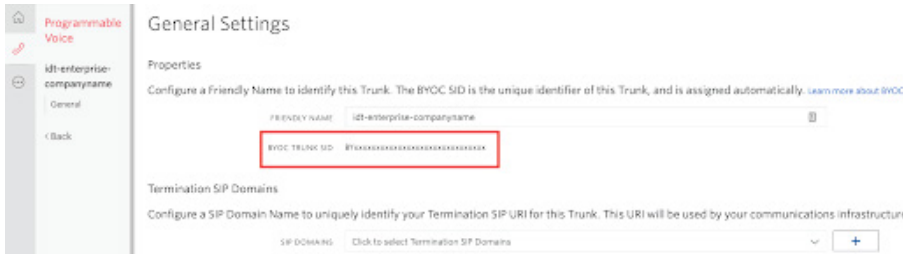
On the new page, enter a friendly name and a SIP URI that you will be using later to make calls via SIP (e.g., idt-enterprise-call-forwarding). Under **IP Access Control Lists**, select the IP ACL we created in the previous step. Under **Call Control Configuration**, choose the **BYOC Trunk** option for Configure With, and for BYOC Trunk selection, use the trunk we created earlier idt-enterprise-companyname. Then click “Save.”



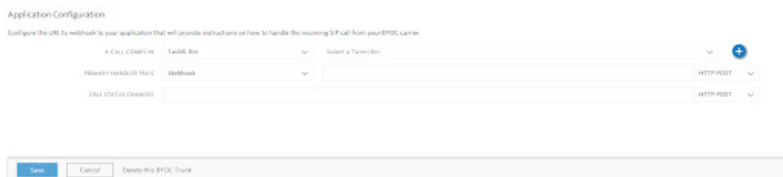
Now any SIP calls made to idt-enterprise-call-forwarding.sip.twilio.com will go through the configuration settings on our BYOC trunk. As of right now, the configuration will use the “default” Twilio TwiML demo. For our call forwarding use case, we need to change the BYOC trunk to use simple call forwarding to our BYOC trunk.

- **Update BYOC Trunk with Call Forwarding TwiML**

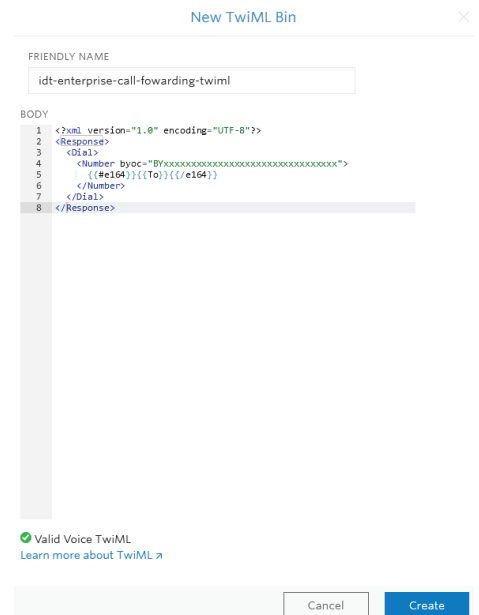
In the **Programmable Voice** section of Twilio, click on **BYOC Trunks**, click on your IDT Enterprise trunk you created earlier, and take note of your trunk’s BYOC Trunk SID.



Under **Application Configuration**, select the option **TwiML Bin** under A Call Comes In and click on the blue “+” sign.



On the popup page, enter the TwiML that will be executed when this trunk receives calls. Enter a friendly name for the TwiML code snippet and the code on the screen, and click “Create.” In this example, we use the Dial and Number verbs in the TwiML, and we added the byoc option in the Number verb, where you can replace your BYOC Trunk SID as the value. In this example, TwiML will forward the calls using the BYOC trunk to the To number provided in the original call, utilizing Twilio’s templating feature and E.164 internal function to initiate the call.



Once added, you will see this new TwiML Bin on the BYOC trunk page. Click on “Save.”

Make a Test Call

You can now send SIP traffic through the SIP domain created (in this example, `idt-enterprise-call-forwarding.sip.twilio.com`).

A SIP call made to 12345678900 via `idt-enterprise-call-forwarding.sip.twilio.com` will be call-forwarded from Twilio through your BYOC trunk, and you will see this completed call reflected in the call logs on Twilio.

