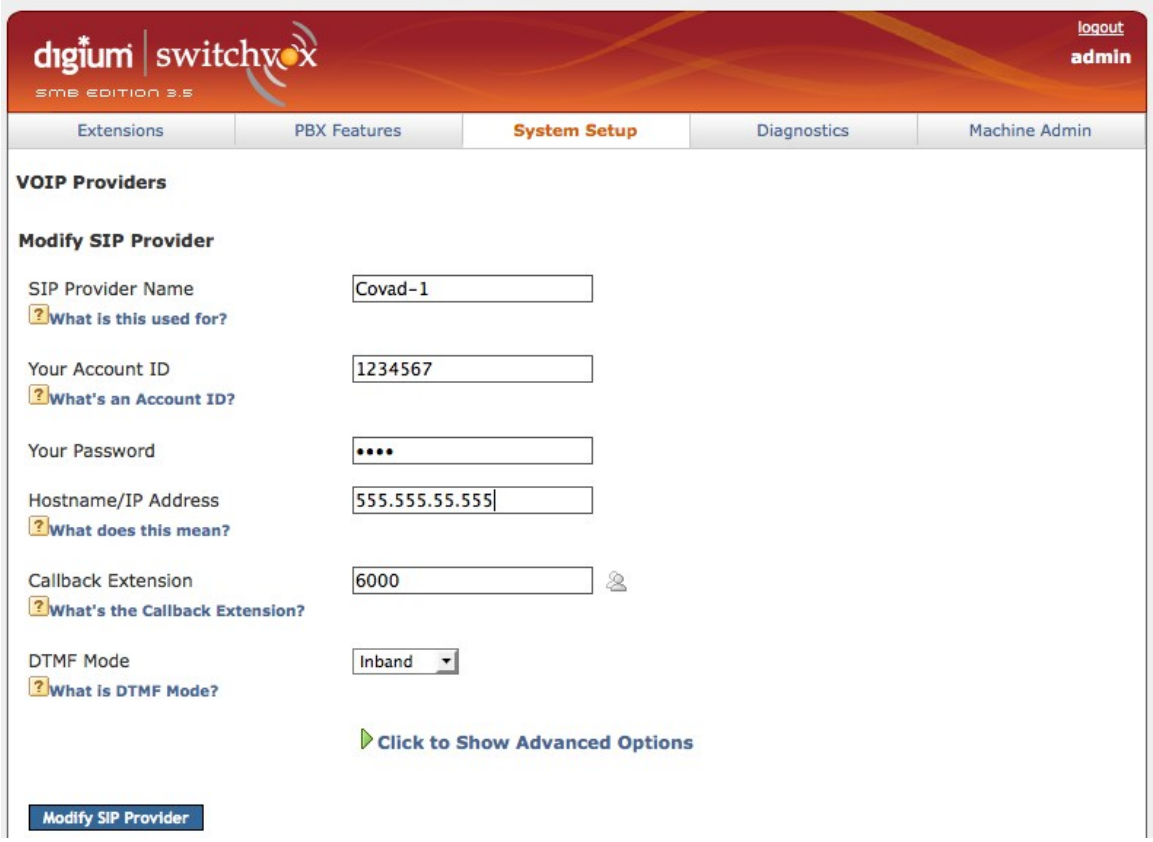
Configuration guide for Switchvox and Covad.

This document will guide a Switchvox administrator through configuring the system to utilize Covad Integrated Acces.

After you have the Covad Integrated Access account information from Covad, you will need to input this information into your Switchvox system through the admin web interface. The Covad SIP Settings are found on the Order worksheet, which is provided to you by Covad at the scheduled time of the install.

Once logged into your Switchvox server follow these steps to configure Covad:

* Navigate to System Setup > VOIP Providers
* Under "Add New" make sure the drop down box is selected for SIP provider, click "Go" and you will be presented with the following screen: (Note: For each DID, you will have to do ADD NEW to configure the DID to register with the Covad IA service.)

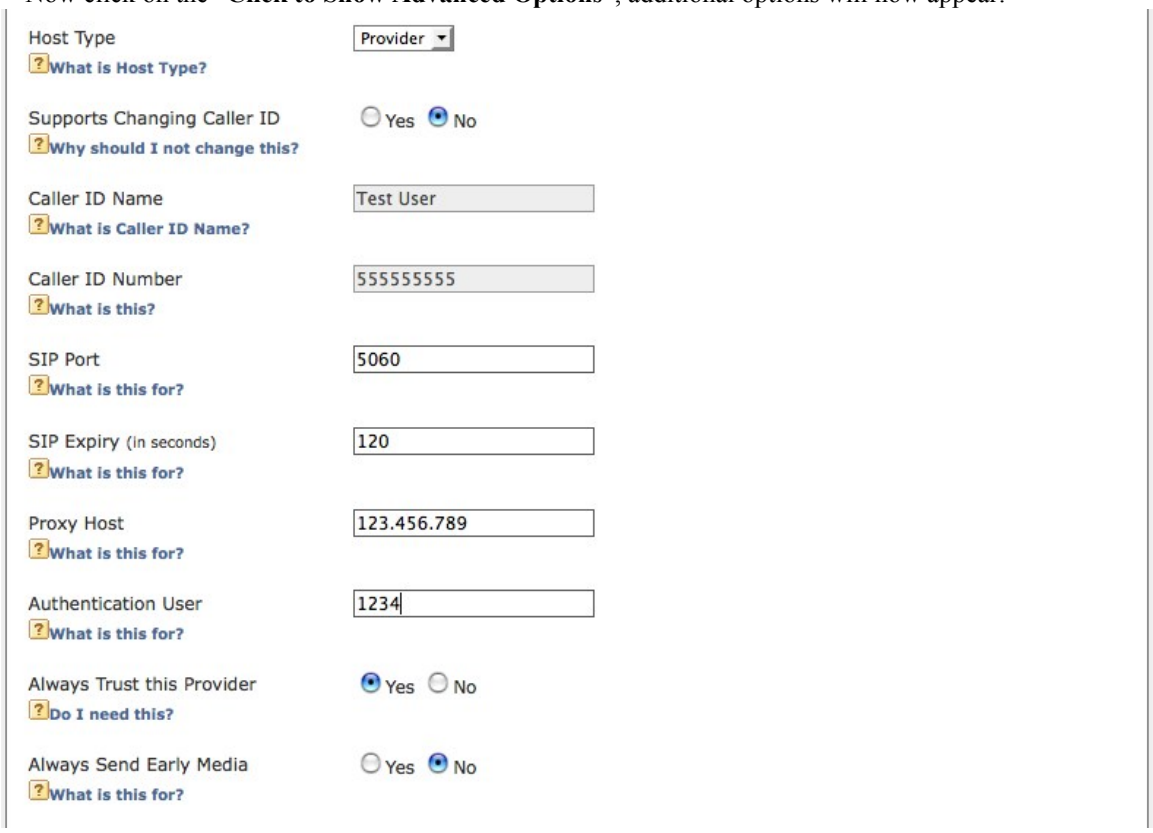


* **SIP Provider Name**: should be something logical that identifies this trunk as Covad (i.e. "Covad-1"), since you will be using that name later to configure calling rules. If you have more than one DID from Covad, you can name them Covad-1, Covad-2, Covad-3, etc. as each new entry requires a unique logical identifier.)
* **Your Account ID**: is one of the DID/s that Covad provided.
* **Your Password**: the password for digest challenge which is the admin reg code Covad provided.
* **Hostname/IP Address**: Covad will provide you with a Fully Qualified Domain Name as the proxy to Register with.

* **Callback Extension**: The default extension to ring when receiving a call over this provider. (Operator extension or IVR) This is where you tell the DID where to terminate on the Line side, either to the IVR/ AA or to an Extension directly.

* **DTMF Mode**: The DTMF mode to use when sending and receiving DTMF tones to and from Covad. This should be set to 'Inband'.

Now click on the "**Click to Show Advanced Options**", additional options will now appear:



* **Supports Changing Caller ID:** Should be set to 'no' , if their is a need to change outbound Caller ID , it has to be set to a DID that is registered with Covad.

* **Always Trust this Provider:** Should be set to 'yes' to allow inbound calls.

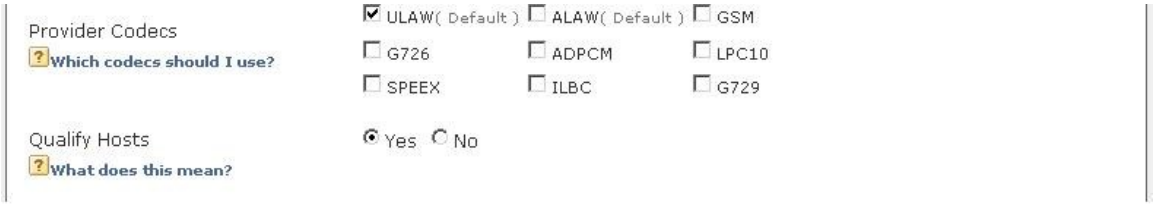
* **Host Type:** set to Provider.

* **Proxy Host**: Put the proxy host that Covad provides in this field.

This is the same FQDN as referenced in the above Hostname/IP Address field.

* **Authorization User:** This field should contain the "REG CODE PASSWORD" that Covad provides.

  Note: Be sure to update this field as it by default uses the "Your Account ID" which is provisioned above as the DID that's being registered, this has to be manually updated to reflect the reg code password.



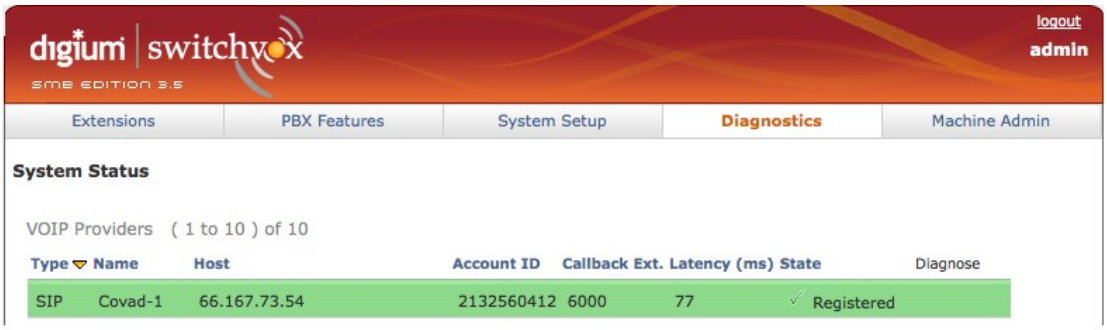
* **Provider Codec's:** Covad currently supports G.711 ulaw.

* **Qualify Hosts**: This field is optional; enabling this option allows you to view your latency to Covad.

* All other fields in this section will fill in automatically; don't worry if some are blank as they are not required.

* Click "Modify SIP Provider", your changes are now saved and the Provider should be successfully registered.

* Navigate to "Diagnostics > System Status", this page shows the status of all VOIP peers.

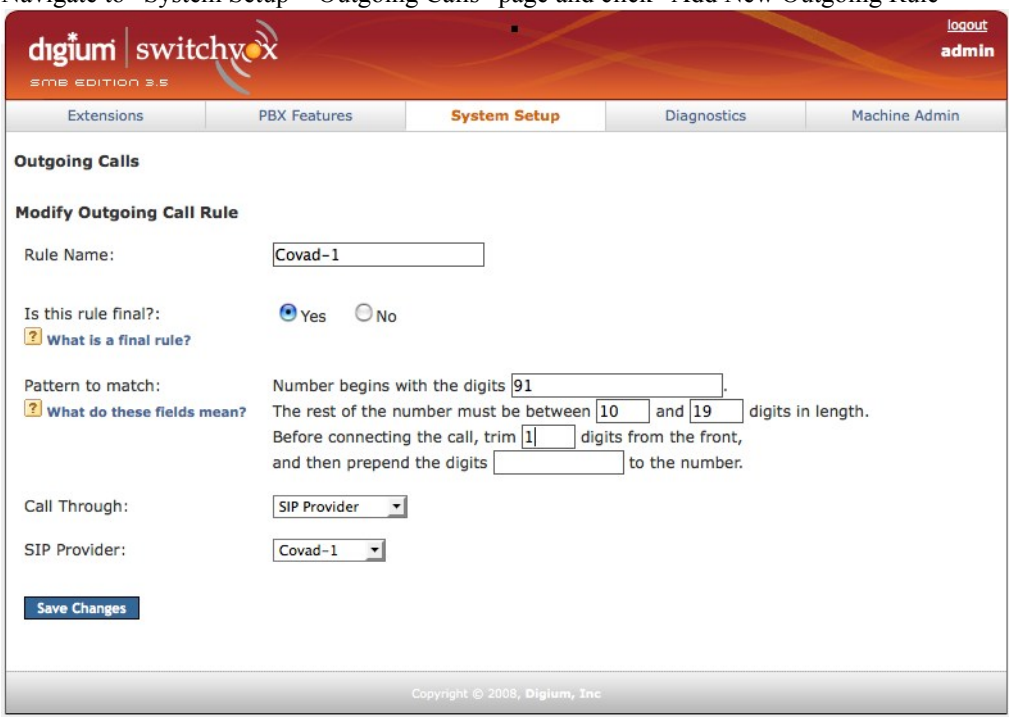


* The above picture shows Switchvox successfully registered to Covad. If the VoIP Provider is highlighted in green and the state is "Registered", Switchvox is registered and authenticated with Covad.

* In the event there is an error registering to Covad, the VoIP Provider will be highlighted in red and you will have the option to diagnose the problem with the built in mechanism.

The next step is to setup calling rules to determine which calls go through Covad; Here is a standard example.

* Navigate to “System Setup > Outgoing Calls” page and click “Add New Outgoing Rule”

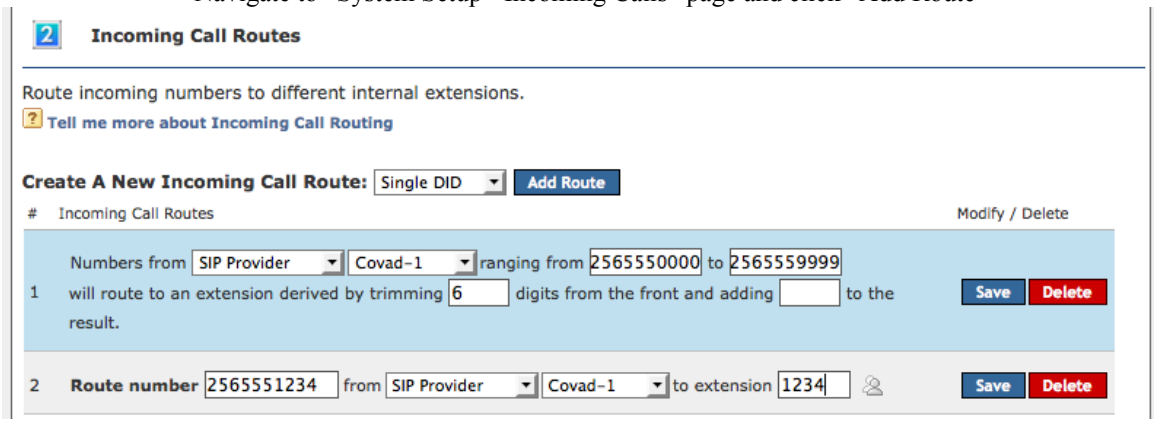


These are examples and your rules may vary based upon requirements.

* The rule shown in the picture above will take a number beginning with 91 and , truncate the 9 and send the call to Covad. This would be an example of dialing a long distance call beginning with a 9.

Now that outgoing calls route correctly, you will need to setup where incoming calls are routed.

- Navigate to “System Setup >Incoming Calls” page and click “Add Route”



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- These are examples and your rules may vary based upon requirements.

- Rule number 1 will match a range of DID’s and send them to the matching extension on the system.
- Rule number 2 will match one DID and send it to an IVR. (e.g. the main company number)

If your Switchvox PBX is behind a router that performs NAT and/or there will be phones connected to Switchvox from outside the network, you need to set an option in Switchvox.

* Navigate to “Machine Admin -> Network Settings”
* Make sure the yes is selected next to “Allow Nat Port Forwarding”

Switchvox is now fully configured for Covad’s Integrated Access. If you have any questions please contact Digium technical support at +1-256-428-6000