



Clarinet VoIP Applications

SIP Simulation

Step 1

You access the Clarinet software by clicking Start, Programs, Clarinet 10.x on your PC host. First, double click on the Clarinet loader icon to launch the loader, which will check the USB communications between your PC host and your Clarinet interface pod/s.

When the loader panel disappears double click on the 'Clarinet' icon to open the Clarinet Manager. Now create a new template profile by clicking on 'Profile', then 'New', then 'LAN', then select 'Lan_simu_sip_ua.acp' or 'Lan_simu_sip_ua_px.acp'. The profile with the _px content should only be selected if you are using a proxy. Click 'Next' and you will be shown the default name for your selected profile, if you wish to change the name do it now, then click 'Next'. You will be asked if you wish to apply a protocol filter, click 'Yes' and select 'Lan_auto_sip.acf'. The template profile will now open and you need to select the correct Ethernet interface configuration. After this, click on the 'General' tab and remove the 'Min duration' (recommended) if you do not want the profile to time-out automatically. Go back to the Clarinet tab and select the 'Call simulator' button where you will see the name of the the IP profile selected automatically to work with the LAN profile, for convenience and safety it is possible to save the main LAN profile and your IP profile under new names in a new folder to protect them from being modified by other users.

Step 2

Now start to configure your IP profile by noting its name in the main LAN profile, selecting the 'P IP' button on the Clarinet Manager and opening the same required IP profile. Click on the 'Initialize emulators' button which will open in the MAC page and then select a suitable MAC address for your Clarinet LAN pod to use. Now click on the 'IP' button and enter a suitable IP address and subnet mask. If you are using a Gateway enter the Gateway IP address on this page. The bottom half of the page under the title 'ICMP' is devoted to the new ping function. You can select to ping automatically by ticking the box and entering the IP address that you would like to ping. When running the profile you will also have a manual ping instruction with another box in which to enter suitable IP addresses. If no IP address is entered in this box then the Clarinet will use the address that you gave in the IP, ICMP, 'Default remote IP address' box while editing your profile (see above).

Now click on the TCP/IP button where you can enter a 'Hostname' IP address (typically the same address as the 'Own IP address' entered earlier using the 'IP' button).

Click on 'alias' and you will see examples of alias names such as 192.168.2.231 with the alias cla231. You may run the Clarinet profile and send an INVITE message from another terminal to your Clarinet IP address then see if this appears with an alias such as JOHN@192.168.2.231. if it does then you are recommended to change the default 'cla231' name in the 'alias' key to the actual name used, so in this example you would replace cla231 192.168.2.231 with JOHN 192.168.2.231. If you wish to use an outgoing alias with calls generated from the Clarinet then these should also be entered here with their corresponding IP addresses.





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Now click on 'hosts' and perform exactly the same function here by entering incoming (own) IP address with the appropriate hostname and incoming IP addresses with their appropriate hostname. Using the example given in alias above it would read 192.168.2.231 JOHN (same format but reversed with name following the address).

Responder

Return to the main IP profile editor window and click on 'Responder'. Here you will see that one response has been selected, (>>) but up to 50 may be configured. Click 'Edit' to see the configuration of each.

In the 'incoming calls behaviour' panel you will see that the Clarinet looks for the host/alias name and in the template the default is INVITE sip:cla231 change this to include your host/alias name which in this example would be INVITE sip:JOHN.

If you have selected to accept an incoming call (default) then you will respond with the status messages the default being '100 Trying' followed by '180 Ringing'. These status messages are shown to be selected by a tick but may be de-selected if required and others selected such as '182 Queued' or '183 Session Progress'. Alternatively you can build your own status message by selecting one and overwriting the content. When editing the status messages you should change the host/alias names from cla231 to your new host/alias name. The 'Status Success' message, 'Status Error' message and 'BYE' message should all have their host/alias names modified in the same way.

In the 'Incoming calls behaviour' panel the status messages are sent during the 'Call establishment' phase and the 'BYE' message is sent during the 'call clearing phase'. Between these two phases there is a 'Call active' phase where you can select an active source (RTP entry due for release soon) and a transmission mode. The default transmission mode is to 'Send continuously for' (blank) seconds. If the box is left blank then the call will remain active until it is cleared manually using the Clarinet real-time options or cleared by the calling party. If a number such as '9' is entered in the box then the call will remain active for 9 seconds after which it will be cleared by the Clarinet launching the BYE message. The content of this BYE message may be edited by the user if required.

Generator

Return to the main IP profile editor window and click on 'Generator'. You will see that only 'SIP Destination 1' has been selected but the panel allows for 50 calls to be generated (and another 50 responded to) in one profile, click on 'edit' to see the configuration of 'SIP Destination 1'.

In the SIP generator window you will see that the starting delay is set at 5 seconds by default. If you leave this set at 5 seconds then the call will be launched automatically 5 seconds after clicking to run your profile. If you empty the panel the call will need to be sent manually from the real-time options under the Clarinet Manager. You can enter any time-to-launch from 0 to infinite.





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If you wish to repeat any call up to 1 million times then you may change the execution number specify a 'Delay between exec' and a call hold time which is entered in the 'Call active' phase using transmission mode 'Send continuously' for (x) seconds. After this time expires the Clarinet will automatically launch a BYE message which is pre-configured but may be altered by the user. You will notice that in the 'Call active' phase there is a default active source of 'none'. In the next software release you will be able to select a reference or customer recorded RTP file to replay in the generated call. Click on INVITE to see the content of the INVITE message. This has been pre-configured to show you the type of content required. All content may be edited by the user and checked using the 'Parse' button or launched without checking (allowing you to send invalid code) by clicking OK without clicking 'Parse'.

You will notice that there is an alias used in front of each IP address and that several IP addresses are entered as 0.0.0.0. The alias configuration is described earlier in the Step 2 section and where an IP address appears as 0.0.0.0 this indicates that the Clarinet will automatically insert content already entered earlier in the profile such as 'Own IP address'.

The ACK message may be configured in the same way.

You may copy and paste the content of one 'SIP destination' to another and then just make a small change (such as the alias) or you can edit each of the 50 communications completely independently.

If You Encounter Problems

- 1) Check that you have selected the correct Ethernet configuration (100Mb Half Duplex, 10Mb Full Duplex.....) in the main LAN profile.
- 2) Check that you have entered a suitable IP address and MAC address in the appropriate 'IP profile', 'initialize emulators' panel.
- 3) Check that you have entered the correct Subnet Mask in the 'IP profile', initialize emulators', IP panel.
- 4) When you run your LAN profile you should see an indication of the interface type, your MAC address, your IP address and then see ARP request messages being launched from the Clarinet. If you do not see this then entries for 1) 2) or 3) above are probably incorrect.
- 5) Try to send a call to the Clarinet and see what name appears before the Clarinet IP address in the INVITE message. If this name is not exactly the one you specified as your host/alias name in the 'initialize emulators' 'TCP/IP', 'hosts' and 'alias' panels then these need to be modified to correspond. Also, check that you entered the same names in the 'Responder', 'Edit', 'If find' panel. If the Clarinet does not find this name exactly, it will not respond.
- 6) If you are still having problems please send your .acp file, .aip file and .ace file to PDS where we will investigate for you.

