

My BLF won't light on my phone. What to do.

If you have a phone where a BLF will not come on when it is supposed to, there are several things you can do. The most important thing to understand is how a BLF is turned on or off. When a phone goes off hook and connects with a call, it sends out a short status packet to the PBX. The packet simply says that the status has changed from available to busy. The PBX then updates all of the phones that have a subscription to the BLF with a status packet indicating that the status has changed to busy. The packet either got there or it didn't. If it didn't, the status will not update. The status should update automatically every 30 minutes or so. If the packet was missed, everything should be back to normal the next time the phone re-subscribes (about every 30 minutes automatically). What can go wrong? The packet might have been lost. What do I do? Why would the packet get lost in the first place? Is it magic? Is it being controlled by 'The Force'? Probably not. The packet may have not arrived due to many factors. Most likely the flow of normal packets was disrupted. In the world of SIP, signaling packets have a very short life. They become stale if they are not delivered on time. The SIP packets are delivered using UDP. This protocol does not ask for a positive acknowledgement when a packet is received. It is assumed that it has been received. There are several things that can cause a packet to be delayed on a LAN. All these things have the same symptom. Here is a short troubleshooting guide:

1. Make sure you didn't just restart services or reboot your PBX. When you reboot your PBX or restart services, the BLF subscription is lost and you can either reboot your phones or wait until they resubscribe in order to fix the problem.
2. Ensure your phones are on the latest Phone firmware.
3. Check that the phone has a call limit set. If the Call Limit under Edit Extensions-> Advanced (in SIP section) is set to 0 - (unlimited) the PBX will not track the status of this extension. Make sure you set it to a number higher than your phone can actually handle.
4. The packet might not be the culprit; maybe your lamp is broken. Test this by going to the button on the phone and select diagnostics. Select the option lights. Did the light come on? If it did, it's not the light.
5. To narrow this down a little further, it is best to remove all doubt. Restore the phone to factory defaults and reprogram it. Test it and see if the problem happens again. If it does, go to the next step.
6. Isolate the Issue. The easiest way to do this is to swap the phone with one that is working ok and has not demonstrated this issue. If the problem follows the phone, it is most likely a setting or something wrong with the phone. If the problem follows the location and happens on the other phone in this same location, the problem is probably on the segment of the LAN. After this has been tested, try swapping the ports on the data switch. It could be a bad port on the switch.
7. Look at the Monitor screen in the PBX Setup ? Reports menu. Is that extension lagged? Does it show the same number of milliseconds as the other phones on the monitor screen? The number of milliseconds represents the amount of time it takes a packet to travel round trip from the PBX to the phone. If this extension looks like it has a longer time than the other phones, it could be caused by a weak connection. Using the diagnostic tools in the reports section, use the ping tool to ping the IP address of the phone. If the ping time seems a little lagged, you need to look at the network. Try running the traceroute utility to the IP address of the phone. The traceroute utility will show if there is any packet loss.
8. Put a cable tester on the segment and make sure that it is performing at Cat5 or better (if it does not test out, check all of the cable connections and replace or re-terminate the wall jacks and plugs). If you don't have a cable tester, try reseating all of the RJ-45 plugs in the segment; they may not be properly connected. If you simply want to do all you can to get on to the next stop on your day, re-terminate all the wall jacks and test. You might be pleasantly surprised that the issue has disappeared.

9. If you have now retested the segment with your cable tester and are confident that the cables do not have a problem, then we must look at the Quality of Service settings in the Data Switch. If QOS is not set up properly, large data transfers can block packets occasionally on the LAN. QOS is easy to setup. Just follow the instructions provided by the data switch manufacturer. If you don't have a Smart/Managed Switch, you will not be able to set the QOS parameters on the LAN. It is recommended that you have one installed if you want to resolve this issue.
 10. If for some reason you are not able to set up QOS on the LAN, you will need to discuss the options with the owner. If they do not want to purchase a Smart/Managed Switch capable of setting QOS, your only choice will be to explain to them that they must refrain from large bandwidth using applications such as videos, Internet music and other apps that are taking up large amounts of bandwidth. QOS will eliminate the issue and give voice packets priority over the other data packets.
8. Packet Capture. It is possible to use the packet capture utility to capture some packets to make sure that the packets are being sent from/to the PBX or from/to the phone.

The packet capture is only helpful if it is real small and only contains the 30 seconds of data required to reproduce the issue. If you cannot reproduce the issue while the packet capture is on for just a very short amount of time, it is like looking for a needle in a haystack. There is no such thing as black magic. The BLF did not turn on for a good reason. If you want to go with the percentages, it breaks down like this: Less than 1% light is out. Check it anyway in diagnostics. It does not take any time. Less than 1% The phone is broken. This is very unlikely for a BLF 85% Cabling ? Loose connector ? bad patch cord 13% QOS not set up or set up wrong Moral of the story: Carry a known good patch cable and some tools to re-connect the wall jacks. Rule this out first and you will save a lot of time over the long run.