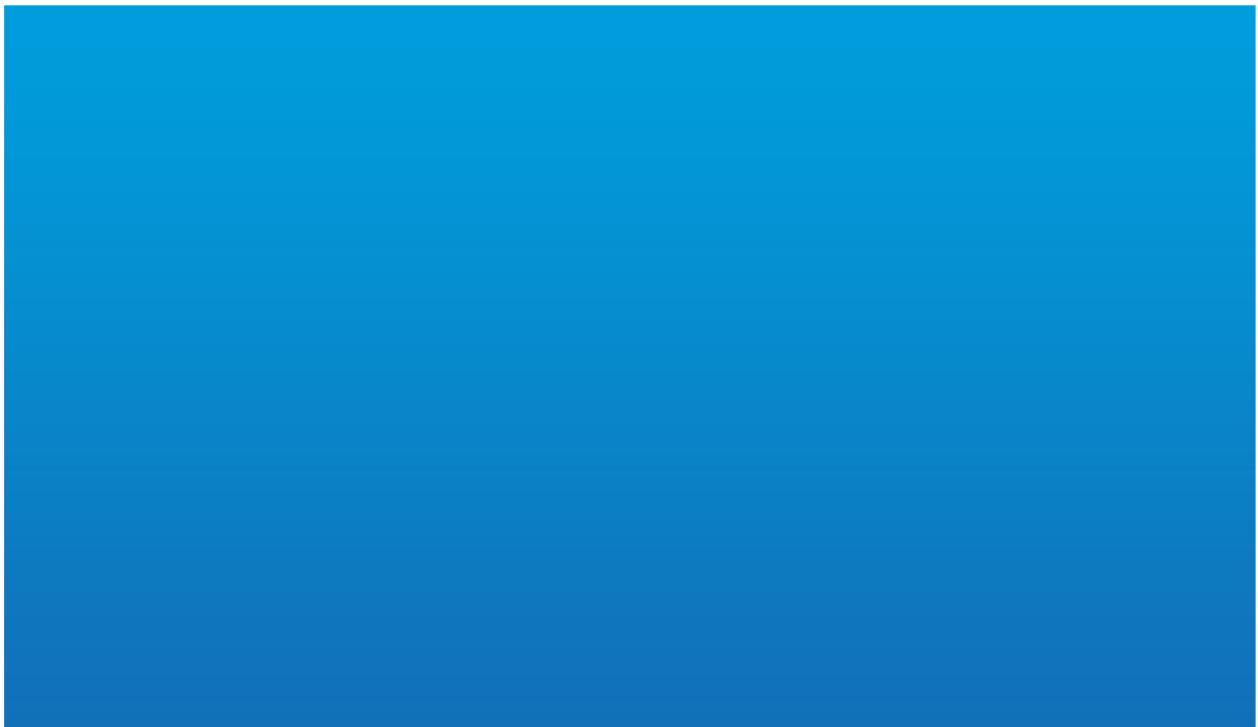


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# Redundancy Options

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## **CARRIER REDUNDANCY**

Carrier outages are the single most common failure in today's communications world. The office PBX is in a closed and protected environment and thus is reliable. Carrier circuits must traverse long distances in the urban wilds. And in the central offices they are connected to other networks, also subject to failure.

The following redundancy solutions are listed in order of preference:

### **Virtual PBX Backup:**

This option is preferable as it uses the power and flexibility of SIP to establish communications resilience. A virtual PBX is setup in standby mode. If a carrier (or PBX) failure occurs, the standby system takes over and routes incoming calls to employee's mobile phones (or any other number).

### **SIP Backup Trunking:**

SIP trunking is an attractive alternative to an analog line backup solution. Here are the advantages of using SIP as a backup strategy:

- A. Some SIP providers provide a backup "package" for a low monthly cost. During normal operation there is no traffic going through the SIP trunks, hence the low price. In the case of a PRI failure, all traffic would go through the SIP trunks and the user would then pay for minutes of usage. Thus, you pay a low monthly price, but have the equivalent capacity to a PRI (or more).
- B. SIP trunks don't require hardware
- C. SIP trunks can utilize your existing data circuit
- D. Caller ID and DID's are standard features on SIP trunks
- E. SIP trunking can be provided on any IP connection including wireless. SIP trunking will be an application on 4G networks. Many companies in other countries use the wireless network for making and receiving phone calls, versus using TDM technology.

### **Analog Lines**

Many companies install a handful of analog lines as a backup to their digital PRI circuit(s). If the end-user has purchased a "network redundancy package" from their carrier, if the PRI goes down, incoming calls are automatically routed to the analog lines.

Cons to this solution:

- A. A PRI supports 23 simultaneous conversations. It is not financially feasible to have that many analog backup lines at \$30 per line per month.
- B. Analog lines do not support DID (direct inward dial) service
- C. Analog lines only support caller ID as an expensive monthly option
- D. Analog lines require an analog line card (extra hardware)
- E. The backup lines are usually provided by the same PRI carrier so there is no provider resiliency