Faxing in a virtual environment

GFI®

GFI Software™ understands the needs of our customers to evolve their faxing to improve efficiency and cost effectiveness. GFI FaxMaker™ is a world-trusted fax solution that helps you accomplish just that by combining faxing with virtual environments.

So how does faxing work in a virtual environment? We will first explain the components of a virtual environment and what it actually is. This will help you better understand how GFI FaxMaker can fit comfortably into a virtual environment and how the fax-flow will work through it.

The example shows what a virtual network environment looks like and components that make up the virtual network.

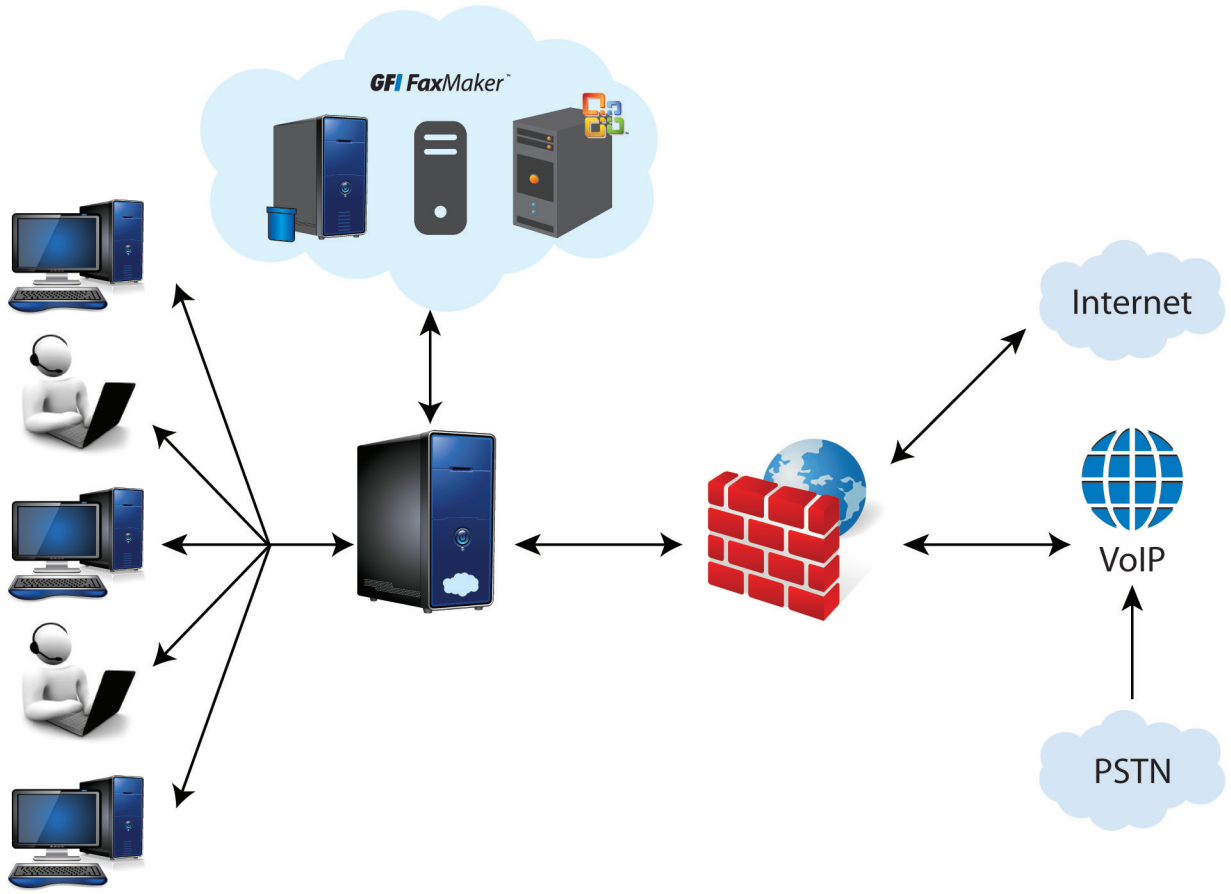

Figure 1: Typical virtualized server network including GFI FaxMaker

Shown in figure 1 (above), a virtual network environment consists of a series of virtual servers on a single host or series of host physical machines that allow multiple servers to work together on one physical machine. That in itself is more cost-effective because you reduce the amount of hardware in a network, thus saving electricity and the costs that would typically be incurred by a system using one physical machine per server.

Fax servers integrate into this type of network by utilizing different methods of sending and receiving faxes. A GFI FaxMaker fax server can reside within a virtual server on the VM host server. It then communicates with a media gateway or VoIP-capable phone PBX to negotiate a fax call by means of SIP (session initiation protocol) or H.323. This has to be done via a virtual fax device (a software-based fax driver that mimics a fax card) like the Brooktrout SR140 or XCAPI devices.

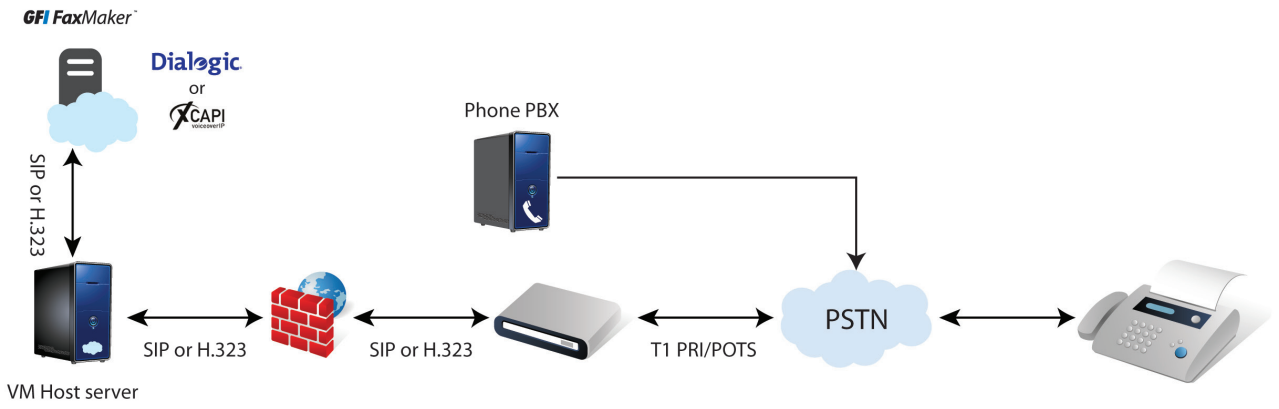

Figure 2: GFI FaxMaker server bypassing the non-FOIP-capable PBX and sending through a media gateway instead

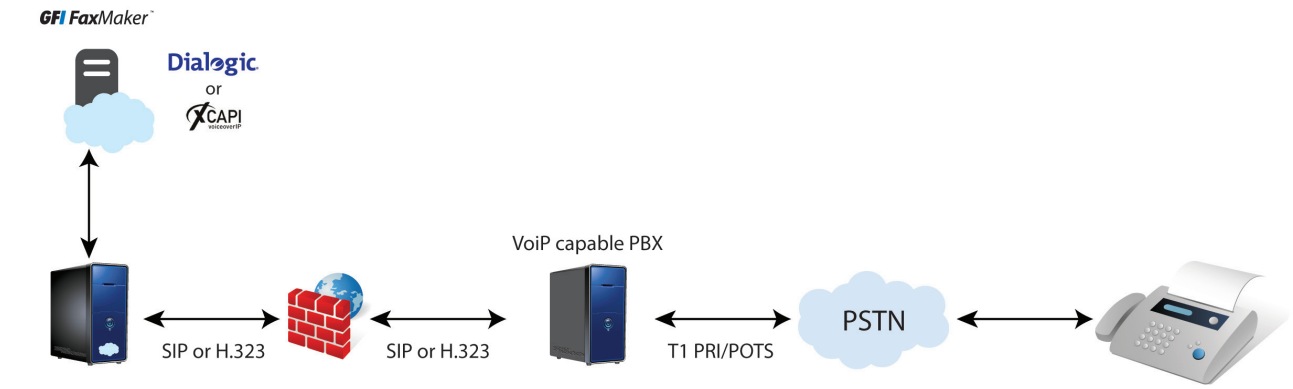

Figure 3: GFI FaxMaker server connecting to a FOIP-capable PBX without the need of a media gateway

Notice that in both figures you see the connection to the PSTN as T1 PRI/POTS (plain old telephone service). It is the common method of connecting to the PSTN with regular analog phone lines. T.38 (the primary codec for fax) and G.711 are digital audio codecs used for encapsulating audio into data packets so that audio can traverse a packet-switched network or, in some cases, the Internet. These codecs allow for phone and fax audio calls to be made over a digital network instead of being bound to an all-analog circuit switched network, allowing for connections to SIP hosts and digital trunk/VoIP providers.

GFI FaxMaker capitalizes on this capability to allow an all-virtual fax solution for both sending and receiving on a virtual and IP-based network structure. Along with this, GFI FaxMaker also allows for several methods of sending and receiving faxes to and from end-users. End-users can send faxes directly from a mail client such as Outlook just like they would send an email.

Since the email is directed to a local address bound to the GFI FaxMaker server, secure documents can be emailed within the organization without the security risk of sending important documents through email via the Internet. Faxes sent from an end-user's mail client are received by GFI FaxMaker and immediately converted to a flat, non-editable image and sent and received just like a normal fax would.

This secure method of sending and receiving important documents allows businesses of all types to comply with strict privacy policies such as HIPAA, and meaningful use policies enforced on EHR, EMR and EPR applications, among others. Users can also receive faxes directly in the inbox of their mail clients.*

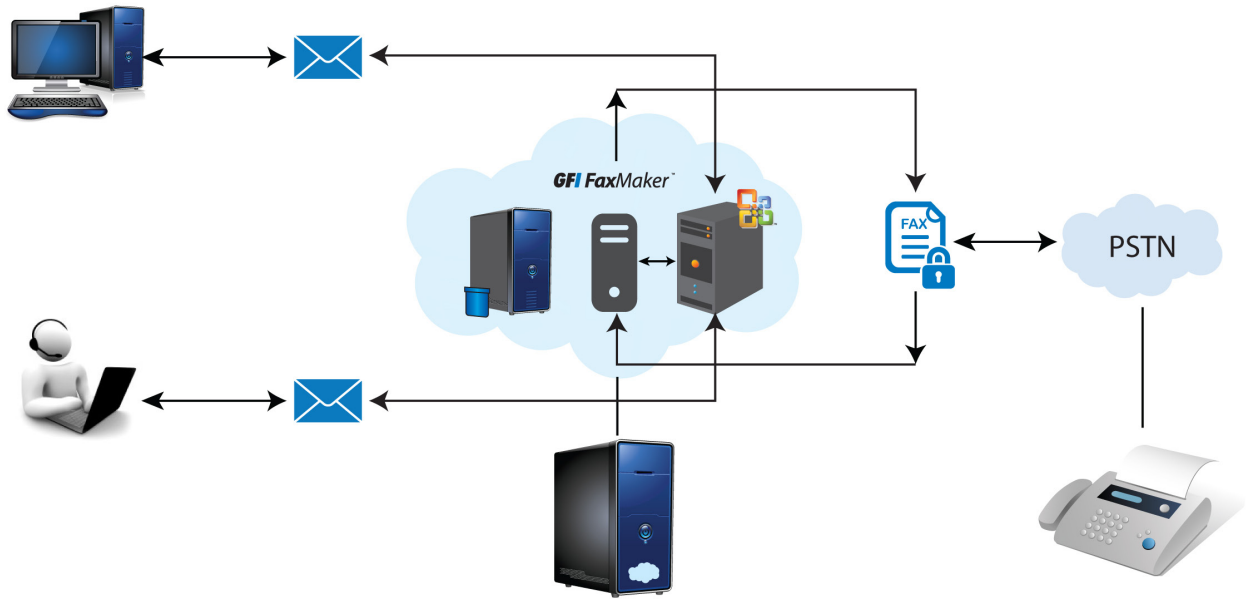

Figure 4: Example of users sending and receiving faxes via a mail server and fax conversion to and from email

**Requires inbound routing to be set up for each end-user within GFI FaxMaker configuration.*

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