



ip.buffer App Note

AN003 : Connecting to fixed IP
devices



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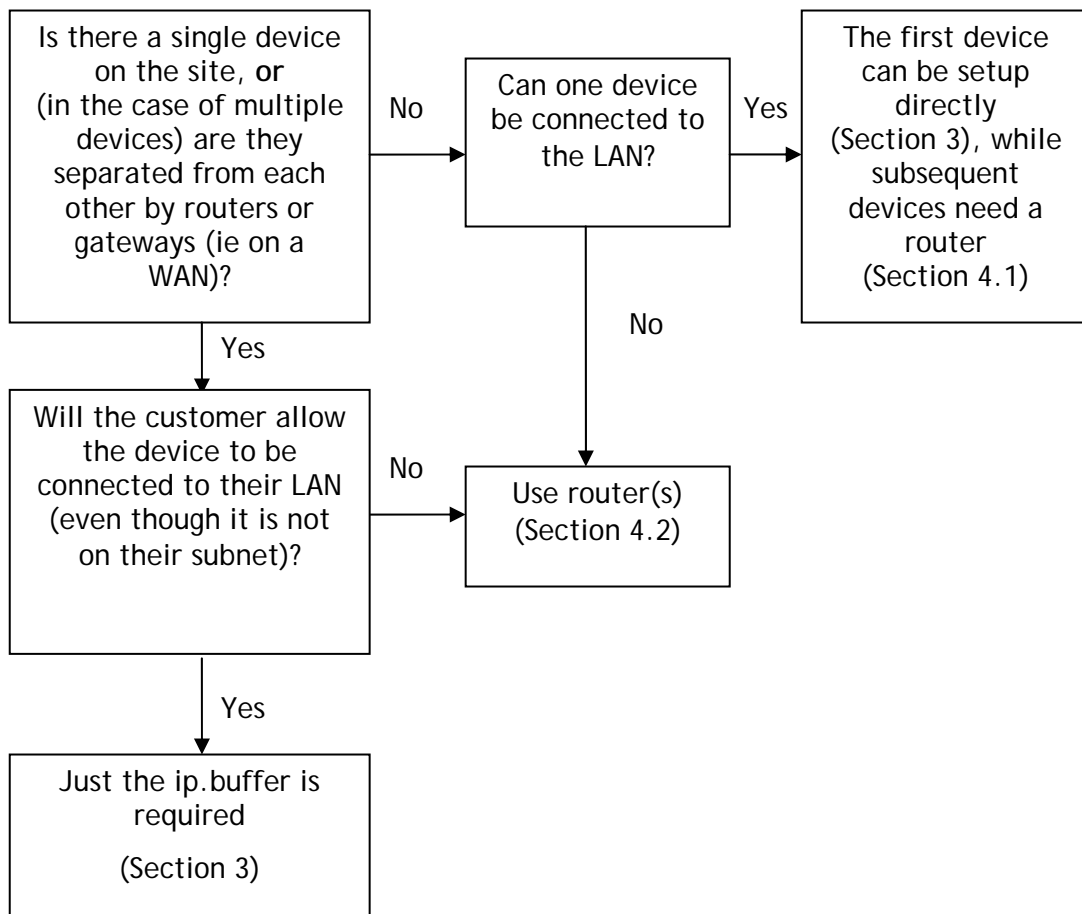
1. Introduction

Some devices have hard-coded, fixed, IP addresses. Connecting to these requires a slightly different configuration to the norm. Depending on the situation you may require an additional router to provide IP address translation.

The Siemens Hipath 4000 is an example of such a device - it is fixed to an address of 192.0.2.3

1.1. Determine site configuration

The first thing is to determine the setup of the particular site. These are the configurations possible. Follow the questions to determine what is required:



2. Reducing Points of Failure

Since the ip.buffer is collecting important information, it is vital that it is physically sited near the device/PBX.

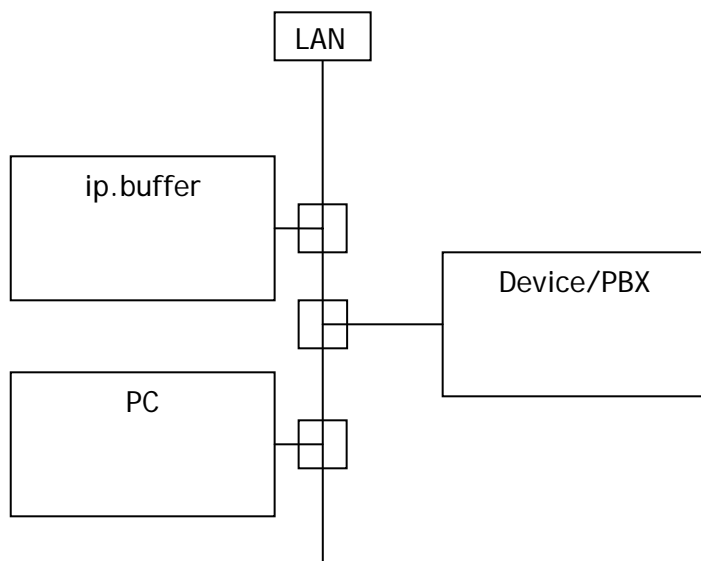
If there are switches, hubs, and long connections between the ip.buffer and any of the devices/PBXs you stand to lose data when one part of that link fails.

- We would strongly recommend putting the ip.buffer in the same enclosure as the PBX, running from the same power supply, and connected to the same hub/switch.

3. Router-less configuration

In the case where a single device/PBX is on the site (or at least within the particular LAN) you can use just the ip.buffer.

The ip.buffer will be completely accessible from the LAN, and the device/PBX will only be accessible if someone reconfigures their PC to include the device's subnet as a multihoming option.



Proceed as follows (example shown for the Hipath):

3.1. Setup the ip.buffer

Setup the ip.buffer's address and network parameters to suit the site's LAN. Effectively ignore the fact that you will be collecting from an unusual network device.

Once you have an address and can connect to the ip.buffer's web-server, continue with the next step.

3.2. Setup the TCP source

1. Set the ip.buffer to collect from TCP
2. Set the TCP source options:
 - a. ip.buffer -> Device (active/client)
 - b. IP Address = 192.0.2.3
 - c. Port = 1201
3. Physically connect the device/PBX onto the same LAN. (It's IP address will not be on the same subnet, but the Ethernet packets will still go down the same cabling and will co-exist with the LAN's subnet.)

Now, at the moment the ip.buffer will attempt to access the device on 192.0.2.3 via its default gateway. The final step will make it all work:

3.3. Add an extra, mulithome, IP address

In the ip.buffer's network settings, add an extra IP address. For example:

2nd IP = 192.0.2.4

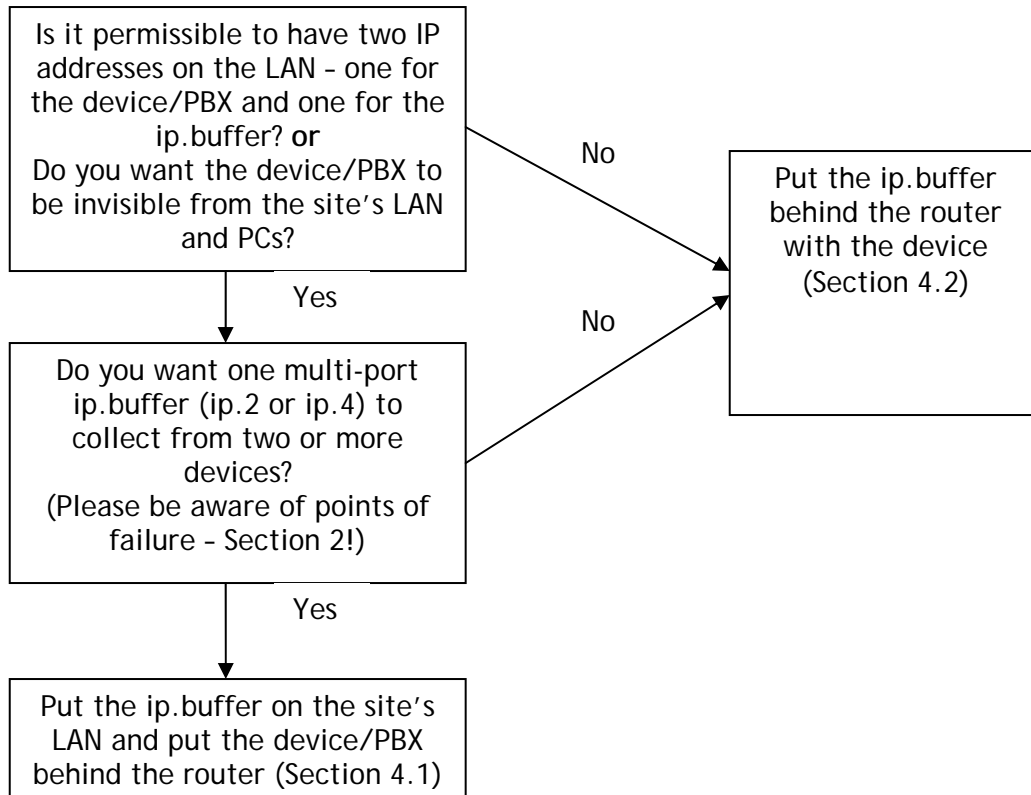
2nd Subnet = 255.255.255.0

This will tell the ip.buffer that it has a secondary static address on the Ethernet - in this case an address that is on the same subnet as the device.

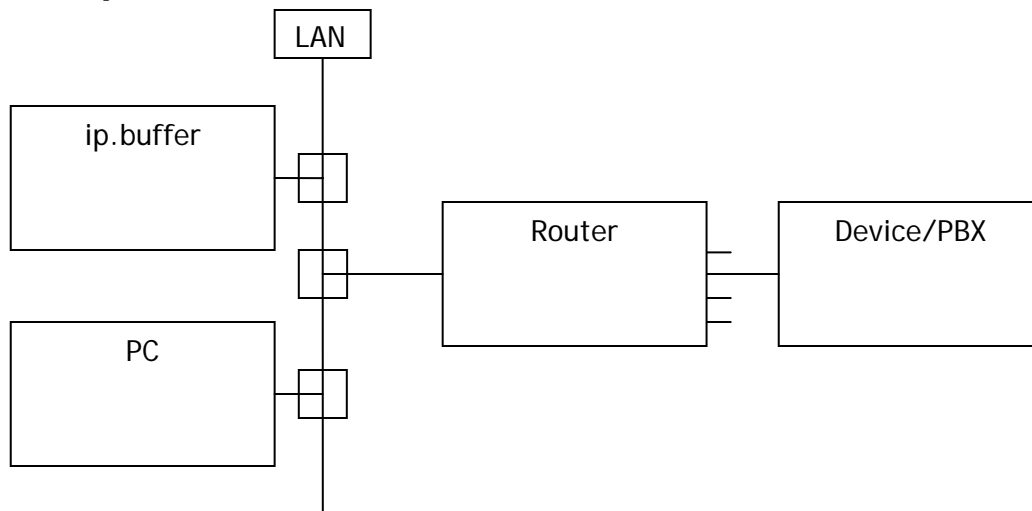
Now, all packets for 192.0.2.3 will no longer go via the gateway, but will be routed to Ethernet and will originate from 192.0.2.4.

4. Router Configuration

There are two ways to configure the router and ip.buffer combination.



4.1. ip.buffer on the LAN



In this situation, the ip.buffer is assigned a LAN IP address. All PCs on the LAN can access both the ip.buffer (because it's local) and the device/PBX.

4.1.1. Configure the router

The router needs these settings:

- Connect the WAN side of the router to the site's LAN
- Assign the WAN side of the router a static IP address that is on the site's LAN subnet (you will probably need a laptop to configure the router)
- Set the router's LAN side to correspond with the device/PBX (e.g. 192.0.2.100 upwards, with subnet 255.255.255.0)
- Set the DMZ entry of the router to be 192.0.2.3 (the address of the device/PBX)
 - This tells the router to forward any incoming WAN packets onto the device on its LAN. All services will be forwarded.
- Connect the device/PBX onto the LAN side of the router

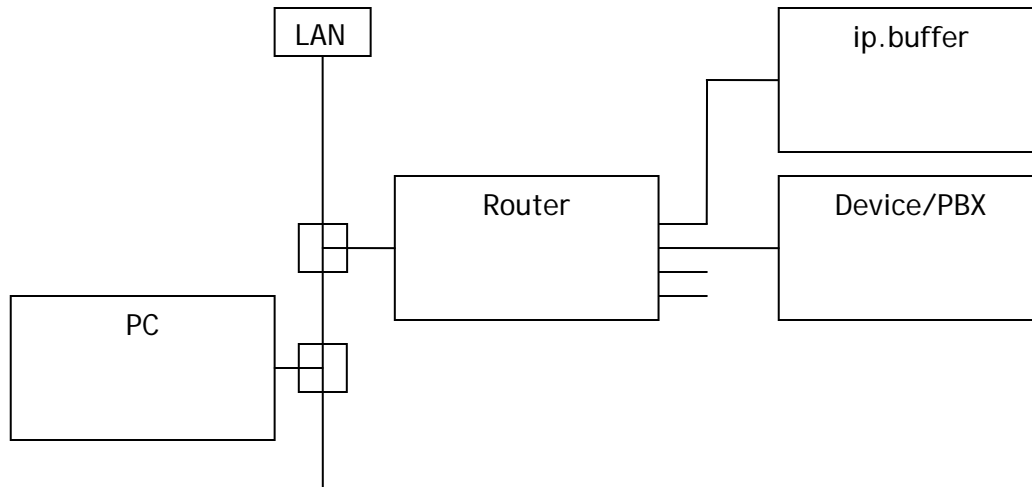
Using the DMZ entry means that you don't have to disable SPI, change any firewall settings, or do anything else. The firewall is effectively disabled. However, only use the DMZ setting when using the router inside a trusted LAN - do not use it for connection to the Internet!

4.1.2. Connecting to the device/PBX

The ip.buffer should be told to connect to the IP address of the router, and to the required port. e.g. 1201.

The router will forward all requests from the site's LAN (the router's WAN) onto the device/PBX.

4.2. ip.buffer behind the router



In this situation, only the router appears on the site's LAN. All PCs on the LAN can access the ip.buffer services, but not the device/PBX itself.

The configuration is similar to the above, except that the DMZ entry should point to the ip.buffer.

4.2.1. Configure the ip.buffer

Set the ip.buffer's primary network settings:

Address = 192.0.2.100

Subnet = 255.255.255.0

Gateway = 192.0.2.1 (assuming this will be the address of the router itself)

4.2.2. Configure the router

The router needs these settings:

- Connect the WAN side of the router to the site's LAN
- Assign the WAN side of the router a static IP address that is on the site's LAN subnet (you will probably need a laptop to configure the router)
- Set the router's LAN side to correspond with the device/PBX (e.g. 192.0.2.100 upwards, with subnet 255.255.255.0)
- Set the DMZ entry of the router to be 192.0.2.100 (the address of the ip.buffer)
 - This tells the router to forward any incoming WAN packets onto the ip.buffer on its LAN. All services will be forwarded.
- Connect the device/PBX onto the LAN side of the router
- Connect the ip.buffer onto the LAN side of the router

4.2.3. Connecting to the device/PBX

The ip.buffer should be told to connect to the device directly (e.g. 192.0.2.3), and to the required port. e.g. 1201.

The router will forward all requests from the site's LAN (the router's WAN) onto the ip.buffer. Only the ip.buffer has direct access to the device/PBX.

If a PC needs to access the ip.buffer it should use the IP address that was assigned to the WAN side of the router.