



SURF Feed Connection Guide

Tullett Prebon Information Ltd

A wholly owned subsidiary of Tullett Prebon

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1. Introduction

1.1 General

This document details the network requirements for a customer to connect to Tullett Prebon for the Datasales Surf Feed. The customer will connect via a leased line to either the London or New York offices. A connection via the Internet will be available for both London and New York access for test purposes and to provide connectivity whilst waiting for the implementation of the leased line connection. Clients based in London and New York may connect to both sites for redundancy and provide their own internal routing.

2. Connectivity via the Internet

2.1 Overview

To speed up the deployment of the Surf feed, the client may connect to the Surf Servers via the Internet. The production environment will need to be migrated to a leased line connection once available to guarantee the delivery of the data without unpredictable delays, which occur over the Internet.

The client will need to configure their firewall to connect to either the DNS names or the IP addresses on the specified port numbers as listed below.

2.2 DNS Names & IP Addresses

The SURF servers can be accessed by the following DNS names or IP Addresses:

surfcb1.ldn.tullib.com 192.149.225.218 London Server A

surfcb2.ldn.tullib.com 192.149.225.219 London Server B

surfcb1.ny.tullib.com 192.149.224.218 New York Server A

surfcb2.ny.tullib.com 192.149.224.219 New York Server B

The IP Address range for the Surf servers, can be summarized by the following network ranges:

192.149.225.216 /30 – London Servers

192.149.224.216 /30 – New York Servers

2.3 TCP Ports

A single TCP port will be assigned to each client. This port will need to be opened on the clients firewall for the above address range.

3. Connectivity via Leased Line

3.1 Overview

Clients may connect via a single router and 256kb circuit or dual routers with dual 256kb circuits for full redundancy. The client will supply the router at both ends and provide an Ethernet port to connect to the Tullett Prebon DMZ Switches Tullett Prebon will assign to address to use for the Ethernet port.

3.2 Hardware Requirements

The recommended hardware for this system is a Cisco 2610 series router, but this is only our recommendation. The customer can supply any brand or model of router as long as we are provided with an Ethernet port. The recommended configuration would be as follows:

3.2.1 London Specification – Assuming X.21 Presentation

Part Number	Description
CISCO2610	Ethernet Modular Router w/ Cisco IOS IP Software
WIC-1T	1-Port Serial WAN Interface Card
CAB-SS-X21MT	X.21 Cable, DTE Male to Smart Serial, 10 Feet
WIC-1B-S/T	1-Port ISDN WAN Interface Card (Optional)

3.2.2 New York Specification – V.35 Interface

Part Number	Description
CISCO2610	Ethernet Modular Router w/ Cisco IOS IP Software
WIC-1T	1-Port Serial WAN Interface Card
CAB-V35-MT	V.35 Cable, DTE Male to Smart Serial, 10 Feet
WIC-1B-U	1-Port ISDN WAN with NT1 Interface Card (Optional)

3.2.3 New York Specification – X.21 Interface

Part Number	Description
CISCO2610	Ethernet Modular Router w/ Cisco IOS IP Software
WIC-1T	1-Port Serial WAN Interface Card
CAB-SS-X21MT	X.21 Cable, DTE Male to Smart Serial, 10 Feet
WIC-1B-U	1-Port ISDN WAN with NT1 Interface Card (Optional)

3.3 Customer Site Configuration

Each customer site network is unique and will design their own connectivity accordingly. This section explains what the customer needs in order to connect to Tullett Prebon Ltd via leased lines.

3.3.1 Customer Site Access Router

An access router(s) will be installed on a DMZ at the customer site with a leased line(s) connecting to the access router on the Tullett Prebon Surf DMZ.

3.3.2 Customer Network Routes

Depending on the customer network, routes are required to direct the traffic destined for the Surf Servers via the leased line(s). The following route can summarize all the Surf Servers:

London: 192.149.225.220/30 (Range 192.149.225.220 – 192.149.225.223)

New York: 192.149.224.220/30 (Range 192.149.224.220 – 192.149.224.223)

This route needs to be added to the customers network and pointed to the access router installed on the Tullett Prebon DMZ.

3.3.3 Customer Firewall

In the majority of cases, the access router will be located on a customer DMZ, so the customer firewall will need to be configured to allow the clients to talk to the above address range on the TCP port assigned to the client.

3.3.4 Server IP Addresses for Leased Line Connections

The SURF servers can be accessed by the following IP Addresses:

192.149.225.220 London Server A

192.149.225.221 London Server B

192.149.224.220 New York Server A

192.149.224.221 New York Server B

The IP Address range for the Surf servers, can be summarized by the following network ranges:

192.149.225.220 /30 – London Servers

192.149.224.220 /30 – New York Servers

3.3.5 Internet Backup Option

As discussed in section 2, the internet can be used for connectivity to the surf servers. This solution may also be used as a backup incase the leased line circuit goes down. To allow for this scenario, the client firewall should be configured for both the Internet accessible servers and the leased line accessible servers. The same port number will be used for both options.

3.3.5.1 London

192.149.225.216 /30 – London Internet Servers (Route to Internet)

192.149.225.220 /30 – London Dedicated Servers (Route to DMZ)

3.3.5.2 New York

192.149.224.216 /30 – New York Internet Servers (Route to Internet)

192.149.224.220 /30 – New York Dedicated Servers (Route to DMZ)

3.4 Tullett Prebon Site Configuration

Either a single or dual pair of routers will be installed at Tullett Prebon on the Surf DMZ. The section provides the configuration necessary to connect to the Surf Firewall.

3.4.1 Access Router

The access router will be configured and managed by the client. In order to connect to the Firewall, Tullett Prebon will allocate four IP Addresses to the customer on the Surf DMZ.

3.4.1.1 London Addresses

- 192.168.41.W - Client Hiding Address
- 192.168.41.X - Client Router Ethernet Address or HSRP Address
- 192.168.41.Y – Client Router A Ethernet Address (For Dual Routers only)
- 192.168.41.Z – Client Router B Ethernet Address (For Dual Routers only)

The subnet mask will be 255.255.255.0 and default gateway 192.168.41.1.

3.4.1.2 New York Addresses

- 192.168.225.W - Client Hiding Address
- 192.168.225.X - Client Router Ethernet Address or HSRP Address
- 192.168.225.Y – Client Router A Ethernet Address (For Dual Routers only)
- 192.168.225.Z – Client Router B Ethernet Address (For Dual Routers only)

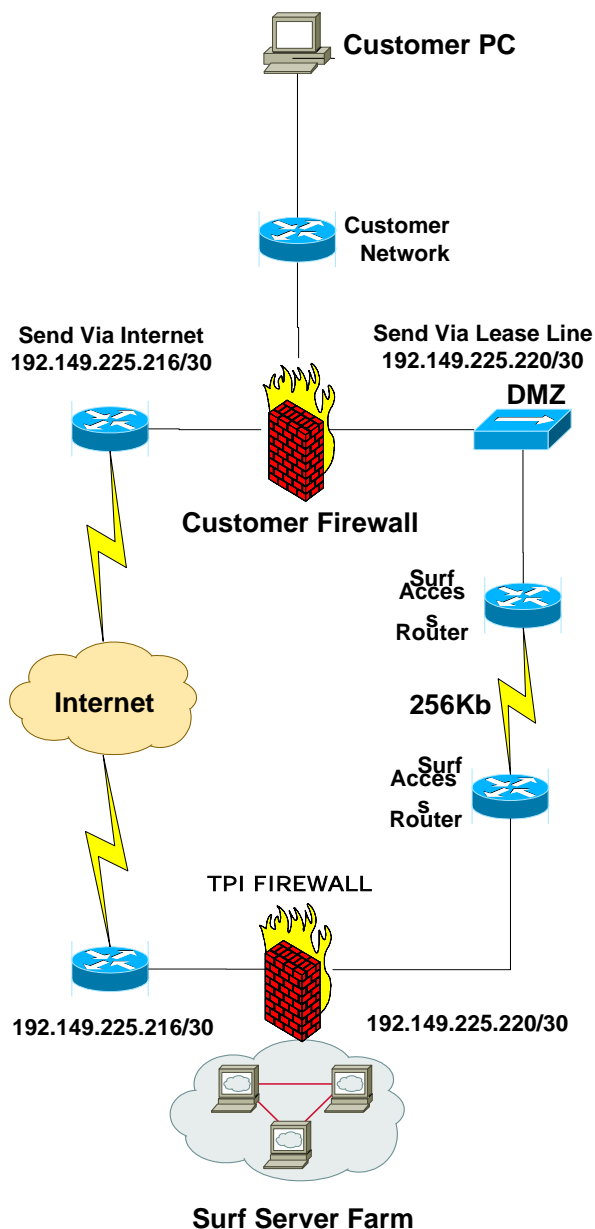
The subnet mask will be 255.255.255.0 and default gateway 192.168.225.1.

3.4.2 Network Address Translation

To make administration easier, the client router needs to translate the source address of all clients to the hiding address allocated. This way, the Tullett Prebon Surf Firewall does not need to know about any of the customer network routes. Likewise, the client can perform a similar translation to remove Tullett Prebon addressing from their network.

4. Diagrams

4.1 London Client Connectivity Overview



1. Customer PC with Surf client installed requests a connection to the Surf Server on the assigned TCP port. The address of the server will be one of the following depending on whether the internet is used or a dedicated leased line has been installed.
 Internet Server A : 192.149.225.218
 Internet Server B : 192.149.225.219
 Dedicated Server A : 192.149.225.220
 Dedicated Server B : 192.149.225.221

2. If a dedicated leased line is used and more than one firewall exists, the last hop router on the client network requires a route for 192.149.225.220/30 via the correct firewall where the router with the leased line exists.

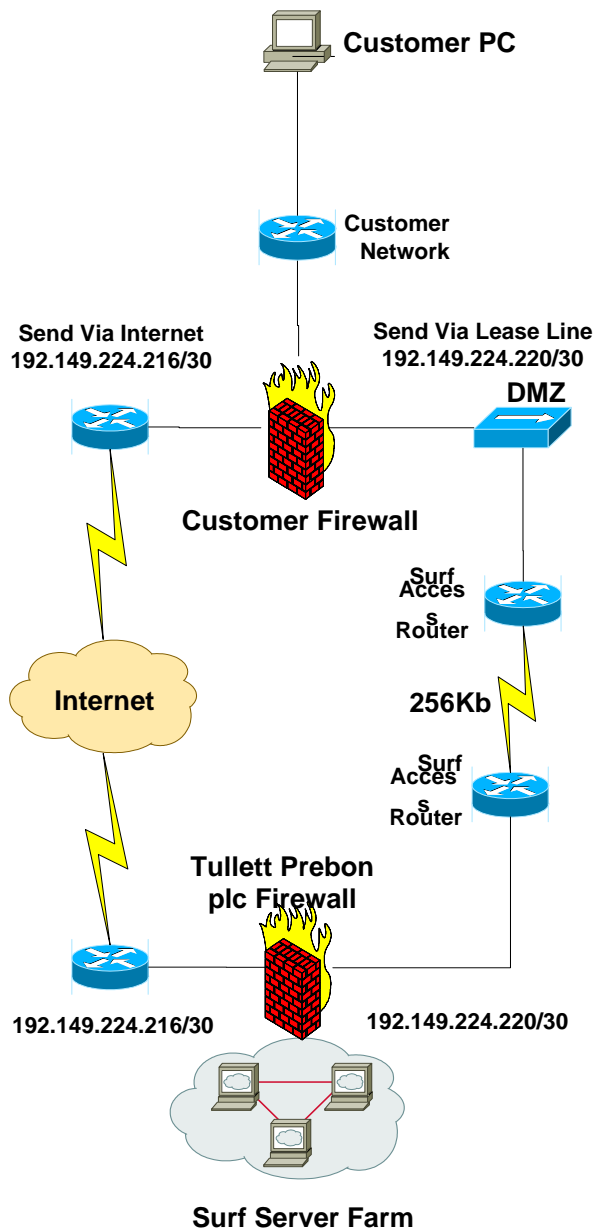
3. The firewall permits traffic from the client to either the internet or the router on the DMZ for the specified TCP port. Where the leased line has been installed, the firewall will direct traffic destined for 192.149.225.220/30 via the router on the DMZ.

4. Where a dedicated line has been installed, the router will forward traffic to the router on the Tullett Prebon DMZ.

5. The router installed on the Tullett Prebon plc DMZ translates the source IP address of the clients to a private hiding address on the Tullett Prebon plc DMZ. Traffic for 192.149.225.220/30 is routed to the firewall interface 192.168.41.1.

6. The Tullett Prebon plc Firewall permits and directs the traffic from both the internet and leased line connections to the server farm.

4.2 New York Client Connectivity Overview



1. Customer PC with Surf client installed requests a connection to the Surf Server on the assigned TCP port. The address of the server will be one of the following depending on whether the internet is used or a dedicated leased line has been installed.

Internet Server A : 192.149.224.218
 Internet Server B : 192.149.224.219
 Dedicated Server A : 192.149.224.220
 Dedicated Server B : 192.149.224.221

2. If a dedicated leased line is used and more than one firewall exists, the last hop router on the client network requires a route for 192.149.224.220/30 via the correct firewall where the router with the leased line exists.

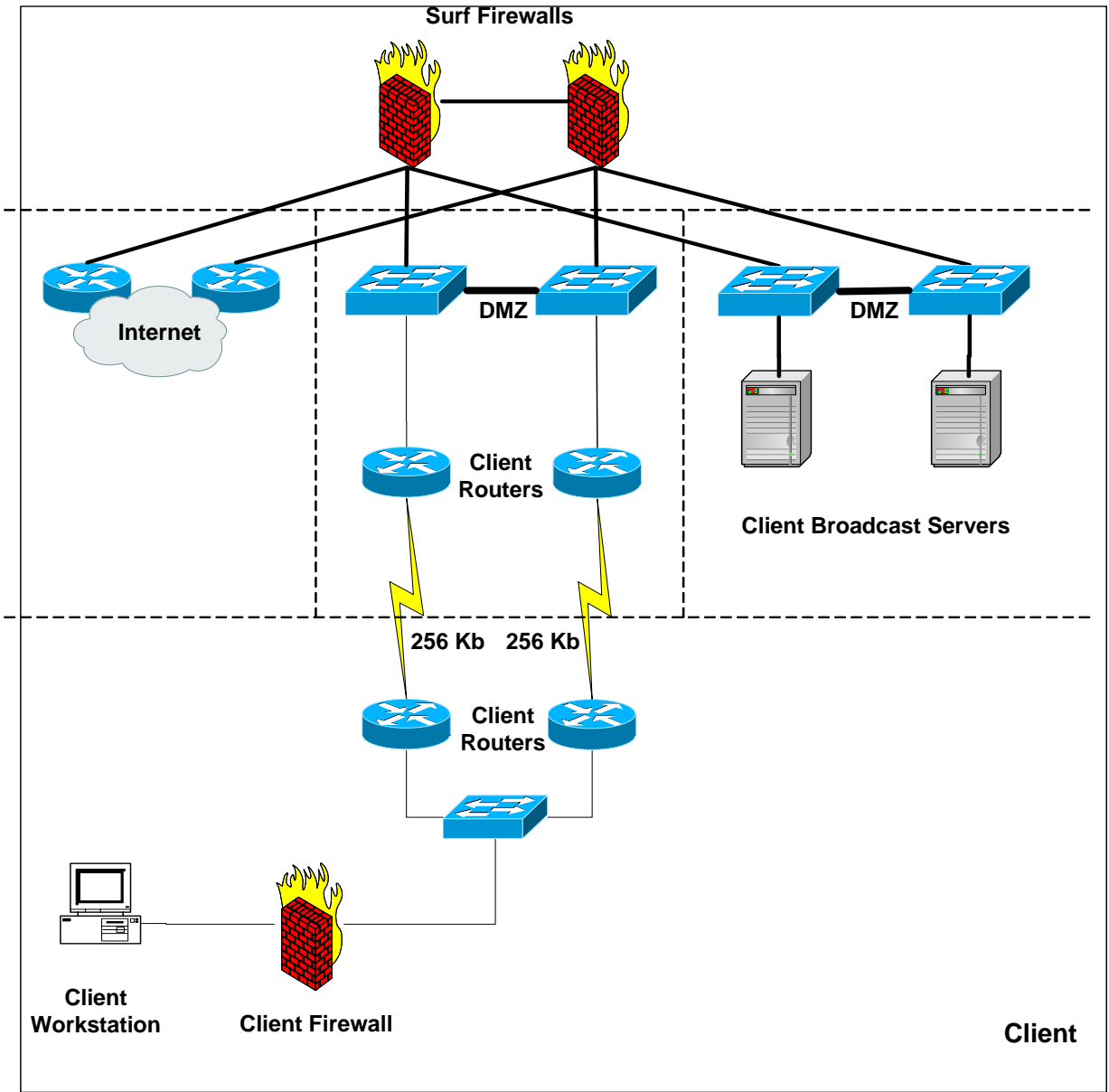
3. The firewall permits traffic from the client to either the internet or the router on the DMZ for the specified TCP port. Where the leased line has been installed, the firewall will direct traffic destined for 192.149.224.220/30 via the router on the DMZ.

4. Where a dedicated line has been installed, the router will forward traffic to the router on the Tullett Prebon plc DMZ.

5. The router installed on the Tullett Prebon plc DMZ translates the source IP address of the clients to a private hiding address on the Tullett Prebon plc DMZ. Traffic for 192.149.224.220/30 is routed to the firewall interface 192.168.225.1.

6. The Tullett Prebon plc Firewall permits and directs the traffic from both the internet and leased line connections to the server farm.

4.3 Firewall / DMZ Architecture



4.4 London / New York Connectivity

