

# User Connectivity to the new JSE Derivatives Trading System



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## 1. References

Document*	Author	Version	Issue Date

## 2. Version Control

Version	Author	Date	Reason for Changes
Version 2.0	Matthias Kempgen	12 February 2007	Bandwidth requirements, Front End section, IP addresses
Version 2.1	Matthias Kempgen	13 February 2007	Added NAS request process
Version 2.2	Matthias Kempgen	13 February 2007	Glossary updated

## 3. Introduction

The purpose of this document is to illustrate the connectivity options available to customers (Trading Members, Clearing Members and Information Subscribers) who will access the new JSE Derivatives Trading System for Agricultural Derivatives and Equity Derivatives.

This document focuses on the connectivity requirements during the testing phase for the new system, while also providing the basis for planning connectivity to the future production system.

The document caters for the acceptance and compliance test phases for Release C of Project Orion. The JSE reserves the right to change IP addresses and port numbers of the new Derivatives Trading System but will communicate any such changes.

**Information Subscribers – please refer specifically to section 3.8 for information on infrastructure requirements for connection to the new systems via the API as well as all other sections of the document**

## 4. Glossary of terms

IP	Internet Protocol
IPX	Novell Netware protocol (Internetwork Packet Exchange)
ISDN	Integrated Services Digital Network
JSE	JSE Ltd
MITS	Multi Instrument Trading System
TCP	Transmission Control Protocol
Users	Recipients of JSE derivatives trading and information services
NAS	Network Access Service

## 5. User Connectivity

### 5.1 Connectivity to the JSE Network

Currently members connect to the SAFEX system using dial-up, ISDN or leased lines, with routers configured for IPX.

To access the new system various options are available:

1. Members can connect via existing leased lines currently being used for the production SAFEX systems. Members need to consider bandwidth utilisation on these circuits and impact to their current trading activities, and may as a result need to consider bandwidth upgrades to existing circuits. Routers must be configured for IP (see section 3.2 below).
2. Members can elect to install new leased lines to facilitate connectivity to the new trading system.
3. MTN Managed Network option – this option will enable users to connect to the JSE via the MTN MPLS network offering cost advantages and introducing connectivity options like leased line connectivity to a local MTN POP.
4. ISDN dialup to the new Derivatives Trading System external user test environment and production environments is also available

Additional requirements for connectivity to the new trading system are:

- Private (as allocated by the JSE) class IP address space or public class IP address space
- Cisco router (recommended)

If the member chooses to use their own public class IP address space this needs to be communicated to the JSE via the [Derivative\\_Info@jse.co.za](mailto:Derivative_Info@jse.co.za) e-mail address.

### 5.2 Configuring Router for IP

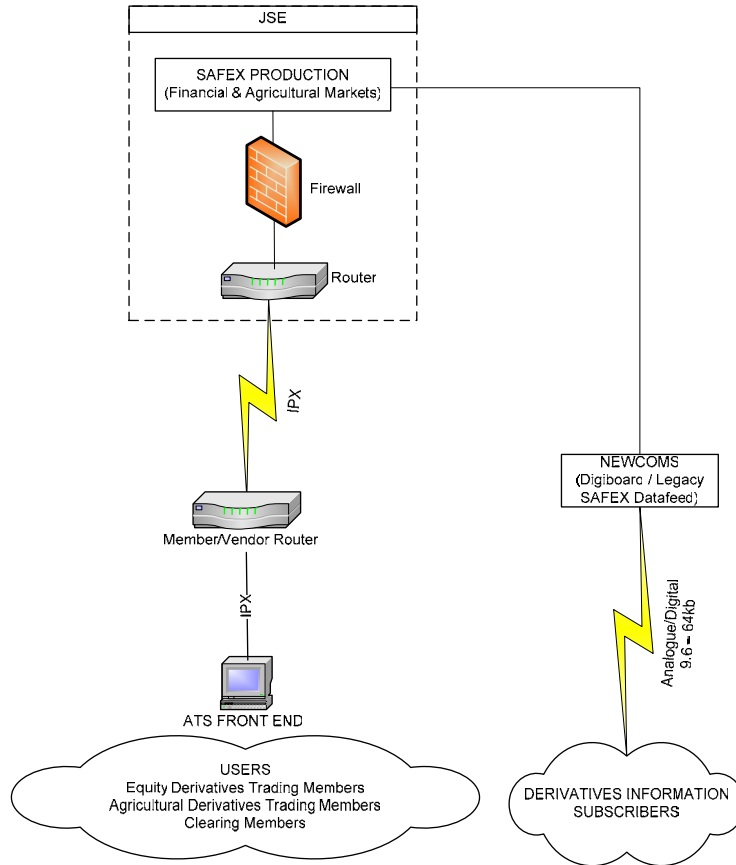
The member's network and interface cards need to be enabled for TCP / IP connectivity. Sample router and switch configurations for TCP / IP networks can be obtained from [www.cisco.com](http://www.cisco.com) or member's can contact their IT support provider.

For the JSE to configure members on TCP / IP, information is required and should be submitted to [nas@jse.co.za](mailto:nas@jse.co.za) as a NAS request for configuration. Please use the "NAS Release C Connectivity to the JSE" template to complete your NAS request.

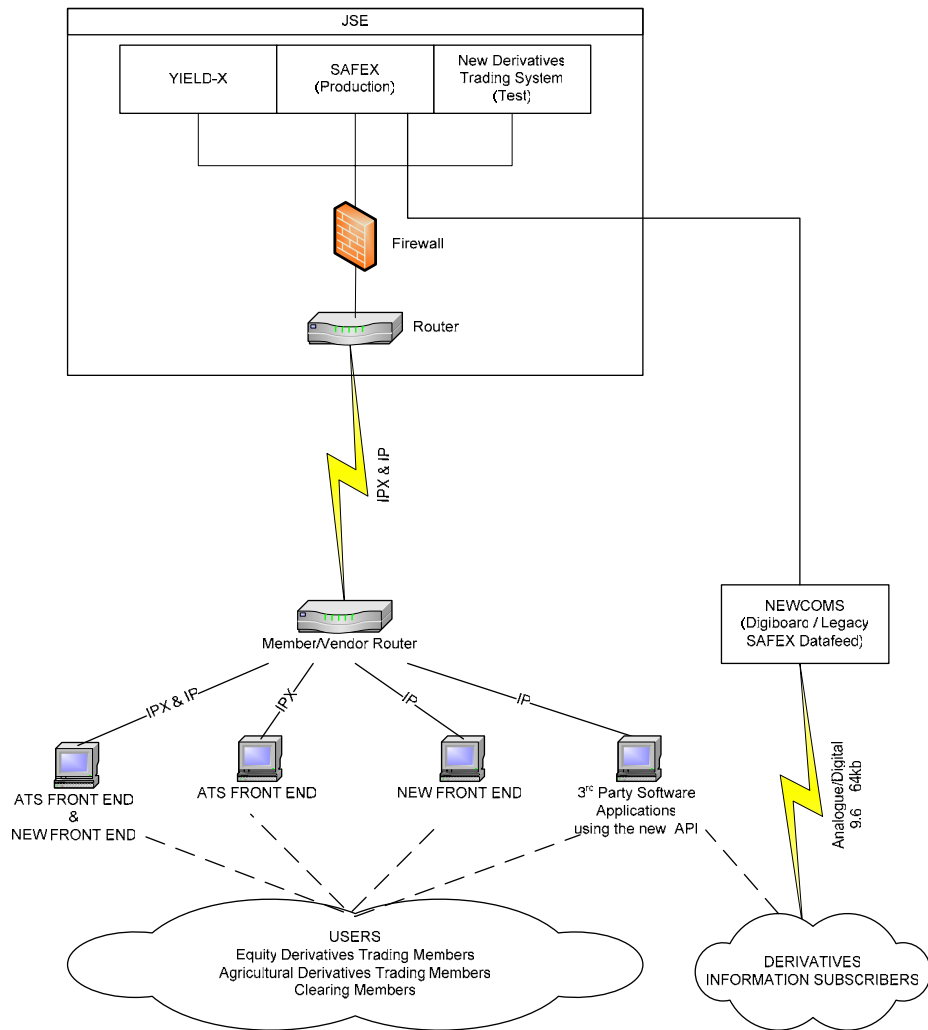
Should a member wish to connect via the MTN managed network solution members will be assisted with the setup.

### 5.3 Illustrations

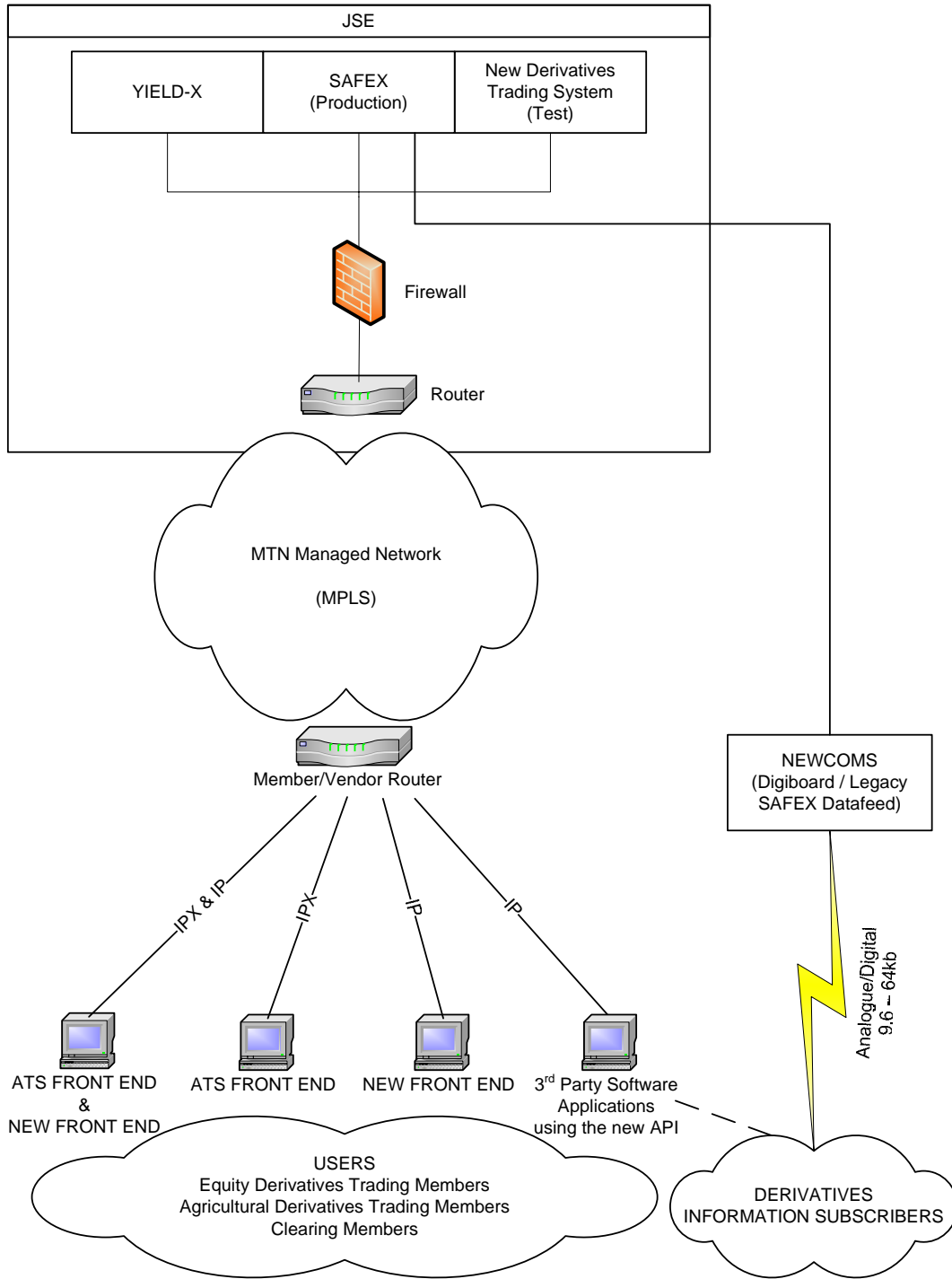
The following three schematic diagrams outline the existing SAFEX connectivity as well as the proposed parallel new derivatives trading system and SAFEX test approach connectivity via a direct connection to the JSE or connectivity via the MTN managed network option.



**Figure 1.** Existing Connectivity to SAFEX System



**Figure 2.** Connectivity to the new Derivatives Trading System during the Testing phase – SAFEX production system still in operation



**Figure 3.** Connectivity to the new Derivatives Trading System via the MTN Managed Network during the Testing phase – SAFEX production system still in operation



## 5.4 Firewall / Router Configuration

The following information is required to update firewall/router configurations if installed:

### Test environment

#### 1. New Derivatives Trading System:

Proxy host address:	10.3.13.191
TCP port (Financials):	2003
TCP port (Agriculturals)	2210

#### 2. Download Server for updates:

Download Server host address:	10.3.13.191
TCP port (downloads Financials and Agriculturals):	4410

## 5.5 Routing

Customers must use static routing to route data across the interface between the Customer Network and the JSE Network.

The following IP network configurations are required on the routers to facilitate connectivity to the test system:

### Test environment:

IP route 10.3.12.0 255.255.252.0 (serial interface of router at the JSE)

## 5.6 Bandwidth Requirements

#### 1. Bandwidth Requirements for the new Derivatives Trading System Front End:

- APD – 25k per user
- EDM – 25k per user

#### 2. Bandwidth Requirements for Information Subscribers:

- 25k per 'listener' per market

#### 3. EOD file downloads:

- Specifications on these files are being finalised, however the JSE estimates that the complete set of available files will not exceed 2MB per day per market if all files are subscribed to.

## 5.7 Client workstation minimum requirements

The Derivatives Trading System front end application should be installed on a PC with the following recommended specifications (it is possible to install the new front end on the same workstation as your current SAFEX solution but is not recommended as this may impact your production trading activities):

### Recommended:

P4 2.8 GHz or equivalent processor  
512 MB RAM  
Windows XP sp2  
Minimum 2GB available disk space

## Network Interface Card

The JSE therefore recommends separating the physical installation of the new Derivatives Front End onto a separate PC or limiting their testing to times when the current ATS production front end is not used.

### **5.8 New front end availability**

The new Derivatives Trading front end will be available for download from the JSE after 2 April 2007.

The JSE will communicate the link for the download of the software – the JSE will make the front end available via an FTP site and via the existing SAFEX Slaves.

### **5.9 Information Subscriber requirements for the new Derivatives Trading System**

Information Subscribers will make use of the same API as the trading members– the API document for the new Derivatives Trading System (which is available separately) specifically indicates messages to be used by Information Subscribers to connect and access public information.

The current data feed servers (known as Newcoms) and related Digiboard infrastructure will no longer be valid and available once the new Orion Release C go live. Information Subscribers will require a leased line into the JSE to connect to the new system. The bandwidth requirements for information subscribers can be found in section 5.6. The sharing of existing Infowiz lines to the JSE will be possible as long as the shared line caters for all the bandwidth requirements as per section 5.6.

Please note that the new Derivatives Trading System API is based on the TCP/IP communications protocol – please refer to the new Derivatives Trading System API Specification document for more information.

## **6. Contact List for help or queries**

### **Software or Technical Queries:**

The JSE Trading Division can be contacted via the following e-mail address:

Derivative\_Info@jse.co.za