

## North Street Global, LLC. Business Continuity Plan

### Overview

North Street Global holds business continuity for disaster recovery as a high priority. Our goal is to ensure our continued ability to serve our clients and to protect their assets and the people and assets of our North Street Global. Our Business Continuity Program has been developed to provide a reasonable assurance of business continuity in the event there are disruptions of normal operations at North Street Global's critical facilities.

No contingency plan can be failsafe or provide absolute assurance that an interruption in business will not occur or that negative consequences will not ensue from a crisis or event. That said, North Street Global is committed to ensuring that its program is comprehensive and up-to-date, particularly as new information, technique, and technologies become available. We may alter, add to, or eliminate specific aspect of the program as we judge appropriate for the protection of all concerned.

The plan described in this document start with an overview of North Street Global's infrastructure and details steps for recovery from: data loss, hardware failure, and Internet connection failure. The infrastructure of our contingency site for Business Continuity is presented.

### Technology & Operation Infrastructure

#### Messaging

North Street Global currently utilizes Hosted Exchange for its messaging platform. Hosted on Intermedia's highly redundant platform, email and mobile messaging is protected in a high availability infrastructure. In addition, all mailboxes accessed via Outlook 2010 and 2013 are stored using Microsoft Cached Mode, which leaves a local copy of the mailbox on the c: drive of the desktop in use. This leaves a copy of all messages to date, calendar events, contacts and other mailbox related items. All mobile devices have a copy of contacts and calendar as well, and have recent messages as maintained by the user.

#### File Services

North Street Global uses JungleDisk cloud space from Rackspace Data Centers. The data is synchronized locally with the desktops as well as replicated across multiple Rackspace data centers in the continental US, Backup strategy consists of local synchronization, versioning and & backup to an external drive.

#### Market Data

North Street Global utilizes Bloomberg services, & other specialized data vendors for its market data & quantitative analysis needs. Bloomberg and trading applications can be downloaded from the Internet and installed as needed, with the appropriate license for access. Market Data are cross-checked and referenced to ensure correctness and avoid stale-ness.

## Databases

Currently North Street Global utilizes Salesforce, NavSuite, FundCount, ReportAgent and Nirvana for their CRM, EOMS, Risk Reporting and operational processes.

## Network and Connectivity

North Street Global's broadband connectivity consists of multiple internet providers (Time Warner & SignalPoint Communications) connected to automated primary and back-up switching modules for redundancy and dual Cisco firewalls for protection.

North Street Global utilizes shared space environment redundant network infrastructure and ISP circuits.

The network has virtual private network ("VPN") technology; redundant communication lines with hardware failover, based on both firewall and switch redundancy.

Internet, market data, remote access, and LAN/WAN connectivity are provided using industry best practices, including primary and secondary circuits, different circuit providers, redundant hardware, and universal power systems ("UPS") and heating-ventilation-air-conditioning ("HVAC") systems in our data rooms.

## Telephone System

Telephone system is provided by a hosted PBX provider **RingCentral** and is used over dedicated data lines. The firm is using Polycom telephony equipment with multiple features, such as follow me and soft phones on the mobile devices. All firm's stakeholders have additional business phones setup at their residences for the redundancy purposes.

## Replication and Redundancy

North Street Global utilizes geographical clustered exchange and file redundancy. In addition, North Street Global uses Microsoft clustering services to achieve high availability for critical data and applications via third party (JungleDisk and Intermedia).

## File Storage Security

North Street Global uses secure cloud system and is protected by both 256bit AES channel encryption as well as paraphrase file encryption. All file data is setup to be preserved indefinitely and cannot be deleted without secondary control mechanism. All files are stored with at least 5 versions (copies) up to 10 versions maximum. The redundancy is also achieved by remotely connecting to the file services from the Web interface and any PC with an internet connection.

## Data Loss Recovery

If any data is lost or becomes corrupt on the desktops, North Street Global will restore data in the following order of priority:

- 1) Online backup via JungleDisk cloud
- 2) Local backup performed on the alternate remote computers and laptops
- 3) Offsite backup performed via **cloud services**

## Hardware Failure Recovery

### Network Infrastructure

North Street Global has two sets of Cisco ASA 5505 Firewall Security Appliances with Security Plus licenses connected to two redundant circuits from Cogent Communications and XO Communications. Loud Partners Inc (see "Third-Party Technology Advisor" below) should be contacted to troubleshoot the hardware failure initially and can facilitate the part replacement process.

- 1) DHCP Server and IP scope are provided by shared space IT department
- 2) VPN Access will be replaced by utilizing cloud services and telephony from individual home of each employee.

### Desktop PC

The current standard for a North Street Global PC is custom built high end desktops with Intel I7 processors, 8 GB RAM, 128 GB SSD hard drive and Windows 7 Professional with Service Pack 1. Each machine has Microsoft Office 2010 or 2013 installed. In addition, North Street Global's machines currently run Bloomberg over the Internet.

If there is a particular component that fails, the desktop is covered by the standard three year warranty. Part replacement is typically done on overnight basis and can be installed onsite by a Loud Partners Inc technician. Loud Partners Inc should be contacted to troubleshoot the hardware failure initially and can facilitate the part replacement process.

Steps to reinstall all application in event of a hardware failure on one of North Street Global's PCs:

1. Operating System CD would need to be inserted into CD-ROM and run. This will automatically installed Windows 7 to its original factory condition with the HP drivers for all components initially installed with the machine.
2. Once the restore is complete, Windows update will need to be run to install all Microsoft patches and updates.
3. Office 2010 or 2013 standard will need to be installed, using the license key listed above. Office 2010 SP1 should also be installed to get the software up to date with patches.
4. Outlook can be automatically configured by downloading the Intermedia Outlook profile helper. This can be located at <https://owa.msoutlookline.net>, choosing Mailbox Manager Selection and the logging in with the appropriate email address and password. The profile helper is generally to the right and can be downloaded to the PC. You will need to enter the email address and password in order to setup the Outlook profile.
5. Network drives can be mapped by installing JungleDisk (My Secure Backup) application and the appropriate network share. Either Research for the R: drive, Trading for T: drive, Marketing and IR for M: drive or Accounting and Operations for the O: drive.
6. Bloomberg can be downloaded from the Bloomberg website and installed by contacting Bloomberg technical support.
7. Printer drivers can be downloaded from the HP website.
8. On-site data backup is enabled on a multiple backup devices on daily and weekly basis. The procedure automatically retrieves backup data in the event of loss of connectivity to data server or data server breakdown.
9. Offsite backup is done via JungleDisk online services
10. Offsite backup is done via cloud services

## Contingency Site Infrastructure

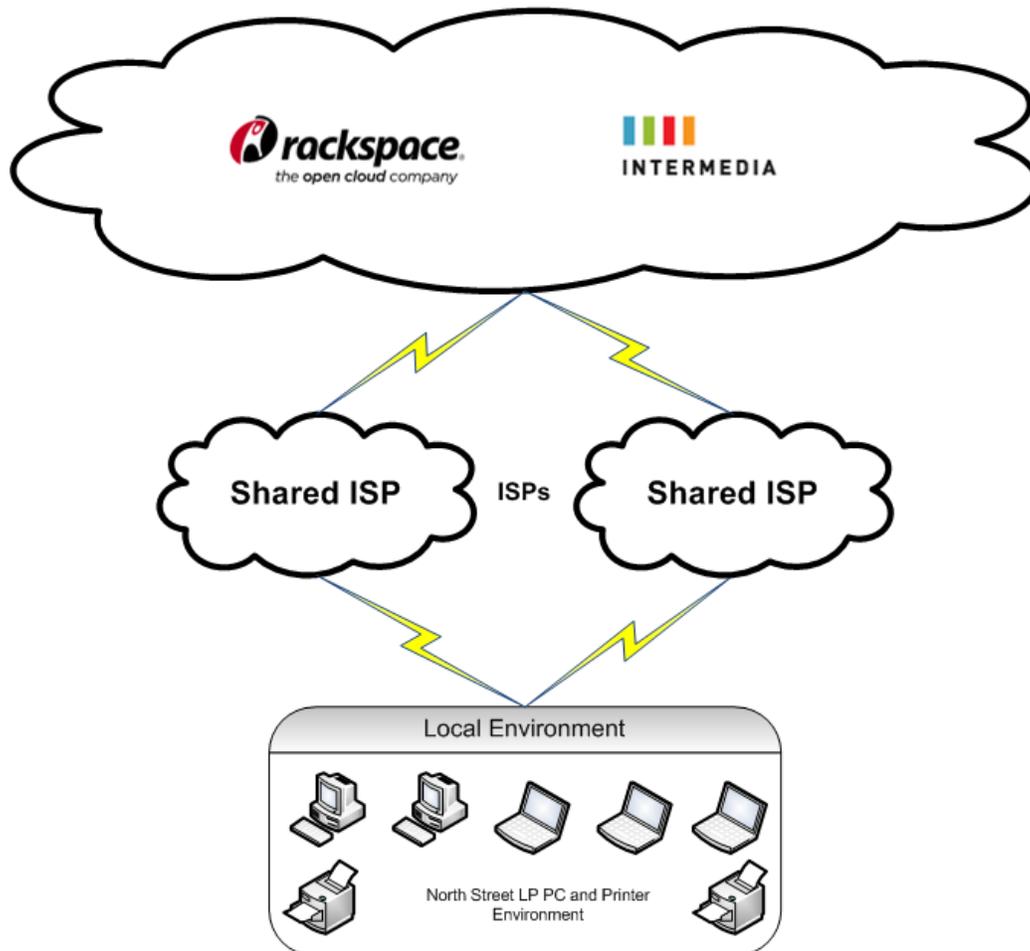
North Street Global maintains and periodically conducts full-cycle daily operations from North Street Global owned computers at contingency sites and at employee's homes with full suite of applications and business telephones.

## Third-Party Technology Advisor

North Street Global outsources all desktop & server technical support to the Loud Partners Inc with whom North Street Global maintains a service level agreement. Loud partners Inc is an IT Solutions provider specialized in helping financial services company's deploy and manage hosted IT solutions. Loud Partners Inc manages mirrored data centers throughout the US and provides solutions to North Street Global whom redundancy, high availability, and disaster recovery is a high priority.

## Infrastructure Design

North Street LP Infrastructure Environment – Primary Site,  
708 3<sup>rd</sup> Avenue, NY, NY



## Appendix – Overview of Business Disaster Recovery Plan

### A1. COMMUNICATIONS PROTOCOL

If a disaster were to occur, North Street Global has established a communications protocol whereby employees have the ability to contact one another and the outside world using various methods including traditional land lines from home, cell phones, or via email using their Blackberries, or home computer (using cable modems). A disaster communication tree has also been established, as well as a list of emergency contacts for key personnel.

### A2. DISASTER RECOVERY AND BUSINESS CONTINUITY MANAGEMENT TEAM

North Street Global has designated key personnel with assigned responsibilities for the coordination of the disaster recovery and business continuity process for North Street Global (the “**DR AND BC MANAGEMENT TEAM**”).

On an annual basis North Street, LP conducts a general training session for all members of the DR and BC Management Team. The goal of the annual training is to address key changes during the year and to ensure that the entire team is informed of their specific responsibilities.

### A3. TESTING OF DISASTER RECOVERY PLAN

On an annual basis North Street Global and certain members of the DR and BC Management Team perform a full scale disaster recovery test in order to evaluate the effectiveness of the process. The overall objective of the recovery test is to:

- identify what went right and what when wrong (lessons learned)
- understand why certain things went right and certain things went wrong
- look for opportunities for improvement

### A4. DUE DILIGENCE OF DISASTER RECOVERY SITE

On an annual basis, Loud Partners Inc as an IT provider conducts as on-site visit of the disaster recovery site to assess facilities, personnel, operations and internal controls.

### A5. VENDORS

APPLICATION NAME	APPLICATION PURPOSE	ACCOUNT #	SUPPORT PHONE	SUPPORT EMAIL
Loud Partners Inc	IT Support		646-481-9491	<a href="mailto:support@loudpart.com">support@loudpart.com</a>
Jungle Disk	Cloud File Sharing			<a href="mailto:support@jungledisk.zendesk.com">support@jungledisk.zendesk.com</a>
Intermedia	Cloud Email Hosting	1199709	800-379-7729	<a href="mailto:ts@intermedia.net">ts@intermedia.net</a>

Building Management	Building Information			
Bloomberg	Market Data		212-318-2100	
HP Support	PC Warranty Support		800-334-5144	

**A6. FACILITY INFORMATION ON DISASTER RECOVERY SITE FOR CLOUD APPLICATIONS**

**FACILITY SIZE**

- Total facility size: 75,000 – 180,000 Sq/Ft
- Total raised floor: 33,500 – 145,000 Sq/Ft

**FACILITY DESCRIPTION**

- Tier 3++ datacenters
- Office space with kitchen area
- Three conference rooms
- Secured storage areas for temporary equipment storage
- Three full size interior loading docks

**OPERATIONS**

- 24/7 network operations center in Dallas
- 24/7 network operations center in Dallas integrated with 24/7 network operations center in Denver

**POWER PROTECTION**

- 2N electrical infrastructure
- Four MW ONCOR single electrical feed
- Two 3750 kVA GE redundant transformers
- Dual HOLT/CAT 2000 kW diesel generators (installing third 2 MW generator)
- 72+ hours fuel supply (system is pre-engineered to add five more generators as growth requires)
- Eight to sixteen Liebert 675 kW modules in 2N configuration
- Thirty to forty Emerson/Liebert power distribution units

**AIR CONDITIONING**

- N+1 trane centrifugal chillers
- Twenty Emerson 30 ton CRAC units on raised floor
- Eleven Emerson 30 ton Split System-DX (Direct Exchange) CRAC units
- Twelve trane roof top units supplying cold air for facility infrastructure rooms

**FIRE DETECTION AND SUPPRESSION**

- VESDA (very early smoke detection)
- FM-200 fire suppression system in POP and SunGard Network Room
- Dual inner-lock pre-action sprinkler system

**CONNECTIVITY AND BANDWIDTH**

- Sprint dual OC-48 internet backbone
- Ten third-party carriers
- Two Cisco 7609 and two Juniper MX480 core border routers
- Six Cisco 6509 access switches

**FACILITY SECURITY**

- Onsite personnel 24x7
- Electronic and physical security
- Biometric and card security system
- Video surveillance
- Man-trap entry and badge-only access
- SAS70 type II certification

**BUILDING MANAGEMENT SYSTEM**

- Environmental controls and electrical monitoring
- Under the floor water detection system
- Control and monitor 2000 points throughout the facility

