

# Connectivity Options That Match Your Trading Style

Align your U.S. Treasury business operations with the best-fit connection to NASDAQ's technology and market data. We provide a variety of access options including Co-Location, Direct Connect, Points of Presence, and Millimeter Wave.

## PHYSICAL CONNECTIVITY

### 1. CO-LOCATION

Nasdaq Co-Location enables clients to place their equipment within the NASDAQ Data Center to access Nasdaq Fixed Income ("NFI"), the U.S. Treasury securities trading system, at the lowest latency available.

| OFFERING  | DESCRIPTION  | FEES <sup>1</sup>   |
|---|--|---|
| CoLo Cabinet  | Choose between a range of cabinets from Low to High Density.   | Monthly Recurring Cost (MRC): Ranging from \$2,000 for a Low Density Cabinet (<=2.88kW) to \$4,500 for High Density Cabinet (7kw<=10kW) |
| CoLo Nasdaq Fixed Income Only                         | 10G hand-off.  | Install: \$1,500<br>MRC: \$7,500  |
| External Connectivity To Your CoLo Cabinet            | Choose any of the approved telco providers to install a direct circuit or utilize our Express Connect service. | Telco Circuit MRC: Varies by vendor and end point<br>Cross Connect Install: \$500<br>Cross Connect MRC: \$350                           |
| Connectivity To Other CoLo Clients Within Data Center | Cross connect to any co-located clients (no MRC to cross connect between your own co-located cabinets).        | Install: \$500 MRC: \$350   |

### 2. DIRECT CONNECT

Direct Connect enables clients to connect to the NASDAQ Data Center via a separate agreement with a telco vendor for the circuit. This option adds additional geographic latencies of 300+ microseconds as introduced by your telco provider.

| OFFERING                                   | DESCRIPTION  | FEES <sup>1</sup>                                 |
|--|--|---|
| Direct Connect To Nasdaq Fixed Income Only | 1GB Ultra switch port.   | Install: \$1,500<br>MRC: \$1,500                  |
| External Connectivity To Carteret          | Choose from any of the approved telco providers to install a direct circuit or utilize our Express Connect service to connect to our Carteret data center. | Telco Circuit MRC: Varies by vendor and end point |

### 3. POINTS OF PRESENCE (“POP”)

The POP service enables clients to connect to Nasdaq Fixed Income from specific financial data centers.

| OFFERING  | DESCRIPTION                 | FEES <sup>1</sup>                |
|---|-----------------------------|----------------------------------|
| POP 1GB Ultra<br>To Nasdaq<br>Fixed Income Only | NY4: Secaucus, New Jersey   | Install: \$1,500<br>MRC: \$1,500 |
|   | CH4: Chicago, Illinois      | Install: \$1,500<br>MRC: \$1,500 |
|   | LD4: London/Slough, England | Install: \$1,500<br>MRC: \$1,500 |

### 4. EXTRANET

| OFFERING | DESCRIPTION   | FEES <sup>1</sup>           |
|----------|---|-----------------------------|
| Extranet | Choose from any of the approved extranet providers to gain access to Nasdaq Fixed Income. | Fees vary based on provider |

## LOGICAL CONNECTIVITY

### PORTS

| OFFERING                                   | DESCRIPTION  | FEES <sup>1</sup>            |
|--|--|------------------------------|
| OUCH/FIX Order Entry Ports                 | Order entry ports to Nasdaq Fixed Income matching engine.  | Install: \$0<br>MRC: \$500   |
| Dedicated OUCH Server                      | Access NFI liquidity via a port server not shared with other firms. Controlling ports and message traffic gives firms the ability to shift connectivity to optimize their trading strategies. Dedicated servers can support a maximum of 30 ports. | Install: \$0<br>MRC: \$2,500 |
| FIX Drop Ports                             | Ports that deliver real-time trading activity information on the NFI platform.   | Install: \$0<br>MRC: \$50    |
| Disaster Recovery (DR) Ports (OUCH or FIX) | DR ports provide connectivity to the NFI disaster recovery platform located in a geographical diverse location from the primary engine in Carteret, NJ.  | Install: \$0<br>MRC: \$50    |

## WIRELESS SERVICES

### METRO MILLIMETER WAVE

The Metro Millimeter Wave (“MMW”) offering enables clients in the NASDAQ Data Center to receive market data from other major New Jersey metro trading hubs at 40%-50% faster speeds than any fiber based network. The Wireless Express Connect offers clients a dedicated point-to-point bandwidth for order entry, data, and other system messages.

| WIRELESS SERVICE   | WIRELESS CARRIER | INSTALLATION FEE | MRC                  | EXPECTED LATENCY*   |
|--|------------------|------------------|----------------------|---------------------|
| Multicast Nasdaq Fixed Income ITCH Wave Port At Secaucus, NJ (NY2) | Apsara Networks  | \$2,500          | \$5,000 <sup>1</sup> | 87 µsec one-way     |
| Multicast Nasdaq Fixed Income ITCH Wave Port At Secaucus, NJ (NY4) | Apsara Networks  | \$2,500          | \$5,000 <sup>1</sup> | 90 µsec one-way     |
| Wireless Express Connect (Carteret To Secaucus- NY2- 50mb)         | Apsara Networks  | \$5,000          | \$10,000             | 182 µsec round-trip |

1. Prices shown do not include any fees for market data receipt or redistribution covered under Market Data Agreement.