Nordic Derivatives Trading System Test (EqD Test) Connectivity Details – IP Subnets and Ports – VASBY

Below connectivity details pertain to **Nordic Derivatives Trading System Test (EqD Test)** environment. Connectivity details to Production environment are published separately.

For protocols where only subnet/range is specified, the specific IP address will be included in each member's account details available via Member Portal or from MAC@nasdaq.com.

BGP/Routing

VASBY – Nasdaq advertises five networks: **204.190.134.0/24** and the ITCH A- and B- multicast source subnets **204.190.134.32/28** (A-feed), **204.190.134.48/28** (B-feed) and the AMD A- and B- multicast source subnets **159.79.69.96/28** (A-feed), **159.79.69.112/28** (B-feed).

Unicast services VASBY

Protocol / Service	IP ranges within announced /24 subnet - Primary	IP ranges within announced /24 subnet - Secondary/Failover	Port Range
FIX Order Entry	204.190.134.64-127	204.190.134.64-127	8200-8299
OUCH Order Entry	204.190.134.64-127	204.190.134.64-127	7100-7199
FIX Drop	204.190.134.64-127	204.190.134.64-127	6200-6299

VASBY – ITCH Multicast (Extranet, Direct Connect, NODE, Colo 1G):

ITCH Multicast Equity Derivatives (1G)[1]	Primary - A Flow	Secondary/Failover - B Flow	Port Range
ITCH Multicast[1] UDP	Source IP address: **204.190.134.32** (within subnet **204.190.134.32/28**) Destination IP address and port in direction to client: Multicast group address: **233.74.125.65** **UDP** port: **18032**	Source IP address: **204.190.134.48** (within subnet **204.190.134.48/28**) Destination IP address and port in direction to client: Multicast group address: **233.74.125.66** **UDP** port: **18032**	
ITCH Re-request UDP	IP address: **204.190.134.128** **UDP** port: **18132**	IP address: **204.190.134.144** **UDP** port: **18132**	18130-18139
ITCH Re-request TCP	IP address: **204.190.134.130** **TCP** port: **18132**	IP address: **204.190.134.146** **TCP** port: **18132**	18130-18139
GLIMPSE TCP (ITCH)	IP address: **204.190.134.129** **TCP** port: **18332**	IP address: **204.190.134.145** **TCP** port: **18332**	18330-18339
Rendezvous Point (RP) - PIM-SM join message **Extranet providers, Direct Connect and Co-Lo 1G in VASBY**	RP-A: **159.79.85.254/32**	RP-B: **159.79.85.255/32**	

General Communication: This content contains non-sensitive information

VASBY – AMD Multicast (Extranet, Direct Connect, NODE, Colo 1G):

AMD Multicast Equity Derivatives (1G)[1]	Primary - A Flow	Secondary/Failover - B Flow	Port Range
AMD Multicast[1] UDP	Source IP address: **159.79.69.99** (within subnet **159.79.69.96/28**) Destination IP address and port in direction to client: Multicast group address: **233.74.125.77** **UDP** port: **31077**	Source IP address: **159.79.69.115** (within subnet **159.79.69.112/28**) Destination IP address and port in direction to client: Multicast group address: **233.74.125.78** **UDP** port: **31078**	
AMD Re-request UDP	IP address: **159.79.68.97** **UDP** Port: **29312**	IP address: **159.79.68.105** **UDP** Port: **29312**	
Rendezvous Point (RP) - PIM-SM join message **Extranet providers, Direct Connect and Co-Lo 1G in VASBY**	RP-A: **159.79.85.254/32**	RP-B: **159.79.85.255/32**	

[1] For general information on ITCH Multicast setup, please consult the INET ITCH UDP Multicast presentation at
https://www.nasdaq.com/solutions/data/european-market-connectivity