✳ ST Engineering

MULTICAST FASTPATH FEATURE BRIEF

With iDX 3.0, ST Engineering iDirect is introducing the Multicast Fastpath feature, a software upgrade which significantly improves the performance of our remotes receiving high throughput multicast streams.

Multicast Fastpath allows service providers to offer more reliable and higher performing services for organizations that want to expand their use of HD broadcast, IPTV, distance learning, digital signage and other video applications.

Advances in Performance

The Multicast Fastpath feature is implemented in software, and is available on all remotes (iNFINITI and Evolution) after upgrade to the iDX 3.0 software release. Moreover, the Multicast Fastpath feature is available on both iNFINITI TDM and DVB-S2 down streams.

Prior to Multicast Fastpath, multicast user data was handled by the full software stack processed as data casting traffic thus limiting the aggregate throughput possible.
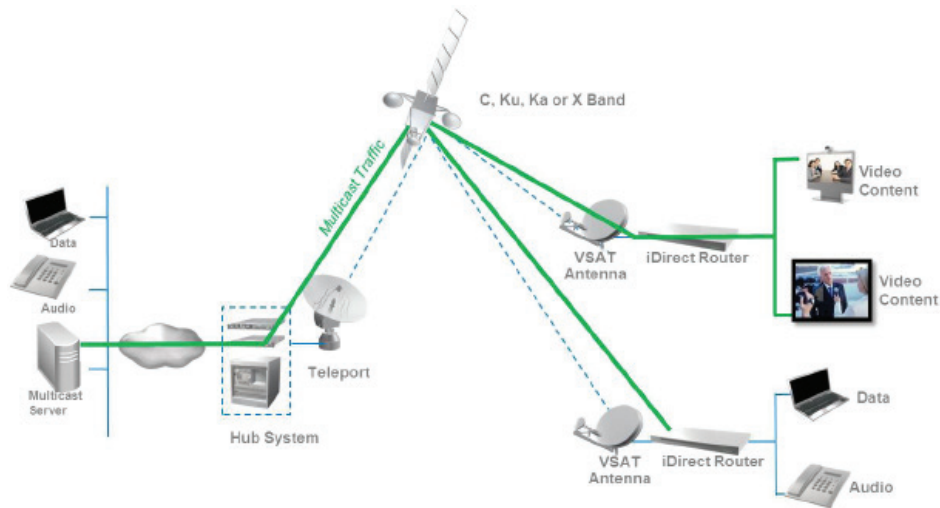
iDX 3.0 now allows the multicast packets to be fast tracked, bypassing some software processing resulting in faster multicast throughput up to 40 Mbps.

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Furthermore Multicast Fastpath is decoupled from unicast throughput. The existing unicast performance of the remotes is preserved, while delivering significantly increased multicast performance.

With our Multicast Fastpath feature, multicast content can be segmented from core network traffic and fast-tracked through the modem, straight to the end-user. Data throughput can reach up to 60 Mbps with minimal impact on the overall network performance. With Multicast FastPath, service providers can offer more reliable and affordable plans for organizations that want to expand their use of HD broadcast, IPTV, distance learning, digital signage and other video applications.

Multicast Streams

Multicast Fastpath is configured as **persistent multicast streams**. Up to sixteen streams can be configured. Different QoS Application Profiles can be defined and applied to each of the sixteen Multicast Fastpath streams, allowing service providers to prioritize and better manage multicasting in their network.

Multicast Fastpath streams can only be established as persistent multicast streams. In contrast, all requests to join a multicast stream by **IGMP** will automatically be treated as regular multicast traffic. The performance of IGMP multicast streams is unchanged from previous software releases.

Multicast Fastpath is supported in Evolution iDX 3.0 release and above for **non-encrypted data** streams and Evolution iDX 4.1.3 and above for **encrypted multicast fastpath data** streams.

Some additional considerations are required when dealing with HNO/VNO networks. **HNOs and VNOs** that control their own NMS will be able to configure Multicast Fastpath channels. For software VNOs, HNOs will maintain the control required to create Multicast Fastpath channels for software VNOs.

In summary, Multicast FastPath traffic bypasses a remote's router for greater performance and provides persistent multicast traffic over DVB-S2/DVB-S2X outbound for higher bandwidth efficiencies while freeing up more bandwidth for unicast traffic.

For more information please contact your ST Engineering iDirect Sales Representive.

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