

From: Christine Hallquist <christine@nekbroadband.org>
Sent: Tuesday, April 6, 2021 4:15 PM
To: Faith Brown <FBrown@leg.state.vt.us>
Cc: Evan Carlson <evan@nekbroadband.org>; Kristen Fountain <kristen@nekbroadband.org>; 350vt-board@googlegroups.com
Subject: [External] Fwd: Fwd: Fwd: Update | Starlink Beta

[External]

Faith,

Would you please enter this email on the record with Senate Finance?

With warm regards, Christine Hallquist NEK Community Broadband 802-258-0674

This is informational for the Senate Finance Committee. I just received this today. As I suspected, Starlink is running into capacity constraints. This message is from Starlink to me as a beta users. I have noticed that I get much more bandwidth in the middle of the night, as opposed to the day, which indicated that Starlink was already experiencing bandwidth problems. Since Starlink needs to utilize 10 GHz base stations to communicate to the satellites, the physics work against some of the broad claims that I have heard. I will also point out that I am running Speedify, which allows failover to DSL when latency gets high, which happens quite often. I am averaging 300 failovers per day. We need to continue to push back that Starlink is the magic bullet, as so many have indicated.

"As more users come online, the team is seeing an increase in surges of activity, particularly during peak hours. The gateway infrastructure to support these types of surges is in place, but we are awaiting final regulatory approval to use all available channels. Near term fixes have been implemented to facilitate better load balancing in the interim, and this issue will fully resolve once all approvals are received.

With warm regards, Christine Hallquist NEK Community Broadband 802-258-0674

----- Forwarded Message -----

Subject:Update | Starlink Beta
Date:Tue, 06 Apr 2021 02:28:23 +0000 (UTC)
From:Starlink <no-reply@starlink.com>
To:christine@nekbroadband.org



Throughout the beta program, customer feedback has helped drive some of our most important changes to date as we continue to test and scale the network.

The Starlink team has implemented a number of improvements since our last update. Below are some of the key highlights:

Starlink Expansion

Since rollout of initial U.S. service in October 2020, Starlink now offers limited beta service in Canada, U.K., Germany and New Zealand. To date, we have deposits from almost every country around the world; going forward, our ability to expand service will be driven in large part by governments granting us licensing internationally.

Preventative Maintenance

Recently some beta users saw short but more frequent outages, particularly in the evening hours. This was caused by two main issues— preventive maintenance on various ground gateways, coupled with a network logic bug that intermittently caused some packet processing services to hang until they were reset. The good news is fixes were implemented and users should no longer see this particular issue.

Gateway Availability

As more users come online, the team is seeing an increase in surges of activity, particularly during peak hours. The gateway infrastructure to support these types of surges is in place, but we are awaiting final regulatory approval to use all available channels. Near term fixes have been implemented to facilitate better load balancing in the interim, and this issue will fully resolve once all approvals are received.

Dynamic Frame Allocation

The Starlink software team recently rolled out our dynamic frame allocation feature which dynamically allocates additional bandwidth to beta users based on real time usage. This feature enables the network to better balance load and deliver higher speeds to the user.

Connecting to the Best Satellite

Today, your Starlink speaks to a single satellite assigned to your terminal for a particular period of time. In the future, if communication with your assigned satellite is interrupted for any reason, your Starlink will seamlessly switch to a different satellite, resulting in far fewer network disruptions. There can only be one satellite connected to your Starlink at any time, but this feature will allow for choice of the best satellite. This feature will be available to most beta users in April and is expected to deliver one of our most notable reliability improvements to date.

These upgrades are part of our overall effort to build a network that not only reaches underserved users, but also performs significantly better than traditional satellite internet.

To that end, the Starlink team is always looking for great software, integration and network engineers. If you want to help us build the internet in space, please send your resume to starlinksoftwarejobs@spacex.com.

Thank you for your feedback and continued support!

The Starlink Team

Space Exploration Technologies Corp | 1 Rocket Road, Hawthorne, CA 90250 | [Unsubscribe](#)

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