

EdgeXOS Platform Notes

XRoads Networks

Edge Network Appliance Platform Notes

EdgeXOS Setting Up Tunnel Acceleration

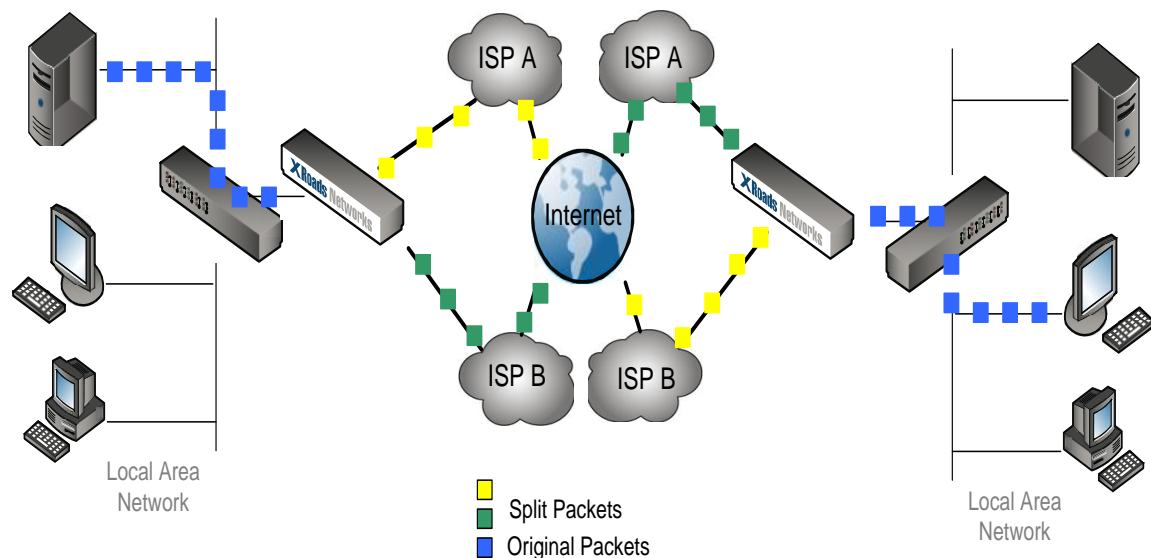
Site2Site Tunnel Acceleration (Accelerated Bonding)

This document provides an overview of how our Site2Site Tunnel Acceleration technology works and how one would configure it within the EdgeXOS appliance. Note: This capability became available as of July of 2010. Any EdgeXOS appliance deployed before that time would have to be upgraded to the latest version to use these features.

IMPORTANT: Tunnel acceleration is designed ONLY to be used with two or more Internet links. Tunnel acceleration cannot be used to connect both public and private networks. Many problems could be created by attempting to do so, so it is disabled within the device as much as possible and should not be attempted.

Overview: The Site2Site tunnel acceleration uses packet splitting to divide network traffic between two local area networks across two or more Internet-based tunnels in order to improve network throughput and reliability in the event of a network outage. The splitting is based on weighting assignments as determined by the administrator and built-in adjustments made by the appliance in order to optimize network throughput across the tunnels.

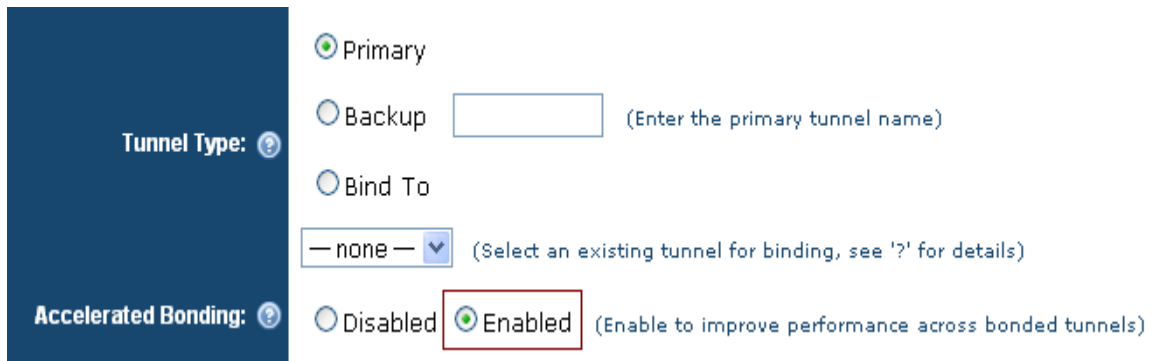
Note: Tunnel acceleration only works with tunnels which are bonded to each other.



Packet splitting is NOT recommended for all types of deployments so it is recommended that end-users contact XRoads Networks support engineering prior to implementation in order to determine its suitability for your specific deployment.

Enabling Accelerated Bonding: To enable accelerated bonding simply set the Site2Site configuration option to ENABLED when performing the usual steps to configure the primary Site2Site tunnel. For instructions on setting up a Site2Site tunnel, please reference the How To Guide on Site2Site configuration.

The following is an example screen shot as to where the accelerated bonding option is within the Site2Site configuration screen (again simply set to ENABLED).



The screenshot shows a configuration interface for Site2Site tunnels. On the left, there is a dark blue sidebar with two sections: "Tunnel Type: ?" and "Accelerated Bonding: ?". The "Tunnel Type" section contains three radio buttons: "Primary" (selected), "Backup" (with an adjacent text input field and the instruction "(Enter the primary tunnel name)"), and "Bind To" (with an adjacent dropdown menu showing "— none —" and the instruction "(Select an existing tunnel for binding, see '?' for details)"). The "Accelerated Bonding" section contains two radio buttons: "Disabled" and "Enabled" (selected and highlighted with a red box, with the instruction "(Enable to improve performance across bonded tunnels)").

Note: Both sides of the tunnel must be configured with Tunnel Acceleration enabled. If either side does not have this enabled it will not work. It is suggested that each tunnel configured in a bonded set have accelerated bonding enabled in order to simplify management.

Troubleshooting: If you are having problems enabling this option first check to make sure that the tunnels are working without accelerated bonding enabled. As this feature is simply an add-on to the existing tunnel solution you should be able to get the tunnels working without this option enabled. If the tunnels are not working without this option, please check to make sure that the configuration is correct on both sides and consult the Site2Site troubleshooting guide and/or contact technical support.

If the tunnels are working without accelerated bonding, then the next step is to make sure that both sides of the tunnel are configured in the same manner, i.e. that both sides have acceleration enabled. If they are, perform a tunnel reset and/or stop and then restart the tunnels on both sides. If neither of these works, please contact technical support.