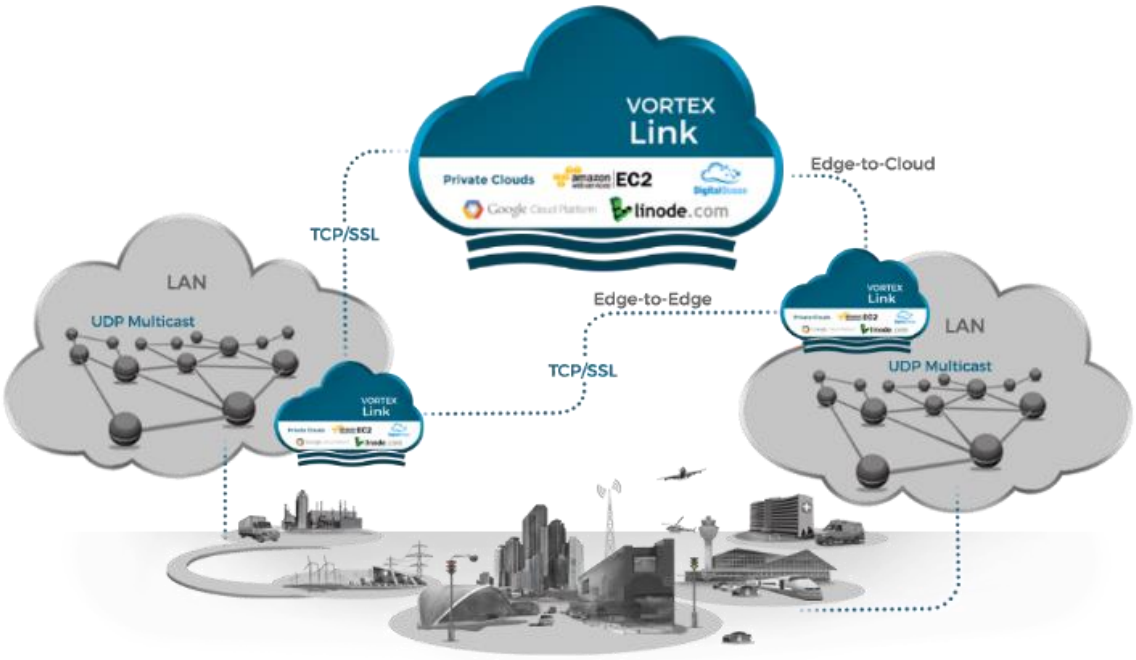
Vortex Link

Overview

Vortex Link provides universally accessible Routing and Discovery Services that enable ubiquitous and transparent data sharing and WAN connectivity for Vortex DDS systems or any other system/device that uses a compliant Data Distribution Service (DDS) software stack. Vortex Link provides transparent discovery and routing between data readers and data writers regardless of location. Vortex Link supports a number of different deployment and connectivity scenarios, including individual device to cloud, system to cloud and also connecting your different LAN's to turn them into a single system.

Vortex Link enables the distribution of data, services, storage and applications to the edge of the network much closer to the devices and users as a way to complement and optimize traditional cloud architectures. Keeping the data at the edge of the network where the connected devices are creating the data offers the possibility to create new and innovative services and process efficiencies not possible with cloud computing alone. Keeping data at the edge makes your system (1) resilient against communication interruptions to the cloud, (2) reduces latency enabling more real-time activities and (3) makes it easier to deal with privacy and/or security concerns.

Smart Cities, Smart Grids even connected cars make use of "horizontal" Device-to-Device (D2D) connectivity in the same way traditional M2M systems typically rely on "vertical" Device-to-Cloud (D2C) communication only. The idea is not to replace existing cloud architectures but to enhance a system by ensuring critical data is available where it can add most value. An edge computing architecture can help assuring the required determinism and efficiency 'at the edge', by reducing latency and improving QoS (quality-of-service) leading to improved services and a better user experience.



Key Features

Vortex Link is composed of Routing and Discovery services, both of which can be deployed multiple times for fault-tolerance, scalability and load balancing purposes.

The purpose of each service is as follows:

- **Discovery Service** – by default in a LAN environment, applications discover each other using UDP multicast. Where this is not available, Vortex Link provides the Discovery Service to provide this capability.

- **Routing Service** – there are some circumstances that may lead two applications to be unable to communicate which each other. In these cases, a Routing Service with the help of a Discovery Service can establish a route to allow the data to flow between applications.

Vortex Link also enables **Boundary Security** for subsystems by providing certificate-based authentication between individual nodes and subsystems sharing data via Vortex Link, secure encrypted communications, access control rules defining the privileges each subsystem has to read or write data and supports routing between DDS security applications.

Complementary Technologies

Vortex Link is a key component of the Vortex DDS Intelligent Data Sharing platform, an advanced suite of complementary interoperable technologies that enable business-critical and industrial IoT systems. Vortex Link can be used to provide Internet wide, secure data sharing. The Vortex DDS platform provides implementations targeting different device platforms, including: Vortex Lite for embedded IoT devices, Vortex Café for Android and Java-centric environments, and Vortex OpenSplice for servers and desktops.

Summary of Vortex Link Benefits

- Key enabling technology for cloud (SaaS, PaaS and DaaS) and edge service providers
- Vortex Link supports Internet wide data sharing for any DDS compliant application (Including 3rd party applications)
- Enables "plug and play" integration and data sharing between different parts of a Vortex DDS IoT system
- Scales elastically as system grows (e.g. as number of connected devices increases)
- Supports both hardware (e.g. BigIP) and software load balancing (e.g. DNS or user defined plugin)
- Deployment independent of cloud infrastructure - can support private, public and hybrid clouds
- Boundary Security with TLS based security, certification-based authentication and access control rules defining the privileges nodes and subsystems have to read and write data
- Information-centric security model which is supported by a modular security framework

For More Information

For further information regarding Vortex Link availability, platform support and pricing please e-mail: ist_info@adlinktech.com or visit: **https://www.adlinktech.com/en/data-distribution-service.aspx**

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