

Parallel Data Mover (PDM) provides several options to connect z/OS and Linux/UNIX/Windows (LUW) systems. These options include the following:

- Standard z/OpenGate transport channel-based connection
- z/OpenGate transport connection between z/OS and a direct attached node with downstream nodes attached via standard TCP/IP network
- Standard TCP/IP networking
- FTP Server/Client using FTP protocol

Each of these options and their respective features and benefits are discussed in the sections below.

STANDARD Z/OPENGATE TRANSPORT CHANNEL-BASED CONNECTION

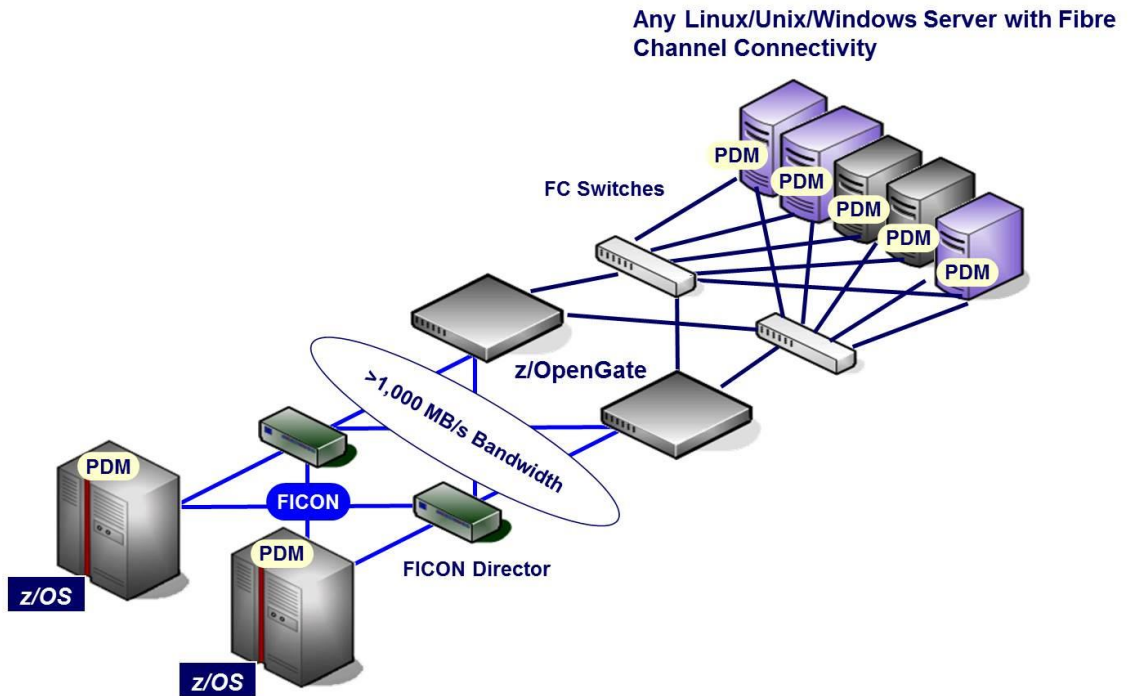
DESCRIPTION

z/OpenGate™ 2.0, a FICON/FC Gateway, is the latest innovation from Alebra to help you manage your data sharing requirements in multi-platform enterprise IT environments composed of z/OS and LUW servers. Using a combination of FICON and Fibre Channel architecture, the z/OpenGate creates a high-speed, efficient and secure data transport between z/OS and LUW systems.

z/OS Platform



The z/OpenGate can directly attached to mainframe and LUW servers or, using FICON Directors and FibreChannel switches, a single z/OpenGate can connect multiple server systems. Using two or more z/OpenGates and redundant switches can provide a high availability / fault tolerant configuration as depicted below.



Any model z Series Server

FEATURES AND BENEFITS

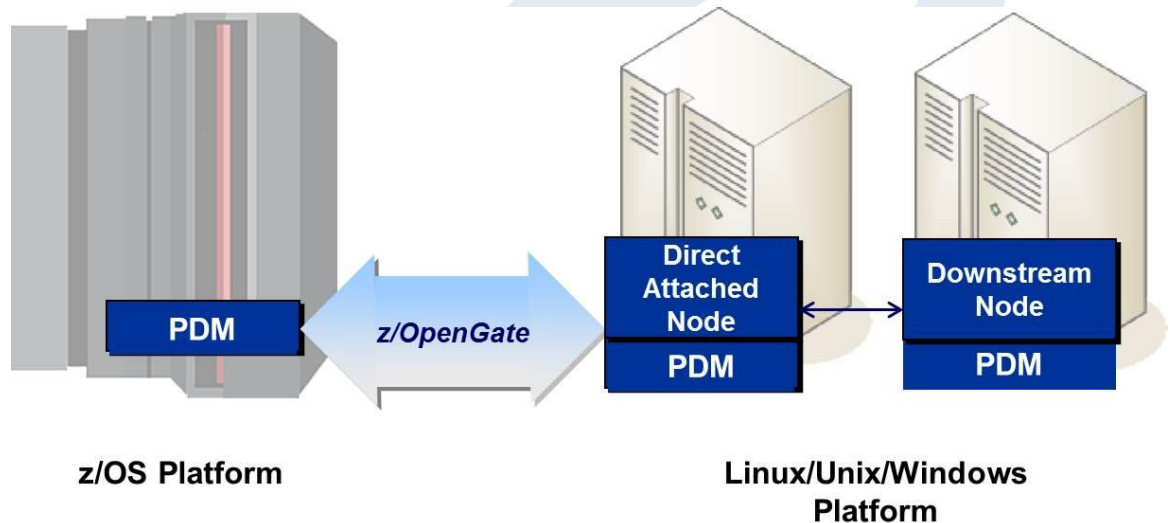
1. **Fastest Transfer Rate** - Using z/OpenGates for end-to-end connectivity between z/OS and LUW systems provides the fastest transfer speed and largest bandwidth available in the industry. Current customers are able to transfer multiple terabytes of data within minutes.
2. **Dedicated Data Network** - Data transfers are accomplished via a channel-based and fibre connection between z/OS and the LUW servers. This relieves the existing communications networks burden of large bulk data transfers impacting other network traffic.
3. **Low Processor Overhead** – The z/OpenGate transport reduces data transfer overhead by 20 times compared with traditional network-based transfer options. As TCP/IP networks get faster, the drain on processors increases significantly compared to the z/OpenGate solution.
4. **Highly Secure** – z/OpenGates use the same channel architecture as used by large datacenters to transfer data between servers and high-speed storage devices. This channel-based connection is highly secure. The inherently secure connection fulfills the

security requirements for many data centers, eliminating the need for highoverhead encryption technology.

Z/OPENGATE TRANSPORT CONNECTIONS BETWEEN Z/OS AND A DIRECT ATTACHED NODE WITH DOWNSTREAM NODES ATTACHED VIA STANDARD TCP/IP NETWORK

DESCRIPTION

As described above, standard end-to-end z/OpenGate connections require that the LUW servers have Fibre Channel connectivity. Some LUW systems either do not have Fibre Channel connectivity or the requirements do not warrant the expense of adding Fibre Channel HBA's. A rack of blade servers is one example. Another example is a z/OS datacenter with remote LUW servers. You can realize the benefit of reduced processor overhead while still connecting the LUW and z/OS servers. For these cases, Alebra offers an alternative configuration as depicted below.



The direct attached node in this configuration can be a dedicated LUW server or any existing LUW server with connectivity to z/OpenGate(s) and network connectivity to the downstream node. Data passes through, but is not stored, on the direct attached node.

FEATURES AND BENEFITS

1. **Full functionality** – Transfers between z/OS and the downstream nodes have full PDM functionality as if the end points are directly attached. Users are unaware that the data is actually passing through the direct attached node.

2. **Channel-based data transfers to/from z/OS system** – Standard communications links to the z/OS system (OSA Adapters) are not used for data transfer. Mainframe communications adapters are often the busiest links in a communications network and will often benefit from the offloading of bulk data transfer.

3. **Greatly reduced z/OS overhead** – As with standard z/OpenGate-attached systems, avoiding the use of z/OS TCP/IP results in a 20-fold reduction in processing overhead.

STANDARD TCP/IP NETWORKING

DESCRIPTION

Like most file transfer facilities, PDM offers file transfer capabilities via standard communications networks.

FEATURES AND BENEFITS

1. **Full functionality** – All PDM functionality is supported over standard TCP/IP communications networks. This includes PDM unique capabilities such as Rapid File Access, Connect Plus and the Subsystem Interface (see additional documentation for details of these and other unique PDM features).
2. **Reduced z/OS overhead** – While not as substantial as z/OpenGate connections, PDM provides incremental improvement over FTP and other products via the use of z/OS CSM buffers for both inbound and outbound transfers. This eliminates the movement of data between PDM and the TCP/IP stack.
3. **Improved bandwidth** – PDM supports Long Fat Pipe / TCP Window Scaling to improve network performance bandwidth over long distance transmissions.

FTP SERVER/CLIENT USING FTP PROTOCOL

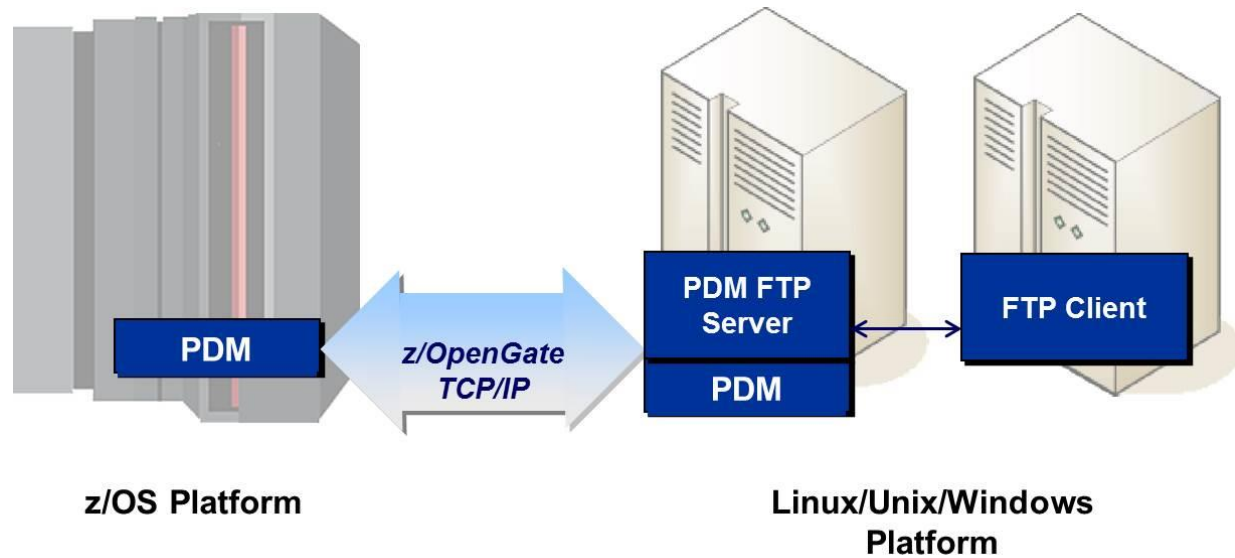
DESCRIPTION

PDM provides a facility to transfer data via FTP protocol between z/OS and systems that do not have PDM installed. The connected system must have FTP server and/or FTP client support as well as access to a PDM node over a network.

The diagram below depicts the options to use FTP. Options:

1. On the target LUW system, use an FTP client to direct the transfer to/from z/OS
2. z/OS can use a PDM client to direct the transfer through a gateway node. This

option uses an internal FTP client on the gateway to communicate to an FTP server on the target node.



FEATURES AND BENEFITS

1. **Functionality** – The functionality of this option is restricted to basic file transfer capabilities of FTP. The full set of PDM capabilities beyond FTP is not supported.
2. **Management** – The management capabilities of PDM to control, monitor, schedule and log file transfer operations is maintained by PDM.

CONCLUSION

Alebra's PDM offers the widest range of options for transferring data between z/OS mainframes and LUW platforms. Configurations are easily optimized to meet speed, efficiency and cost requirements.



ABOUT PDM

Parallel Data Mover (PDM) is a unique parallel data streaming software that tracks, accelerates, and automates data movement and data integration with applications across your enterprise, all while reducing MIPS consumption and improving efficiency. This includes movement and integration between mainframes and Linux, Unix and Windows (LUW), mainframe to mainframe, LUW to LUW, and mainframes to Hadoop.