PDM provides the ability to compress data that is transferred between platforms. The discussion below is an overview of PDM's compression capabilities.

COMPRESSION STANDARD USED – ZLIB (WITH IBM ZEDC SUPPORT)

The compression method used by PDM is implemented by the publically available zlib software library. The zlib library was selected because of its widespread availability and acceptance in the industry. It is compatible with many other products, but most significantly, zlib is compatible with the IBM zEnterprise Data Compression facility (zEDC). Using zlib as a base allows PDM to use a common compression methodology between all supported platforms and, when available, make use of the IBM zEDC facility on z/OS systems for excellent performance and substantially reduced overhead.

PDM USAGE

The purpose of PDM's support of data compression is to reduce the total amount of data transferred between systems and thus, potentially reduce the time required for data transfer. When specified for data transfers, the data is compressed (deflate) on the sending system and de-compressed (inflate) on the receiving system before the data is stored.

PDM administrators may set the default compression behavior on a node by node basis. Three options are available:

- No compression
- Compress only if the z/EDC hardware is available
- Always compress

This default may be overridden by individual file transfer operations by specifying one of the three options for use during that specific file transfer transaction.

NOTE – PDM's usage of the z/EDC feature is only available on a z/OS system which has access to this optional feature. All other systems require software compression/decompression using the zlib software library.

USAGE RECOMMENDATIONS

The cost and benefits of compression will vary greatly and should be evaluated on a case-by-case basis. PDM provides performance details that allow customers to run test cases to determine what reductions of transfer times can be achieved and at what cost in increased overhead.

When the zlib software is used to compress or decompress data, a noticeable increase is processor overhead will be observed. The sending system, where the data is compressed, will typically have more overhead than the receiving system (decompression). Additionally, some additional latency required by the software to compress/decompress will offset some of the throughput efficiencies that would have otherwise been achieved by compression.

The best case for using software compression is for large time-critical transfers over slow networks (i.e. Wide Area Networks). In this case, the benefits of reduction in transfer times often outweigh the additional overhead cost of compression.

On z/OS systems with access to IBM's optional z/EDC facility, the overhead and latency associated with compression is dramatically decreased. Performance tests conducted by Alebra Technologies verified that the overhead for compression or decompression is insignificant on those z/OS systems. Usage of the z/EDC facility will provide customers a broader range of circumstances of using compression in a cost-effective manner.

ABOUT PDM

Parallel Data Mover™ (PDM) is a server-to-server bulk data access and data movement application with robust client interfaces providing a reliable way to share or transfer large volumes of data with the speed advantages of parallel data streaming technology. Contact Alebra today to discover how PDM can help you move and access your data, faster than ever before.