Market Requirements Document

Feature Name: Large Object Compression

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Description of the Problem

If an object body or a VArray occupies more than a single page then the object is treated as a large object. The object retains its OID and stays in the same logical page, but it or its VArray(s) may be stored on multiple physical pages. The total amount of physical space used is more than the actual amount of data because of the overheads associated with management of the large object or VArray.

Description of the Requested Feature

At the kernel level, object bodies and VArrays are stored in slots. So, this MRD is a formal request for a mechanism that can compress the persistent (on disk) content of a slot and minimize the housekeeping overheads.

The compression mechanism must work across all supported languages and platforms and must not use public domain or patented algorithms.

Part of an existing feature or does it require another feature, if so, which one?

This should be a standard feature that a developer can specify for individual classes.

How is this problem being solved now, and why isn't that acceptable?

Some users, such as SLAC, compress whole files. Others compress VArrays themselves or split them into chunks that individually fit into a regular page. Some of these mechanisms may not work across multiple languages or platforms.

What languages must support this capability?

- C++ and Java

Which platforms must be supported?

- All platforms

Do any competitors already have this feature?

- RDBMSs can generally compress Binary Large Objects [BLOBs].

Customers who require this feature

- VLDB customers, e.g Mantech and Northrop Grumman.

Revenue at risk, or which could be won

- This strengthens our competitive position relative to other ODBMS and all RDBMSs.

When is this required?

- Release 10.

Additional Notes

1. We will also need:

- Additional technical publications material.

- Updated marketing collateral.

- Release Note entry.

- New QA material.