Linearly Compressed Pages: A Main Memory Compression Framework with Low Complexity and Low Latency

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Summary

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- **Observation**: Significant data redundancy
- **Old Idea**: Compress data in main memory
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1. Increases capacity (62% on average)
2. Decreases bandwidth consumption (24%)
3. Improves overall performance (13.9%)
Linearly Compressed Pages (LCP)

Uncompressed Page (4KB: $64 \times 64B$)

| 64B | 64B | 64B | 64B | ... | 64B |
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4:1 Compression

Compressed Data (1KB)
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Tomorrow, 8:30am, Session 3A