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Note generali	"Accelerate your PostgreSQL system and avoid the common pitfalls that can slow it down." Includes index.
Nota di contenuto	Cover; Copyright; Credits; About the Author; About the Reviewers; Table of Contents; Preface; Chapter 1: PostgreSQL Versions; Performance of historical PostgreSQL releases; Choosing a version to deploy; Upgrading to a newer major version; Upgrades to PostgreSQL 8.3+ from earlier ones; Minor version upgrades; PostgreSQL or another database?; PostgreSQL tools; PostgreSQL contrib; Finding contrib modules on your system; Installing a contrib module from source; Using a contrib module; pgFoundry; Additional PostgreSQL-related software; PostgreSQL application scaling lifecycle Performance tuning as a practice Summary; Chapter 2: Database Hardware; Balancing hardware spending; CPUs; Memory; Disks; RAID; Drive error handling; Hard drive reliability studies; Drive firmware and RAID; SSDs; Disk controllers; Hardware and Software RAID; Recommended disk controllers; Attached storage - SAN and NAS; Reliable controller and disk setup; Write-back caches; Sources of write-back caching; Disk controller monitoring; Disabling drive write caches; Performance impact of write-through caching; Summary; Chapter 3: Database Hardware Benchmarking; CPU and memory benchmarking

memtest86+STREAM memory testing; STREAM and Intel vs. AMD; CPU benchmarking; Sources of slow memory and processors; Physical disk performance; Random access and I/Os Per Second; Sequential access and ZCAV; Short stroking; Commit rate; PostgreSQL test_fsync; INSERT rate; Windows commit rate; Disk benchmarking tools; hdtune; Short stroking tests; IOPS; Unpredictable performance and Windows; dd; bonnie++; bonnie++ 2.0; bonnie++ ZCAV; sysbench; Seek rate; fsync commit rate; Complicated disk benchmarks; Sample disk results; Disk performance expectations; Sources of slow disk and array performance Summary Chapter 4: Disk Setup; Maximum file system sizes; File system crash recovery; Journaling file systems; Linux file systems; ext2; ext3; ext4; XFS; Other Linux file systems; Write barriers; Drive support for barriers; File system support for barriers; General Linux file system tuning; Read-ahead; File access times; Read caching and swapping; Write cache sizing; I/O scheduler elevator; Solaris and FreeBSD file systems; Solaris UFS; FreeBSD UFS2; ZFS; Windows filesystems; FAT32; NTFS; Adjusting mounting behaviour; Disk layout for PostgreSQL; Symbolic links; Tablespaces; Database directory tree Temporary files Disk arrays, RAID, and disk layout; Disk layout guidelines; Summary; Chapter 5: Memory for Database Caching; Memory units in the postgresql.conf; Increasing UNIX shared memory parameters for larger buffer sizes; Kernel semaphores; Estimating shared memory allocation; Inspecting the database cache; Installing pg_buffercache into a database; Database disk layout; Creating a new block in a database; Writing dirty blocks to disk; Crash recovery and the buffer cache; Checkpoint processing basics; Write-ahead log and recovery processing; Checkpoint timing; Checkpoint spikes Spread checkpoints

Sommario/riassunto

Accelerate your PostgreSQL system