

RSBag - Tasks #847

Make buffer write back configurable

02/02/2012 03:56 PM - J. Moringen

Status:	Resolved	Start date:	02/02/2012
Priority:	Normal	Due date:	
Assignee:	J. Moringen	% Done:	100%
Category:		Estimated time:	0.00 hour
Target version:	rsb-0.7		
Description			
The current implementation (write back chunk buffers every 100 entries) requires too much memory in use-cases with large payloads. This problem can be mitigated by offering strategies such as "write back once N bytes have accumulated".			
Related issues:			
Related to RSBag - Enhancement # 846: Flush index blocks?		Resolved	02/02/2012
Related to RSBag - Enhancement # 1038: Allow composite flush strategies		Resolved	06/26/2012

Associated revisions

Revision f2a41dc4 - 06/20/2012 08:09 PM - J. Moringen

Added flush strategies in src/backend/flush-strategies.lisp

refs #847, #846

- src/protocol.lisp (open-bag): added flush-strategy keyword parameter
(open-bag stream): accept flush-strategy keyword argument; pass to backend unless direction is input
- src/backend/protocol.lisp (buffer-property): new generic function; return specified property of a buffer
(flush): new generic function; flush a buffer to background storage
(backend-flush-strategy): new generic function; return the flush strategy associated with a backend
(flush?) new generic function; return non-nil when a buffer should be flushed
(define-findable-class-family flush-strategy): new findable class family; consists of flush strategy classes
(make-flush-strategy): new generic function; make and return a flush strategy according to a specification
(make-flush-strategy symbol): new method; construct from keyword or class name
(make-flush-strategy class): new method; construct from given class
- src/backend/buffering-writer-mixin.lisp
(buffering-writer-mixin::flush?-func): removed slot
(buffering-writer-mixin::flush-strategy): new slot; stores flush strategy
(close): call `flush' instead of `write-buffer'
(put-entry buffering-writer-mixin t t): call `flush?' and `flush'
(flush buffering-writer-mixin t): new method; dispatch to `write-buffer'
(flush :after buffering-writer-mixin t): changed write-buffer -> flush
- src/backend/flush-strategies.lisp: new file; contains flush strategies
- src/backend/package.lisp (package rsbag.backend): added used package

- more-conditions; added exported symbols buffer-property, flush, backend-flush-strategy, flush?, no-such-flush-strategy-class, find-flush-strategy-class, flush-strategy-classes and make-flush-strategy
- src/backend/tidelog/file.lisp (file): change default initargs to supply a flush strategy instead of a flush? function
(buffer-property file chunk eql :length/entries): new method; return number of entries in chunk
(buffer-property file chunk eql :length/bytes): similar for bytes
(buffer-size->): removed; no longer required
- test/protocol.lisp (test suite protocol-root): added local functions pathname/existing, namestring/existing, stream
(test protocol-root::open-bag/valid): use these; test flush strategies
(test protocol-root::open-bag/invalid): likewise
- test/backend/flush-strategies.lisp: new file; contains tests for flush strategies
- cl-rsbackend.asd (system cl-rsbackend): added file
src/backend/flush-strategies.lisp
(system cl-rsbackend-test): added file
test/backend/flush-strategies.lisp

Revision 60a0fb42 - 06/21/2012 02:28 AM - J. Moringen

Added last-write-time-mixin in src/backend/backend-mixins.lisp

refs #846, #847

- src/backend/backend-mixins.lisp: new file; contains mixin classes for backend classes
- src/backend/package.lisp (package rsbackend.backend): added exported symbol last-write-time-mixin * src/backend/tidelog/index.lisp (index): added superclass `last-write-time-mixin'
- src/backend/tidelog/file.lisp (file): likewise
- cl-rsbackend.asd (system cl-rsbackend): added file
src/backend/backend-mixins.lisp

Revision 7fc11149 - 06/21/2012 03:28 AM - J. Moringen

Support flush strategies in bag-record/main.lisp

refs #846, #847

- bag-record/main.lisp (update-synopsis): added flush-strategy commandline option
(main): pass value obtained from flush-strategy commandline option to `events->bag'
- bag-record/help.lisp (make-channel-strategy-help-string): minor improvement
(make-flush-strategy-help-string): new function; return help string for flush strategies

Revision 47010ea7 - 06/21/2012 03:33 AM - J. Moringen

Added flush-strategy commandline option in bag-record.rst

fixes #846, #847

- bag-record.rst: added description of flush-strategy commandline

option

History

#1 - 02/14/2012 01:42 PM - J. Moringen

- % Done changed from 20 to 60

#2 - 03/06/2012 07:43 PM - J. Moringen

- Target version set to rsb-0.7

#3 - 06/20/2012 08:10 PM - J. Moringen

- % Done changed from 60 to 80

#4 - 06/21/2012 03:30 AM - J. Moringen

- % Done changed from 80 to 90

#5 - 06/21/2012 03:41 AM - J. Moringen

- Status changed from In Progress to Resolved

- % Done changed from 90 to 100

Applied in changeset r468.