

Robotics Service Bus - Enhancement #1727

Update and test Spread plugin(s) to Spread 4.4

01/27/2014 11:32 AM - S. Wrede

Status:	Closed	Start date:	01/27/2014
Priority:	Normal	Due date:	
Assignee:		% Done:	0%
Category:	Spread Connector	Estimated time:	0.00 hour
Target version:	rsb-0.12		

Description

Spread 4.4 has just been released and contains some interesting features (less overhead for small messages, new protocol for highest performance, improved windows build system):

Available for download from here: <http://www.spread.org/download.html>

Spread 4.4.0 RC1 <http://www.spread.org>

Spread Concepts LLC is happy to announce the release of a new release candidate version, 4.4.0 RC1, of the Spread toolkit.

The Spread 4.4 release is an important release that incorporates a new, accelerated ring protocol. This protocol is tailored for data center networks and can provide 30%-50% higher throughput and 20-35% lower latency in modern local area networks. This version also supports Spread's old ring protocol.

A new AcceleratedRing parameter has been added to Spread's configuration file. If this parameter is set to true, then the accelerated ring protocol will be used. If it is set to false, then the old ring protocol will be used. If it is left unspecified, then Spread will try to determine which protocol is likely better for your environment. If your configuration looks like it might be a LAN (i.e. - all daemon IPs are in the same /16 network) rather than a WAN, then Spread will use the accelerated protocol. Otherwise, it will use the original protocol. All the daemons in a configuration must use the same ring protocol. Daemons with different protocols will refuse to communicate with one another.

A new AcceleratedWindow parameter, with a value between 0 and the value of the PersonalWindow parameter, should be specified as a flow control parameter in the spread.conf file. The higher the parameter the more acceleration is expected -- up to a point. The sample.spread.conf file included in this release has example settings for these parameters that enable the Accelerated Ring protocol, as well as a description of their functions.

The main new features of this release are:

- 1) Accelerated Ring protocol to improve both throughput and latency in local area networks.
- 2) Redesigned message-packing, reducing overhead for small messages.
- 3) Updated MSVS project files for Windows source builds.
- 4) Several bugfixes that make Spread less likely to exit under high loss.

5) Expanded and improved logging.

For details check the Readme.txt file.

This release does not include any API changes, so applications should be able to be relinked or recompiled with the new Spread library without changes.

The Spread toolkit provides a high performance messaging service that is resilient to faults across local and wide area networks.

Spread functions as a unified message bus for distributed applications, and provides highly tuned application-level multicast, group communication, and point to point support. Spread services range from reliable messaging to fully ordered messages with virtual synchrony delivery guarantees, even in case of computer failures and network partitions.

We should check whether these changes impose any problems and update our packages / plugins accordingly. This could also pose an opportunity to introduce plugins to the Java library.

History

#1 - 10/25/2014 05:07 PM - J. Moringen

- Target version changed from *rsb-0.11* to *rsb-0.12*

#2 - 03/26/2015 05:17 PM - J. Moringen

- Status changed from *New* to *Closed*

We already use Spread 4.4 in some installation. The plugins do not seem to require modifications.