



Client Side Monitoring

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Goals

- Gather information about the applications accessing relational databases via CORAL API (former POOL RAL)
- Minimally intrusive from CORAL clients point of view
- Lightweight run-time impact to not disturb performance
- Plug & play design to allow various use of configurable set of reporting capabilities into various formats.
- Complementary data to the server side trace information to complete overall run-time picture during performance analysis and bottle-neck detection

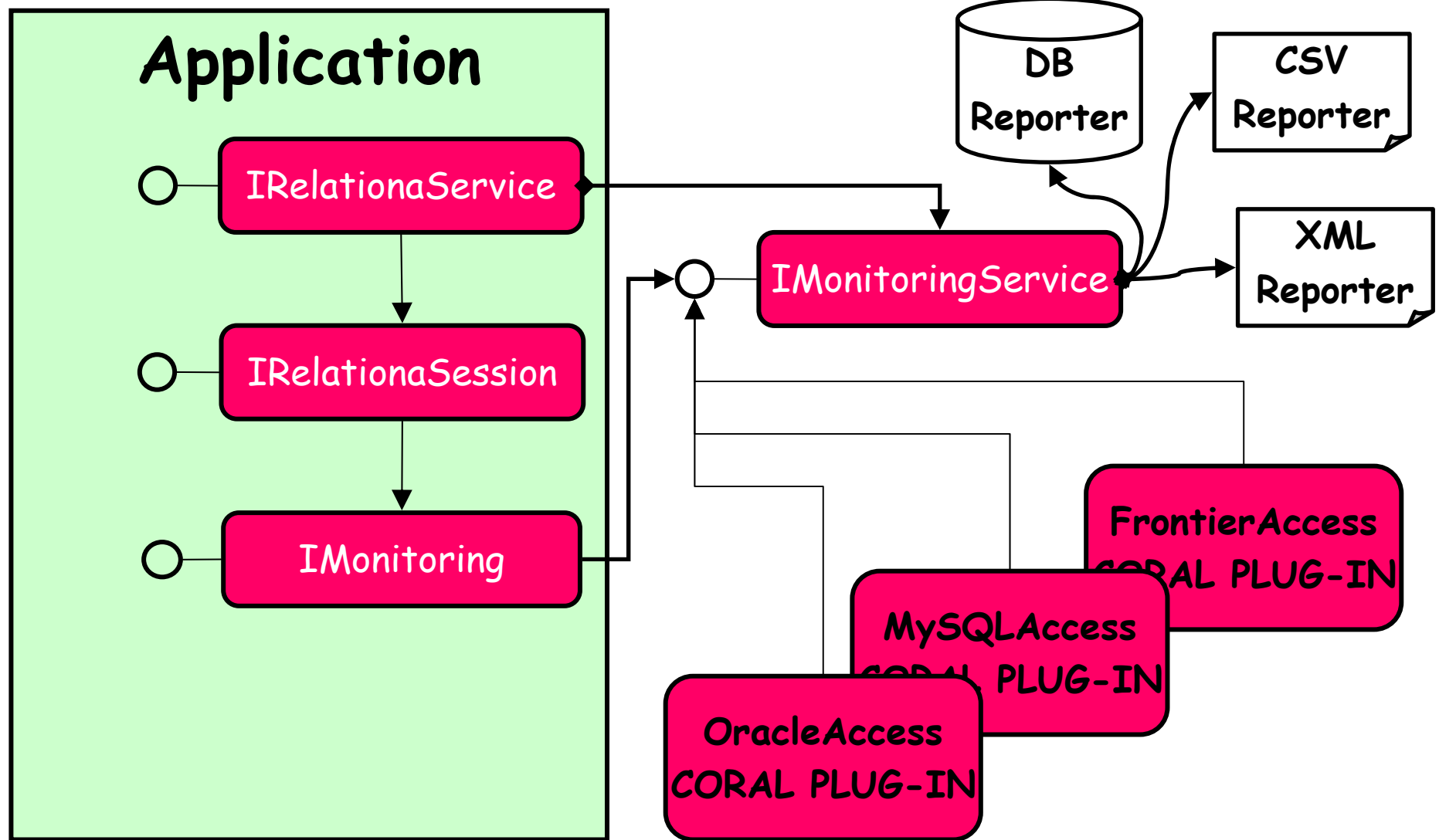


Design

- Two abstract interfaces
 - coral::IMonitoring (user)
 - coral::monitor::IMonitoringService (developer)
- coral::IMonitoring interface
 - Available for each session to steer the monitoring service
 - Allows monitoring of each session independently and with different level of information gathering (default, debug, trace)
- coral::monitor::IMonitoringService interface
 - Implementation used by each CORAL plug-in
 - Allows to install various reporting components
 - Records monitoring events coming from CORAL plug-ins and performs report generation on demand or at the end of the CORAL application run



Object Diagram





Usage

1. Initialize IRelationalService
2. Initiate IRelationSession
3. Setup client side monitoring via IMonitoring interface obtained from IRelationSession
4. Run
5. Modify monitoring settings
 - stop, change monitoring level
6. At the end ask for client side monitoring report to a file of a given format or to a configured output stream



Issue to be discussed

- Integration of Fermilab client side monitoring
 - Should be possible to achieve easily as CORAL monitoring reporting plug-in
 - On-the-fly monitoring events conversion needed
- Instant reporting or complete reporting at the end of application run?
 - Danger of loosing data if app crashes in the middle of its run
- Supported report formats
 - CSV, SQLite (the highest priority)
 - Easily imported into any database
 - XML (lower priority)
 - Needs agreement of all involved parties on XML schema to be used
 - Fermilab CSM plug-in