RRR|Log Performance Tuning Workshop

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Agenda

- Introductions and expectations
- Get everyone access to **RRR|Log**, upload files and start compiling
- Use of server-logs, aruser-logs and mid-tier-logs
- The important API-calls and how they are used in the system
- Understanding log files
- Turning on logging in Mid-Tier, and capturing the result
- Viewing a log file in **RRR|Log**
- Limitations of the open test version

Getting started with RRR|Log

- Register an account
- Get the license activated
- Optionally installing and licensing the offline version
- Open an **RRR|Log** instance
- Upload your log file
- Compile your log file...

Understanding log files

- Log files might seem scary, but there is actually only a dozen or so API-calls you need to understand
- They are hard to read, but we have **RRR|Log** for that
- Server logs might be a mix of parallel calls, but you can group them by RPC#, and **RRR|Log** will sort them out

Server, AR User or Mid-Tier logs

- Server logs
  - Performance Tuning (1GB+ log files)
  - Escalations
  - Troubleshooting elusive things that you do not know when it happens
- AR User logs are good, but...
  - the AR User tool has been phased out
  - Some things does not work in AR User
  - Some things are done differently in AR User
- Mid-Tier
  - The future
  - Different syntax for client workflow logging
  - New timer tags can give us new information

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The important API calls EXP/CE/SE

- ARExport (EXP)
  - Export of ARF/ARV files to the client cache
  - Called if form/field/menu/ACTL has been changed for the form
  - Called if the User-record has been changed
  - Called if ANY change has been made to the Group-form-data (except None-groups in version 7.x)
- ARCreateEntry (CE)
  - Creates an entry when user press Save
  - Creates an entry when a ACTL-Push-Fields has been issued
- ARSetEntry (SE)
  - Modifies an entry when a user press Save
  - Modifies an entry when an ACTL-Push-Fields has been issued

The important API calls GE/GLE

- ARGetEntry (GE)
  - Retrieves field data for a specific record
  - When a user Displays a Request
  - When an ACTL Set-Fields has found a record
- ARGetListEntry (GLE)
  - An ACTL Set-Fields before the ARGetEntry-call that retrieves the field data
  - An ACTL Push-Fields before the chosen record is created/changed with ARCreateEntry/ARSetEntry
  - If your ACTL Push-Fields should always create a record. Clear out the Push-Field-If-Qualification instead of setting it to (1=0) or something similar
- ARGetOneEntryWithFields (GOEWF)
  - A new API-call used by ACTL Set-Fields that return a single entry only

The important API calls GLEWF/GME/SGE

- ARGetListEntryWithFields (GLEWF)
  - A user search with QBE or Advanced Search
  - A table-field (make sure to refresh tables only when the data is needed, for example only if the the corresponding page-field is displayed)
  - A Crystal-Report with no big character fields (AR System ODBC)
- ARGetMultipleEntries (GME)
  - A plain text Report
  - A Crystal-Report with big character fields
- ARSetGetEntry(SGE)
  - This is a new call only performed by mid-tier to reduce the number of API-calls when a record is saved with the normal Save-button

The important API calls EXECAL/EXEC/GMCRS

- ARGetListSqlForActiveLink (EXECAL)
  - ACTL direct SQL
  - ARExecuteProcessForActiveLink (EXEC)
  - ACTL calls to the server with
    - Run-Process @@:
    - $PROCESS$ @@:
- ARGetMultipleCurrencyRatioSets (GMCRS)
  - Make sure you have a Default Currency defined in Server Information -> Currency Types. If you do not even have hidden currency-fields, this is not necessary, but if you have any currency-fields in your forms, such as in ITSM, you need to do this.

The important API calls SVE

- ARServiceEntry (SVE)
  - Service Calls are typically good. They do not send unnecessary data, and they can do a lot of things with a single call to the server.
- ARExpandQueryMenu (EXPQRY)
  - This call is typically made a lot by Mid Tier when you have type ahead enabled for a character menu

Demo – turn on and get your log file

- Server logs are controlled in Server Information -> Log Files
- In the same place you control the permission group that can perform FLTR/SQL logging from the client
- Other log files are turned on in the AR System User Preference Record. Turn on everything to get as much info as possible.
- When logging in to mid-tier a separate window will be opened for logging
- Just before you come to the crucial activity you want to debug:
- Close the logging window to get a fresh one
- Perform your activity
- Select the logging window
- Ctrl-A + Ctrl-C will mark and copy all content of the logging window
- You are now ready to paste your log into RRR|Log

Demo – upload and view your log in RRR|Log

- Go to http://rrr.se and access RRR|Log
- If you are not logged in, you will be prompted for a login and password
- If you do not have an account yet, register an account
- Paste your log in the provided field
- After submission, you will be able to review the much simplified RRR|Log version of your log

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Limitations of the open test version

- The free test version exists to give you a fair amount of use out of the tool, while still retain enough to get you interested in the full version
- If your log file exceeds 50 API-calls or 500 SQL-calls, or 5000 rows total, it will be truncated
- The full version currently has a limit of about 4GB, which will allow you to
- Examine any client side log
- Do performance tuning and server side troubleshooting
- Tune your threads
- Check your latency
- Work with your escalation distribution
- Running the offline version of RRR|Log on your PC or webserver

Question/Discussions

- Questions...
- Comments...