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## Advanced RMU Show Statistics

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# Agenda

- Show Statistics Overview
- TIViz
- Storing Statistics in a Database
- Real-time Counters Access





# Overview

- ~1000 base statistics counters
- Per Logical Area
- Per Physical Area
- Per Cache



# Access to Binary Data

- RMU /SHOW STATISTICS /OUTPUT=...
- Readable with...
  - user-supplied program
  - RMU/SHOW STATISTICS /INPUT=...
- RMU SHOW STATISTICS HANDBOOK
- RMU\$SHOW\_STATISTICS.CDO



# Example Programs

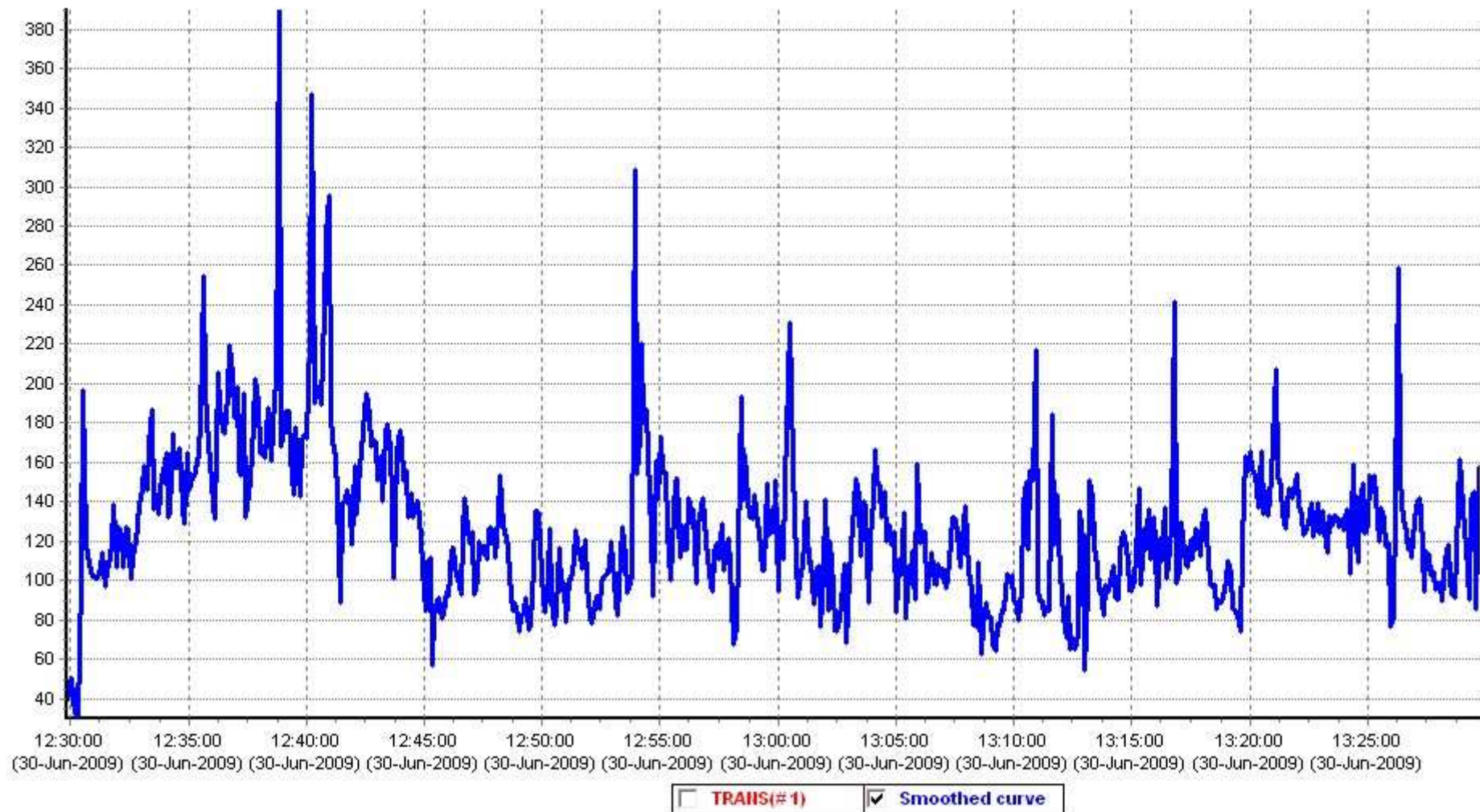
- Templates for you to modify and use
- Format to CSV for TIViz
- Formant and store in Rdb database
- Can be adapted for real-time access
  - Output to mailbox from RMU/SHOW STAT



# PERFT4\_RDB72

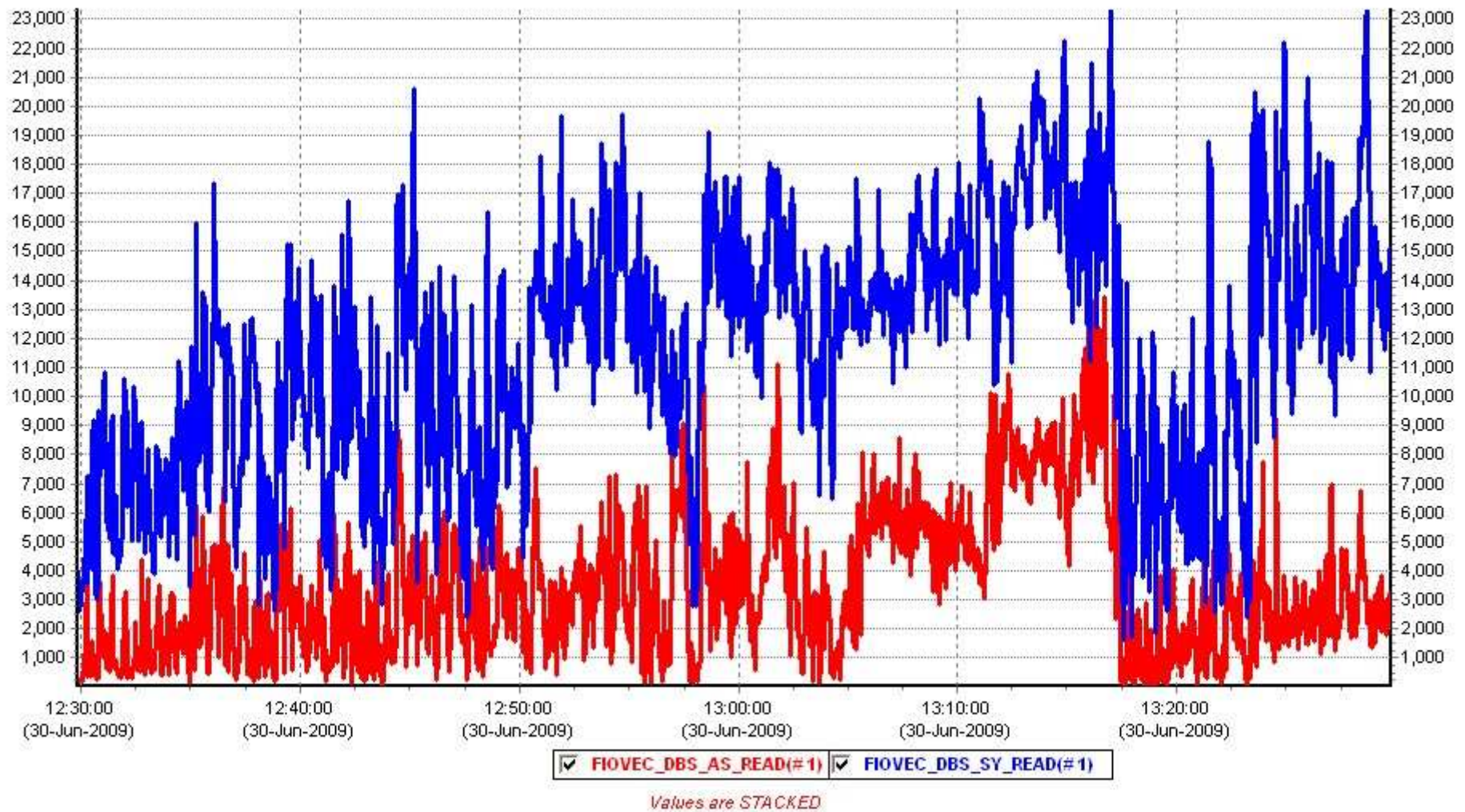
- Example template
- Convert statistics to TIViz format from saved binary output

## Example Transactions Per Second

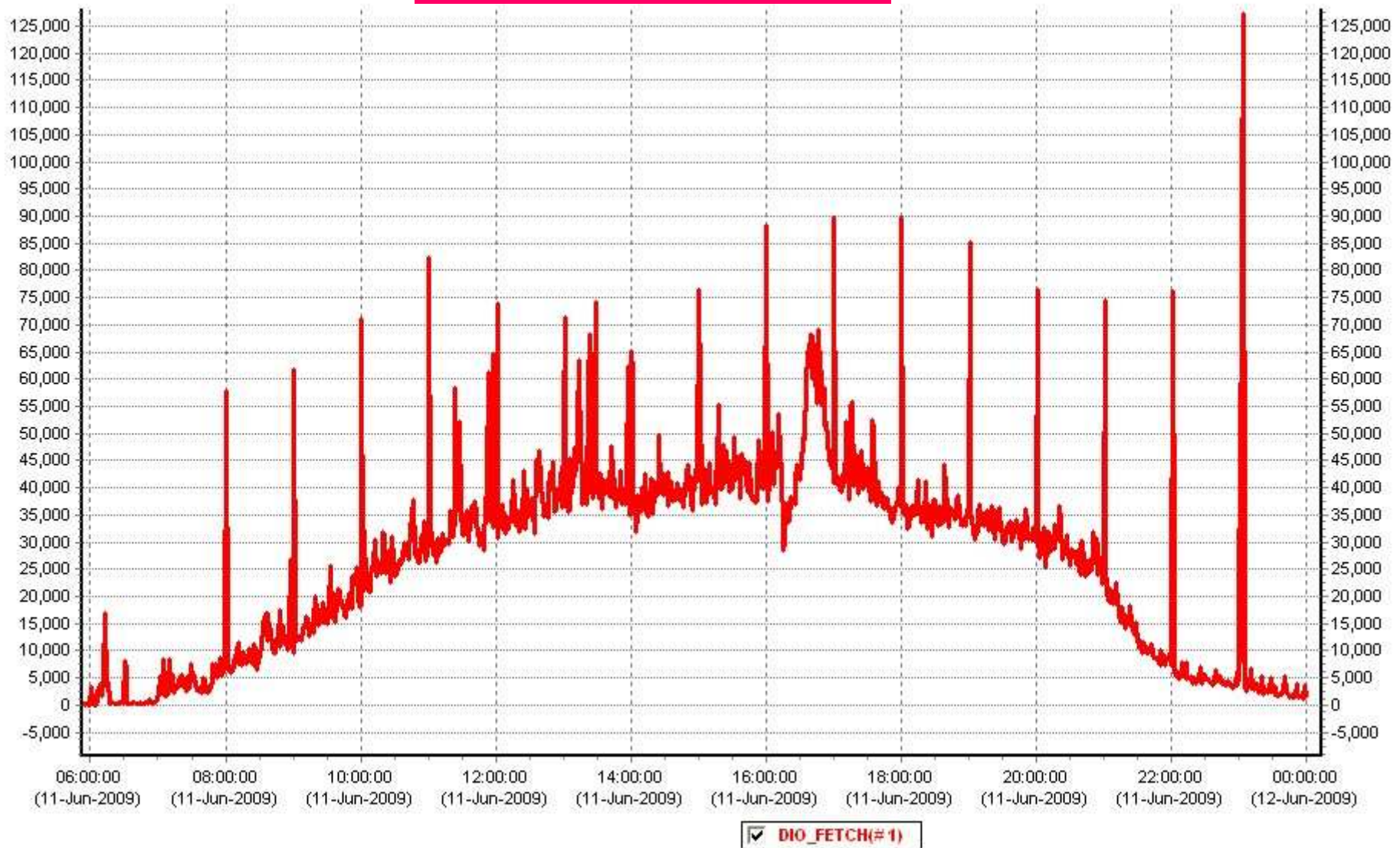




## Example Asynch and Synch Reads

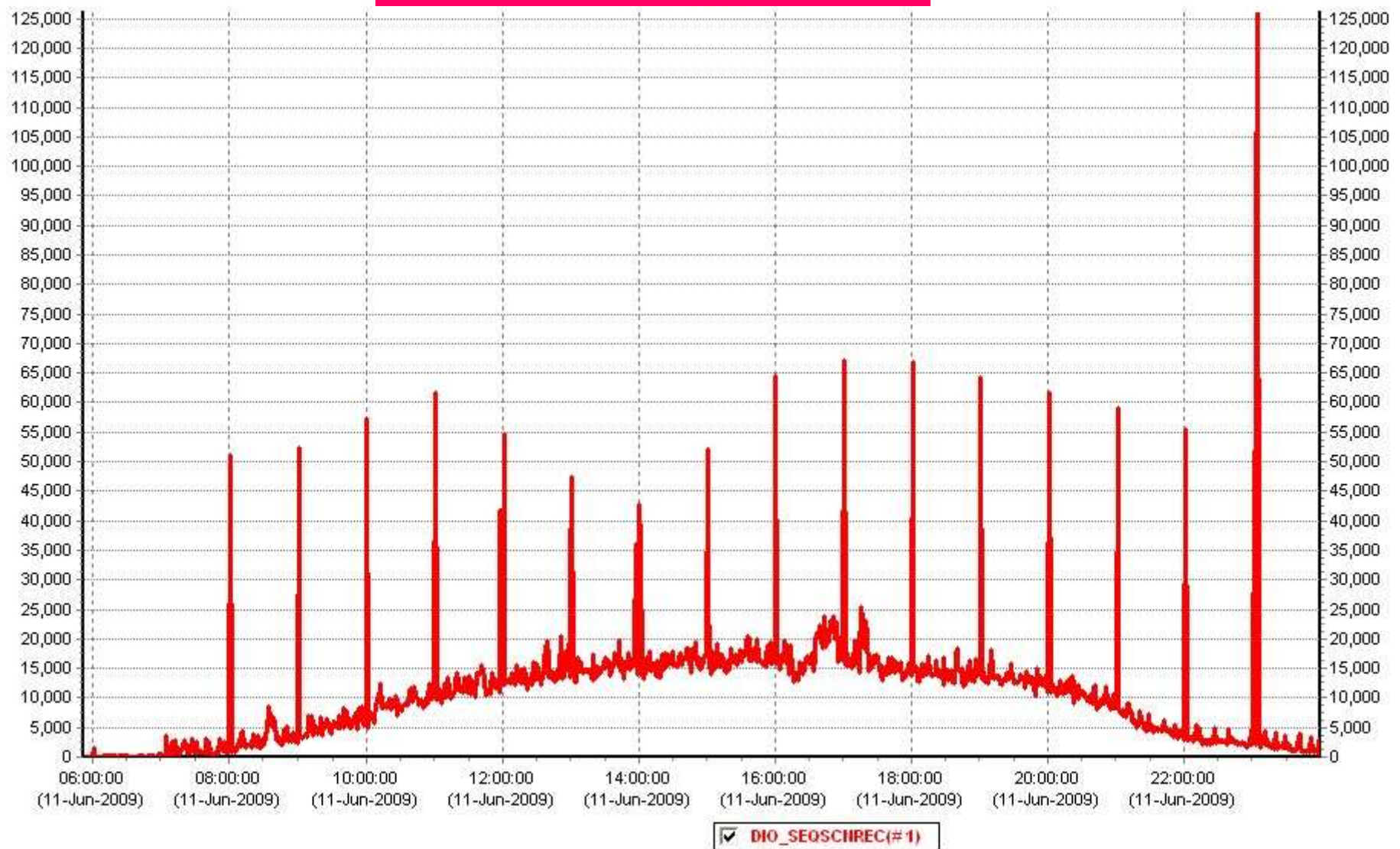


## Example DIO Fetch





## Example SEQSCNREC





# Save Statistics

- Historical record
- Very low overhead to capture and collect
- Store in a database?
- Store in flat files?



# RDB\_STATS\_DATABASE72

- Database, Node, date/time, counters
- Access from wide variety of data access tools
- Storage of statistics from multiple systems & databases possible
- About 4K bytes (if uncompressed) per sample
- Extract, for example, with RMU /UNLOAD



# Save Rdb Stats in Database

```
$ RDB_STATS_DATABASE == "$SYS$LOGIN:RDB_STATS_DATABASE72
$ RMU /SHOW STATISTICS MFP -
    /NOINTERACTIVE -
    /OUTPUT = 2009-10-16-00-56.STATS
    /UNTIL = "16-OCT-2009 23:59:00" -
    /TIME = 60
$ RDB_STATS_DATABASE MYSTATS.RDB 2009-10-16-00-56.STATS
```



## Quickly Retrieve Data Example

```
SQL> SELECT MIN (TRANS), MAX (TRANS), AVG (TRANS)
        FROM RMU$STATISTICS WHERE
            RT_START_TAD >= '25-SEP-2009 10:00' AND
            RT_START_TAD < '26-SEP-2009 12:00' AND
            NODENAME = 'MYNODE';
```



# Real-Time

- Display?
- Feed to other programs?





# Send Stats to Program Via Mailbox

- Use program to create mailbox & read from it
- Use RMU/SHOW STATS to write to mailbox
- Real-time access




# SGA API

- Also called KUS or KUSAPI
- API to real-time statistics information
- User program access to statistics information



## For More Information

<http://search.oracle.com>



or

[www.oracle.com/rdb](http://www.oracle.com/rdb)



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