

Monitoring Plots of dCache Data Movement

Vladimir Podstavkov, Fermilab
For the dCache Team

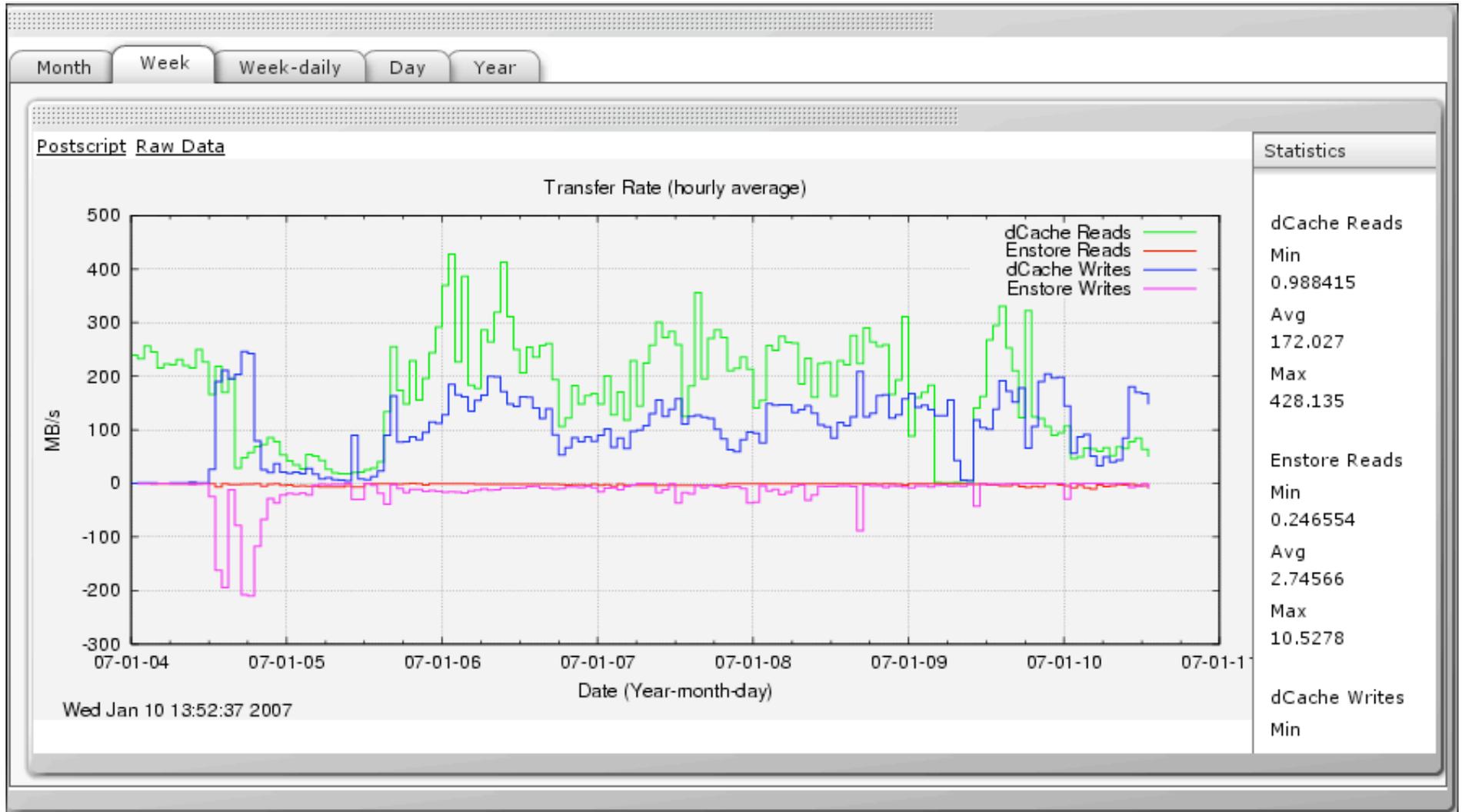
Architecture

- Built as a separate application using Java servlet technology and works in the Apache Tomcat servlet container. It consists from two parts - the first one works with the database where dCache puts the detailed information about the data transfers, and the second one is a presentation layer.
- Such modular architecture allows to use the tools which do best in each case. The backend part is built using Java and JDBC database driver API and is configurable using XML configuration files. The frontend part is built with OpenLaszlo technology, which allows developers to create applications with the rich user interface capabilities of desktop client software. OpenLaszlo applications are written in XML and JavaScript - just like DHTML, but portable across browsers

Plots

- The monitoring system builds the set of plots for various datasets and various time intervals - day, week, month, year... The datasets, the time intervals and data presentation are configurable via XML configuration files. The changes in the configuration can be activated remotely by the system administrator.
- The total number of plots varies from system to system and currently is about 50 - 60. This system is used by CDF, LQCD and CMS dCache systems at Fermilab.

Transfer Rate for CMS



Installation

- ❑ Install PostgreSQL DBMS (<http://www.postgresql.org>)
- ❑ Create the database
- ❑ Prepare the billing cell, better in separate domain
- ❑ Configure the billing cell to work with the postgres DB

```
create diskCacheV111.cells.BillingCell billing "${billingDb} \  
-useSQL -replyObject \  
-jdbcUrl=jdbc:postgresql://localhost:5432/dcache \  
-jdbcDriver=org.postgresql.Driver \  
-dbUser=user -dbPass=pass"
```
- ❑ The billing cell creates the minimal set of tables the first time it starts
- ❑ Install the Tomcat servlet container
- ❑ Install the plotting application from RPMs
(see https://plone4.fnal.gov/P0/DCache/groups/dcache_dev/webdcache)
- ❑ Configure the database connection for it
- ❑ Start Tomcat