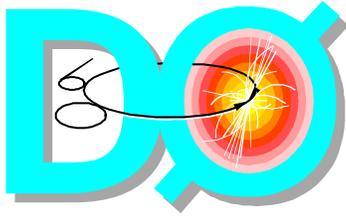


Hardware Database

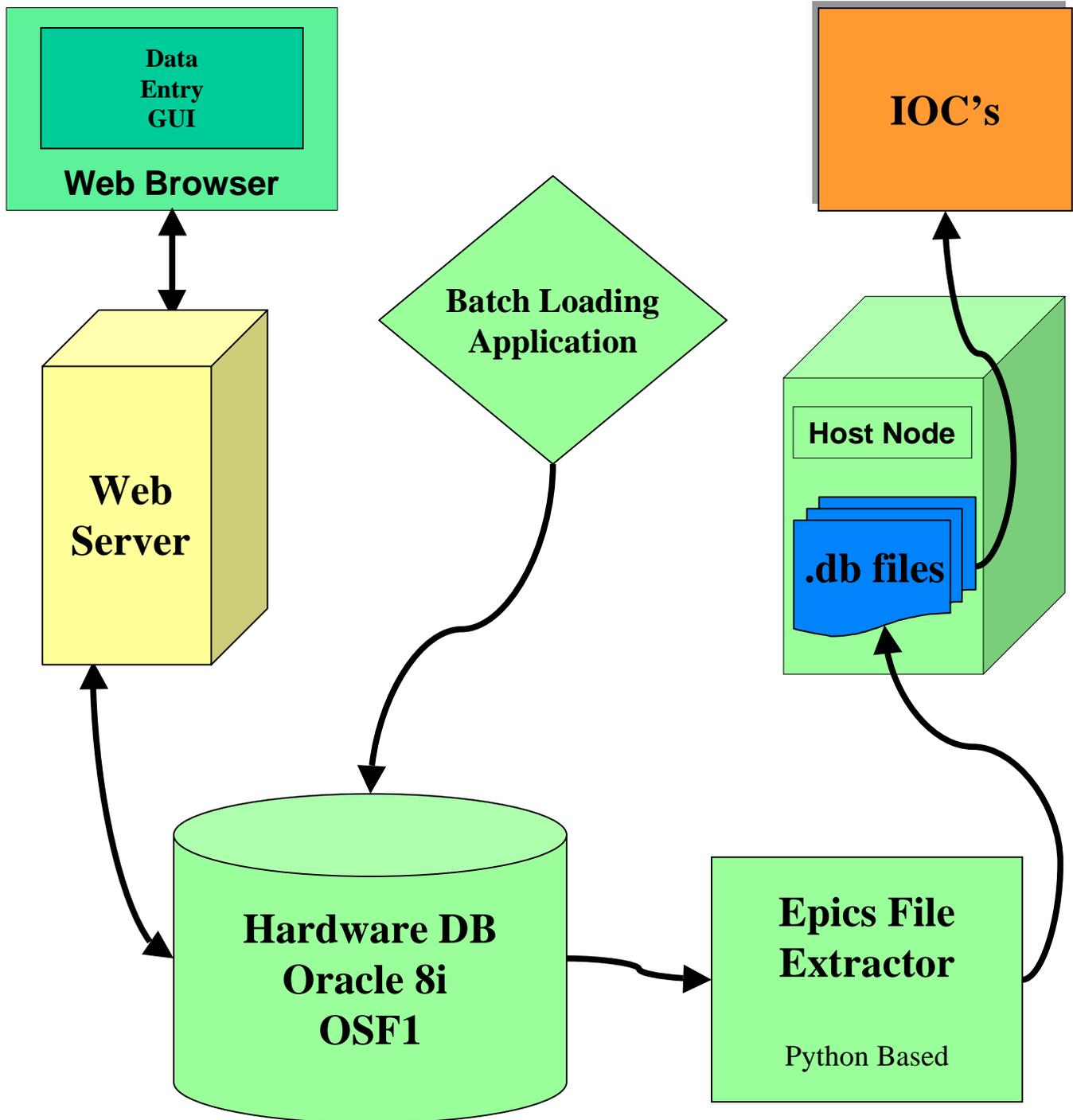
Oracle Database Repository for Epics

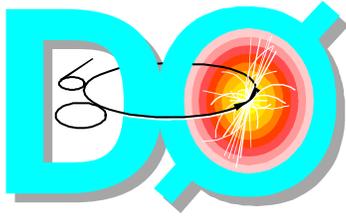
Russell Gilmartin, Stan Krzywdzinski, Jeremy Simmons

Online Workshop, Fermilab, June 3-4 1999



HDB Process





Hardware Database

◆ Hardware Database Goals

- ◆ Ease creation of Epics records for monitoring and controlling hardware
- ◆ Central repository for hardware information

◆ Key Components

◆ Web Based GUI

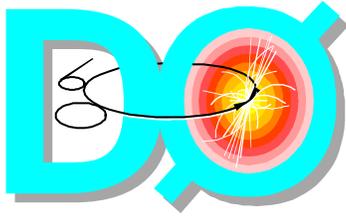
- ◆ Ease data entry, allow for browsing of data entered

◆ Batch Loading Application

- ◆ Allows multiple records to be entered simultaneously

◆ Epics File Extractor

- ◆ Retrieves records from the database in Epics format



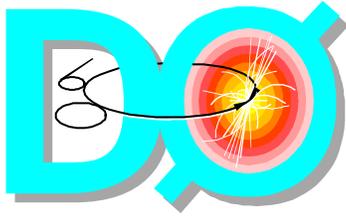
Web Based GUI

- ◆ Constraints are stored in the database
- ◆ User Values are parsed for correct format
- ◆ Pull Down lists are used wherever an Epics menu is specified

AO Record for Device: [HDB_DEMO_RM](#)

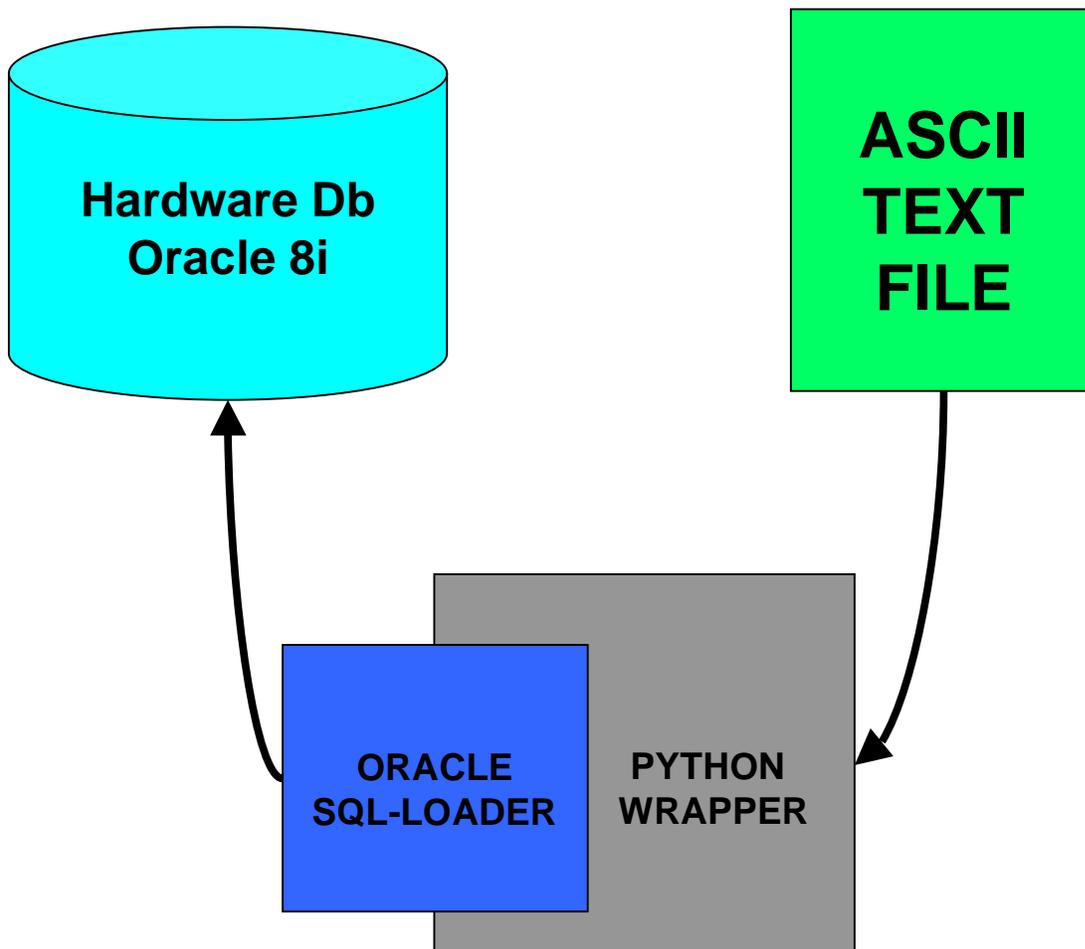
Add Attributes to AO Record Named:

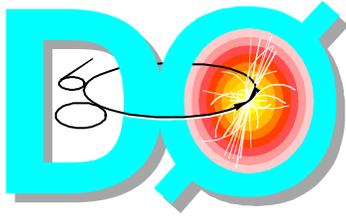
Field Name	Field Description	User Value
AOFF	Adjustment Offset (FLOAT)	<input type="text" value="-10.0"/>
ASLO	Adjustment Slope (FLOAT)	<input type="text" value="6.1035E-4"/>
DESC	Description (STRING)	<input type="text" value="Rack Monitor DA00"/>
DRVH	Drive High Limit	<input type="text" value="10.0"/>
DRVL	Drive Low Limit	<input type="text" value="-10.0"/>
DTYP	Device Type (STRING)	<input type="text" value="Raw Soft Channel"/>



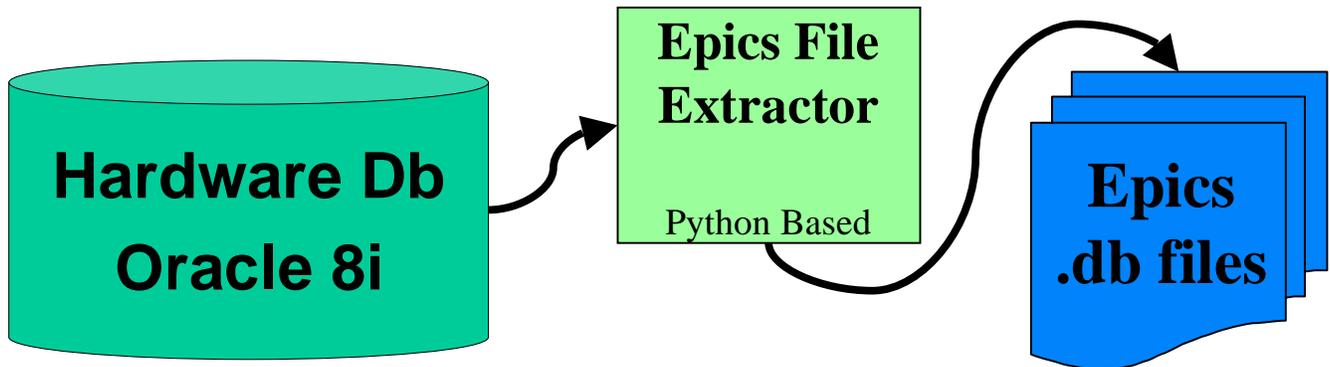
Batch Loading

- Input from ASCII Text file, Epics .db file.
- On Cmd Line User invokes:
`hdb-batch.py myfile.txt`
- Python Wrapper, validates, etc. then spawns SqlLoader to load data.
- Errors are returned to the user via Wrapper.





Epics .db File Extractor



```
xterm
usage:
> dbWrite.py Node output.db
or
> dbWrite.py d device output.db
> dbWrite.py n node output.db
> dbWrite.py d JEREMYS_RM jeremys_rm.db

EPICS records for device "JEREMYS_RM":
> more jeremys_rm.db
record(ao,JEREMYS_DA00) {
  field(AOFF,"0,0")
  field(ASLO,"4.885E-3")
  field(DESC,"Rack Monitor RM1/DA00")
  field(DTYP,"Raw Soft Channel")
  field(LINR,"NO CONVERSION")
  field(DRVH,"10,0")
  field(DRWL,"-10,0")
  field(OMSL,"supervisory")
  field(SCAN,"Passive")
  field(OUT,"RM1,DA00 NPP NMS")
}

record(ai,JEREMYS_AD00) {
  field(HHSV,"MAJOR")
  field(HIGH,"6")
  field(HIHI,"9")
  field(HSV,"MINOR")
  field(AOFF,"0,0")
  field(ASLO,"4.885E-3")
  field(DESC,"Rack Monitor RM1/AD00")
  field(DTYP,"Raw Soft Channel")
  field(INP,"RM1,AD00 NPP NMS")
  field(LINR,"NO CONVERSION")
  field(LLSV,"MAJOR")
  field(LOLO,"-9")
  field(LOW,"-6")
  field(LSV,"MINOR")
  field(SCAN,"1 Second")
}

>
```