

Experiences in implementing the integrated RDB at SNS

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EPICS Collaboration Meeting

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What's worked well



OAK RIDGE NATIONAL LABORATORY
U. S. DEPARTMENT OF ENERGY

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Schema design - Solid



Database - fast



Who said an RDB isn't fast,
I'm dying

Prescriptive MPS



Jeri - Production
Machine Mode Browser

Table Tree Mask

Filter MPS Device IDs All Chains

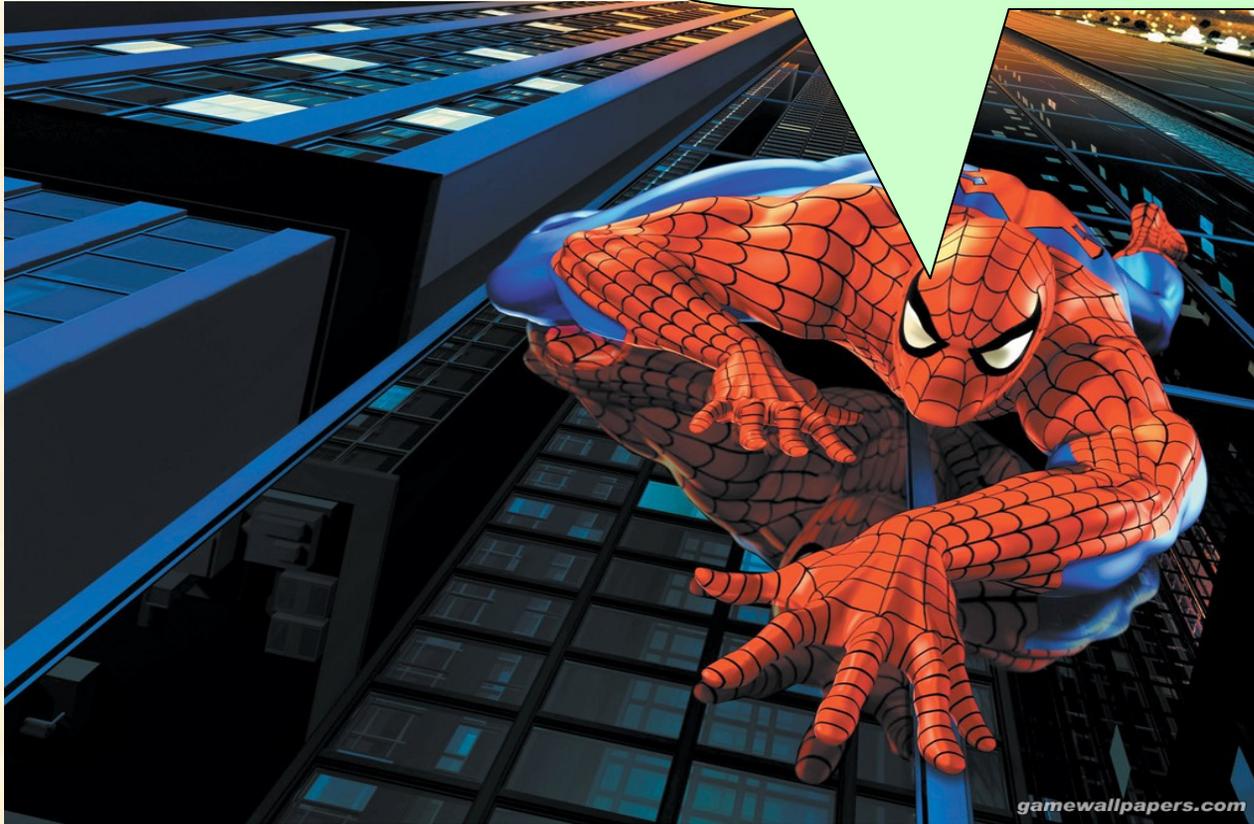
DVC_ID Use '*' as a wildcard for searching.

Devices Details

| DVC_ID | APPR_DTE | MPS_CHAIN_ID | SERIAL_NBR | SFT_VER | FPL_TOTAL | FPAR_TO... | CHA |
|---------------------|------------|----------------|----------------------|---------|-----------|------------|-----|
| CCL_Diag:MIOC_BLM1A | 12-03-2003 | CCL Beam Stop | 0x012345670x76543... | | | | 0 |
| CCL_Diag:MIOC_BLM1B | 07-28-2004 | CCL Beam Stop | 0x012345670x76543... | | | | 0 |
| CCL_Diag:MIOC_BLM2A | 12-03-2003 | CCL Beam Stop | 0x012345670x76543... | | | | 0 |
| CCL_Diag:MIOC_BLM2B | 07-28-2004 | CCL Beam Stop | 0x012345670x76543... | | | | 0 |
| CCL_HPRF:MIOC3A | 12-03-2003 | CCL Beam Stop | 0x012345670x76543... | | | | 0 |
| CCL_PS:MIOC1A | 12-03-2003 | CCL Beam Stop | 0x012345670x76543... | | | | 0 |
| CCL_PS:MIOC2A | 12-03-2003 | CCL Beam Stop | 0x012345670x76543... | | | | 0 |
| CCL_PS:MIOC2B | 12-03-2003 | CCL Beam Stop | 0x012345670x76543... | | | | 0 |
| CCL_PS:MIOC3A | 12-03-2003 | CCL Beam Stop | 0x012345670x76543... | | | | 0 |
| CCL_PS:MIOC4A | 12-03-2003 | CCL Beam Stop | 0x012345670x76543... | | | | 0 |
| CCL_PS:MIOC4B | 12-03-2003 | CCL Beam Stop | 0x012345670x76543... | | | | 0 |
| CCL_Vac:MIOC1A | 12-03-2003 | CCL Beam Stop | 0x012345670x76543... | | | | 0 |
| CCL_Vac:MIOC1B | 12-03-2003 | CCL Beam Stop | 0x012345670x76543... | | | | 0 |
| DTL_Diag:MIOC_BLM1A | 06-17-2003 | CCL Beam Stop | 0x012345670x76543... | | | | 0 |
| DTL_Diag:MIOC_BLM1B | 06-17-2003 | CCL Beam Stop | 0x012345670x76543... | | | | 0 |
| DTL_Diag:MIOC_DBCM1 | 06-17-2003 | CCL Beam Stop | 0x012345670x76543... | | | | 0 |
| DTL_HPRF:MIOC3A | 06-17-2003 | CCL Beam Stop | 0x012345670x76543... | | | | 0 |
| DTL_PS:MIOC1A | 06-17-2003 | CCL Beam Stop | 0x012345670x76543... | | | | 0 |
| DTL_RCCS:MIOC1A | 06-17-2003 | CCL Beam Stop | 0x012345670x76543... | | | | 0 |
| DTL_Vac:MIOC1A | 06-17-2003 | CCL Beam Stop | 0x012345670x76543... | | | | 0 |
| DTL_Vac:MIOC1B | 06-17-2003 | CCL Beam Stop | 0x012345670x76543... | | | | 0 |
| FE_Ctl:MIOC2A | 06-17-2003 | MEBT Beam Stop | 0x012345670x76543... | | | | 0 |

PV Crawler

Everything you ever wanted
to know about your IOC



What hasn't worked so well

Overall Prescriptive usage



Change - Hate it

VI Forever



GUI's



Sale benefits group by group



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Management support

Make it so



We're working on

Jeri - Development
File Devices Signals Subsystems Equipment Cable Reports View Admin Help

BLM Browser

MPS Chains | **IOCs**

BLM
- CCL_Diag:BLM00
- CCL_Diag:BLM101
- CCL_Diag:BLM103
- CCL_Diag:BLM106
- CCL_Diag:BLM108
- CCL_Diag:BLM110
- CCL_Diag:BLM112
CCL_Diag:BLM204
- CCL_Diag:BLM208
- CCL_Diag:BLM210
- CCL_Diag:BLM302
- CCL_Diag:BLM304
- CCL_Diag:BLM306
- CCL_Diag:BLM310
- CCL_Diag:BLM402
- CCL_Diag:BLM404
- CCL_Diag:BLM406
- CCL_Diag:BLM408
- CCL_Diag:BLM410
- CCL_Diag:BLM411
- DTL_Diag:BLM160
- DTL_Diag:BLM248
- DTL_Diag:BLM317
- DTL_Diag:BLM334
- DTL_Diag:BLM414
- DTL_Diag:BLM428
- DTL_Diag:BLM524
- DTL_Diag:BLM611
- CCL_Diag:BLM202
- CCL_Diag:BLM104
- CCL_Diag:BLM308
- CCL_Diag:BLM102
- CCL_Diag:BLM206
- CCL_Diag:BLM212
- CCL_Diag:BLM312
- CCL_Diag:BLM300

Device ID **Serial Number** **IOC** **MPS Chain**
CCL_Diag:BLM204 142526 CCL_Diag:IOC_BLM1 1 CCL Beam Stop

SSA **AFE** **HVPS**
ID: CCL_Diag:SSA_BLM1-02 Channel: 10 ... ID: CCL_Diag:IFC_AFE01 ID: CCL_Diag:HVPS_BLM1-02 Channel: 0

ADC Slow **ADC Fast** **MPSIF**
ID: CCL_Diag:ADC_BLM1-02 Number: 10 ID: CCL_Diag:ADC_BLM1-01 Number: 10 ID: CCL_Diag:MPSIF_BLM1-01 Channel: 10

IP CARR **DAC** **MIOC**
ID: CCL_Diag:IPCr_BLM1-01 Slot: 0 ID: CCL_Diag:DAC_BLM1-01 Channel: 10 ID: CCL_Diag:MIOC_BLM1A Channel: 10

Cables | **ADC Fast** | **ADC Slow** | **DAC** | **AFE** | **MPSIF** | **SSA**

Device ID **Serial Number** **IOC** **Fast / Slow**
CCL_Diag:ADC_BLM1-01 CCL_Diag:IOC_BLM1 Fast

| Channel | CCL_Diag:ADC_BLM1-01 |
|---------|----------------------|
| 0 | CCL_Diag:BLM00 |
| 1 | CCL_Diag:BLM101 |
| 2 | CCL_Diag:BLM102 |
| 3 | CCL_Diag:BLM103 |
| 4 | CCL_Diag:BLM104 |
| 5 | CCL_Diag:BLM106 |
| 6 | CCL_Diag:BLM108 |
| 7 | CCL_Diag:BLM110 |
| 8 | CCL_Diag:BLM112 |
| 9 | CCL_Diag:BLM202 |
| 10 | CCL_Diag:BLM204 |
| 11 | CCL_Diag:BLM206 |
| 12 | CCL_Diag:BLM208 |
| 13 | CCL_Diag:BLM210 |
| 14 | |
| 15 | |
| 16 | CCL_Diag:ND106 |

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- **Physic module to populate RDB from user brain waves**