

WEM304 Status Monitoring of the EPICS Control System at the Canadian Light Source

WHY?

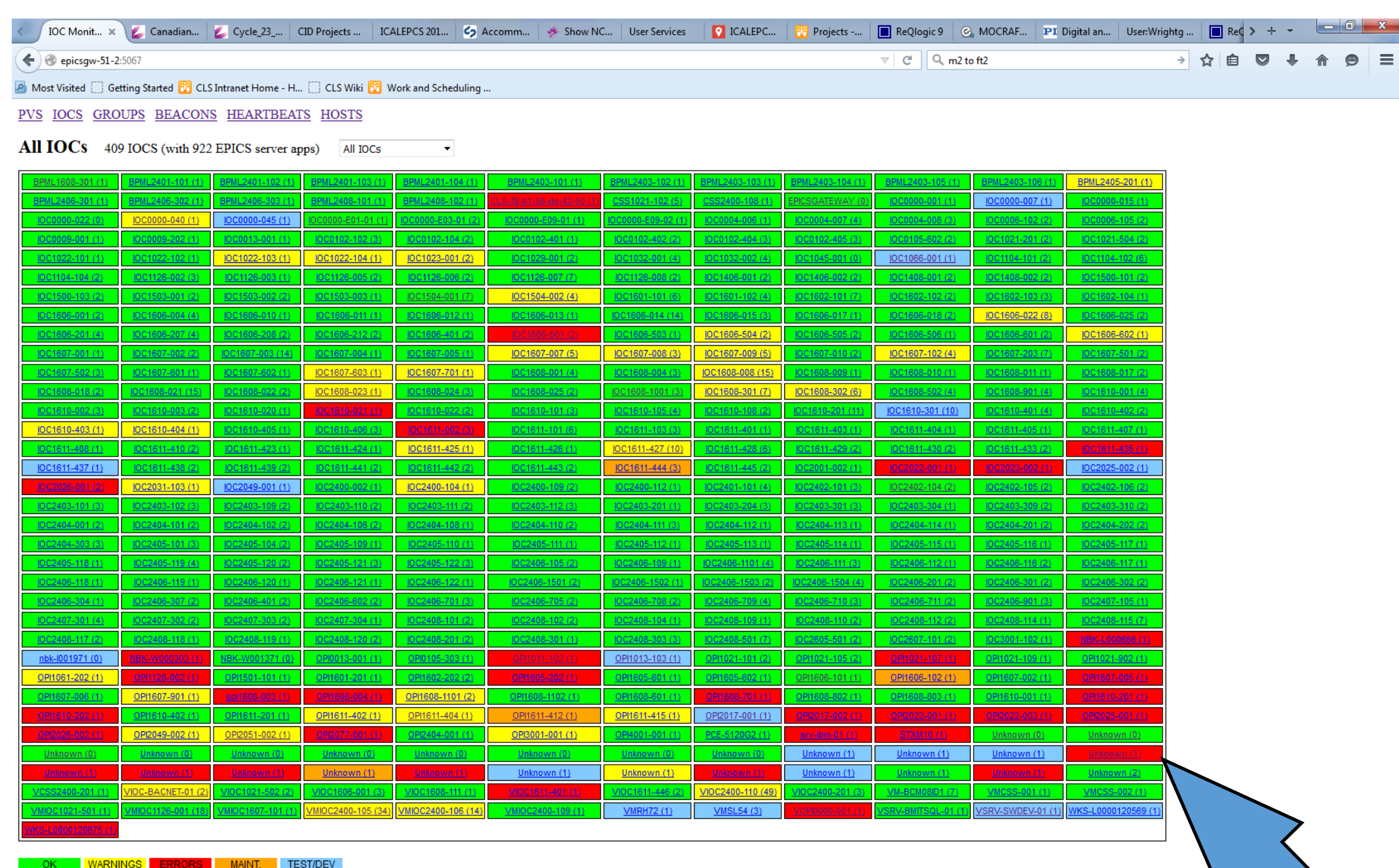
- Goal**— Monitor Overall Health of the Control System
- Goal**— Monitor Actual Process Variable Requests and Connections
- Goal**— Report Anomalies Before Problems Occur (or before anyone else notices)
- Goal**— Don't Duplicate the Alarm Handler!
- Goal**— Minimize changes to Existing Applications
- Goal**— Improve accuracy of IRMIS database

To automate the effort of tracking changes to the control system — both planned and unplanned!

The potential to track all applications: where they're running, when last restarted, what Process Variables are controlled

The potential to track Process Variable connections: knowing where a PV resides, and what applications are making requests for that Process Variable

The potential to catch errors early—misnamed Process Variables, failed applications, failed hosts,



Displaying 1 - 25 of 343926 detected PVs

Index	PV Name	Requests (Tot)	Requests (Non GW)	Last	Server	Port	Lost
1	SMTR1607.7-21-03.veloBase	11534	54	OP1607-901	IOC1607-008	36398	
2	PELA1607-5-10-01.inPosition	161	1	VMSL54	VIOC2406-110	40361	
3	gap1606-510-04.dsp02.LL17@name	52955	79	OP1606-101	IOC1606-017	5064	*** LOST ***
4	SMTR1607-5-10-17.servo.pid.integrationSumLimit	50263	40		IOC1607-007	58979	
5	gap1606-510-32.dsp02.LL17@name	30124	211	OP1606-101	IOC1606-017	5064	
6	SMTR1601-1-R10-56.cosmeOn	18715	2		IOC1601-102	32831	
7	SMTR1601-1-R10-56.cosmeOn	19382	2		IOC1601-102	32831	
8	OC50004-01.vac_raw	23038	2		VIOC2406-110	44281	
9	BMT11-03.Avac	35542	116	OP1601-101			
10	BMT11-03.VST.status	83606	3777	OP1128-001	VMOC1128-001	36561	
11	SMTR1608-5-B10-09.veloBase	16296	4	EPICSGW-648-2	IOC1608-021	32848	
12	gap1607-501-54.dsp01.LL153Val	22717	766	OP1607-003	OP1607-006	5064	
13	ICP1409-800-01	22106	2		IOC1409-101	5064	
14	SMTR1601-1-R10-63.debugLevel	15346	2		IOC1601-102	32831	
15	gap1606-510-32.dsp01.LL17@name	39707	227	OP1606-101	IOC1606-017	5064	
16	SMTR1605-5-800-01.veloBase	18655	2		IOC1604-104	5064	
17	WGS1405-01.k2.setAddress	29275	410	OP1021-101	IOC2406-1504	4159	
18	CM1608-2-10-01.temp.Rth	40128	3	EPICSGW-648-2			
19	ICP1409-800-01	50763	37				
20	ICP1409-800-02	28027	79	WKS-L0000120675	VIOC2406-110	59967	
21	ICP1409-800-03	29334	73	WKS-L0000120675	VIOC2406-110	59967	
22	ICP1409-800-04	27788	79	WKS-L0000120675	VIOC2406-110	59967	
23	ICP1409-800-05	27781	79	WKS-L0000120675	VIOC2406-110	59967	
24	SMTR1607-5-021-20.chargeTarget	46862	39		IOC1607-008	36398	
25	IOC.m102.MarkerStop	32549	631	IOC1610-301	IOC1610-301	61348	

Displaying 1 - 25 of 598 Detected Hosts

Index	Name	IP Addr	EPICS GW
1	BPML1608-301	10.52.28.4	False
2	BPML2401-101	10.50.0.37	False
3	BPML2401-102	10.50.0.38	False
4	BPML2401-103	10.50.0.39	False
5	BPML2401-104	10.50.0.40	False
6	BPML2403-101	10.50.20.143	False
7	BPML2403-102	10.50.0.41	False
8	BPML2403-103	10.50.0.42	False
9	BPML2403-104	10.50.0.43	False
10	BPML2403-105	10.50.0.44	False
11	BPML2403-106	10.50.0.68	False
12	BPML2405-201	10.50.10.75	False
13	BPML2406-301	10.50.0.62	False
14	BPML2406-302	10.50.0.6	False
15	BPML2406-303	10.50.0.14	False
16	BPML2408-101	10.50.20.135	False
17	BPML2408-102	10.50.20.141	False
18	ccdc1608-001	10.52.7.201	False
19	CCDC1608-003	10.52.28.105	False
20	CLS-00-01-29-06-ee-e5	10.51.20.86	False
21	CLS-00-90-e8-29-43-7d	10.51.0.123	False
22	CSS1021-102	10.50.20.12	False
23	CSS2400-108	10.50.20.119	False
24	DEX-r05199	10.52.0.5	False
25	DMS1021-001	10.50.0.114	False

1135	IOC1104-102	10.52.0.2	5064	700 days, 19:36:00	X
1136	IOC1608-022	10.52.4.13	49825	701 days, 1:51:30	X
1137	IOC1607-002	10.52.24.5	5064	701 days, 19:13:30	X
1138	IOC2401-101	10.50.0.92	1026	701 days, 19:52:30	X
1139	IOC2401-101	10.50.0.92	5064	701 days, 19:59:30	X
1140	IOC2401-101	10.50.0.92	1025	701 days, 20:04:00	X
1141	IOC1610-406	10.52.8.7	1032	701 days, 22:34:00	X
1142	IOC1602-101	10.50.20.34	1041	702 days, 16:20:45	X
1143	IOC1602-101	10.50.20.34	1038	702 days, 16:21:15	X
1144	IOC1602-101	10.50.20.34	1040	702 days, 16:22:15	X
1145	IOC1602-101	10.50.20.34	1036	702 days, 16:23:15	X
1146	IOC2404-303	10.50.0.84	1026	702 days, 20:17:30	X
1147	IOC2404-303	10.50.0.84	5064	702 days, 20:17:45	X
1148	IOC1610-022	10.52.8.5	1025	702 days, 23:30:45	X
1149	IOC1610-108	10.52.8.4	1025	702 days, 23:39:15	X
1150	IOC1602-101	10.50.20.34	5064	702 days, 23:45:00	X
1151	IOC2403-102	10.50.0.95	1025	703 days, 1:04:00	X
1152	IOC2406-710	10.50.0.129	5064	710 days, 19:15:00	X
1153	IOC1408-001	10.50.20.160	5064	718 days, 0:30:00	X
1154	IOC1406-001	10.50.20.162	1026	718 days, 0:34:45	X
1155	IOC1406-002	10.50.20.164	5064	718 days, 0:36:00	X
1156	IOC0000-015	10.50.0.156	5064	733 days, 19:40:30	X
1157	IOC2405-104	10.50.1.50	5064	747 days, 23:34:30	X
1158	IOC2406-710	10.50.0.129	1025	807 days, 12:06:15	X
1159	IOC2405-119	10.50.20.189	33746	859 days, 0:39:45	X
1160	IOC2403-101	10.50.0.94	1034	893 days, 5:29:00	X
1161	IOC1126-003	10.52.12.24	5064	903 days, 22:44:15	X
1162	IOC2403-101	10.50.0.94	5064	1011 days, 7:26:45	X
1163	IOC2400-002	10.50.0.65	5064	1034 days, 17:13:15	X
1164	IOC2405-119	10.50.20.189	5064	1034 days, 17:52:15	X
1165	IOC2405-122	10.52.44.16	1025	1038 days, 14:20:00	X
1166	IOC2405-122	10.52.44.16	5064	1038 days, 14:20:00	X
1167	IOC2405-121	10.52.43.220	5064	1038 days, 14:33:15	X
1168	IOC2405-121	10.52.43.220	1026	1038 days, 14:33:45	X
1169	IOC2405-101	10.50.0.86	1025	1039 days, 17:10:45	X
1170	IOC2405-101	10.50.0.86	5064	1039 days, 17:10:45	X
1171	IOC2404-111	10.50.0.91	1025	1052 days, 15:34:15	X

What Have We Got? Web Pages With....

- Status indicator for all hosts
- Known PVs
- Application List with Uptime
- Host Lists
- Duplicate PVs
- Badly named PVs

Detected 40 Duplicate PVs

PV Name	Server 1	Server 2	More?
booster.vac	VMIOC2400-105 (32855)	VIOC2400-110 (44281)	
CV2608-1101	VMIOC2400-105 (32855)	VIOC2400-110 (59594)	
FM1610-1-100-01.Protected	VIOC2400-110 (39268)	VIOC2400-110 (48267)	
IOCSR_0_Name	IOC1610-301 (61348)	IOC1610-301 (61387)	1 more
IOCSR_0_State	IOC1610-301 (61348)	IOC1610-301 (61387)	1 more
IOCSR_0_Status	IOC1610-301 (61348)	IOC1610-301 (61387)	1 more
IOCSR_0_StatusStr	IOC1610-301 (61348)	IOC1610-301 (61387)	1 more
IOCSR_0_Time	IOC1610-301 (61348)	IOC1610-301 (61387)	1 more
IOCSR_heartbeat	IOC1610-301 (61348)	IOC1610-301 (61387)	1 more
IOCSR_rebootStatus	IOC1610-301 (61348)	IOC1610-301 (61387)	1 more
IOCSR_rebootStatusStr	IOC1610-301 (61348)	IOC1610-301 (61387)	1 more
IOCSR_rebootTime	IOC1610-301 (61348)	IOC1610-301 (61387)	1 more
IOCSR_recentlyStr	IOC1610-301 (61348)	IOC1610-301 (61387)	1 more
IOCSR_status	IOC1610-301 (61348)	IOC1610-301 (61387)	1 more
IOCSR_statusStr	IOC1610-301 (61348)	IOC1610-301 (61387)	1 more
LTB1.SWE	VMIOC2400-105 (33412)	VIOC2400-110 (44281)	
MSD1606-5-01.motorType.sp	IOC1606-505 (1025)	IOC1606-022 (47524)	
MSD1606-5-02.motorType.sp	IOC1606-505 (1025)	IOC1606-022 (47524)	
MSD1606-5-03.motorType.sp	IOC1606-505 (1025)	IOC1606-022 (47524)	
MSD1606-5-04.motorType.sp	IOC1606-505 (1025)	IOC1606-022 (47524)	
MSD1606-5-05.motorType.sp	IOC1606-505 (1025)	IOC1606-022 (47524)	
MSD1606-5-06.motorType.sp	IOC1606-505 (1025)	IOC1606-022 (47524)	
MSD1606-5-07.motorType.sp	IOC1606-505 (1025)	IOC1606-022 (47524)	
MSD1606-5-08.motorType.sp	IOC1606-505 (1025)	IOC1606-022 (47524)	
MSD1606-5-09.motorType.sp	IOC1606-505 (1025)	IOC1606-022 (47524)	
MSD1606-5-10.motorType.sp	IOC1606-505 (1025)	IOC1606-022 (47524)	
MSD1606-5-11.motorType.sp	IOC1606-505 (1025)	IOC1606-022 (47524)	
MSD1606-5-12.motorType.sp	IOC1606-505 (1025)	IOC1606-022 (47524)	
SMTR1402-B10-01.load.absEncoder	IOC1602-101 (1036)	IOC1602-101 (1064)	

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Index	PV Name	Requests	Last
51	\$(backZMotor).ccw	8	OP1128-001
52	\$(backZMotor).cw	8	OP1128-001
53	\$(backZMotor).lowerSafetyLimit	8	OP1128-001
54	\$(backZMotor).moving	9	OP1128-001
55	\$(backZMotor).percentTravelRange.calc	9	OP1128-001
56	\$(backZMotor).upperSafetyLimit	8	OP1128-001
57	\$(backZMotor).vel.\$(unit).fbk	8	OP1128-001
58	\$(BEAMLINE).ModeSelect	8606	OP1202-001
59	\$(BFF).goToNextStep	17	OP1607-901
60	\$(BFF).LockPin.Opr.Extract	19	OP1607-901
61	\$(BFF).LockPin.Opr.Insert	19	OP1607-901
62	\$(BFF).LockPin.Out	19	OP1607-901
63	\$(BFF).LockPin.Status	19	OP1607-901
64	\$(BFF).RunMode	17	OP1607-901
65	\$(BFF).Slide.1	19	OP1607-901
66	\$(BFF).Slide.10	19	OP1607-901
67	\$(BFF).Slide.2	19	OP1607-901
68	\$(BFF).Slide.3	19	OP1607-901
69	\$(BFF).Slide.4	19	OP1607-901
70	\$(BFF).Slide.5	19	OP1607-901
71	\$(BFF).Slide.6	19	OP1607-901
72	\$(BFF).Slide.7	19	OP1607-901
73	\$(BFF).Slide.8	19	OP1607-901
74	\$(BFF).Slide.9	19	OP1607-901
75	\$(BFF).Slide.Current	17	OP1607-901

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