

EVIDEN

Dynamic Power Optimizer (DPO)

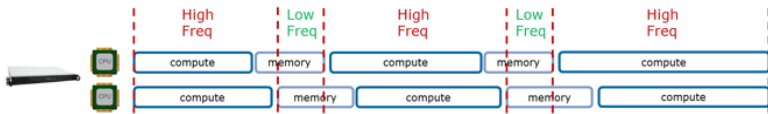
Part of Smart Energy Management Suite (SEMS)

(SEMS) DPO – Dynamic Power Optimizer

The Eviden solution to optimize the energy consumption of applications

Adapt CPU frequency depending on job phases

- Metric-based (CPU, memory)
- MPI (active) wait



Optimize without rebuilding or recoding

- Nothing to do for metric-based optimization
- LD_PRELOAD symbols override for MPI (active) wait optimization

The screenshot shows the 'Smart Energy Management Suite' interface. At the top, there are navigation icons and the title 'Smart Energy Management Suite'. Below that, there are search and filter options for 'Jobs', including 'Job ID', 'Name', 'Job Status', 'User/Initiator', and 'Nodes'. A table titled 'All Jobs' is displayed, showing a list of jobs with columns: Job ID, Name, Current State, Start time, End time, Duration, User/Initiator, DPO Optimized, Nbr of nodes, and Nodes. The 'DPO Optimized' column contains 'yes' for several jobs, which are circled in green in the original image. The table also includes checkboxes for each job and a footer with 'Items per page: 10' and '1 - 10 of 1301'.

Job ID	Name	Current State	Start time	End time	Duration	User/Initiator	DPO Optimized	Nbr of nodes	Nodes
100003	FIX_JOB	COMPLETED	2022-12-02 10:53:59	2022-12-02 11:03:58	00:09:59	rotap	yes	10	oahut10000-10009i
100002	AtomicB	COMPLETED	2022-12-02 09:57:19	2022-12-02 11:03:58	01:06:39	ghadjet	yes	74	oahut10000-10014-10016-10017-10020-10060-10064-10079i
100001	FIRESTARTER	RUNNING	2022-12-02 11:02:59	2022-12-02 11:04:04	00:01:00	delaportea	yes	0	
100000	AtomicB	RUNNING	2022-12-02 11:02:59	2022-12-02 11:04:04	00:01:00	dsej	yes	2	oahut10002-10063i
99997	AtomicB	RUNNING	2022-12-02 11:02:49	2022-12-02 11:04:04	00:01:10	ghadjet	yes	6	oahut10021-10026i
99998	AtomicB	RUNNING	2022-12-02 11:02:29	2022-12-02 11:04:04	00:01:30	user0	yes	3	oahut10013-10015i
99995	hostname	RUNNING	2022-12-02 11:02:09	2022-12-02 11:04:04	00:01:50	cottony	yes	14	oahut10000-10013i
99994	Star Citizen	RUNNING	2022-12-02 11:01:49	2022-12-02 11:04:04	00:02:10	delaportea	yes	5	oahut10021-10025i
99993	FIRESTARTER	RUNNING	2022-12-02 11:01:29	2022-12-02 11:04:04	00:02:30	delaportea	yes	1	oahut10020
99992	Alarm	RUNNING	2022-12-02 11:01:09	2022-12-02 11:04:04	00:02:50	bee0	yes	6	oahut10021-10026i

Integrated solution

- Slurm options to enable DPO in srun and sbatch commands
- Status in (SEMS) EO - Energy Optimizer (see above snapshot)

(SEMS) DPO – Dynamic Power Optimizer

Contact information if you are interested in purchasing DPO



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