

Open Storage Solutions' Report on System Status for Newfoundland Power



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Open Storage Solutions
All your data.
All the time.
Period.



Maintenance Report from September 2001 - Present

Over the last 14 months DRACO had 12 calls. The results were:

Two call logged for PMs on Draco as a result of computer room shutdowns.

4 calls logged for disk drive failures.

2 calls logged for broken tape leaders.

4 calls logged for controller related problems

Over the last 14 months CORVUS had 5 calls. The results were:

One call logged for PM on CORVUS as a result of computer room shutdown.

2 calls logged for disk drive failures.

2 calls logged for controller related problems

Details follow:

Service summary for OSS Raid Subsystem (Draco):

- Oct. 10 2001 11am: Received a call from Keith LeFeuvre. Keith informed me that 3 drives failed over the course of 2 weeks. Time in: Oct 10 at 1PM call was completed Oct 10th at 3pm.
- Oct. 18 2001 11am: Received a call from Keith LeFeuvre. A computer room shutdown is planned for Oct 27th. OSS performed preventive maintenance: Cleaned and vacuumed controllers, disk racks, DLT drives. Checked SCSI cables, terminators and disk power supplies. Duration of call 2hours 50 min.
- Jan.02 02 3pm: Received a call from Keith LeFeuvre. There was a low voltage alarm coming from the right raid controller. Keith planned for the shutdown on Jan 5th. I replaced the batteries on both controllers. During power up disk shelves 2,5and 8 did not come on-line. A drive time out was adjusted on the raid controllers and I found a disk drive power supply on Ch2 ID 3 was a little low. I adjusted the power supply. I recommended replacing the channel cards for shelves 2,5&8 and doing a firmware upgrade, however it was suggested I wait for the next shutdown. Duration of call 4 hours 30 min.
- Jan. 08 02: Received a call from Keith LeFeuvre. Two disk drives failed. I replaced the failed drives. Duration of call 1hr 10min.
- Jan.11 02 1pm: received a call from Keith LeFeuvre. The left raid controller was reporting a high temp. alarm. The shutdown was planned for Jan 12 8am. I replaced the fans in both controllers. Customer did not want to replace channel card at this time. System came up fine. Call Duration 2hr 20 min.
- Jan 29 02 12pm: received a call from Keith LeFeuvre. A broken tape leader on one of the DLT 7000 tape drives. Wanted me to replace the leader at 6:30. The call was completed at 7:30 pm the same day. Duration of call 1hr 15 min.

- April 02 02 3pm: received a call from Keith. A failed disk drive. Call was start time was April 02 02 time 4pm. Call duration 40 min.
- April 13 02 7:30am: received a call from Keith LeFeuvre. The Alpha server could not see half of the raid drives. After some trouble shooting the problem was with the Host Channel card on the right controller. The host channel card and internal cables for the host cards were replaced. Also on power up shelves 2, 5,& 8 did not come on line. I loaded the new code to both controllers and done a power cycle, all drive shelves came on line and system powered up, however 2 drives in the raid failed. They were replaced. Start time of call April 13 02 at 9am.
- May 3 02 5:10pm: Received a call from Sean Kearley. A broken tape leader on one of the DLT 7000 tape drives. Wanted me in at 8:30 that evening. Call duration: 1hr.
- June 12 02 5pm: Received a call from Keith LeFeuvre. There were two dropped drives on the raid: One from JBOD and the other from a raid set. I replaced the drives. Time in June 12 7:00pm call duration: 1hr 20 min.
- Oct 15 02 3pm: Received a call from Keith LeFeuvre. They are planning a computer room shut down for Oct 19th and would like a PM done on equipment. I vacuumed a large amount of dust from the system. Because there was so much dust I replaced both controller fans. Checked all cables and terminators and power supplies. All OK. However during power up channel 2 would not come on line. I replaced Channel 2 cards from both controllers. Powered up the equipment again and syatem came up. Call Duration 5hr 20 min.
- Nov 4 02: Received a call from Sean Kearley: The left controller failed and the fault tolerant raid system done its job and failed over to the surviving controller. According to the Raid logs the failure happened Friday night/ Saturday morning. I was notified of the failure on Monday 10am. Sean wanted me in there at 8:30 pm on Nov 4th. I went in and found that the problem was with unstable voltage from one of the two redundant power supplies for the raid controllers. Call duration 2hr 30min.

Service for OSS Raid Subsystem (Corvus):

- Jan 8 02 10am: Received a call from Keith LeFeuvre. He informed me that Corvus had two drives that failed. He wanted the drives replaced on Jan 9th at 2:30 pm. Call duration 1hr 20 min.
- July 15 02 2pm: Received a call from Keith LeFeuvre. A computer room shutdown is planned for Duffy on the 27th. I Checked the system Loaded new code checked power supplies cables and terminators. I was on site doing a PM on this system, which was not covered on a 7 X 24 contract. Therefore the PM was a billable call. The cost per hour for a weekend call is \$280.00 per hour. I was on site that day for 6 hours. Because of the good relationship between Open Storage Solutions and Newfoundland Power I only charged for 2 hours.

- Sept 12 02 5:30pm: Received a call from Keith LeFeuvre. High Temperature alarms were being reported on our of the raid controllers. Keith wanted me there at 8:30 pm on Sept 6th. Call Duration was 1 hr 30 min.
 - Oct 02 02 10am: Received a call from Keith LeFeuvre a disk drive had failed. He wanted me on site to replace on Oct 8 1:30 pm. Call duration 1hr 20min
 - Oct 15 02 8:30am: Received a call from Keith LeFeuvre a high temperature alarm on a raid controller. I arrived that day at 9am and replaced a fan. This system is covered by a service contract for service Monday – Friday 8-5. Again because of the relationship between the two companies I performed the service the same day without additional cost to the customer.
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