

## Lesson Learned

### Failure of EMS Due to Over Utilization of Disk Storage

**Primary Interest Groups**

Reliability Coordinators (RC)

Transmission Operators (TOP)

Transmission Owners (TO)

**Problem Statement**

Loss of control functionality due to the hard disk on the SCADA server being fully utilized.

**Details**

Engineers identified that the hard disk on the SCADA server was fully utilized which prevented the supervisory control from functioning properly. Operators had visibility of the system, but did not have control. The post event investigation identified that an automatic file purge process was not functioning correctly which caused the hard disk to exceed its maximum capacity.

**Corrective Actions**

The following actions were taken to correct the problem:

- The file purge process was corrected.
- SCADA hardware was upgraded to include an additional amount of disk storage.
- Hard disk utilization monitoring is now included with the periodic performance monitoring of the system

**Lessons Learned**

SCADA equipment monitoring should include monitoring of hard disk storage utilization. Also purging processes need to be set up to perform periodic clean up of disk space.

NERC's goal with publishing lessons learned is to provide industry with technical and understandable information that assists them with maintaining the reliability of the bulk power system. NERC requests your input on this lesson learned by taking the short survey provided in the link below:

Click here for: [Lesson Learned Comment Form](#)

For more information on this lesson learned please contact:

[NERC – Lessons Learned](#) (via email)

NPCC – [John Mosier](#) (via email) or (212) 840-1070

Source of Lesson Learned:

Northeast Power Coordinating Council

Lesson Learned #:

20130202

Date Published:

February 6, 2013

Category:

Communications

*This document is designed to convey lessons learned from NERC's various activities. It is not intended to establish new requirements under NERC's Reliability Standards or to modify the requirements in any existing reliability standards. Compliance will continue to be determined based on language in the NERC Reliability Standards as they may be amended from time to time. Implementation of this lesson learned is not a substitute for compliance with requirements in NERC's Reliability Standards.*