LotMan

- LotMan is a lightweight storage allocation tool
  - LotMan provides administrators with an easy to set up tool for controlling allocation of disk space.
- GridFTP plug-in for LotMan
  - Allows GridFTP administrators to control storage space usage on a per user basis.
  - GridFTP can prevent a transfer from starting if it knows ahead of time (via the LotMan plug-in) that sufficient storage is not available.
- The LotMan software has been integrated into the Virtual Data Toolkit (VDT).

Lease Manager

- The Lease Manager is a flexible tool for matching resources with requests.
- Can be used to manage many different types of “counted” resources, such as license usage and job / resource matches.
- Provides two-way match making, so that both the resource and the request can specify requirements of the other.
- The state of leases can be persisted.
  - In the event of a crash, the lease manager can continue from where it left off

Lease Manager with Stork

- The Lease Manager can be used by Stork for to provide dynamic matching of data transfer jobs:
  - Resources can specify the number of transfers they support, as well as required attributes of the transfer job.
  - The transfer job can restrict itself to specific resources or attributes of resources.
  - This combination was employed at a demonstration at the Super Computing 2005 conference.

Event Logging

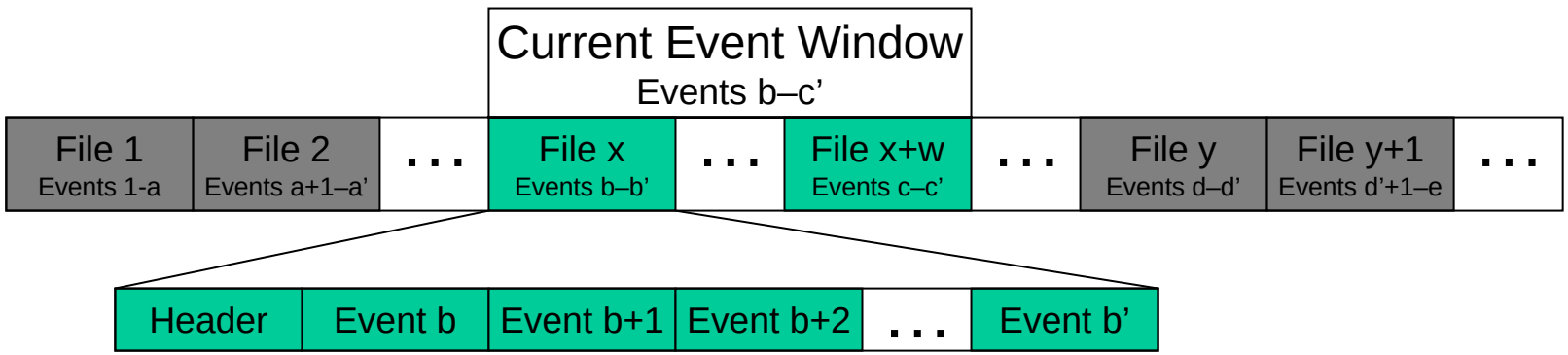
- Condor can generate an “Event Log”:
  - This is a log of significant events about the life of a job, or all of the jobs on a system.
  - The event logs are rotated
    - “Log”, “Log.1”, “Log.2”, …
  - The Maximum size and number of rotation files is configurable

Event Log File Headers

- Each of these event log files has a header
  - This header contains information to uniquely identify the file, and position in the sequence of files
  - Thus, each log file forms a link in the chain of event log files
  - Each event log file can be viewed as a window into an infinite stream of events

Event Stream

- Header also contains the byte offset of the file and the range of event numbers in the entire stream of events
- The set of current log files forms a window into the event stream



Event Log Reading

- An application programming interface (API) has been created to allow applications to easily read this event log.
- The “state” of the reader can be persisted to disk, so that the application can continue reading after a shutdown or crash.
- The reader can tell the application if data has been lost and how much.

Event Log Reading and NetLogger

- A new tool is being developed to allow these Condor job events to be exported to NetLogger:
  - Takes advantage of the Event Log reading API
  - Uses persisted state to continue after a shutdown or crash
  - Generates unique “event Ids” for NetLogger's use
  - Insures that events are sent to NetLogger once and only once