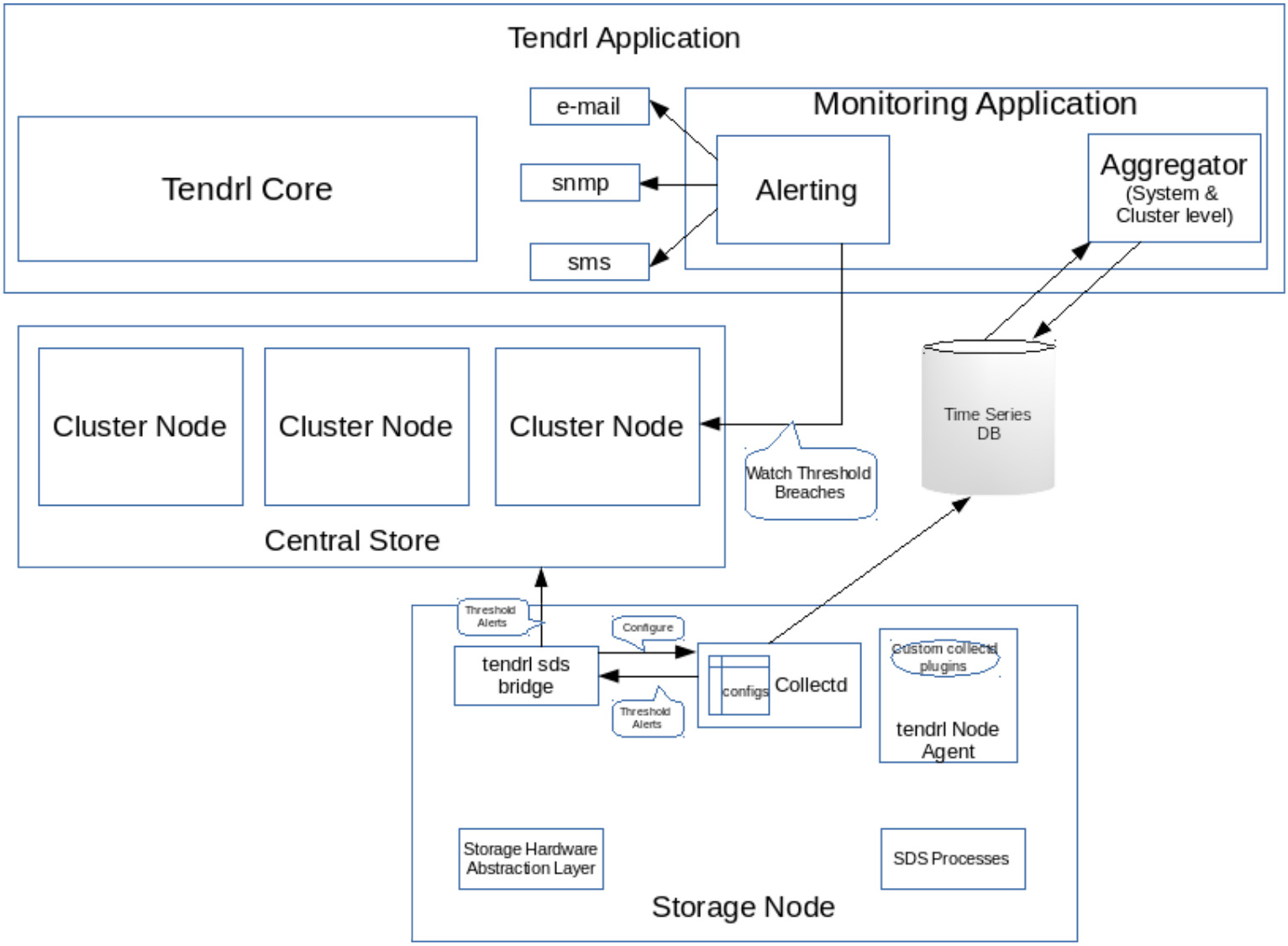
MONITORING ARCHITECTURE PROPOSAL



Note:

collectd plugins will be loaded and configured only through collectd configuration files.

Different configuration files for each plugin and then including them through a path wild card in the main config file is possible and used in Skyring 2.0

For monitoring the logical resources, it suffices to only query for the statistics from one of the nodes.

- In gluster's case, any random node in the cluster.
- In ceph's case, any mon node and we can particularly choose it to be ceph leader mon.

Skyring 2.0 used salt-stack's formula based configuration generation capabilities.

Architecture In Brief

- As part of managing/importing the node into Tendrl, Tendrl through tendrl-node-agent initiates the generation of collectd configurations for physical resources on the node by using the corresponding templates.
- At the time of cluster creation, the Tendrl through its yaml file entry initiates sds-bridge to generate sds-bridge specific collectd configurations on the appropriate nodes using the specific templates.
- The node on which the configurations are made is known to the tendrl by an entry in the central store.
- If the node with the logical resource configurations goes down appropriate choice of an alternative node is made and the sds specific configurations are re-done on the new node. And the configured node is updated in central store.
- If the node that was previously down is back up, sds-specific configurations will be disabled on that node.
- When there are collectd detected threshold breaches, the collectd updates the same to the central store.

- Based on appropriate states in the central store, the correlating and alerting module of the monitoring application will handle it appropriately(ex: mail, snmp, sms alerts).
- The monitoring application will also consist of a aggregation/summarization module that aggregates statistics at cluster and system levels using the states in central store and data in time-series db.
- The request for statistics maintained in time series db will be served by the same (Apache) server that serves the tendrl app but through the monitoring app.
- The users configuration for sending out alerts and notifications can be maintained along with the tendrl's user details in central store.

Open-ended questions:

- API formats
- Notification Subscriptions @ Cluster level
- Sds-specific knowledge resides only with sds-bridge, so is it better to have correlation of various threshold breaches happen in sds-bridge before updating the states accordingly to the central store.