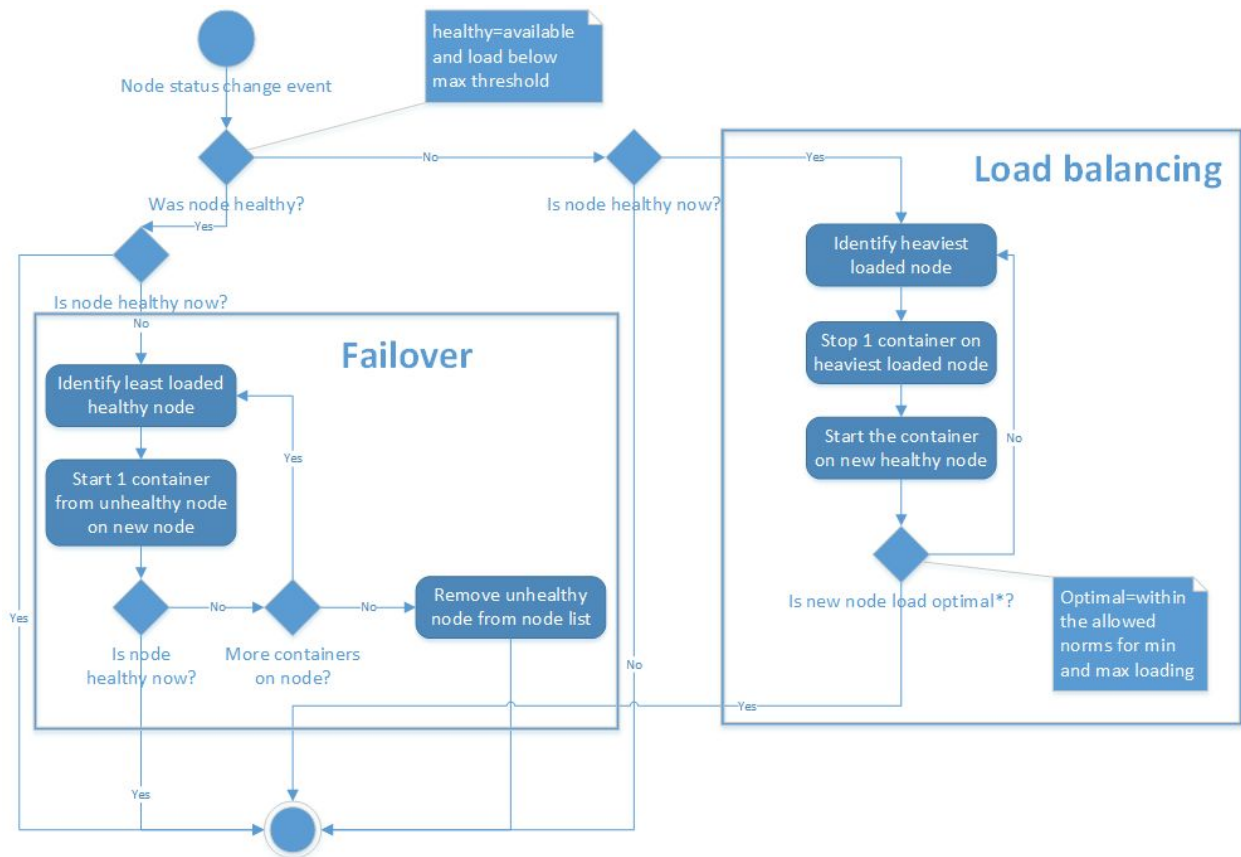


Simplified use case 1 statement

Design a 3rd party tool that can act as a failover and load re-balancing engine for a cluster of docker nodes

Features

- GUI
 - Provide view of existing containers/nodes/node loads/node status
 - Allow a user to start/stop containers
 - Allow user to start/stop nodes
- Container manager - implement using the docker-client Java API - Sindhu
 - Start new containers
 - Stop containers
 - Track which containers are on which nodes
 - Provide basic information on containers and nodes
 - Cache information needed to track & restart all containers
 - Remove containers from tracking/cache when they complete successfully
- Node monitor - implemented using the Java VirtualBox SDK -Simon
 - Actionable event when a node goes unhealthy (unhealthy=unavailable, over loaded, or any other “unhealthy” event)
 - Actionable event when a new or unhealthy node becomes healthy
 - Track load levels for each available node
 - KPIs: number of containers per node, CPU loading per node, memory usage per node
- Load balancing engine - implement in Java -Sudhakar, Prudhvi
 - When node goes down, Restart containers from failed nodes on working nodes, based on least loaded algorithm
 - When node becomes available, rebalance containers across all working nodes, based on least loaded algorithm
- VirtualBox interface
 - Provide a Java VirtualBox interface to handle all communications to and from the VirtualBox



Node change event