

## Load Balancing

M9 Systems provides an advanced, highly-reliable load-balancing solution that enables the distribution of traffic among multiple servers in a cluster.

Load-balancing also allows servers to be added on the fly to accommodate traffic surges for maximum performance or removed from the cluster without any downtime. It enables scheduled software and Operating System upgrades to be performed on one server at a time while the configuration continues to function and serve content.

By allowing multiple small servers to be used in place of one large server, we ensure high performance and throughput as well as redundancy.

Traffic distribution can be based on several different algorithms, such as:

- **Unweighted Round-Robin**

Traffic is evenly distributed among all servers in the cluster in a circular fashion.

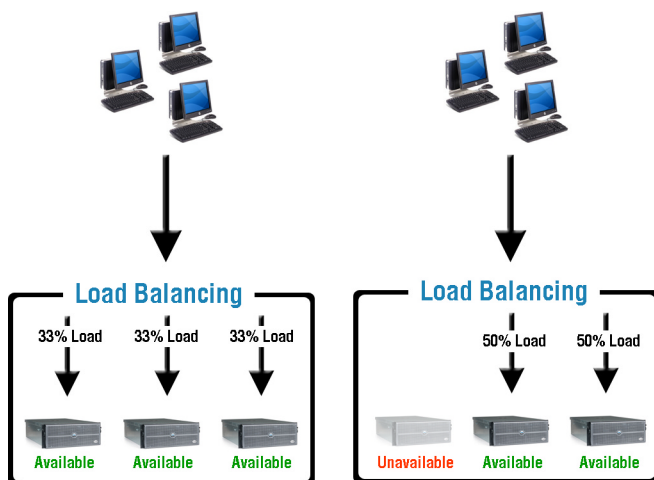
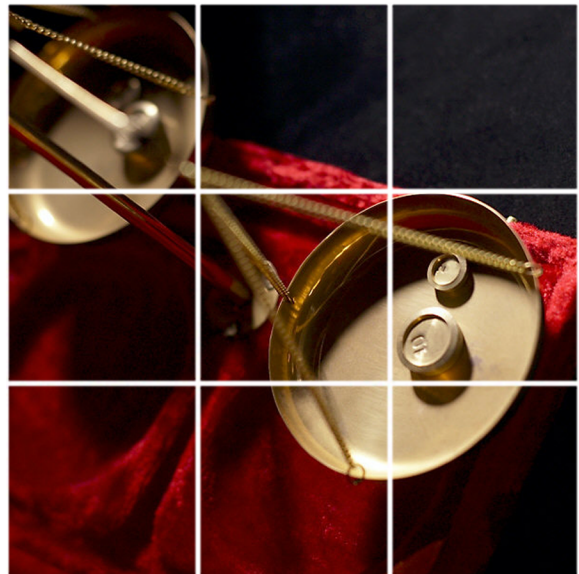
- **Weighted Round-Robin**

Traffic is distributed among all servers in a circular fashion, however, each server is assigned a weight,  $n$ , that represents its capacity to handle connections, as compared to the other servers in the cluster. That is, new connections are assigned to a given server  $n$  times before the next server in the cluster is chosen.

- **Weighted Least Connections**

The weighted least connections algorithm specifies that the next server chosen from the cluster for a new connection is the server with the fewest (least) active connections. Each real server is assigned a weight for this algorithm. When weights are assigned, the decision of which server has the fewest connections is based on the number of active connections on each server, and on the relative capacity of each server.

The architecture of a server cluster has redundancy built in, making recovery from the loss of an individual server fast and easy with virtually no loss in information and no downtime for users. So not only do you achieve effective distribution of traffic for optimal user performance but also the first elements of a full **Disaster Recovery** strategy.



### The Benefits:

**Faster response times for end-users**  
**Minimized risk of service interruption**