

Abstract

Multiple Routing Configurations for Datacenter Disaster Recovery Applicability and Challenges

Cloud services based on datacenter networks are becoming very important. Datacenters host computing and storage resources, and these resources are served to customers through a network of datacenters. Protecting such a network from disasters like earthquakes, hurricanes and terrorist attacks is crucial. In this paper, we propose the use of multiple routing configurations (MRC) IP fast reroute recovery process for datacenter disaster recovery. A demonstration of how this recovery scheme can be applied is shown. Also, we discuss the impact of the MRC recovery process on the post failure load distribution over network links and how this impact can be minimized. We propose a manual technique to minimize the impact of MRC and compare it to an automatic technique called modified MRC. Both the advantages and disadvantages of the two techniques are outlined. We conclude that a newer technique is needed that overcome the above mentioned disadvantages. The new technique should not manipulate link weights to achieve good load distribution.