Classification-based Virtual Network Mapping Method and System

Technical Field

The present invention relates to network virtualization technology, and particularly relates to a classification-based virtual network embedding method and system.

Background Art

Network virtualization technology is a core internet technology in future, which allows supporting a plurality of virtual networks on a shared bottom resource. These virtual networks may either have different network frameworks or carry different types of services therebetween.

Virtual network embedding is one key problem of the network virtualization technology. Node and link demands required by the virtual network are satisfied by mapping virtual nodes and virtual links in a virtual network request on the shared bottom resource. Virtual network embedding is proven to be a technical problem which is very difficult to solve and has higher computation complexity. No effective measures are proposed in the present methods to reduce the computation complexity, so that the mapping processing time is relatively long and the utilization ratio of the shared bottom resource is lower.

Summary of the Invention

The object of the present invention is to provide a classification-based virtual network embedding method and system for overcoming the above problems.

In order to achieve the above objectives, the present invention provides a classification-based virtual network embedding method, the method comprises:

step 101) when receiving a virtual network request, classification virtual nodes related to a virtual network request according to the classification standard, and dividing the virtual nodes belonging to different classifications to different virtual network subrequests;

wherein the classification standard is namely to classify the virtual nodes into a

Classification-based Virtual Network Embedding Method and System

Technical Field

The present invention relates to network virtualization technology, and particularly relates to a classification-based virtual network embedding method and system.

Background Art

Network virtualization technology is a core internet technology in future, which allows supporting a plurality of virtual networks on a shared bottom resource. These virtual networks may either have different network frameworks or carry different types of services therebetween.

Virtual network embedding is one key problem of the network virtualization technology. Node and link demands required by the virtual network are satisfied by mapping virtual nodes and virtual links in a virtual network request on the shared bottom resource. Virtual network embedding is proven to be a technical problem which is very difficult to solve and has higher computation complexity. No effective measures are proposed in the present methods to reduce the computation complexity, so that the mapping processing time is relatively long and the utilization ratio of the shared bottom resource is lower.

Summary of the Invention

The object of the present invention is to provide a classification-based virtual network embedding method and system for overcoming the above problems.

In order to achieve the above objectives, the present invention provides a classification-based virtual network embedding method, the method comprises:

step 101) when receiving a virtual network request, classification virtual nodes related to a virtual network request according to the classification standard, and dividing the virtual nodes belonging to different classifications to different virtual network subrequests;

wherein the classification standard is namely to classify the virtual nodes into a