

Virtual Machine Migration planning in software defined Networks

Abstract:

As the increasing number of smart devices and various applications, IT services have been playing an important role in our daily life. In recent years, the quality and resilience of services have been drawing increasing attention.

Existing system:

While there are continuous efforts on the optimal VM placements to reduce network traffic, VM migration has received relatively less attention. We argue that careful planning of VM migration is needed to improve the system performance. First of all, in the case of evacuating services before disasters or recovering services after damages, we must migrate all VMs under constraints such as limited time or improve the impaired quality of services in time. Thus, it is important for us to minimize the evacuation time, i.e., the total migration time. Then, the migration process consumes not only CPU and memory resources at the source and the migrated target's physical machines but also the network bandwidth on the path from the source to the destination.

Disadvantages:

1. System performances has to be improved.
2. Resource consumption has to be reduced for minimizing the migration time.

Proposed system:

In this paper, we investigate the problem of how to reduce the total migration time in Software Defined Network (SDN) scenarios. We focus on SDN because with centralized controller, it is easier to obtain the global view of the network, such as the topology, bandwidth utilization on each path, and other performance statistics. On the other hand, SDN provides a flexible way to

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install forwarding rules so that we can provide multipath forwarding between the migration source and destination. We allow multiple VMs to be migrated simultaneously via multiple routing paths. The objective of this paper is to develop a scheme that is able to optimize the total migration time by determining their migration orders and transmission rates.

Advantages:

1. Application performance has been improved by using centralized controller.
2. Total migration time has been improved

SYSTEM REQUIREMENTS

H/W System Configuration:-

- Processor - Pentium –III
- RAM - 256 MB (min)
- Hard Disk - 20 GB
- Key Board - Standard Windows Keyboard
- Mouse - Two or Three Button Mouse
- Monitor - SVGA

S/W System Configuration:-

- Operating System : Windows95/98/2000/XP
- Application Server : Tomcat5.0/6.X
- Front End : HTML, Jsp
- Scripts : JavaScript.
- Server side Script : Java Server Pages.
- Database : MySQL 5.0
- Database Connectivity : JDBC