

Test results with Apache Bench with and without SSH-tunnel.

Preface

Below you will find the results of Apache Bench with and without SSH-tunnels. The goal of this test was to check what the impact of SSH-tunnels is on HTTP connectivity.

Test environment

As test environment, we used 2 systems based on Red Hat Enterprise Linux 4 update 5. One is used as a web server with Apache 2.0.52 with an out-of-the-box configuration and the other is used a web client using ApacheBench 2.0.41. The systems are in situated in different subnets on different geographical locations; they are connected by a WAN. The ping-time the each other is on an overage of 2.4 ms.

Test phases

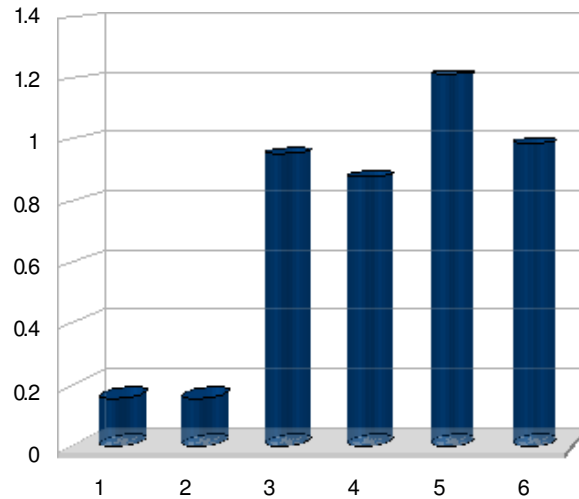
The test is done in the next phases:

1. 10.000 requests with 200 concurrent connections without HTTP-keepalive via direct request to port 80 on the server
2. 10.000 requests with 200 concurrent connections with HTTP-keepalive via direct request to port 80 on the server
3. 10.000 requests with 200 concurrent connections without HTTP-keepalive via SSH-tunnel to port 80 on the server
4. 10.000 requests with 200 concurrent connections with HTTP-keepalive via SSH-tunnel to port 80 on the server
5. 10.000 requests with 200 concurrent connections without HTTP-keepalive via SSH-tunnel with compression to port 80 on the server
6. 10.000 requests with 200 concurrent connections with HTTP-keepalive via SSH-tunnel with compression to port 80 on the server

We will request an ordinary HTML-page, so no PHP-rendering was done in the background. The HTML-page had a size of (app.) 400 bytes and was served directly from a local storage (no remote storage).

Summary

An SSH-tunnel does have a big impact on the handling of the HTTP requests. A direct connection will be about 6 times if you compare it with an SSH-tunnel. See the chart below with the time in milliseconds per request (how shorter the bar... the better).



TEST RESULTS

Phase	Short description	Requests/second	Avg time in ms per request	Failed req
1	Direct	6323.94	0.158	0
2	Direct + Keepalive	6319.27	0.158	0
3	SSH	1047.83	0.954	0
4	SSH + Keepalive	1138.74	0.878	0
5	SSH + Compression	824.09	1.213	0
6	SSH + Compression + Keepalive	1012.70	0.987	0