# Performance Evaluation

The Performance Evaluation was done for 1000 copies of a file that had a size of 12kb on disk and was of PDF Format.

**When only 1 Client was making Requests to Index Server**

**Lookup Time : 1254 milliseconds/1000 Files , Avg Cost per File : 1.254 Milliseconds/1 File**

**Download Time : 10319 milliseconds/1000 Files , Avg Cost Per File : 10.319 Milliseconds/1 File**

**When 2 Clients Where Running Concurrently**

**LookupTime**

**Client 1 : 1198 milliseconds/1000 Files , Client 2 : 1633 milliseconds/1000 Files**

**Avg Cost = (1198 + 1633)/ 2 = 1415.5 /1000 Files , 1.4155 Milliseconds/File**

**Download Time**

**Client 1: 18269 milliseconds/1000 Files, Client 2: 988 milliseconds/1000 Files**

**Avg Cost = (18269 + 988)/2 = 9628.5 milliseconds/1000 Files = 9.6285 milliseconds/1 Files**

**When 3 Clients where running Concurrently**

**Lookup Time**

**Client 1: 1552 milliseconds/1000 Files, Client 2: 1680 milliseconds/1000 Files**

**Client 3 : 1770 milliseconds/1000 Files**

**Avg Cost = (1552 + 1680 + 1770)/3 = 1667.33**

**milliseconds/1000 Files = 1.67 Milliseconds/File**

**Download Time**

**Client 1: 21102 milliseconds/1000 Files, Client 2: 17420 milliseconds/1000 Files**

**Client 3 : 14210 milliseconds/1000 Files**

**Avg Cost = (21102 + 17420 + 14210)/3 = 17577.33**

**milliseconds/1000 Files = 17.578 Milliseconds/1 File**

**So to Summarize**

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| **Concurrent Nodes** | **Activity** | **Cost / 1 File** |
| **1** | **Lookup** | **1.254 ms** |
| **1** | **Download** | **10.319 ms** |
| **2** | **Lookup** | **1.4155 ms** |
| **2** | **Download** | **9.6285 ms** |
| **3** | **Lookup** | **1.67 ms** |
| **3** | **Download** | **17.578 ms** |