**Supplementary Table 2:** System specific information of use cases.

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| --- |
| **System Configurations** |
| **Systems used**  | SMP node | HPC cluster |
| **No. of cores available** | 48 | 448 |
| **Processor** | AMD Opteron Processor 6176 | Intel(R) Xeon(R) CPU E5-2670 |
| **Clock speed** | 2.30 GHz | 2.60 GHz |
| **RAM** | 252 GB | 63.02 GB per node |
| **OS** | Open Source Centos-6.4 | Open Source Centos-6.2 |