

Cluster Management System case study

Systems: OSCAR (3.0), ROCKS (version 3.0), OpenMosix (version2.4.22)

| Criteria | OSCAR | ROCKS | OpenMosix |
|--------------------------------------|--|-----------------------------|---|
| Ease of Installation / configuration | Yes GUI SIS-based | Yes KickStart | Yes (2 RPM commands) with OSCAR C3. Addition boot configuration with LILO |
| Ease of Management | C3 | Cluster-Fork | N/A |
| Load Balancing / Resource Management | PBS/MAUI | PBS/MAUI, SGE | Auto/Manual Job migration/distribution |
| Network Management | MAC address querying TPING?? | Insert-ether Ganglia | N/A |
| Network Traffic management | X | X | X |
| Cluster Monitoring | XPBS, Ganglia but not built-in, Clumon | Ganglia | N/A OpenMosixView |
| Security | SSH | SSH | N/A |
| Single System Image | X | X | Yes at fork_ &_ forget |
| Reliability | Single head (SPF) | Same | Same |
| Heterogeneity | X | Yes (with X86 Linux) | Yes (with X86 Linux) |
| Grid enable or multi cluster | X | Yes | X |
| Scalability - App - Install | MPI/PVM 64 (practically) | MPI/PVM Larger than 64 | Not test, yes but hit the ceiling N/A |
| Support and documentation | Good | Good | Sufficient |
| Architecture | Beowulf | Beowulf | Beowulf and NOW SMP. |
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