

DIP service needs description.

This document describes the current situation and the expected situation independently of what is technically possible. The actual feasibility is to be investigated and debated.

Current situation:

- Currently the DIP service is offered by 2 medium –range office SLC3 PCs in the computing center running on the GPN network (pcitco121 and pcitco122). Each of these machines is simply running a daemon (DIP DNS) and nothing else.
- These machines are currently “trusted” by others machines on experiments networks and on the TN to access the DIP Data from the DIP DNSs.
- There are 2 machines for the DIP service because a fallback mechanism is implemented by software to guarantee a good level of service availability. In case a daemon fails, the second one running on the other machines takes over transparently for the end users of the DIP service. This ability shall be maintained.
- These machines are not Quattuor managed.
- These machines have minimalist Lemon monitoring (ping only).
<http://lemonweb.cern.ch/lemon-status/info.php?entity=lxnoq/DIP&type=host&cluster=1>
- There is no service contract attached. Priority 0 for problem solving.
- There is a procedure defined for the CC operators in case of a failure is detected. ()
- The service is monitored by SLS. <http://sls.cern.ch/sls/service.php?id=DIP>

Requirements for the migration toward TN:

Migration details

- The functionality offered by the DIP DNS daemons will not change.
- The provision of the DIP service shall be migrated to the TN for security reasons. The migration shall occur at the end of June 2008. For testing purpose and for the preparation of the migration for the end users, the new setup on the TN shall be available by end of May 2008.
- The actual transition from one setup to the other will be announced to the end users in advance. For the migration itself, the DIP users will have to connect to the new setup on the TN. In the mean time, the 2 machines actually running the DIP service on the GPN (pcitco121 and pcitco122) will be switched off and removed from the CC.

Hardware / networking aspects

- There is a need for 2 Linux machines on the TN with fixed IP addresses. These machines are not visible/accessible from outside CERN. In case it is not avoidable, some machines on the GPN could be trusted by the DIP DNS machines.
- These 2 machines shall preferably be virtual servers. In this case, the 2 virtual servers shall be on 2 distinct physical machines for the failover mechanism described above to be applicable.
- The OS shall be Linux, preferably preliminary SLC5 flavor.
- There 2 machines shall be accessible remotely to DIP service managers for the configuration and maintenance of the DIP service. (How, TBD)

Performance

- There are no specific constraints there. With future DIP usage in mind, each machine shall offer the computing, memory and disk space equivalent of a high –

- 1 range PC of these days (RAM = 2Gb, Disk space >= 100Gb, Ethernet
2 100Mb/1Gb).
3 • Although this is probably by default from OS installation, an important point is
4 the number of file descriptors available on the machine that shall be unlimited.
5

6 **Monitoring:**

- 7 • The SLS monitoring shall still be possible.
8 • Full Lemon monitoring shall be available on the hardware (CPU / Memory / Disk)
9 • Automatic alarms in case of an issue shall be triggered toward the service managers
10 (configurable) by SMS and email.
11 • Lemon daemon monitoring and custom alarm generation would be a plus.
12 • The creation of circular DIP DNS log files would be a plus.

13 **Maintenance**

- 14 • Quattuor management shall be possible. There the limitation concerns rebooting the
15 machine that shall not occur without informing the DIP service managers in advance. A
16 monthly update mechanism with email warning forehand is acceptable.
17 • DIP DNS packages can be provided as RPM for quick deployment on a different machine
18 with same IP for minimum end user disturbance.
19 • The hardware maintenance contractual details shall be discussed (Fabio Trevisani). TBD
20 • The machines shall be on UPS.
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