



DIP

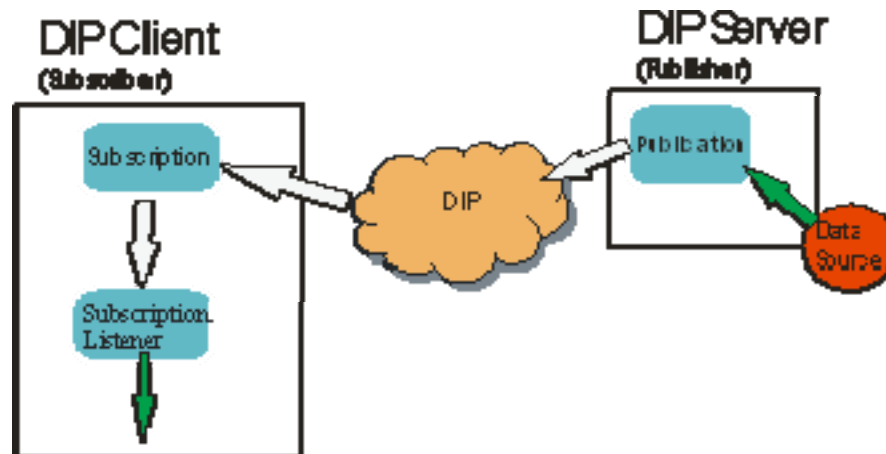
Service, status, recent issues and plans for the future

Plan

- DIP service overview
- Recent DNS issues
- Findings and actions
- Q/A



- “DIP is a system which allows relatively small amounts of real-time data to be exchanged between very loosely coupled heterogeneous systems. [...]”



- **DIP DNS role:**
 - Establish link between DIP Data subscribers and publishers.
 - Maintains list of available Publications.
- **DNS location:**
 - ITCO maintains 2 DNS on the GPN, best effort.
 - Located in the computing center (on 2 separated Linux PCs under (limited) Lemon monitoring.
 - Procedures for on –shift operators in case of a problem on the sub cluster.
 - Fallback mechanism.

- DNS1 degraded:
 - (new) connections affected:
 - Delays for new registrations or connections refused.
 - During recovery period, scattered situation with Publishers and Subscribers on different DNSs.
- Actions:
 - DNS probing:
 - Improve technical monitoring on the DNS machines, using more stringent DNS probing (current lack of sensibility).
 - Improve DNS technical feedback toward ITCO service supporters (better technical logging + SMS alerts).
 - Redundancy:
 - Review fallback mechanism, upgrade DNSs.



- Communication not sufficient:
 - DNS status awareness:
 - SLS page provides the current status as a snapshot, does not tell details on the failure.
 - Lack of feedback on resolution progress.
- Actions:
 - User awareness:
 - Provide more details on the SLS webpage about the DNS health and ongoing actions.
 - Report toward users via DIP mailing list.
 - For the users:
 - Report issues to itcontrols-support@cern.ch, prevent interpersonal reporting, often incomplete.

- Other actions ongoing:
 - Prepare migration of the DNS on the TN (mid 2008)
 - Prepare switchover in parallel to current GPN solution, announce in advance, provide support for the switch preparation.
 - In depth (load, robustness) testing of new mechanisms prior switchover from GPN to TN.
 - Renew hardware and improve Lemon monitoring for DNS cluster.
 - Other improvements:
 - Investigate full redundancy and hardware abstraction to improve service availability.
 - Integrate DNS monitoring in PVSS JCOP Framework (under discussion).



- The issues that occurred revealed some weaknesses (monitoring, procedure for recovery, communication)
- There are ongoing actions to address these concerns.
- More information:
 - DIP Service Level Agreement (SLA):
http://itcofe.web.cern.ch/itcofe/Services/DIP/relatedDocuments/DIP_SLA_Oct_2006.pdf
 - DIP SLS web page:
<http://sls.cern.ch/sls/history.php?id=DIP&more=availability&period=day>
 - DIP DNS fallback details:
http://itcofe.web.cern.ch/itcofe/Services/DIP/relatedDocuments/DIP_NameServer.pdf
 - DIP Usage recommendations:
<http://itcofe.web.cern.ch/itcofe/Services/DIP/relatedDocuments/DIPUsageRecommendations.pdf>



Q/A

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Questions?