perfSONAR MDM Overview

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WHAT'S IN A NAME?

perfSONAR stands for "**Perf**ormance **S**ervice **O**riented **N**etwork Monitoring **Ar**chitecture"

MDM stands for „**M**ulti-**D**omain **M**onitoring"

GOALS

Reduce diagnostic costs:

- Performance problems noticed early and addressed efficiently.
  - *Network engineers can access multi-domain information.*

Promote realistic expectations of network amongst users.

Transform application design:

- Applications designed with networks in mind.

THREE ASPECTS TO perfSONAR

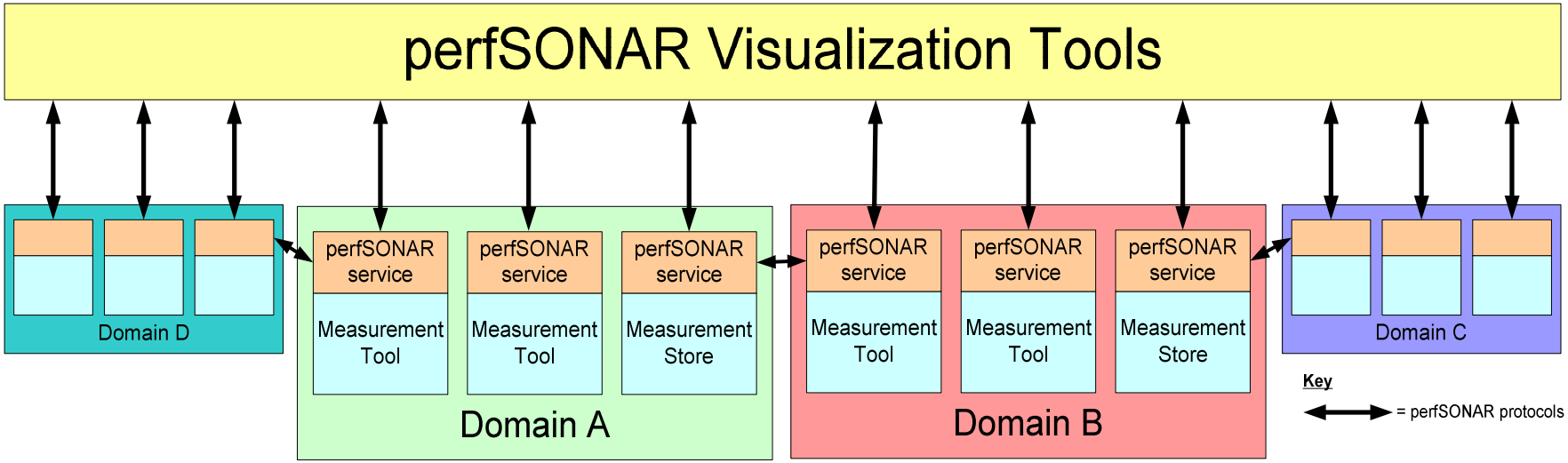
1. Architecture and protocols that:
   - *Define web services based on roles.*
   - *Define their communication syntax and semantics.*
   - *Allow anyone to develop web service implementations.*
2. A set of interoperable software implementations.
   - *Java, Perl, Python etc.*
3. A collaboration by many organisations.

THREE-TIER ARCHITECTURE

perfSONAR is middleware that is distributed between domains.

It facilitates multi-domain performance information sharing.

perfSONAR web services ‘wrap’ existing measurement tools.



WHY perfSONAR? (1)

Research network users need fast, reliable, uninterrupted service.

- Quick multi-domain problem fixes necessary.
- Otherwise, end-user disruption and dissatisfaction results.

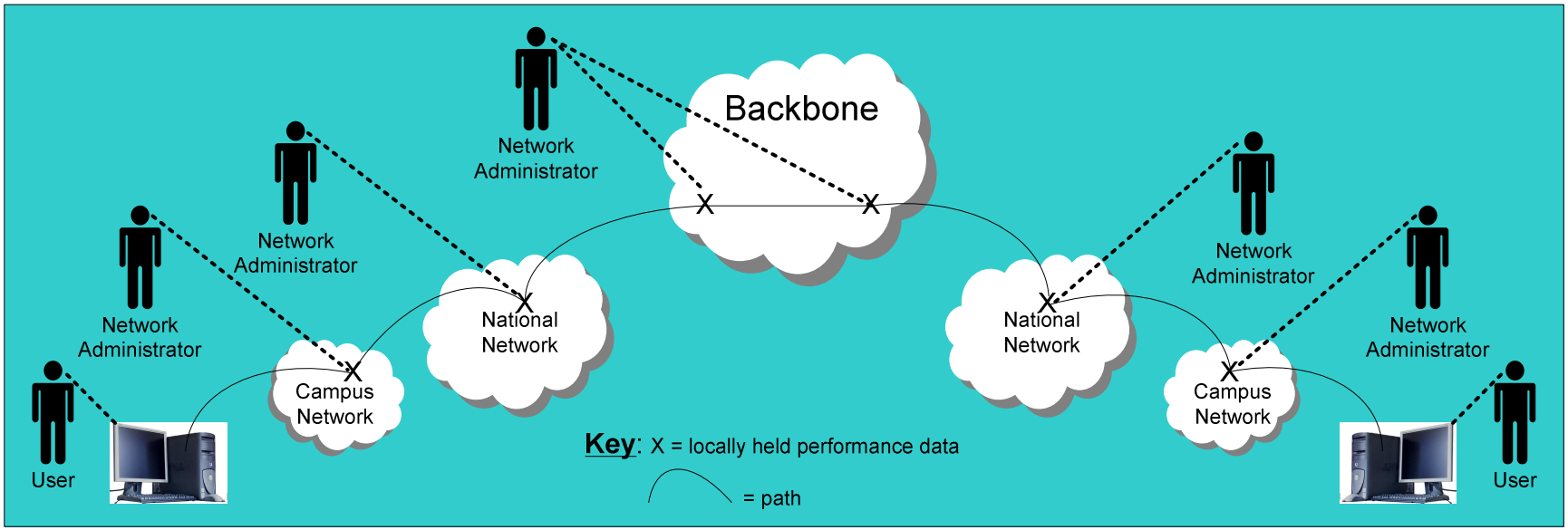
Applications utilise cross-domain paths.

Problem solving difficult across administrative domains.

WHY perfSONAR? (2)

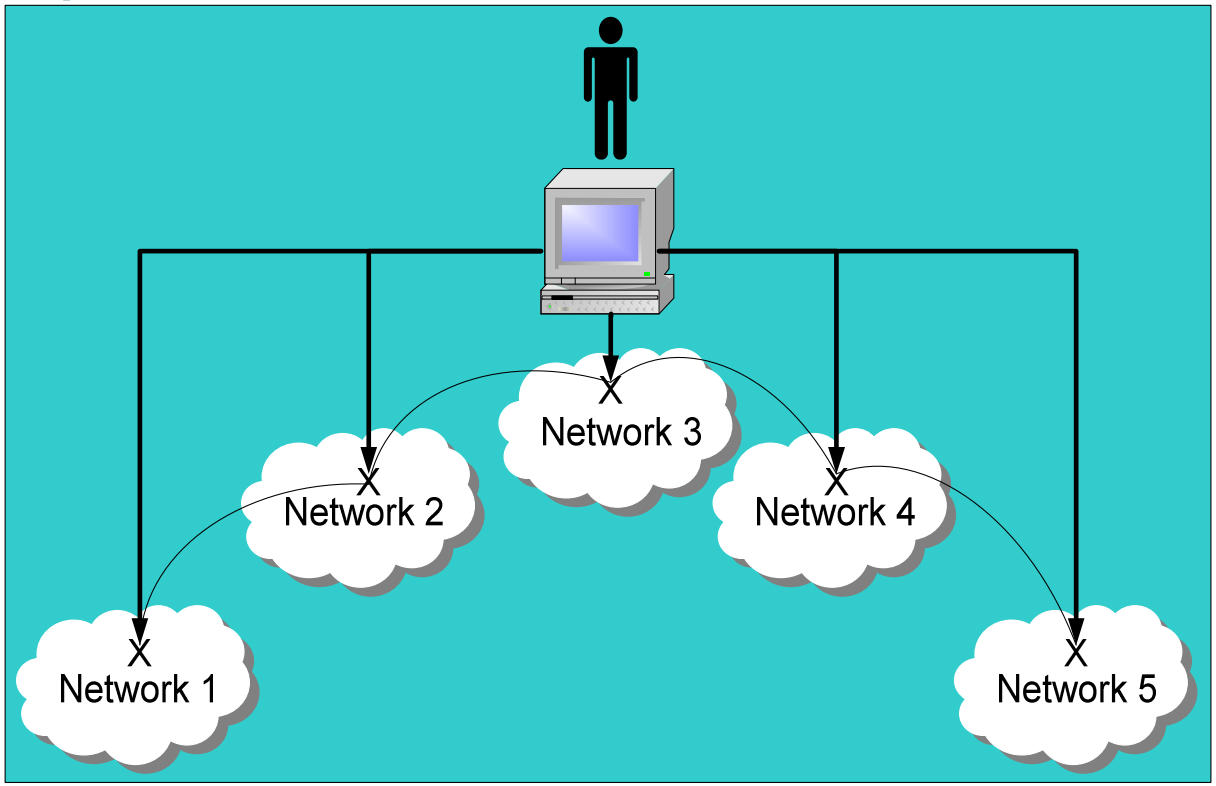
Problem: performance data fragmented / hard to access.

Multi-domain problem diagnoses difficult and slow.



THE perfSONAR VISION

Administrators can identify problems over multi-domain paths.

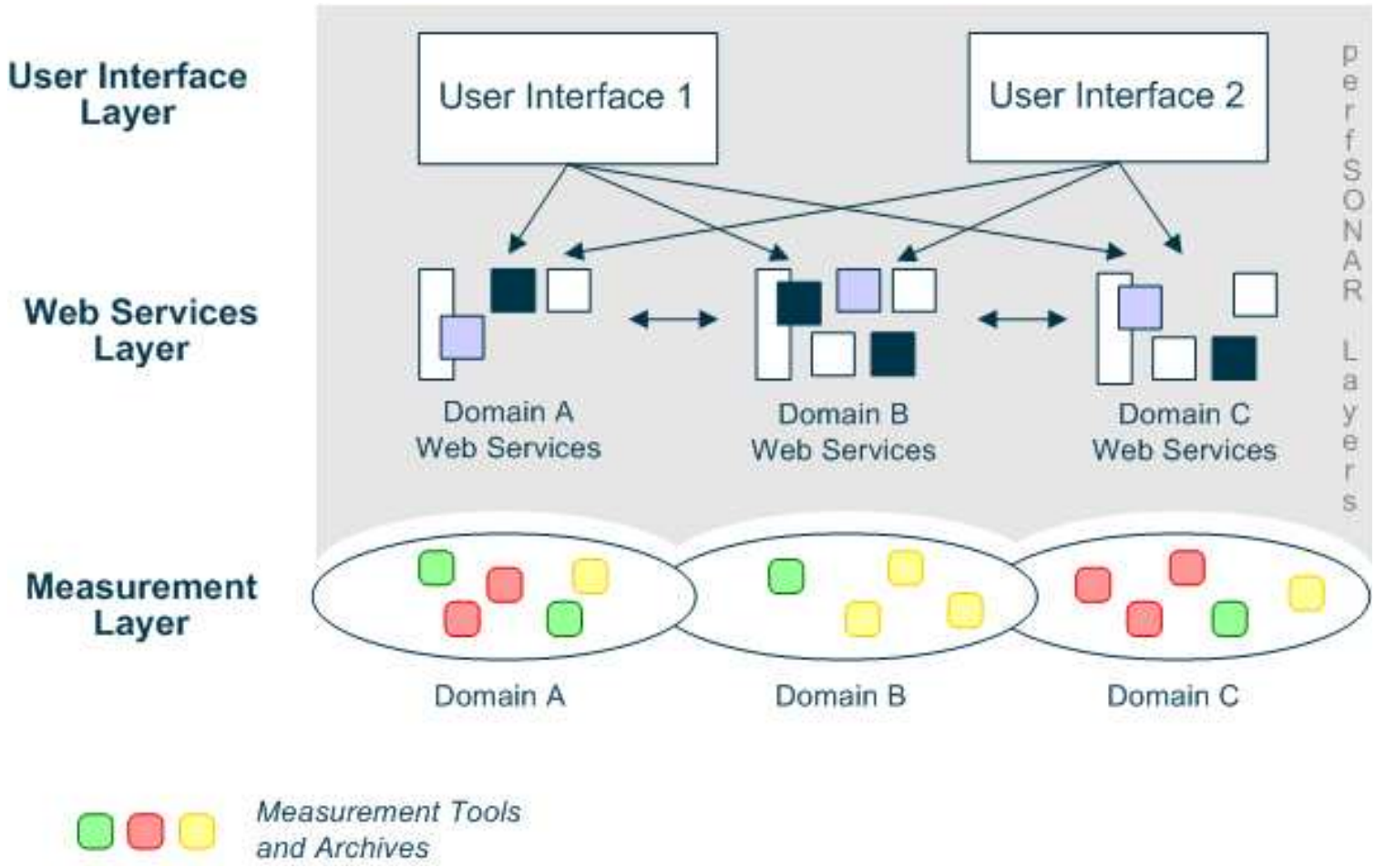


BENEFITS FOR END-USERS

Optimising user experience by delivering:

- Faster, more reliable end-to-end network service.
- Quick identification of network-related application issues.
- Minimised waiting time for resolution of network problems.

HIGH LEVEL VIEW OF ARCHITECTURE



perfSONAR USER INTERFACES

Number of different perfSONAR user interfaces available:

- Applications.
- Web-Based.

Different ways of using infrastructure and presenting data.

Different user focus (micro vs. macro view).

Can create own client tuned to your needs.

QUICK STATUS UPDATE

- All sites are monitoring all metrics
  - UK-RAL only needs to enable the firewall on out direction for bandwidth measurements
- GPS
  - CH-CERN: no plan to install because hard to get the cabling on the same room of the box
  - IT-INFN-CNAF: the splitter was installed and GPS is working
  - FR-CCIN2P3: still on tender, collecting the quotes for installation
- Improving visualization tools based on RFE and feedback