Linux experience at DIA
using open source software

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DIA Uni Roma TRE

Current Situation

department

    DIA $\subset$ engineering $\subset$ university "Roma TRE"

hardware

    mainly of-the-shelf 32bit Intel computers

software

    most clients Windows (2000 and XP Pro)

    some clients MacOS X, Mandrake, RTLinux, Suse

    most servers RedHat, Debian

IBM

- 1 server pSeries (AIX for CATIA)
- 3 server xSeries (RedHat)
- 8 workstation IntelliStation M Pro (Gentoo)

Conventional Use

message related

- sendmail ⤳ postfix
- majordomo ⤳ mailman
- imap, inn, pop (SSL)

web related

- LAMP = Linux + Apache + mySQL (ODBC) + PHP
- some CGI shell scripts, some Perl, some Python
- postgreSQL (mnogosearch alternative for htdig)

other services

- openLDAP directory
- DHCP, DNS, NTP
- (NFS, irc, squid, tftp)

CASPUR Support

- AFS cell vn.uniroma3.it

- RedHat based solution (enterprise server 3)

- integrated ntpd for centralized time

- kaserver ($\approx$ Kerberos4)

- NIS for user data

- most mail and personal web pages are there

AFS history

1. pioneered at Carnegie Mellon University

2. then Transarc Corporation (now IBM Pittsburgh Labs)

3. IBM made source copy available as OpenAFS

Advanced Use

certificates

- openssl generated, some stored on USB eTokens
- TLS for mail and mail relay permission
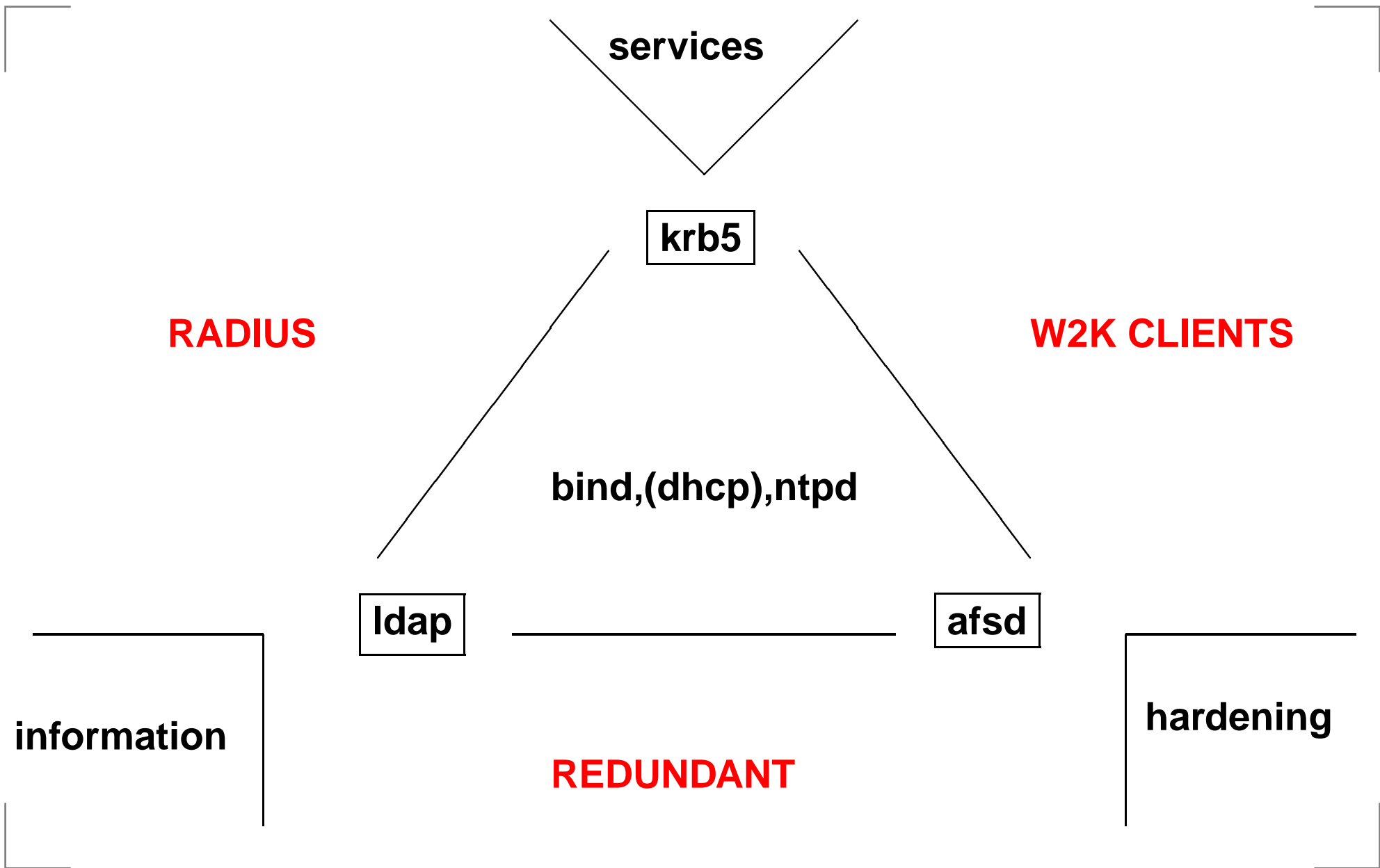- SSL for web auth and DAV access permission

AFS cell dia.uniroma3.it

- Debian (stable) based solution
- ntpd + MIT Kerberos5 + LDAP (name service switch)
- ssh with Kerberos5 support

AFS clients

- PLM laboratory as cluster of workstations on Gentoo
- PC lab (aula CAMPUS ONE) KNOPPIX based
- machine cloning via PXE boot of some minimal Linux

Cell Architecture

services

krb5

RADIUS

W2K CLIENTS

bind,(dhcp),ntpd

ldap

afsd

information

hardening

REDUNDANT

Next Steps

Kerberos5 authentication for more services

Mail scanning and filtering

Zope testing for workflow

- request for feedback on Linux

- student stages at DIA:
  general RADIUS with Kerberos and LDAP
  Linux service files in AFS, Kerberized services
  Windows SSO, Kerberized clients, LDAP clients

- some AIX hints?