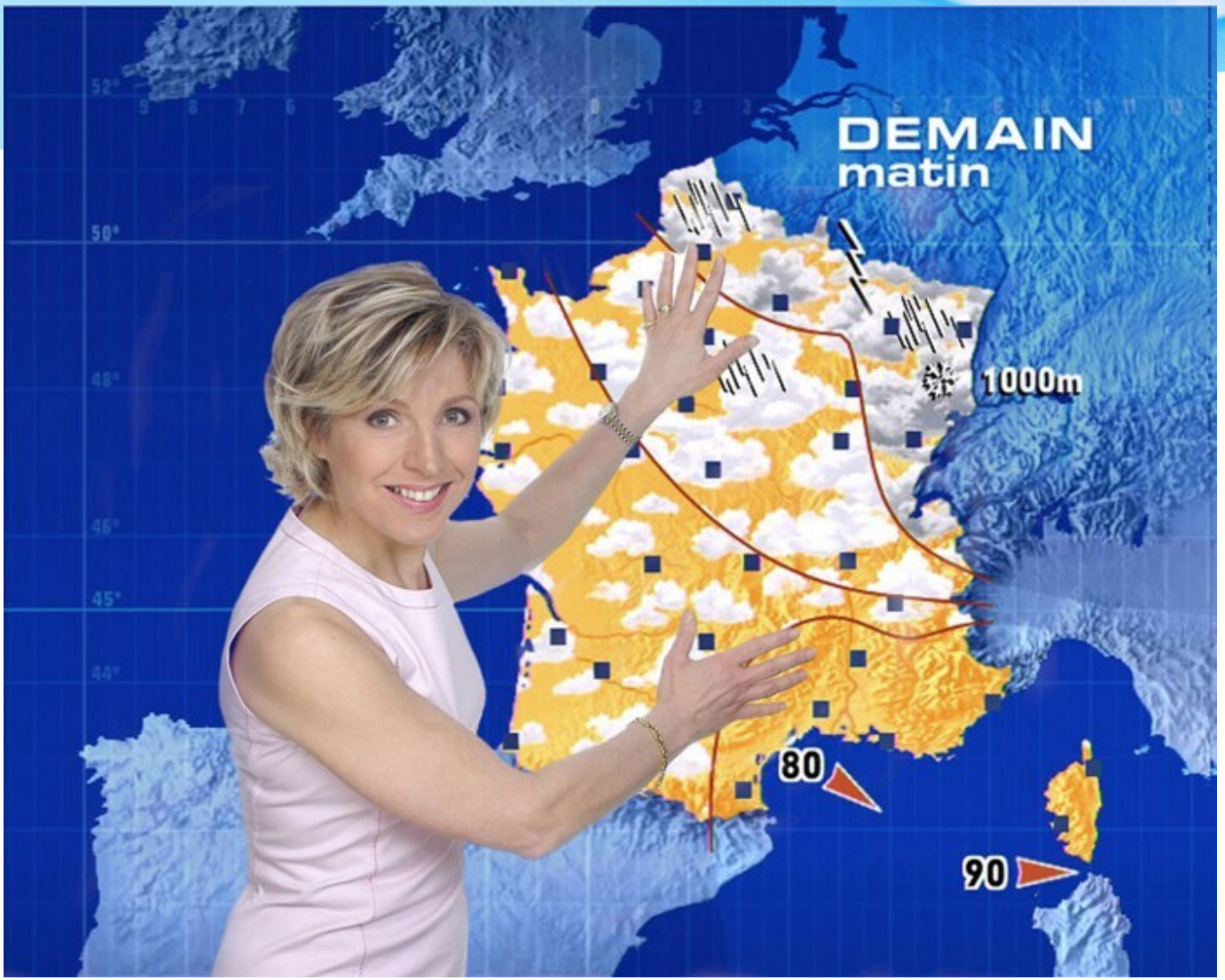
weatherwall

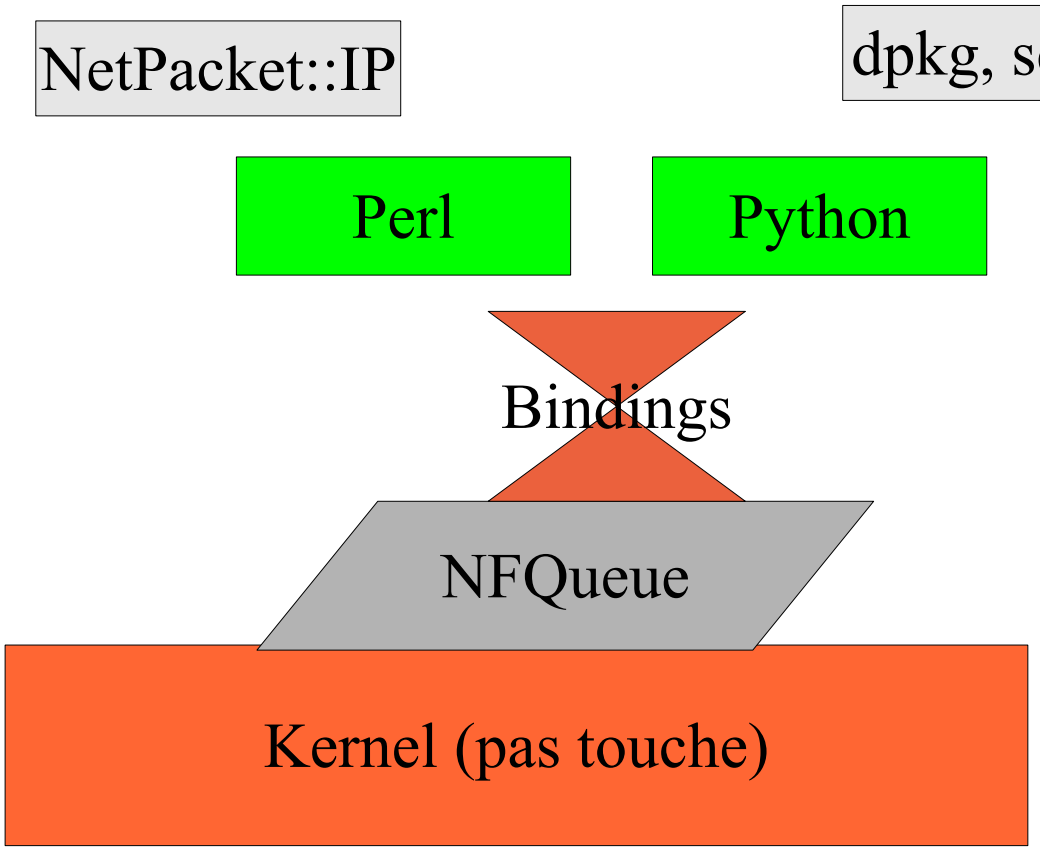
Make Firewalls fun again
(and, no, they are not dead)

Pierre Chifflier <chifflier@inl.fr>

What's this ?



Schéma


NetPacket::IP
dpkg, scapy
Perl
Python
Bindings
NFQueue
Kernel (pas touche)

Le code

```
my $ip_obj = NetPacket::IP->decode($payload);

my $record = get_city($ip_obj->{dest_ip});

my $city = $record->city;

my $weather = get_weather($city);

if ($weather->{conditions} =~ m/[Rr]ain/
    and $city neq “Rennes”)
{
    $payload->set_verdict($nfqueue::NF_DROP);
    return 0;
}
$payload->set_verdict($nfqueue::NF_ACCEPT);
```

Le code

```
my $ip_obj = NetPacket::IP->de ode($payload);

my $rec   d = get_c         {dest_ip});

my $city

my $

                                       in/
    a
{
    $pay      se  erdic ($nfqueue::NF_DROP);
    retur   0;
}
$payload->set_verdict($nfqueue::NF_ACCEPT);
```

Dès 2010 dans toutes les machines à voter !

Le truc sérieux

- Bindings de haut niveau sur nfqueue
- CMake, swig
- Licence GPL
- Layer7 en 10 lignes (ou presque)
- A vous de trouver

```
if ($tcp_obj->{flags} & NetPacket::TCP::PSH) {
    if ($tcp_obj->{dport} == 80) {
        _check_http($tcp_obj->{data})
    or
return $payload->set_verdict($nfqueue::NF_DROP);
  }
}

my @http_checks = (
    "^GET ",
    "^User-Agent",
);

sub _check_http
{
    my $data = shift;

    foreach my $check (@http_checks) {
        return 0 unless ($data =~ /$check/moi);
    }

    return 1;
}
```

Questions ?

- NetFilter Workshop http://workshop.netfilter.org/2008
- Le site : http://software.inl.fr//trac/wiki/nfqueue-bindings
- Wolfotrack : http://software.inl.fr/trac/wiki/Wolfotrack
- Le blog : http://www.wzdftpd.net/blog/
- Remerciements :

Pierre Chifflier <chifflier@inl.fr>