



Using the GNU Gatekeeper to manage your video conferencing

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<http://www.gnugk.org>



History

- started in 1999 as "OpenH323 Gatekeeper"
- now called "GNU Gatekeeper", short "GnuGk"
- comes bundled with many Linux distributions
- wide range of users
 - small and medium telcos
 - prepaid / postpaid calling
 - videoconferencing
 - online training
 - ...



Features I

- OpenSource software (GNU Public License)
 - no license fees
 - full source code
- H.323 v6
- firewall / NAT traversal
 - H.460.18 / H.460.19
 - H.460.23 / H.460.24 (due for approval in November)
 - own method GnuGk to GnuGk (similar to H.460.17, but older)
- gatekeeper clustering: neighbors, alternates
- call failover



Features II

- H.235 security
- extensive call routing capabilities
- runs on Linux, Windows, Solaris, BSD, MacOS X
- TCP interface ("status port")
- telephony features
 - call transfers
 - MakeCall
 - "virtual queues" for hunt groups and call-center functionality
- combines features of gatekeeper, border controller, traversal server and proxy server



Configuration

- text file
- SQL database
 - ODBC
 - MySQL
 - PostgreSQL
 - Firebird
 - SQLite
- mixture



A sample configuration

```
[Gatekeeper::Main]
```

```
Fortytwo=42
```

```
[RoutedMode]
```

```
GKRouted=1
```

```
EnableH46018=1
```

```
AcceptUnregisteredCalls=1
```

```
CallSignalPort=1720
```

```
[RoutingPolicy]
```

```
default=explicit,internal,dns
```

```
[GkStatus::Auth]
```

```
rule=explicit
```

```
127.0.0.1=allow
```

```
default=forbid
```



System requirements

- a server
 - Linux, Windows, Solaris, *BSD, MacOS X
- 1 GB of RAM is plenty
- CPU and network throughput determine max. concurrent calls
 - use Gigabit network cards



Performance (Examples)

- load comes from media (RTP video data) proxied through GnuGk
- examples for single server (dual core, 2 GHz)
 - 500 concurrent voice calls
 - 100 concurrent video calls @ 384 kbps (50% proxied)
 - 15 concurrent video calls @ 2 Mbps



What is missing ?

- "there is nothing to click on..."
 - many users put a small CGI script on top of the TCP interface
- only H.323

License restrictions (GPL)



- May I use it commercially ? **Yes!**
- May I sell services using it ? **Yes!**
- May I sell product that bundle it ? **Yes!**
 - please give credit
- May I modify it ? **Yes!**
 - please send in your modifications
 - check the patent license terms
- May I keep my extensions private ?
 - use the external interfaces to connect
- May I pretend I wrote the gatekeeper myself ? **No!**



Open Interfaces

- TCP API ("status port")
 - status events
 - commands
 - open to non-GPL applications
 - "virtual queues"
- SQL
 - authentication / routing / accounting
- Radius
 - authentication / routing / accounting

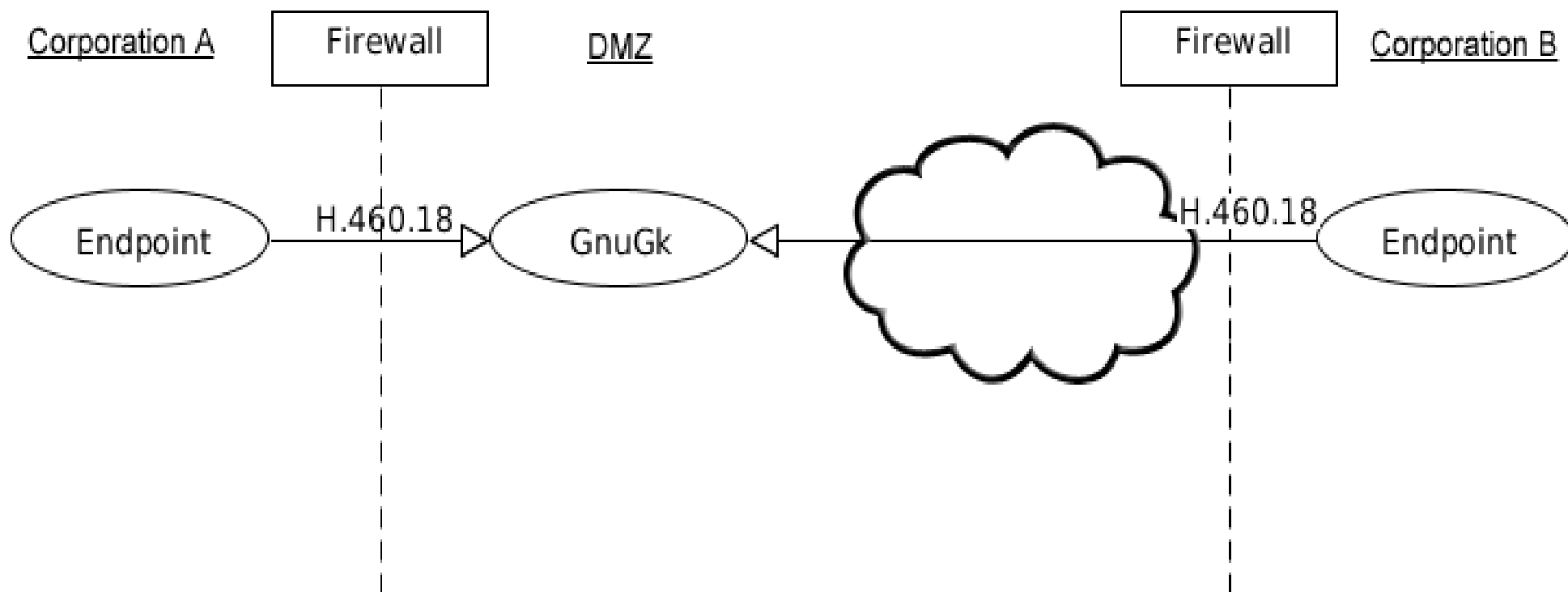


Example deployment

- On-line training at SetFocus
 - training courses on Microsoft topics
 - "on-line" and "off-line" students in the same class
 - Polycom MCUs
 - students get sent a video device
 - ~100 remote students each day
 - students connect to GnuGk using H.460.18/.19
 - monitoring application using ASP.Net



GNU Gatekeeper 2.3.0



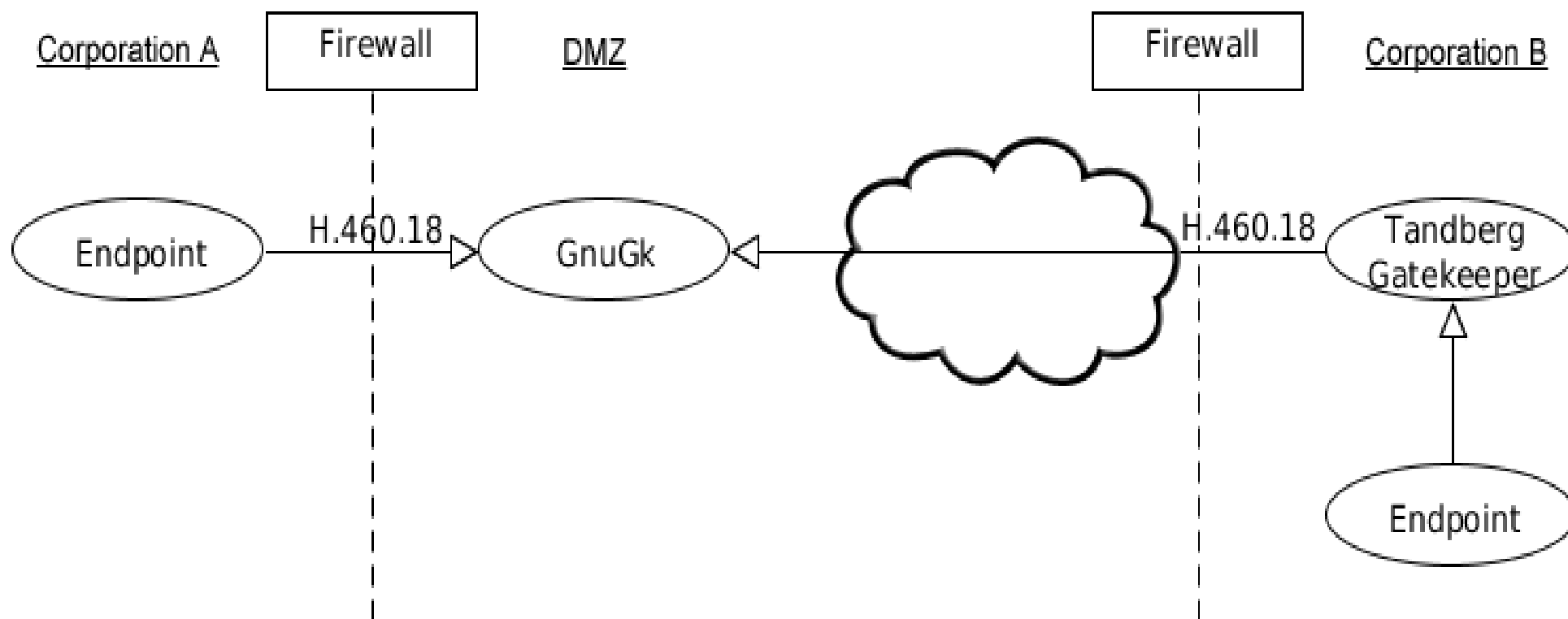


What is next ?

- GnuGk 2.3.1
 - gatekeeper-to-gatekeeper H.460.18/.19 ("traversal zones")
 - fastStart with H.460.18/.19
 - H.460.23/.24 support (updated)



GNU Gatekeeper 2.3.1





Thank you!

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