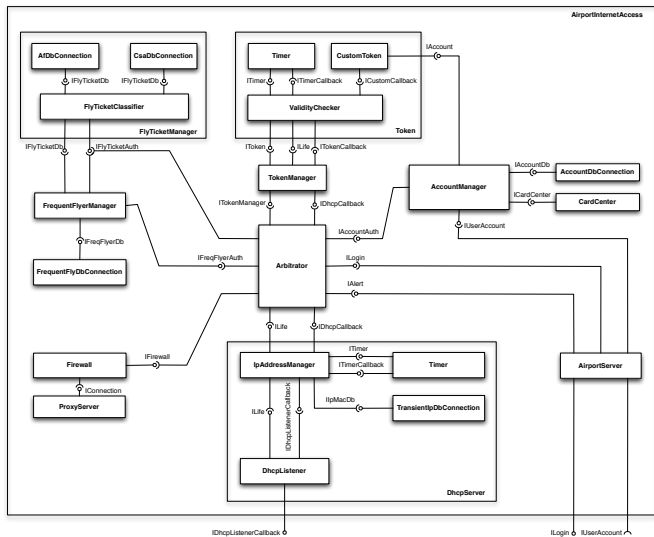


Airport Internet Access Example

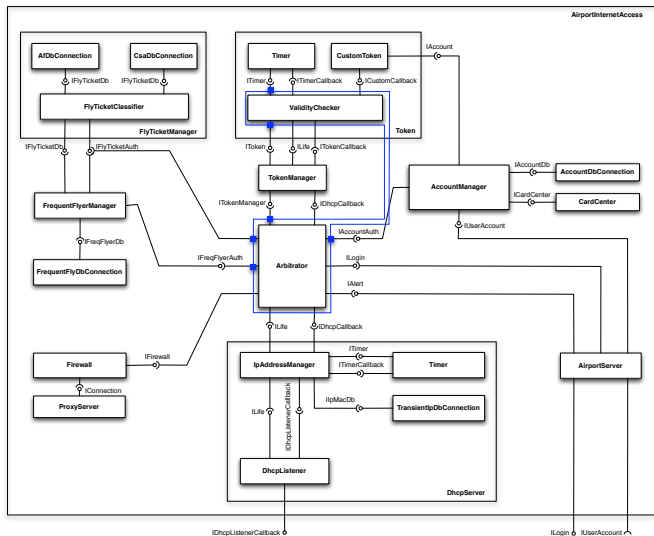
Abdelhakim Hannousse

April 28, 2010

Airport Internet Access Example: Fractal Component Architecture

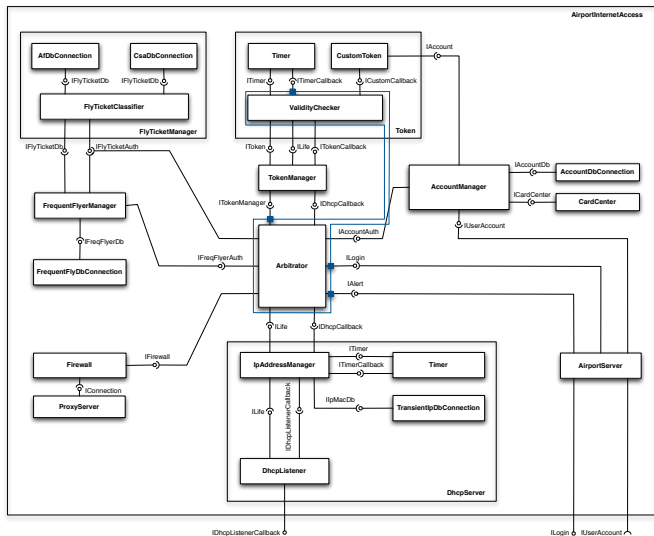


Airport Internet Access: SessionManager View



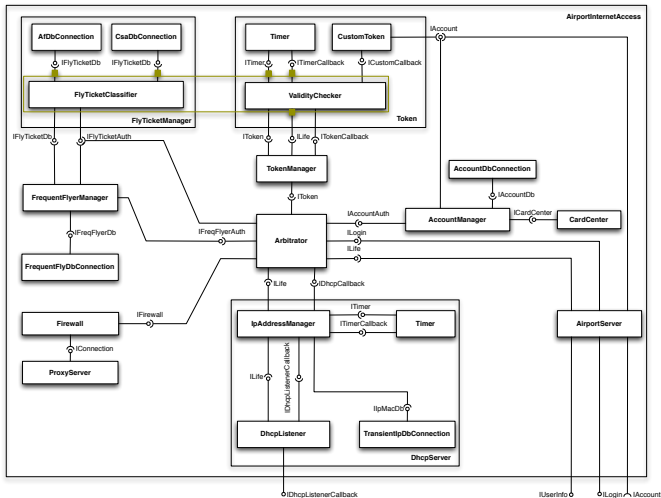
A₁: Offers free internet access promotions to clients according to their categories.

Airport Internet Access: SessionManager View



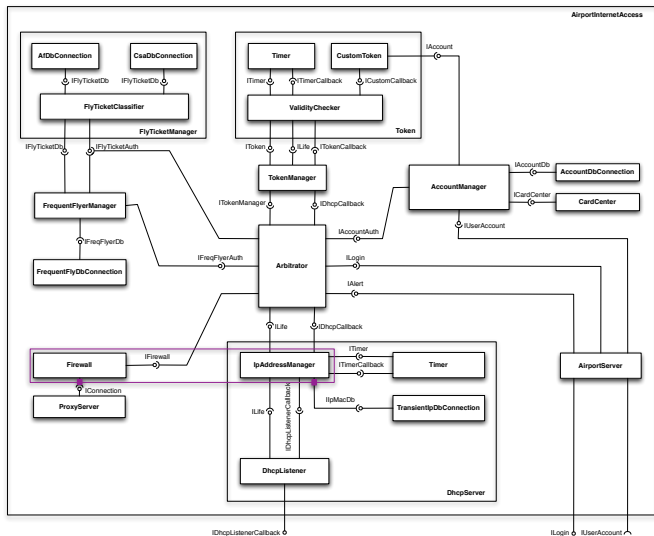
A₂: Inform clients before 5 min of the termination of their current sessions.

Airport Internet Access: SessionControl View



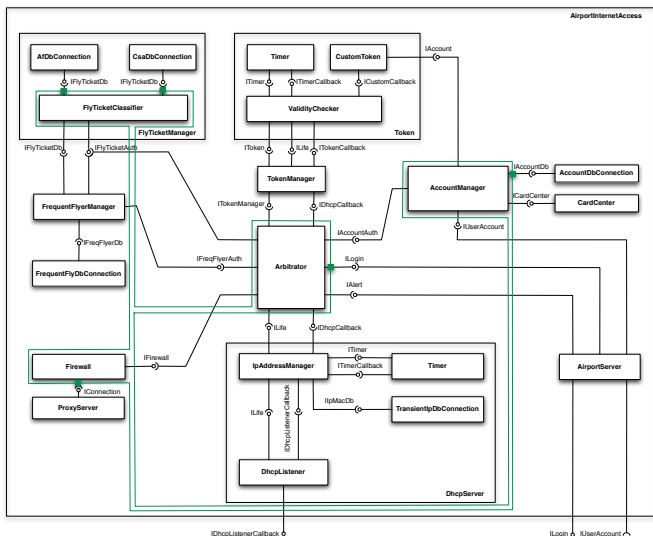
A₃: Terminates a session when the flight of its client is taking off.

Airport Internet Access: IpInternetAccess View



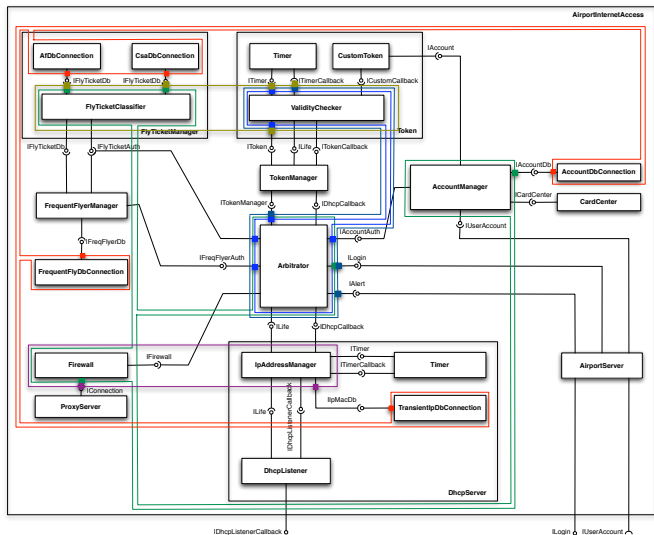
A₄: Blocks P2P applications access for new sessions when the number of active sessions reaches 100.

Airport Internet Access: ConnectionRequest View



A₅: Uses different access mode according to the clients age.

Airport Internet Access: Views Crosscutting



Airport Internet Access: Conflicts

- **A₁ vs. A₂:**

The former multiplies the validity time for business class clients. The later subtract 5 min from the validity time to inform clients before sessions terminations.

Solution:

Seq A₁ A₂

Airport Internet Access: Conflicts

- **A₄** vs. **A₅**:

The former allows full internet access for business clients and limited access for minor clients. The later blocks P2P applications access when the number of active sessions exceeds 100.

Solution:

Cond *isBusinessClassClient* A₄ (Seq A₄ A₅)

Airport Internet Access: Conflicts

- **A₁** vs. **A₃**:

The former allows clients to connect for more times for free when promotions are available. The later terminates sessions when their corresponding flights are taking off.

Solution:

Until $A_3 A_1$

or

matches [*getTime()*!; *setTime(0)*!] $A_3 A_1$

Airport Internet Access: Conflicts

- **A₂ vs. A₃:**

The former informs clients before sessions termination. The later terminates sessions when their corresponding flights are taking off without alert.

Solution:

For A_2 and A_3 we need to discuss.