

# Firewall Virtualization for Grid Applications BOF

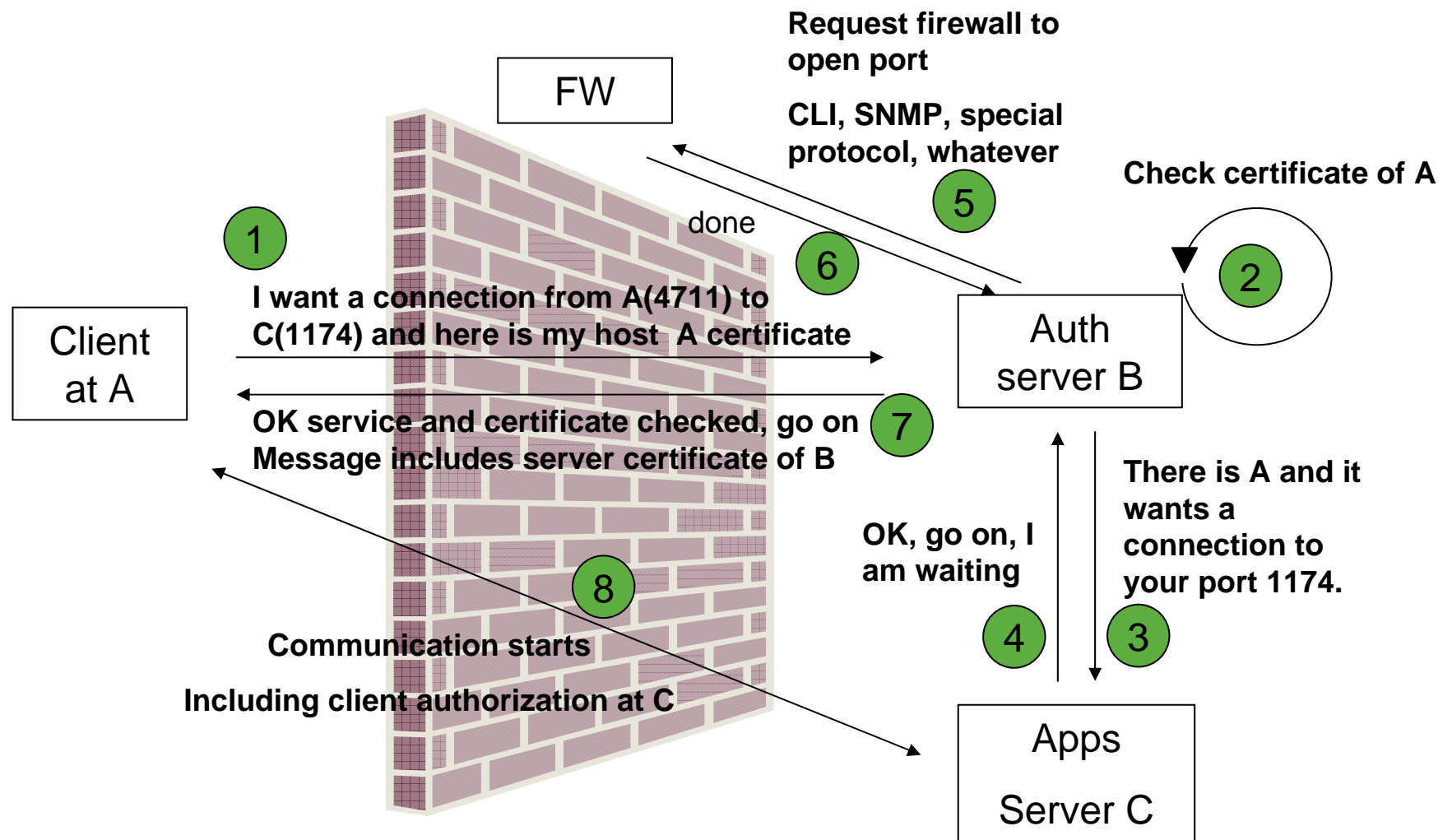
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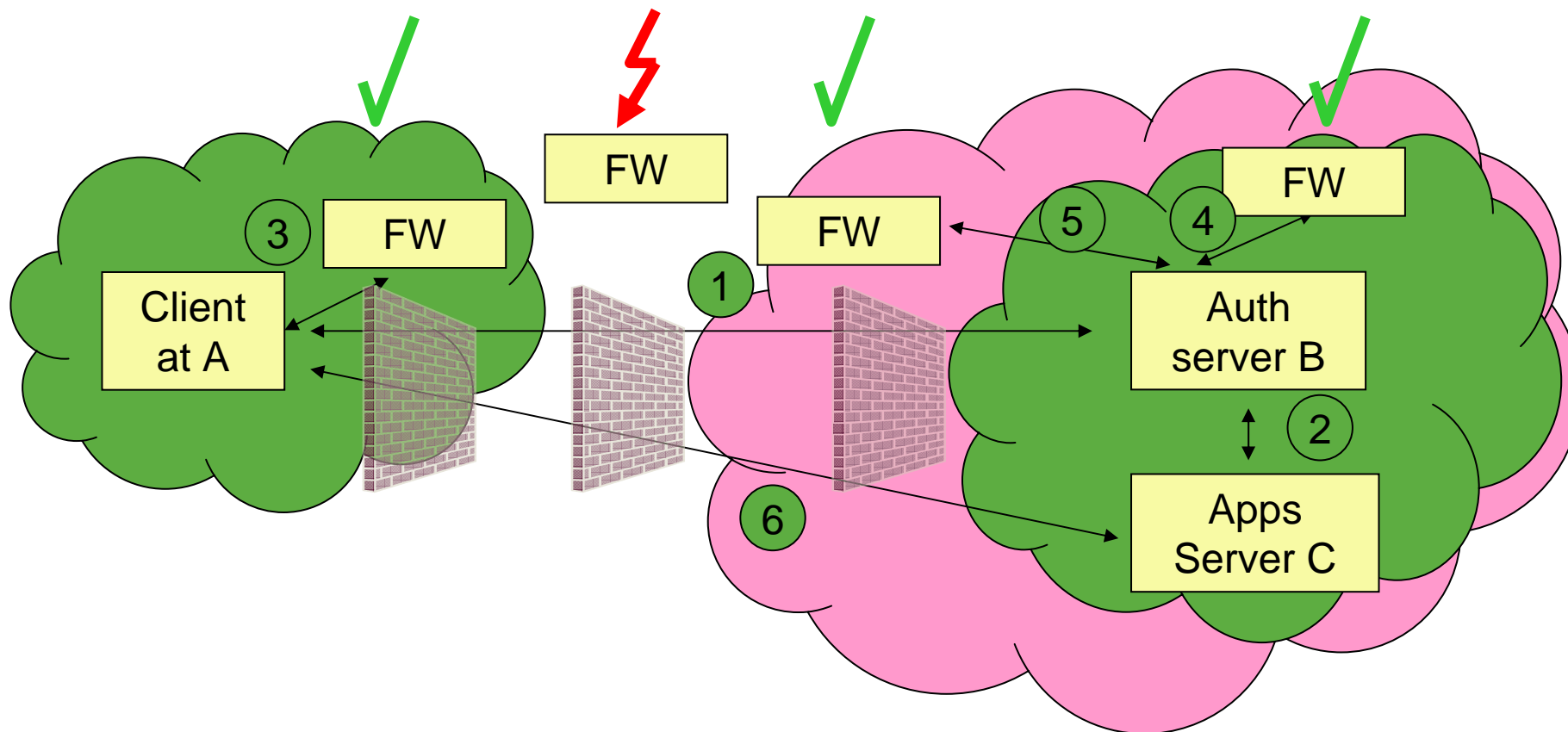
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- Control Plane (ex. Web Services) vs. the Data Plane
  - CP using port 80 works seamlessly but Data Plane gets blocked
- Manual vs. Automated
  - Document the ports per middleware, grid protocol deployed or authorize the CP to provide a level of automation
- Static vs. Transient
  - Related issues as above

- Make middleware and network resources known to each other
  - Grid middlewares should know about communication path.
  - network resources should be opened dynamically.
- End-to-end applicability
- Local authorization/authentication
- Independence of the FW vendor/implementation
  - Capabilities may be different





## Group Abbreviation:

➤ fvga-wg

## Group Name:

➤ Firewall Virtualization for Grid Applications  
- Working Group

## Area:

➤ Infrastructure

- Grid Computing
  - vision of applications having on-demand, ubiquitous access to distributed services running on diverse, managed resources like computation, storage, instruments, and networks among others, that are owned by multiple administrators.
  - dynamic, seamless Virtual Organizations (VOs) using distributed resources
  - application driven transport privileges from the network
  - pre-existing security policies within the network (firewalls, NAT, ALG, VPN-GW)
  - administrator/manual intervention to work.
- fi-rg has documented use cases & issues that Grid applications face (GFD.83)
- fvga-wg
  - will leverage the application requirements from FI-RG
  - standardize a set of service definitions for a virtualized control interface into firewalls and other midboxes allowing grid applications to securely and dynamically request application/workflow-specific services



- Produce a standard set of service definitions that provide an abstract interface for an authorized grid application to specify its data-path traversal requirements:
  - Port opening/closing service
  - Data Plane and Service Plane interactions
  - Requests from within and outside the security domain
- A set of security recommendations surrounding the application interacting with the Firewall service at the control and data plane including AAA of the service requests
- A best practices document for the network-administrator and a grid-administrator to understand the architecture and security implications of this deployment including:
  - Deployment scenarios and use-cases
  - Interactions between various Grid components
  - Examples of successful prototype deployments
- The resulting standards from the working-group will enable Grid-Middleware/Network services developers to implement a virtualized firewall service, integrate with Grid-middleware security and provide a dynamic firewall service to the Grid applications.
- The working group will ensure that it is compatible with the OGSA architecture and leverages the security infrastructure and standards for Grid Applications.

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|---------|---|
| OGF23:  | Charter discussion and group volunteers   |
| OGF24:  | Discussion on requirements to define the standardized service interface for virtualized Firewalls   |
| OGF25:  | Draft on Firewall-Virtualization-Service<br>Discussion on Security, AAA and Grid-Security aspects   |
| OGF26:  | Firewall Virtualization-Service draft version 2<br>First draft on Security recommendations (v1) for FVGA  |
| OGF27:  | Finalized Firewall Virtualization-Service draft<br>Security Recommendations v2<br>Two implementations and demonstration<br>Discussion on Best Practices draft |
| OGF28:  | WG-Last-Call for Firewall Virtualization-Service<br>Final version of Security Recommendations<br>First draft on Best Practices                                |
| OGF 29: | WG-Last-Call Security Recommendations<br>Finalize Best Practices draft  |
| OGF 30: | WG-Last-Call Best Practices Draft.  |

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# Questions and discussion