CGL project

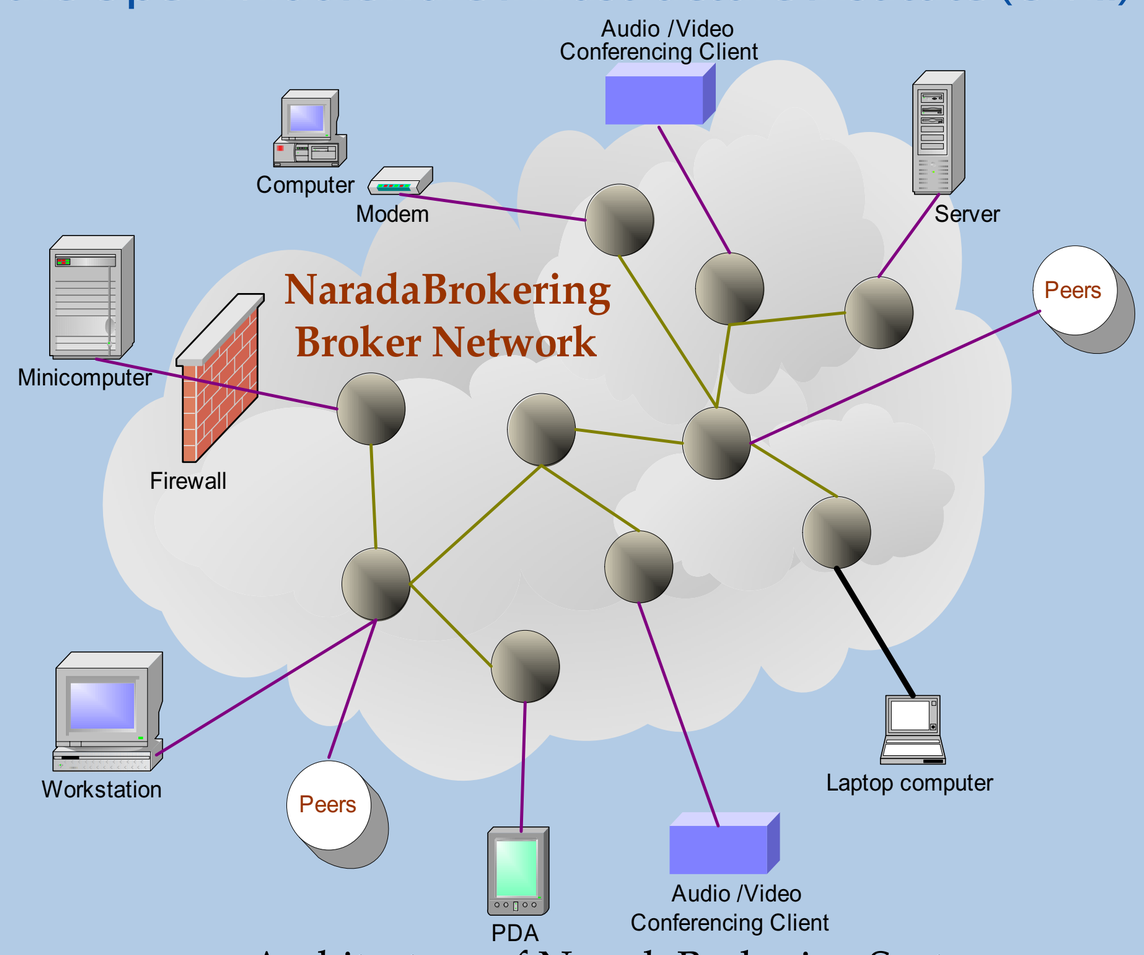
# NaradaBrokering

## Distributed Messaging Infrastructure

www.naradabrokering.org

## Introduction

NaradaBrokering is an open-source technology, based on the publish/subscribe paradigm, supporting a suite of capabilities for reliable/robust and flexible messaging. This middleware infrastructure is designed around a scalable distributed network of cooperating message routers and processors. NaradaBrokering is funded in part by the United States National Science Foundation (NSF) and the Open Middleware Infrastructure Institute (OMII) of the United Kingdom.




Architecture of NaradaBrokering System

NaradaBrokering supports: High Performance Collaborative Environments, and Core Web and Grid Capabilities.

NaradaBrokering Messaging Infrastructure

### Current Capabilities

**Quality of Services and Grid/Web Application Support**

- *Reliable Delivery*: Robust and exactly-once delivery of messages in the presence of failures
- *Ordered Delivery*: Producer Order and Total Order over a message type. Time Ordered delivery using Grid-Wide NTP-based absolute time
- *Recovery and Replay*: Recovery from failures and disconnects. Replay of messages while preserving time-spacing between successive messages. Buffering services to reduce Jitter.
- *Message Payload Options*: Compression and Decompression of payloads. Fragmentation and Coalescing of payloads.
- *Grid Application Support*: NaradaBrokering enhanced Grid-FTP. Bridge to the Globus Toolkit-3.
- *Web Services*: WS-Eventing, WS-Reliable Messaging and WS -Reliablility
- *Security*: Secure end-to-end delivery of messages

### Current Capabilities

**Transports and Publish/Subscribe**

- *Multiple Transport Support*: Transport protocols supported include TCP, Parallel TCP streams, UDP, Multicast, SSL, HTTP and HTTPS
- *Subscription Formats*: Subscription constraints can be expressed as Strings, Integers, XPath queries, Regular Expressions, SQL and comma-separated tag=value pairs
- *Messaging Related Compliance*: Java Message Service (JMS) 1.02b compliant, WS-Eventing support.

### Forthcoming Features

**Redundancy and Failure Resilience**

Support for fault-tolerant replicated distributed stable storages

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