

# Project Proposals and Specifications

As of June 26th 2019 we've adopted a [Lightweight RFC Process](#). If you are considering making a proposal yourself, it is encouraged to follow that process and use the associated [RFC template](#).

To have discussion of proposals in a single place, discussion should be kept on the [mailing list](#).

## RFC Template

### Under Discussion

- Introducing a Geode Linking Module
- Addition of Manifest File with "Dependent-Modules" Attribute to All Geode Projects
- Creating Geode Components Using ComponentManagementService
- ServiceResult and Functional Result Handling
- Dynamically Loading/Unloading Features
- Allow multiple trust and key store files to be configured for a Geode cluster
- Server-Side Thread Pooling for Client-Server TLS
- Get locators internal host addresses for clients in same subnet
- Service Loader interface for Data Serializable Fixed IDs
- Introducing VisibleMembers attribute
- Improve data inconsistency in replicated regions
- Customization of ResourceManager's JVM Interaction
- LiveServerPinger improvements
- Improve possible duplicate logic for secondary buckets in WAN
- Migration from springfox to springdoc
- Introduce monitoring of async writer thread
- Enhancement of start gw sender with clean-queue
- Enhancement of backup disk-store command

### In Development

- De/un-deprecate IndexType ENUM
- Certificate Based Authorization
- Replace UDP messaging for membership with TCP
- Logging to Standard Out
- Cluster Management Service
  - Cluster Management Service Rest API
    - 1.10.0 Management REST API - experimental
    - 1.11.0 Management REST API - v1
    - 1.12.0 Management REST API - v1
    - 1.13.1 Management REST API - v1
    - 1.14.0 Management REST API - v1
    - 1.15.0 Management REST API - v1
  - Cluster Management Service Java Client
  - Cluster Management Service CLI Client
  - For extension developers: How to Add Elements Managed by Cluster Configuration Service
  - Guidelines for Cluster Management service
- WAN Configuration for an Ingress Proxy
- Geode Redis API Improvements
- Support for clear operation on partitioned region
- Persist gateway-sender startup-action within Cluster Configuration
- ClassLoader Isolation
- Management of threads stuck for a long time in Geode

### Icebox

- Usability
  - Client Usability Improvements
  - Usability and API Enhancements Requirements
  - Usability and API Enhancements Spec
- JVSD
- HDFS Persistence Store
- Geode Modularization Proposal (work in progress)
- Pluggable Cache Persistence and Overflow Stores
  - Proposal for pluggable cache stores
- Function Service Usability Improvements
- Custom External Type Definition Proposal
- Pluggable Data Converters
- Proposal for Geode Modularization
  - Geode Modularization - An approach
- Upgrading to Lucene 7.1.0
- Refactoring Proposals
- Allowing more distributed-system-ids than 255 (work in progress)

- Support PDX objects as binary data, not JSON, in the new protocol (work in progress)
- Replace singleton PoolManager with ClientCache scoped service
- Public API to Add Endpoints to Geode HTTP Server
- [Icebox] Geode dependency update process
- Collecting Framework Dependencies into single Gradle Dependency
- Add option to allow newer Geode clients to connect to older Geode servers
- New Client Server Protocol
  - Message Serialization and Transmission
  - Implementation Phases and Milestones
  - High Level Goals
  - Work In Progress
    - Server Architecture
    - Protocol Message Examples
    - Geode Data Types
    - RPC framework evaluation
  - Road Map, Proposed
  - How To Create a Geode Client in 10 Easy Steps
    - Delimiting Protobuf Messages
  - Protobuf Protocol
    - Message Structure and Definition
      - Error Codes
      - Connection Operation Message Definitions
      - Version Identification
      - Region Operation Message Definitions
      - Locator Operation Message Definitions
  - Protobuf Value Encoding Scheme Proposal

## Implemented

- Replacing JGroups 2.2.9
- Management and Monitoring
  - Management API
  - Management and Monitoring Requirements
  - Proposed MBeans
  - Diagrams of Proposed MBeans
  - MBean Federation Spec (still formatting from orig src)
- Logging Spec
- Off-Heap Memory
  - Off-Heap Annotations
  - Off-Heap Memory Spec
- Automated Rebalancing
- Sept 2015 Website Refresh proposal
- OQL Aggregate functions and UDA
- Geode Redis Adapter Proposal
- Revised SSL properties
- Text Search With Lucene
  - Text Search Aggregation Options
- Lucene Index Creation on Existing Region
- Configuration Persistence Service
- Lucene Text Search on Nested Object
- Proposal for supporting default SSLContext
- Simple JDBC Connector
- Lightweight RFC Process
- Instrumenting Geode Code
- Controlling event dispatch to AsyncEventListener
- Upgrade Spring version from Spring 4 to Spring 5.x
- Finer grained security
- Move membership code to a separate gradle sub-project
- OQL Method Invocation Security
- Move gfsh code to a separate gradle sub-project
- Group Configuration in Management Rest API
- Shipping patch releases
- Client side configuration for a SNI proxy
- Allow same host and port for all gateway receivers
- Gw sender to deliver transaction events atomically to receivers
- Add C Bindings to Native Client Library
- Redundancy Gfsh Commands
- Introduction of SSL Parameter Extension
- Make Cluster Management Service(CMS) Thread Safe
- New option for serial gw sender dispatcher threads start
- Avoid the queuing of dropped events by the primary gateway sender when the gateway sender is stopped
- Introduce Codeowners file
- Introduction of new command "alter gateway-sender"
- Make key and trust stores reload automatically upon change
- Geode Compatibility with Redis data sharding and cluster changes
- Geode Command to replicate region data from one site to another connected via WAN
- Introduction of ClassLoaderService into Geode
- On Demand Geode Authentication Expiration and Re-authentication

- Integrate Geode's redis API with the security manager
- Versioning Extension
- Enhance Off-heap memory fragmentation visibility
- Improvements on client Function execution API

## Unknown State

- Statistics
  - Statistics API
  - List of Statistics
- Notes for rolling upgrade updates
- Function Service Refactor - Removal of static-ness and splitting of client and server-side FunctionService
- Proposal for Gfsh Feature Flag
- Lucene built-in QueryProvider for user to run complex search in gfsh
- WAN Gateway Sender Callback API & Dead-letter queue example implementation

## Dropped

- [DROPPED] Client side configuration for a SNI proxy
- Make Geode's Working Directory Configurable
- ServiceRegistry
- Throttling of OQL queries