## RealmMUD – Startup Process

Revised 04/24/2013

### Realm

1. Spins up Game singleton
2. Passes configuration data to the singleton

### Game

1. Spins up Singletons one-by-one and calls OnInit() on each (passes relevant data, such as other Manager references and configuration values).
2. Throws an OnGameInitialize event through EventHandler

### LuaManager

1. Creates a LuaVirtualMachineContext

### LuaVirtualMachineContext

1. Spins up the number of indicated Virtual Machines

Game

1. Registers LuaFunctions and Enums with the LuaFunctionRepository

DatabaseManager

1. Creates a DatabaseServerContext and ProcedureLoader

DatabaseServerContext

1. Spins up a number of DatabaseServers

DatabaseServer

1. Gets a ProcedureRepository from the ProcedureLoader

StaticDataManager

1. Creates Loaders and stores them in the LoaderRepository
2. Calls Load on the StaticDataLoader

StaticDataLoader

1. Loops all Loaders in the LoaderRepository and calls Load()

Loader

1. Creates and submits a database Transaction

DatabaseManager

1. Takes the Transaction and submits it to a Random DatabaseServer

DatabaseServer

1. Handles the Transaction and submits it to the Sql Database
2. OnComplete processes and performs a callback to the originating object

Loader

1. OnLoadComplete handles the resulting data.
2. Creates a Definition file (or populates an existing one)
3. Adds the Definition file to the StaticDataRepository

EntityManager

1. Creates an EntityLoader and calls LoadStartupEntities()

EntityLoader

1. Submits a database transaction for game\_GetStartupEntities.sql
2. On return, populates a cached dictionary and then issues a callback to the EntityManager with a list of IDs of the startup zones.

EntityManager

1. Handles the callback and…. ?

BooleanSet

1. Flagged as Complete, throws OnInitializationComplete event

Game

1. Executes GameSetup lua script
2. Calls StartServer()
3. Calls Startup() on NetworkManager

NetworkManager

1. Starts up ListeningThread
2. Throws OnTcpServerStatusChanged event

Game

1. Calls BeginGameLoop()
2. Throws OnGameStartup event

## Questions:

1. The EntityManager in step 21 needs to know what the STARTUP objects are to begin loading them from the static data manager. Once initiated, data is loaded as a cascade with each object calling to initialize the other entities they need.