

Short Use Case Descriptions

After review of Project Vision's functional and NFRs, the following use cases have been identified.

Actor Key

UAS = User Application Server

Dev = Developer

Use Case Name	Precondition	Actor	Need	Do Something	Basic Intent/Goal
Join Cluster	Has information about the cluster	UAS	Join the cluster	Join Cluster	Become a member of the cluster
Run Cluster	Join Cluster use case has run	UAS	Participate in cluster actions	Run Cluster	Start participating in the cluster
Receive Committed Entries	N/A	UAS	Bring itself up to date	Receive Committed Entries	Can maintain consensus
Append Entry	N/A	UAS	To add a message into consensus	Append Entry	Message gets committed into the consensus
Receive Notice of Entry Commit	N/A	UAS	To know if the message they requested to be committed, was committed	Receive Notice of Entry Commit	So that they may update the running UAS state
Receive Start Server	The current node should be running a UAS	UAS	To be running a UAS when required	Receive Start Server	They may go ahead and start up their UAS to provide services
Receive Stop Server	The current node should stop running their UAS	UAS	To stop running a UAS when required	Receive Stop Server	They stop acting as a UAS and providing service

Respond with Server Fitness	UAS implementing own fitness function	UAS	Wants to respond with its fitness for being the UAS	Respond with Server Fitness	The most fit node may be identified to run the UAS
Read Entry Value	N/A	UAS	Read log entries that have been committed	Read Entry Value	Can reference the committed data
Send Network Message	Offloading node communication to UAS	UAS	Send a message offloaded to it from the underlying consensus algorithm	Send Network Message	The underlying consensus algorithm can still communicate without relying on it's own networking stack
Receive Network Message	Offloading node communication to UAS	UAS	Forward a message offloaded onto it's networking stack to the underlying consensus algorithm	Receive Network Message	The underlying consensus algorithm can still communicate without relying on it's own networking stack
Confirm Identity	N/A	UAS	Confirm the identity a new node communicating for the first time	Confirm Identity	Establish security through trust, and ensure they cannot be MITMd
Read Logs	N/A	Dev	Understand what the underlying consensus algorithm is doing, perhaps tracking a bug	Read Logs	Understand what the underlying consensus algorithm is doing