

Factom Bridge

Introduction

(Authority Node Application Round 2)

When Factom was first formed it leaned heavily towards decentralization and censorship resistance. The Factom blockchain is being leveraged for the financial and medical industries. These industries are great use cases for Factom and a solid basis for an enterprise level BAAS company. A few large organizations with many transactions is the obvious direction that a business would need to pursue.

The opposite situation would be many entities or devices that are doing a few transactions each. These could be IOT devices that do not have direct internet access, a protest situation where the internet has been cut off or a natural disaster where access may be unavailable. In the case of an IOT deployment, an implementation on the Factom blockchain can offload much of the infrastructure costs associated with software versioning and security that would otherwise be needed to be maintained by the device manufacturer.

What Factom Bridge is proposing to build are interfaces in the various mesh network projects to allow these networks to interact with the Factom blockchain without leaving their mesh or internal network environments. This would allow for less capable devices to utilize Factom and allow for less geographically identifiable access. Since the entry point of a Factom Entry is not part of the entry, being able to make entries without leaving that alternative network can add security and anonymity to the device making the entry.

The funds from one or more Authority servers will be used to support those servers, but also to support various mesh instances and some compensate personnel for their time. More than one Authority server will allow for quicker, more comprehensive mesh implementations and full time development staff.

The bridge software is expected to be released as open source. The purpose of this project is the growth of the Factom Protocol. A general 'produce useful things' fund provided by Authority Server incentives will allow more latitude than building these under Grant Proposals.

Currently expected Mesh integrations.

- Substratum (in beta)
- Mesh Kit (Open Garden)
- Right Mesh (when available)
- Others as they are identified
- Community suggestions welcome and encouraged

Servers

Testnet - Home office with multiple hours UPS for devices required.

Commercial fixed IP address internet connection.

7th gen i7. 32 gig ram, 256 gb drive space.

If Authority granted, Authority servers would be targeted for commercial data centers. If more than one, these will be geographically diverse. Geographical diversity being defined by power grids, internet backbones, etc. instead of latitude and longitude. The first is in Provo, Utah. A second will be located with a view towards support of diversifying the protocol.

In a perfect world, any large persistent mesh network will have one or more factomd **followers** . Some initial Authority reward will be used for buildout with this in mind. This is not aimed towards using Factom rewards towards the development of other projects, but making Factom available where those projects may be thriving.

Efficiency:

1 Authority Server: 30%

2+ Authority Servers: 50%

Block Rewards will be used in 4 areas:

- Authority Server Maintenance and overhead.
- Authority Server Operational reserves.
- Support mesh net factomd followers and possibly to participate in those networks.
- Personnel compensation

Network setup for initial launch will consist of:

1 Authority Server

2 Guard Servers (When they aren't problematic to the protocol)

2 Followers - (possible load balancing if usage needs arise. Not on day 1)

1 Public Courtesy factomd instance

1 Internal factomd instance

Team

Ethan Garofolo

Ethan has been a professional developer for over 10 years and has worked up and down the abstraction hierarchy, from device drivers to web applications. In recent years he has specialized in microservice-based architectures, having recognized their potential to keep teams productive over the long haul. He is currently authoring a book for The Pragmatic Bookshelf with the working title "Pragmatic Microservices".

Harlan Stanley

Harlan has been doing network, server and security administration and automation for over a decade. He is currently IT Director at Myriad Development which was recently acquired by Corelogic and has spent the last 6 months integrating the data and security systems between the two companies. Before this integration he was responsible for deploying and automation of the production, failover, UAT and a handful of other customer facing implementations of the Myriad network. This is a mix of Virtual servers as well as VMWare implementations on company owned servers in multiple data centers. His security, automation and deployment experience is well suited for Authority Node support as well as any supporting projects that may come about in addition to those servers.

Matt Whittington

Matt has been developing software in the Austin area since 1997. He is a serial entrepreneur that has been involved in the insurance, real estate, legal and healthcare industries. In 2013 he created a short lived currency exchange service in Texas. It was short lived due to its regulatory downside and was officially discontinued in early 2015. Matt is currently a Factom employee and is part of the testload group. He develops projects written on top of the Factom blockchain in addition to occasional factomd API work and core where it effect those API requests. This opportunity is not an exit strategy for him, but a chance to fund interesting things and help grow the Factom protocol.