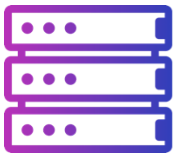

DBGrow

Node Configuration & Specifications

Version: 1.0

Introduction

This document details DBGrow's current, already running setup, ready to go live on M3 from day one. Each "Authority Node" in the following setups are currently configured as followers, and need only their identity configured to be promoted. All nodes DBGrow runs are expandable on demand. Both Mainnet and Testnet nodes shall be expanded as the needs of their respective networks grow.

1. Mainnet

Authority Node 1:

- Amazon Web Services EC2 m5.xlarge
- Us-east-1 region // Virginia, United States, availability zone f
- 8 core, 2.5 GHz Intel Xeon® Platinum 8175, Expandable count up to 96 cores (powers of 2)
- 32GB RAM, expandable to 384GB (powers of 2)
- 120 GB Dedicated Local SSD (NVMe, 1500 Provisioned IOPS) for factom files (separate from root device). Expandable
- RAID1 configured on instance + Built in AWS Elastic Block Store replication
- Uplink speed: ~1200Mbit/s Down, ~400Mbit/s Up (speedtest). 10 Gigabit LAN, up to 25 Gigabit at larger instance sizes.
- On private subnet, not accessible from the internet

Live Authority Node Hotswap:

- Same specs, network setup, and region as **Authority Node 1**
- Deployed in availability zone e
- Configured as follower, ready to take over any time

3 x Authority Node 1 Guard Nodes:

- Amazon Web Services EC2 m5.large
- us-east-1 region // Virginia, United States, spread evenly between availability zones a-c.
- 2 core, 2.5 GHz Intel Xeon® Platinum 8175, Expandable count up to 96 cores (powers of 2)
- 8GB RAM, expandable up to 384GB (powers of 2)
- 50 GB Local SSD (NVMe, General Purpose) for factom files (separate from root device). Expandable
- RAID1 configured on instance + Built in AWS Elastic Block Store replication
- Uplink speed: ~1200Mbit/s Down, ~400Mbit/s Up (speedtest). 10 Gigabit LAN, up to 25 Gigabit at larger instance sizes.
- Deployed in public subnet, one static IP per guard
- One NAT gateway per public subnet availability zone(3 for now)

2 x Monitoring Hosts

- Amazon Web Services EC2 t2.micro
- Nominal specs. 1GB RAM, 1 CPU core
- Deployed in availability zone d and e
- Responsible for monitoring the uptime of the Factom nodes on the local network. Monitors peer discovery port connectivity and stats via the node's HTTP control panel (if accessible).
- Monitors our public-facing guards in other datacenters to determine if they are accessible over the internet
- Alerts the DBGrow team of outages via Email, SMS, and Support Application

1 x Bastion Host:

- Amazon Web Services EC2 t2.micro, nominal specs (1GB RAM)
- Only deployed temporarily for maintenance/access purposes
- Deployed in a public subnet alongside guards
- Fresh from AMI of stock AWS Ubuntu + Fail2ban every launch
- New public IP every launch
- Only accessible from DBGrow's workplace and administrator IP's
- Specialized firewall rules for SSH access to NAT'd instances in private subnet and guards.

Authority Node 2:

- Microsoft Azure D4s v3 Instance
- South India Region(Chennai, Tamil Nadu)
- 8 core, 2.3 GHz Intel XEON ® E5-2673 v4 (Broadwell), Expandable count up to 64 cores (powers of 2)
- 32GB RAM, Expandable to 256GB (powers of 2)
- 120 GB Local General Purpose SSD(Managed, 4000 IOPS Burst) for factom files (separate from root device). Expandable
- RAID1 on instance + Built in Azure managed disk replication
- Uplink speed: ~900Mbit/s Down, ~600Mbit/s Up(speedtest)
- Deployed in private subnet, not accessible from the internet.

Live Authority Node Hotswap:

- Same specs, network setup, and region as **Authority Node 2**
- Configured as follower, ready to take over any time

3 x Authority Node 2 Guard Nodes:

- Microsoft Azure D2s v3 Instance

- South India Region(Chennai, Tamil Nadu)
- 2 core, 2.3 GHz Intel XEON ® E5-2673 v4 (Broadwell), Expandable count up to 64 cores (powers of 2)
- 8GB RAM, Expandable to 256GB (powers of 2)
- 50 GB Local General Purpose SSD (Managed, 4000 IOPS Burst) for factom files(separate from root device), Expandable
- RAID1 on instance + Built in Azure managed disk replication
- Uplink speed: ~900Mbit/s Down, ~600Mbit/s Up (speedtest)
- Deployed in public subnet, 1 static IP per guard
- One NAT gateway(no availability zones in South India region!)

2 x Monitoring Hosts

- Microsoft Azure B1S instance
- Nominal specs. 1GB RAM and 1 CPU core
- Responsible for monitoring the uptime of the Factom nodes on the local network. Monitors peer discovery port connectivity and stats via the node's HTTP control panel (if accessible).
- Monitors our public-facing guards in other datacenters to determine if they are accessible over the internet
- Alerts the DBGrow team of outages via Email, SMS, and Support Application

1 x Bastion Host:

- Microsoft Azure B1S instance
- Nominal specs. 1GB RAM and 1 CPU core
- Only deployed temporarily for maintenance/access purposes
- Deployed in a public subnet alongside guards
- Fresh from VM Image of stock Azure Ubuntu + Fail2ban every launch
- New public IP address every launch
- Only accessible from DBGrow's workplace and administrator IP's
- Specialized firewall rules for SSH access to NAT'd instances in private subnet and guards.

2. Testnet

Testnet Authority Node 1:

- Amazon Web Services EC2 m5.large
- ca-central-1 // Central Canada, availability zone a
- 4 core, 2.5 GHz Intel Xeon® Platinum 8175, Expandable count
- 8GB RAM, Expandable
- 50 GB Dedicated Local SSD (NVMe, General Purpose) for factom files (separate from root device). Expandable

- Built in AWS Elastic Block Store replication
- Uplink speed: ~1200Mbit/s Down, ~400Mbit/s Up (speedtest). 10 Gigabit LAN, up to 25 Gigabit at larger instance sizes.
- One static IP

Testnet Follower Node 1:

- Amazon Web Services EC2 m5.large
- ca-central-1 // Central Canada, availability zone a
- 4 core, 2.5 GHz Intel Xeon® Platinum 8175, Expandable count
- 8GB RAM, Expandable
- 50 GB Dedicated Local SSD (NVMe, General Purpose) for factom files (separate from root device). Expandable
- Built in AWS Elastic Block Store replication
- Uplink speed: ~1200Mbit/s Down, ~400Mbit/s Up (speedtest). 10 Gigabit LAN, up to 25 Gigabit at larger instance sizes.
- One static IP