dbtest1

*dbtest1*

*Low-Level Design*

Status: DRAFT

Document Control

| Version | Date | Author(s) | Notes |
| --- | --- | --- | --- |
| 0.1 | 05/08/2024 | Auto-generated | Draft |
| 0.2 |  |  |  |
| 0.3 |  |  |  |
| 1.0 |  |  |  |

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#

#

# Application Source State

| Attribute | Description |
| --- | --- |
| Application Name | dbtest1 |
| Application Description | PLACEHOLDER |
| Migration Pattern | Rehost - MGN |

###

## Servers

| Environment | Hostname | OS | RAM | CPUs | Disks |
| --- | --- | --- | --- | --- | --- |
| dbtest1 | ip-10-1-102-101 | Ubuntu 20.04.3 LTS | 17.18 | 1 |  |
| dbtest1 | ip-10-1-99-110 | Ubuntu 22.04.2 LTS | 34.36 | 1 |  |
| dbtest1 | ip-10-1-102-103 | Ubuntu 20.04.6 LTS | 17.18 | 1 |  |
| dbtest1 | ip-10-1-54-102 | Ubuntu 20.04.3 LTS | 17.18 | 1 |  |
| dbtest1 | ip-10-1-51-228 | Ubuntu 22.04.2 LTS | 34.36 | 1 |  |
| dbtest1 | ip-10-1-54-104 | Ubuntu 20.04.5 LTS | 34.36 | 1 |  |
| dbtest1 | ip-10-1-99-116.eu-central-1.compute.internal |  | 0.00 | 0 |  |
| dbtest1 | ip-10-1-99-6.eu-central-1.compute.internal |  | 0.00 | 0 |  |

##

## DNS

| Hostname | Type (A/CNAME) | IP |
| --- | --- | --- |
| (no data) |

##

## Dependencies

Application dependencies discovered using Cloudamize to be verified with the application team.

####

### App Dependencies

* External Dependencies
	+ External Applications
		- (none found)
		- processes listening on 147 ports between 35396 and 59238
		- processes listening on 180 ports between 38828 and 46750
		- processes listening on 333 ports between 32826 and 60972
		- processes listening on 341 ports between 32798 and 60650
		- processes listening on 342 ports between 32858 and 60790
		- processes listening on 370 ports between 32852 and 60704
		- processes listening on 93 ports between 23389 and 38801
		- processes listening on 946 ports between 32894 and 60996
		- processes listening on 953 ports between 32768 and 60998
		- unknown process on 39402
		- unknown process on 39408
		- unknown process on 44022
		- unknown process on 44372
		- unknown process on 44374
		- unknown process on 44384
		- unknown process on 44398
		- unknown process on 44412
		- unknown process on 44420
		- unknown process on 45690
		- unknown process on 47678
		- unknown process on 47684
		- unknown process on 47686
		- unknown process on 47692
		- unknown process on 48678
		- unknown process on 51992
		- unknown process on 51994
		- unknown process on 5432
		- unknown process on 60030
		- unknown process on 60042
		- unknown process on 60050
		- unknown process on 60066
		- unknown process on 60070
		- unknown process on 60082
		- unknown process on 60128
		- unknown process on 60134
		- unknown process on 7777
	+ Shared Services
		- PLACEHOLDER

#

# AWS Target State

### Target Landing Zone

| AWS Region | us-east-1 |
| --- | --- |

### Cost estimate

| Hostname | Compute | Storage | Network | Total |
| --- | --- | --- | --- | --- |
| **total** | $4.29k | $0.34k | $0.00k | $4.64k |
| ip-10-1-102-101 | $0.05k | $0.01k | $0.00k | $0.07k |
| ip-10-1-99-110 | $0.16k | $0.02k | $0.00k | $0.18k |
| ip-10-1-102-103 | $0.03k | $0.01k | $0.00k | $0.04k |
| ip-10-1-54-102 | $0.05k | $0.01k | $0.00k | $0.07k |
| ip-10-1-51-228 | $2.32k | $0.02k | $0.00k | $2.34k |
| ip-10-1-54-104 | $0.11k | $0.15k | $0.00k | $0.26k |
| ip-10-1-99-116.eu-central-1.compute.internal | $0.78k | $0.06k | $0.00k | $0.84k |
| ip-10-1-99-6.eu-central-1.compute.internal | $0.78k | $0.06k | $0.00k | $0.84k |

### Target Instances

| App Component | Hostname | Machine Type | Launch Type |
| --- | --- | --- | --- |
| PLACEHOLDER | ip-10-1-102-101 | t3a.micro | On demand |
| PLACEHOLDER | ip-10-1-99-110 | t3a.small | On demand |
| PLACEHOLDER | ip-10-1-102-103 | t3a.nano | On demand |
| PLACEHOLDER | ip-10-1-54-102 | t3a.micro | On demand |
| PLACEHOLDER | ip-10-1-51-228 | r7i.xlarge | On demand |
| PLACEHOLDER | ip-10-1-54-104 | t3a.small | On demand |
| PLACEHOLDER | ip-10-1-99-116.eu-central-1.compute.internal | c7i.large | On demand |
| PLACEHOLDER | ip-10-1-99-6.eu-central-1.compute.internal | c7i.large | On demand |

##

## Network/Connectivity

### Load Balancing

| Name | Type | Internal/External | Listening Ports | Target Ports | Health Check |
| --- | --- | --- | --- | --- | --- |
| Prod-App-LB | ALB | Internal | 80/443 | 80 | TCP 80 |

### SSL Certificates

| Name | Domains | Certificate Authority |
| --- | --- | --- |
| PLACEHOLDER | PLACEHOLDER | PLACEHOLDER |

###

### Security Groups

| App Component | Security Group Name and ID | Inbound Rules | Description |
| --- | --- | --- | --- |
| LB | -App-LB-SG | TCP 80, 443 from 172.16.0.0/16, 172.18.0.0/16 192.168.254.0/23, 192.168.191.0/24, 192.168.130.0/24 | User Access |
| APP | -App-APP-SG | Port 80 from LB SG | ELB Access |
| DB | -App-DB-SG | TCP 1433 from App SG | Application Server Access |

##

## Operations

### Backups

Backups are performed using the AWS Backup service or by taking a Snapshot of AWS EC2 EBS volumes on a regular schedule as specified in the following table.

| Backup | Schedule | Retention Period |
| --- | --- | --- |
| Daily | 01:00 EST Monday to Sunday | 30 days |
| Weekly | 01:00 EST every Sunday | 12 weeks |
| Monthly | 01:00 EST on the first of every month | 12 months |

###

### Resource Tags

The resources in AWS will be tagged with the following:

| Purpose | Tag Name | Tag Values |
| --- | --- | --- |
| Operations**REQUIRED** | Name | dbtest1-[app,db] |
| Operations**REQUIRED** | Application | dbtest1 |
| Operations**REQUIRED** | AppRole | [app,db] |
| Operations**REQUIRED** | Environment |  |
| Operations | Version |  |
| Operations/Billing | Owner |  |
| Operations/Billing | Team |  |
| Billing | Business Unit |  |
| Operations | Hostname (Optional) |  |
| Automation | ServiceHours (none for 24/7) |  |
| Automation | Snapshot |  |
| Security | Compliance |  |
| Security | Classification |  |

#

#

# High Level Migration Plan

| Ref | Description |
| --- | --- |
| 01 | Pre-Migration Workshop and Planning* Cloudamize Wave Groups Created
* App Team Interviews
 |
| 02 | Produce, Review, and Finalize LLD (Signoff) |
| 03 | Schedule Migration Window  |
| 04 | Create Target Network Components in AWS (Security Groups, ELBs) |
| 05 | Install MGN Agent on Source Servers |
| 06 | Configure MGN Target Launch Template |
| 07 | Execute MGN Test Mode Workflow |
| 08 | Prepare source server for migration |
| 09 | Execute MGN Cutover to AWS during migration window |
| 10 | Retrieve AWS IP Address |
| 11 | Connect AWS IP To Monitoring and Logging |
| 12 | Point DNS to New AWS IP Address |
| 13 | Perform User Testing to Verify Application Functionality |
| 14 | Clean Up Migration Environment |
| 15 | Confirmation of Successful Migration for Go/No-Go Decision |
| 16 | Handover and Onboarding to Operations Team |

### Acceptance Criteria

* *Non-functional tests for basic connectivity successfully completed*
* *Functional test criteria mutually agreed and tests successfully completed*
* *Monitoring is fully functional for the infrastructure*

###