

# Hylur Knowledge Foundation - Deployment Summary

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## Quick Start Deployment

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Your Hylur Knowledge Foundation application is now ready for deployment to Google Cloud Platform with GitHub integration. All necessary infrastructure files have been created and committed to git.

### What's Been Prepared

#### Docker Configuration

- `Dockerfile` for containerized deployment
- `.dockerignore` for optimized builds
- `next.config.js` configured for standalone output

#### CI/CD Pipeline

- `cloudbuild.yaml` for Google Cloud Build
- `.github/workflows/deploy.yml` for GitHub Actions
- Automated database migrations and seeding

#### Documentation

- `DEPLOYMENT_GUIDE.md` - Comprehensive step-by-step guide
- `deploy-to-gcp.sh` - Automated deployment script

#### Database Setup

- Prisma schema configured for PostgreSQL
- Seed script with founder accounts (haukur@hylur.net, leif@hylur.net)
- NextAuth.js integration ready

## Next Steps

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### Option 1: Automated Deployment (Recommended)

Run the automated deployment script:

```
cd /home/ubuntu/hylur-knowledge-foundation
./deploy-to-gcp.sh
```

#### Prerequisites:

- GitHub Personal Access Token (with repo permissions)
- Google Cloud account with billing enabled
- Domain ownership of hylur.net

### Option 2: Manual Deployment

Follow the detailed instructions in `DEPLOYMENT_GUIDE.md`

## Required Credentials

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Before starting deployment, ensure you have:

### 1. GitHub Personal Access Token

- Go to GitHub Settings > Developer settings > Personal access tokens
- Create token with `repo`, `workflow`, and `admin:repo_hook` permissions

### 2. Google Cloud Account

- Create account at <https://cloud.google.com>
- Enable billing for the project
- Install and authenticate gcloud CLI

### 3. Domain Access

- Access to hylur.net DNS settings
- Ability to add A/AAAA/CNAME records

## Infrastructure Overview

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### Google Cloud Services Used

- **Cloud Run:** Serverless container hosting
- **Cloud SQL:** PostgreSQL database (db-f1-micro)
- **Secret Manager:** Secure environment variables
- **Cloud Build:** CI/CD pipeline
- **Container Registry:** Docker image storage

### Environment Variables

- `DATABASE_URL` : PostgreSQL connection string
- `NEXTAUTH_URL` : <https://hylur.net>
- `NEXTAUTH_SECRET` : Generated secure secret
- `ABACUSAI_API_KEY` : AI chatbot integration

### Founder Accounts

- **Haukur Kristinsson:** [haukur@hylur.net](mailto:haukur@hylur.net) (password: haukur2024!)
- **Leif Eriksson:** [leif@hylur.net](mailto:leif@hylur.net) (password: leif2024!)

## Expected Costs (Monthly)

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### Development/Testing

- Cloud Run: ~\$0-5 (pay per request)
- Cloud SQL (db-f1-micro): ~\$7-10
- Storage: ~\$1-2
- **Total: ~\$8-17/month**

### Production (with traffic)

- Cloud Run: ~\$10-50 (depending on usage)
- Cloud SQL (upgraded): ~\$25-100
- Storage: ~\$5-15

- **Total: ~\$40-165/month**

## Security Features

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- All secrets stored in Google Secret Manager
- HTTPS enforced with automatic SSL certificates
- Database connections encrypted
- Service accounts with minimal permissions
- Container scanning enabled

## Deployment Process

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1. **GitHub Repository:** Code pushed to public repository
2. **Google Cloud Project:** New project created with required APIs
3. **Database Setup:** PostgreSQL instance with secure credentials
4. **Secret Management:** Environment variables stored securely
5. **Container Build:** Docker image built and stored
6. **Database Migration:** Schema applied and data seeded
7. **Service Deployment:** Application deployed to Cloud Run
8. **Domain Mapping:** Custom domain configured
9. **DNS Configuration:** Records provided for domain setup

## Testing Checklist

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After deployment, verify:

- [ ] Application loads at <https://hylur.net>
- [ ] Founder authentication works
- [ ] File upload functionality
- [ ] AI chatbot integration
- [ ] Database operations
- [ ] SSL certificate active
- [ ] Mobile responsiveness

## Maintenance

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### Monitoring

```
# View application logs
gcloud run services logs read hylur-knowledge-foundation --region=us-central1

# Check service status
gcloud run services describe hylur-knowledge-foundation --region=us-central1
```

### Updates

- Push changes to main/master branch
- GitHub Actions automatically deploys updates

- Zero-downtime deployments

## Scaling

```
# Adjust instance limits
gcloud run services update hylur-knowledge-foundation \
  --region=us-central1 \
  --min-instances=1 \
  --max-instances=10
```

## Support

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For deployment issues:

1. Check Cloud Build logs in Google Cloud Console
2. Verify all secrets are properly configured
3. Ensure DNS records are correctly set
4. Allow time for DNS propagation (up to 48 hours)

## Success Criteria

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Deployment is successful when:

- Application is accessible at <https://hylur.net>
- Founder accounts can authenticate
- All features work as expected
- SSL certificate is active
- Database is properly seeded

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**Ready to deploy?** Run `./deploy-to-gcp.sh` to get started!