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System overview



Security & IAA



Network topology

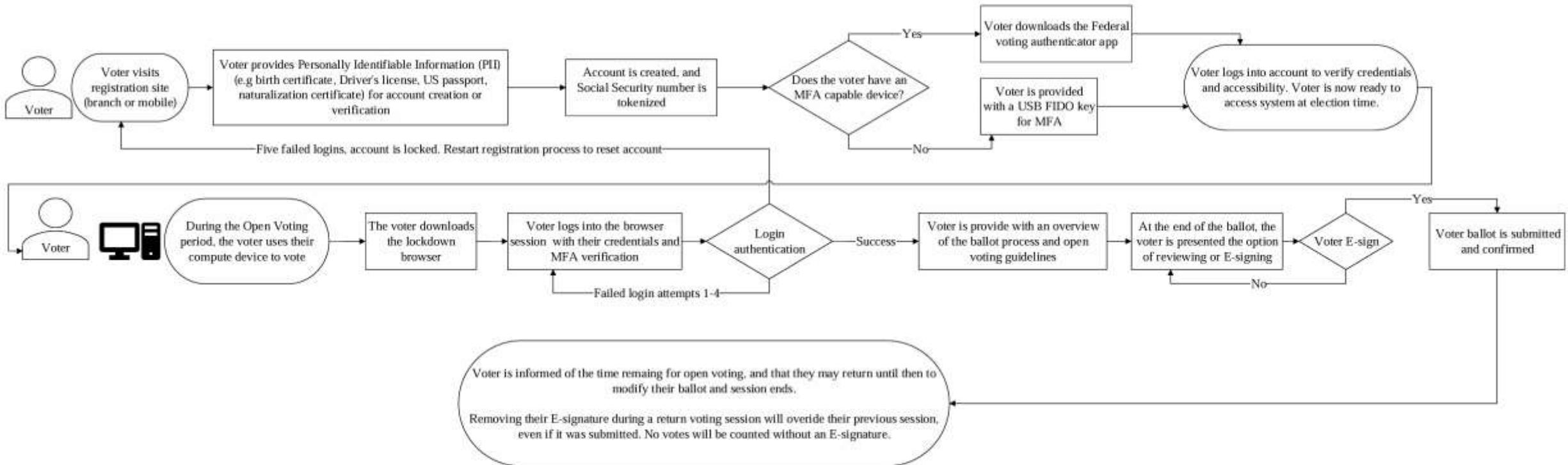


Financials

SECURE INTERNET-BASED NATIONAL VOTING PLATFORM



# SYSTEM OVERVIEW – THE OVERALL PROCESS





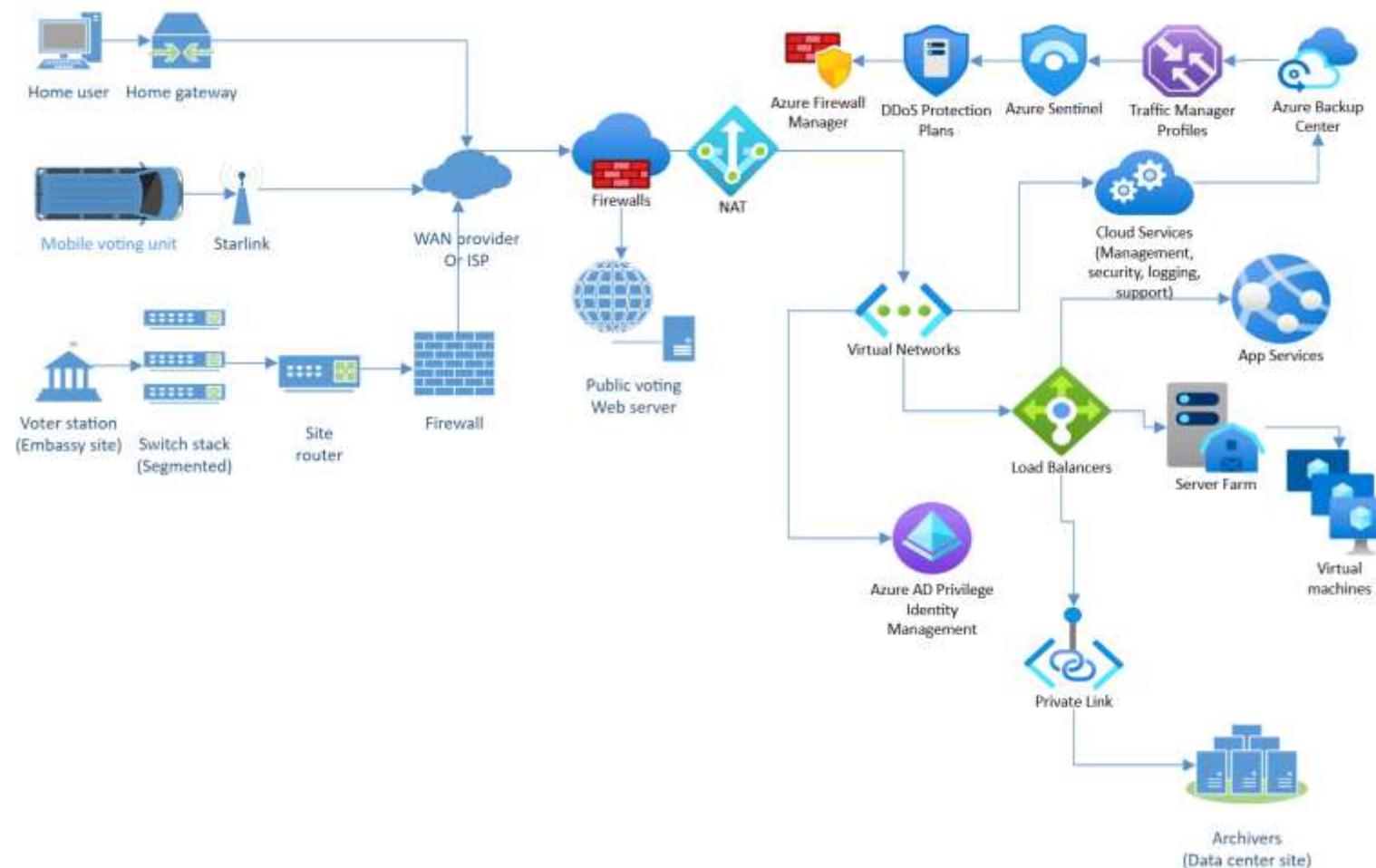
## VOTER ACCESSIBILITY AND ASSISTANCE



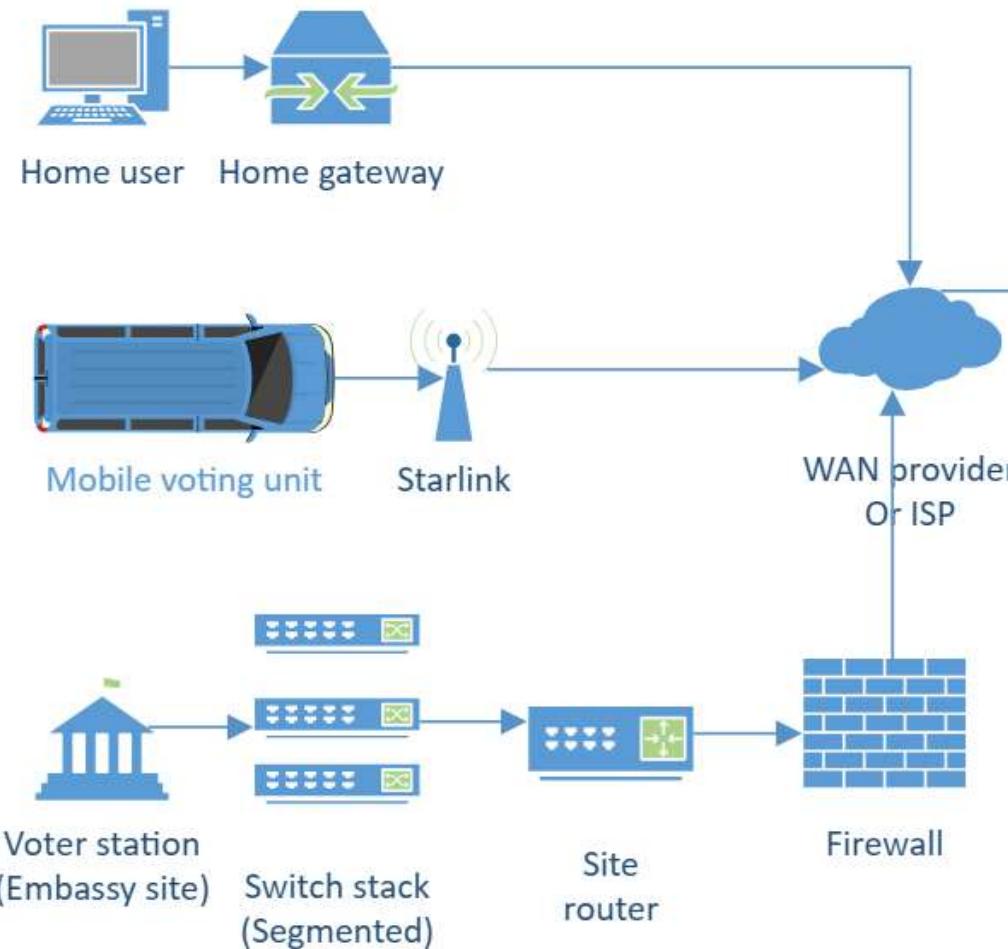
- Need a hand? Call the MVRs!
- Mobile Voting and Registration Service
- Community outreach access
- Voting kiosks
- ADA accessibility



# NETWORK TOPOLOGY - OVERVIEW

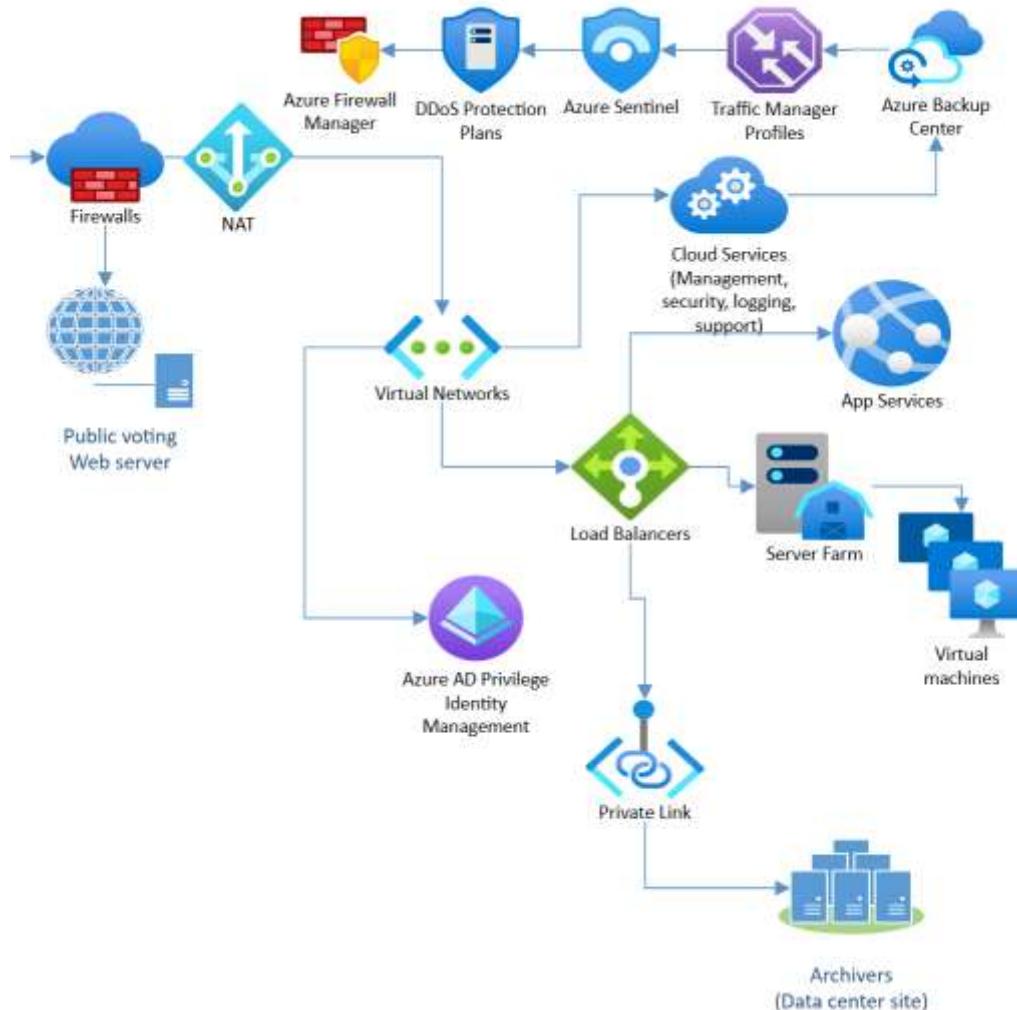


# NETWORK TOPOLOGY – VOTER SECTION



- Home user using traditional ISP
  - Compatible compute device
  - Basic “flat” network
- MVR user utilizing onboard Starlink
  - Sit-down and accessible kiosks
  - Purpose built voting network
- International user at embassy site
  - Voting kiosk installed at location
  - Segmented design

# NETWORK TOPOLOGY – OUR AZURE CLOUD PLATFORM



- Public-facing voting web server
  - Located in DMZ
- Intent-based segmentation
  - Management and support network
  - Load balanced voting segment
  - Servers, VMs, and authentication/token services
  - Azure AD segment
  - Back-up archivers
    - Physical data center
    - Data resiliency, data lifecycle, business continuity



## SECURITY & IAA OVERVIEW



Identity management



Authentication



Authorization



Accounting & Logging



Account Lifecycle & Recovery



# IDENTITY MANAGEMENT



- Everyone is in AD as a specific user
  - Voter, official, or admin
- Verified and tokenized identities
- Access policies

# AUTHENTICATION



- Multi-factor authentication for all users
- OTP and biometrics
- Realtime monitoring for abnormalities

# AUTHORIZATION



- Role-based access control
- Voter, Official, and Admin roles
- Dynamic context-aware policies

## ACCOUNTING & LOGGING



- Everything is logged
- Logs stored immutably
- 7-year storage
- Compliance with **NIST SP 800-92**
- Anomaly detection

# ACCOUNT LIFECYCLE & RECOVERY



- Voter accounts created after identity verification
- Officials and Admin accounts
  - Manually created
  - Periodically reviewed
- Strict account recovery process
- Lifecycle management

## PUTTING THE SECURITY COMPONENTS TOGETHER



- Secure
- Transparent
- Auditable



# FINANCIALS OVERVIEW



Hardware & Systems



Software Development



Personnel & Miscellaneous Operational Costs



Feasibility



Recommendation



# HARDWARE & SYSTEMS



- Hardware purchases
  - ~ US \$2 billion up-front
  - FIDO keys
  - MVRs
- Additional hardware
  - ADA kiosks
  - Cloud infrastructure
  - Redundant back-up servers

# SOFTWARE DEVELOPMENT

- Government created authenticator app
  - AES-256 & TOTP
  - Apple and iOS
- Lockdown browser
  - Development and licensing
  - Similar to Respondus' product

# PERSONNEL & MISCELLANEOUS COSTS



- Recurring personnel expenses
  - ~ US \$8.5 billion per year
- Includes temporary workers
  - Cybersecurity staff
  - Tech support
  - Help desk
  - Trainers
- Auditing and Compliance
  - ADA
  - SOC2
- MVRs
  - Fleet maintenance costs
- Additional expenses as needed
  - Signage
  - Travel vouchers
  - Voter assistance programs

# FEASIBILITY



- Initial implementation estimate
  - ~ US \$ 10 billion
- Annual operating costs
  - ~ US \$ 8.6 billion
- Comparable costs to current solutions
- We prioritize
  - Accessibility
  - Scalability
  - Security
- Utilize existing infrastructure
  - Reduces redundancy
  - Cost effective

# RECOMMENDATION



- Phased roll-out
  - Pilot select states
  - Timeframe: 2-3 years
- Nationwide deployment
  - Timeframe: 5-7 years

THANK YOU FOR CONSIDERING OUR VOTING PLATFORM  
SOLUTION

