

Binance Handler Tasks

Setup Tasks

Initial Configuration

- ☐ Install MindsDB Binance handler
- ☐ Configure API key and secret
- ☐ Set up testnet vs mainnet configuration
- ☐ Configure timeout and retry settings
- ☐ Test basic API connectivity

Handler Creation

- ☐ Create Binance database handler
- ☐ Configure API endpoints
- ☐ Set up authentication
- ☐ Validate handler creation
- ☐ Test handler connectivity

Table Setup

- ☐ Create tickers view
- ☐ Create orderbook view
- ☐ Create trades view
- ☐ Create klines view
- ☐ Create account view (if needed)

Testing Tasks

Connection Tests

- ☐ Test handler connection
- ☐ Validate API authentication
- ☐ Test network connectivity
- ☐ Verify SSL/TLS setup
- ☐ Test rate limiting

Data Retrieval Tests

- ☐ Test ticker data retrieval
- ☐ Test orderbook data access
- ☐ Test recent trades data
- ☐ Test kline/candlestick data
- ☐ Test account information (if configured)

Performance Tests

- ☐ Measure query response times
- ☐ Test concurrent connections

- ☐ Validate rate limiting
- ☐ Test large data queries
- ☐ Monitor memory usage

Error Handling Tests

- ☐ Test invalid API credentials
- ☐ Test network timeouts
- ☐ Test rate limit exceeded
- ☐ Test malformed queries
- ☐ Test service unavailable

Configuration Tasks

API Management

- ☐ Set up API key rotation
- ☐ Configure rate limiting
- ☐ Set up monitoring alerts
- ☐ Configure retry logic
- ☐ Set up error logging

Security Tasks

- ☐ Secure API credentials storage
- ☐ Set up access controls
- ☐ Configure SSL certificates
- ☐ Set up audit logging
- ☐ Implement data encryption

Data Validation Tasks

Data Quality

- ☐ Validate price accuracy
- ☐ Check volume calculations
- ☐ Verify timestamp accuracy
- ☐ Test data freshness
- ☐ Validate order book depth

Schema Validation

- ☐ Verify column types
- ☐ Check data constraints
- ☐ Validate foreign keys
- ☐ Test null handling
- ☐ Verify data formats

Optimization Tasks

Performance Optimization

- ☐ Optimize query patterns
- ☐ Implement caching strategy
- ☐ Configure connection pooling
- ☐ Set up query optimization
- ☐ Monitor resource usage

Monitoring Setup

- ☐ Set up health checks
- ☐ Configure performance metrics
- ☐ Set up error tracking
- ☐ Create usage dashboards
- ☐ Set up alerting

Documentation Tasks

Technical Documentation

- ☐ Document API endpoints
- ☐ Create query examples
- ☐ Document error codes
- ☐ Create troubleshooting guide
- ☐ Document best practices

User Documentation

- ☐ Create setup guide
- ☐ Document common queries
- ☐ Create FAQ section
- ☐ Document limitations
- ☐ Create migration guide

Completion Criteria

Functional Requirements

- ☐ Handler connects successfully
- ☐ All views return data
- ☐ Rate limiting works correctly
- ☐ Error handling is robust
- ☐ Performance meets requirements

Non-Functional Requirements

- ☐ Response time < 3 seconds
- ☐ 99.9% uptime achieved
- ☐ Security requirements met
- ☐ Documentation complete

- ☐ Tests pass consistently

Validation Checklist

Pre-Production

- ☐ All tests passing
- ☐ Performance benchmarks met
- ☐ Security scan completed
- ☐ Documentation reviewed
- ☐ Monitoring configured

Production Ready

- ☐ Load testing completed
- ☐ Disaster recovery tested
- ☐ Monitoring alerts configured
- ☐ Support procedures documented
- ☐ Rollback plan prepared

Success Metrics

- **Uptime:** > 99.9%
- **Response Time:** < 3 seconds average
- **Error Rate:** < 0.1%
- **Data Accuracy:** > 99.9%
- **Test Coverage:** > 95%

Known Issues & Limitations

- Rate limiting: 1200 requests per minute
- API key required for account data
- Testnet vs mainnet configuration
- Regional restrictions may apply
- Market data delays during high volatility

Support & Troubleshooting

Common Issues

1. **API Key Invalid:** Check key format and permissions
2. **Rate Limit Exceeded:** Implement proper throttling
3. **Connection Timeout:** Check network and firewall settings
4. **Data Stale:** Verify refresh intervals
5. **Authentication Failed:** Validate credentials

Escalation Path

1. Check logs and error messages
2. Consult troubleshooting guide

3. Contact Binance API support
4. Escalate to MindsDB team
5. Create GitHub issue if needed