

SharePoint Web Parts Deployment Guide - Abacus Hosting

This guide provides step-by-step instructions for deploying the SFG Aluminium Innovation Hub SharePoint Framework (SPFx) web parts on Abacus hosting infrastructure.

Prerequisites

- SharePoint Online tenant with app catalog
- Node.js 16.x or 18.x installed
- SharePoint Framework development environment
- Abacus hosting account with deployment permissions
- Git repository access

Architecture Overview

The SFG Aluminium Innovation Hub includes the following SharePoint web parts:

- **Warren Executive Dashboard** - Premium executive suite with metrics
- **Yanika Wellness Hub** - Creative wellness and mindfulness components
- **AI Chatbot Web Parts** - Smart assistants with theme customization
- **Library Navigation** - Advanced SharePoint library browsing
- **Quick Access Components** - Fast access to frequently used libraries

Abacus Hosting Configuration

1. Abacus Environment Setup

```
# Configure Abacus CLI (replace with your credentials)
abacus configure --api-key YOUR_ABACUS_API_KEY
abacus configure --region us-east-1
abacus configure --environment production
```

2. Domain Configuration

```
# Set up custom domain for SharePoint integration
abacus domain create --name sfg-sharepoint.abacusai.com
abacus domain configure --ssl-certificate auto
abacus domain configure --cdn-enabled true
```

3. Container Configuration

```
# Configure container for SharePoint hosting
abacus container create --name sfg-sharepoint-webparts
abacus container configure --memory 4GB
abacus container configure --cpu 2-cores
abacus container configure --storage 20GB
```

SPFx Bundle Preparation

1. Environment Configuration

Create or update `config/serve.json`:

```
{  
  "$schema": "https://developer.microsoft.com/json-schemas/spfx-build/spfx-  
  serve.schema.json",  
  "port": 4321,  
  "https": true,  
  "initialPage": "https://sfg-sharepoint.abacusai.com/_layouts/workbench.aspx",  
  "api": {  
    "port": 5432,  
    "entryPath": "node_modules/@microsoft/sp-webpart-workbench/lib/api/"  
  }  
}
```

2. Update Package Configuration

Update `config/package-solution.json`:

```
{
  "$schema": "https://developer.microsoft.com/json-schemas/spfx-build/package-solution.schema.json",
  "solution": {
    "name": "sfg-aluminium-innovation-hub",
    "id": "12345678-abcd-1234-efgh-123456789abc",
    "version": "1.0.0.0",
    "includeClientSideAssets": true,
    "skipFeatureDeployment": false,
    "developer": {
      "name": "SFG Aluminium",
      "websiteUrl": "https://sfg-sharepoint.abacusai.com",
      "privacyUrl": "https://sfg-sharepoint.abacusai.com/privacy",
      "termsOfUseUrl": "https://sfg-sharepoint.abacusai.com/terms"
    },
    "metadata": {
      "shortDescription": {
        "default": "SFG Aluminium Innovation Hub SharePoint Web Parts"
      },
      "longDescription": {
        "default": "Premium SharePoint web parts for Warren's Executive Suite and Yanika's Creative Wellness Hub with AI integration"
      },
      "screenshotPaths": [],
      "videoUrl": "",
      "categories": ["Communication", "Productivity", "Data Visualization"]
    },
    "features": [
      {
        "title": "sfg-aluminium-innovation-hub-feature",
        "description": "SFG Aluminium Innovation Hub feature",
        "id": "87654321-dcba-4321-hgfe-987654321cba",
        "version": "1.0.0.0"
      }
    ],
    "paths": {
      "zippedPackage": "solution/sfg-aluminium-innovation-hub.sppkg"
    }
  }
}
```

Build and Deployment Process

1. Build for Production

```
# Install dependencies
npm install

# Build for production with Abacus optimization
gulp clean
gulp build --ship

# Bundle for Abacus deployment
gulp bundle --ship

# Package the solution
gulp package-solution --ship
```

2. Deploy to Abacus

```
# Deploy the web parts to Abacus hosting
abacus deploy --source ./dist/ --target /sharepoint/webparts/
abacus deploy --source ./temp/deploy/ --target /sharepoint/assets/

# Configure CDN endpoints
abacus cdn configure --source /sharepoint/assets/ --cache-max-age 31536000
abacus cdn configure --compression gzip,brotli
```

3. SharePoint App Catalog Deployment

```
# Upload to SharePoint App Catalog
# Note: This requires SharePoint admin access
spo app add --filePath "./sharepoint/solution/sfg-aluminium-innovation-hub.sppkg"
spo app deploy --name "sfg-aluminium-innovation-hub"
spo app install --name "sfg-aluminium-innovation-hub" --siteUrl "https://yourtenant.sharepoint.com/sites/yoursitecollection"
```

Abacus-Specific Configuration

1. Environment Variables

```
# Set Abacus environment variables
abacus env set SHAREPOINT_TENANT_URL "https://yourtenant.sharepoint.com"
abacus env set CDN_BASE_URL "https://sfg-sharepoint.abacusai.com"
abacus env set API_ENDPOINT "https://api.abacusai.com/v1"
abacus env set ENVIRONMENT "production"
```

2. SSL and Security

```
# Configure SSL termination
abacus ssl configure --cert-type managed
abacus ssl configure --force-https true

# Set up CORS for SharePoint integration
abacus cors configure --allow-origin "*.*.sharepoint.com"
abacus cors configure --allow-methods "GET,POST,PUT,DELETE,OPTIONS"
abacus cors configure --allow-headers "Content-Type,Authorization,X-Requested-With"
```

3. Load Balancing and Scaling

```
# Configure auto-scaling for SharePoint workloads
abacus scale configure --min-instances 2
abacus scale configure --max-instances 10
abacus scale configure --target-cpu 70
abacus scale configure --scale-down-delay 300s
```

Web Part Configuration

1. Warren Executive Web Part

```
// Configure for Abacus hosting
const warrenConfig = {
  apiEndpoint: process.env.ABACUS_API_ENDPOINT,
  cdnUrl: process.env.ABACUS_CDN_URL,
  theme: 'executive-gold',
  features: {
    realTimeMetrics: true,
    aiInsights: true,
    executiveDashboard: true
  }
};
```

2. Yanika Wellness Web Part

```
// Configure for Abacus hosting
const yanikaConfig = {
  apiEndpoint: process.env.ABACUS_API_ENDPOINT,
  cdnUrl: process.env.ABACUS_CDN_URL,
  theme: 'creative-wellness',
  features: {
    mindfulnessTools: true,
    creativityMetrics: true,
    wellnessTracking: true
  }
};
```

Monitoring and Maintenance

1. Abacus Monitoring Setup

```
# Enable monitoring and logging
abacus monitor enable --type application
abacus monitor enable --type infrastructure
abacus logs configure --retention 30days
abacus alerts configure --email admin@sfg-aluminium.com
```

2. Performance Optimization

```
# Configure caching strategies
abacus cache configure --type redis --size 2GB
abacus cache configure --ttl 3600
abacus performance configure --compression gzip
abacus performance configure --minification true
```

3. Backup and Recovery

```
# Set up automated backups
abacus backup schedule --frequency daily --time "02:00"
abacus backup retention --days 30
abacus backup configure --encryption AES256
```

Troubleshooting

Common Abacus Deployment Issues

1. CDN Cache Issues

```
bash
abacus cdn clear-cache --path /sharepoint/assets/*
```

2. SSL Certificate Problems

```
bash
abacus ssl renew --force
abacus ssl verify --domain sfg-sharepoint.abacusai.com
```

3. Memory/Performance Issues

```
bash
abacus scale up --instances 5
abacus monitor check --type memory
```

SharePoint Integration Issues

1. **CORS Errors:** Verify domain whitelist in SharePoint admin center
2. **Authentication Issues:** Check app permissions and consent
3. **Loading Errors:** Verify CDN URLs and asset availability

Security Considerations

1. Access Control

```
# Configure access policies
abacus security configure --policy strict
abacus security whitelist --domain "*.sharepoint.com"
abacus security configure --rate-limit 1000/hour
```

2. Data Protection

```
# Enable data encryption
abacus encrypt enable --type transit
abacus encrypt enable --type rest
abacus compliance configure --standard SOC2
```

Support and Updates

For support with Abacus hosting:

- **Abacus Support:** support@abacusai.com

- **Documentation:** <https://docs.abacusai.com/sharepoint>
- **Status Page:** <https://status.abacusai.com>

For SharePoint web part updates:

1. Update the codebase
2. Rebuild and redeploy to Abacus
3. Update the SharePoint app catalog
4. Test in SharePoint workbench

Conclusion

This deployment guide ensures successful deployment of SFG Aluminium Innovation Hub SharePoint web parts on Abacus hosting infrastructure, providing enterprise-grade performance, security, and scalability for your SharePoint environment.

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