# GTM Copilot Dashboard

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\*\*Key Business Objectives:\*\*

- Streamline access to Synopsys AI-powered engineering tools

- Provide unified user experience across multiple product lines

- Reduce support overhead through self-service portal

- Enable direct tool access via URL routing

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## System Overview

### Application Details

- \*\*Application Name\*\*: GTM Copilot Dashboard

- \*\*Business Unit\*\*: Synopsys AI Solutions

- \*\*Purpose\*\*: Centralized navigation hub for Synopsys.ai Copilot tools

- \*\*Technology Stack\*\*: HTML5, CSS3, JavaScript (Vanilla)

- \*\*Deployment Type\*\*: Static website with iframe integration

- \*\*Target Users\*\*: Synopsys internal teams, customers, and partners

- \*\*Availability Requirement\*\*: 99.9% uptime

- \*\*Security Classification\*\*: Internal Use

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## Application Architecture

### Technical Architecture

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│ GTM Copilot Dashboard │

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│ Frontend Layer (HTML/CSS/JavaScript) │

│ ├── Welcome Page (Tool Selection Interface) │

│ ├── Dashboard Interface (Sidebar Navigation) │

│ ├── Search Functionality │

│ └── Responsive Design Framework │

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│ Integration Layer (iframe-based) │

│ ├── 16 Synopsys AI Tools │

│ ├── URL Routing System │

│ └── Cross-origin Resource Sharing (CORS) │

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│ Infrastructure Layer (Windows Server + IIS) │

│ ├── Internet Information Services (IIS) 10.0 │

│ ├── SSL/TLS Encryption │

│ ├── Load Balancing (if applicable) │

│ └── Monitoring & Logging │

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### Key Features

- \*\*Welcome Interface\*\*: Interactive tool selection cards with search capability

- \*\*Dashboard Navigation\*\*: Persistent sidebar with iframe-based tool loading

- \*\*Search Functionality\*\*: Real-time filtering across all integrated tools

- \*\*Responsive Design\*\*: Optimized for Desktop, Tablet, and Mobile devices

- \*\*URL Routing\*\*: Direct tool access via URL parameters

- \*\*16 Integrated Tools\*\*: Complete Synopsys AI tool ecosystem

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## Integrated Tools & URLs

### Complete Tool Inventory

The GTM Copilot Dashboard integrates with 16 Synopsys AI-powered tools, each accessible through dedicated URLs and URL routing parameters.

#### Tool Configuration Matrix

| Tool Name | URL Parameter | Full URL | Category | Special Features |

|-----------|---------------|----------|----------|------------------|

| \*\*Custom Compiler\*\*\* | `cc` | `https://snpsai-copilot-gtm/?product=cc` | Design Compilation | Workflow Assistant (WA) for TCL code generation |

| \*\*DSO.ai\*\* | `dso` | `https://snpsai-copilot-gtm/?product=dso` | AI Optimization | Design Space Optimization |

| \*\*Fusion Compiler\*\*\* | `fc` | `https://snpsai-copilot-gtm/?product=fc` | Design Compilation | Workflow Assistant (WA) for TCL code generation |

| \*\*IC Validator\*\* | `icv` | `https://snpsai-copilot-gtm/?product=icv` | Physical Verification | IC Design Validation |

| \*\*PrimeSim Pro\*\* | `psim\_pro` | `https://snpsai-copilot-gtm/?product=psim\_pro` | Circuit Simulation | Advanced Circuit Analysis |

| \*\*PrimeSim SPICE\*\* | `psim\_spice` | `https://snpsai-copilot-gtm/?product=psim\_spice` | Circuit Simulation | SPICE-based Simulation |

| \*\*PrimeSim XA\*\* | `psim\_xa` | `https://snpsai-copilot-gtm/?product=psim\_xa` | Circuit Simulation | Extended Analysis |

| \*\*PrimeTime\*\*\* | `pt` | `https://snpsai-copilot-gtm/?product=pt` | Timing Analysis | Workflow Assistant (WA) for TCL code generation |

| \*\*S-Litho\*\* | `slitho` | `https://snpsai-copilot-gtm/?product=slitho` | Lithography | Lithography Simulation |

| \*\*Synopsys.ai Copilot\*\*\*\* | `copilot` | `https://snpsai-copilot-gtm/?product=copilot` | General AI | General AI Assistant |

| \*\*TestMAX ATPG\*\* | `tmax\_atpg` | `https://snpsai-copilot-gtm/?product=tmax\_atpg` | Test Generation | Automatic Test Pattern Generation |

| \*\*VCS\*\* | `vcs` | `https://snpsai-copilot-gtm/?product=vcs` | Verification | Verilog Compiler Simulator |

| \*\*VC Formal\*\* | `vcformal` | `https://snpsai-copilot-gtm/?product=vcformal` | Formal Verification | Formal Property Verification |

| \*\*VC Low Power\*\* | `vclp` | `https://snpsai-copilot-gtm/?product=vclp` | Power Analysis | Low Power Verification |

| \*\*VC SpyGlass\*\* | `vcspyglass` | `https://snpsai-copilot-gtm/?product=vcspyglass` | Design Analysis | Design Rule Checking |

| \*\*Verdi\*\* | `verdi` | `https://snpsai-copilot-gtm/?product=verdi` | Debug & Analysis | Debug and Analysis Platform |

#### Special Feature Legend

- \*\*\\*\*\* Tools with Workflow Assistant (WA) for TCL code generation - users can start with `/generate` command

- \*\*\\*\\*\*\* Synopsys.ai Copilot should be used for finding answers on its use-model, not for product tools. CSG reports do not consider these queries.

### URL Routing System

#### Direct Access URLs

Users can access tools directly using the following URL pattern:

```

https://gtmcopilot.synopsys.com/?product=[parameter]

```

\*\*Examples:\*\*

- Custom Compiler: `https://gtmcopilot.synopsys.com/?product=cc`

- DSO.ai: `https://gtmcopilot.synopsys.com/?product=dso`

- PrimeTime: `https://gtmcopilot.synopsys.com/?product=pt`

#### Internal URL Mapping

The application uses the following internal configuration for URL routing:

```javascript

// URL routing configuration - maps URL parameters to tool names

const URL\_ROUTES = {

'cc': 'Custom Compiler \*',

'dso': 'DSO.ai',

'fc': 'Fusion Compiler \*',

'icv': 'IC Validator',

'psim\_pro': 'PrimeSim Pro',

'psim\_spice': 'PrimeSim SPICE',

'psim\_xa': 'PrimeSim XA',

'pt': 'PrimeTime \*',

'slitho': 'S-Litho',

'copilot': 'Synopsys.ai Copilot \*\*',

'tmax\_atpg': 'TestMAX ATPG',

'vcs': 'VCS',

'vcformal': 'VC Formal',

'vclp': 'VC Low Power',

'vcspyglass': 'VC SpyGlass',

'verdi': 'Verdi'

};

```

### Integration Architecture

#### iframe-based Integration

All tools are integrated using iframe technology, allowing:

- Seamless user experience within the dashboard

- Independent tool loading and operation

- Consistent navigation and branding

- Cross-origin resource sharing (CORS) compliance

#### Browser Compatibility

- \*\*Supported Browsers\*\*: Chrome 90+, Firefox 88+, Safari 14+, Edge 90+

- \*\*Mobile Support\*\*: iOS Safari 14+, Chrome Mobile 90+

- \*\*Security Requirements\*\*: HTTPS/TLS 1.2+ required for all tool access

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## File Structure & Locations

### Production Server File Structure

```

C:\inetpub\wwwroot\gtmcopilot\

├── index.html # Main application file

├── assets\

│ ├── css\

│ │ └── styles.css # All styling and responsive design

│ ├── js\

│ │ └── script.js # Application logic and functionality

│ └── images\

│ ├── favicon\

│ │ └── favicon.ico # Website favicon

│ └── synopsys-logo-color.svg # Synopsys branding logo

└── web.config # IIS configuration file

```

### Development Environment

```

C:\Users\[username]\OneDrive\Desktop\Work\Office\One Point\gtmcopilot(HTML, CSS, JS)\

├── index.html

├── assets\

│ ├── css\styles.css

│ ├── js\script.js

│ └── images\

│ ├── favicon\favicon.ico

│ └── synopsys-logo-color.svg

```

### Backup Locations

- \*\*Primary Backup\*\*: `\\server\backups\gtmcopilot\[date]\`

- \*\*Secondary Backup\*\*: `C:\Backups\GTMCopilot\[date]\`

- \*\*Version Control\*\*: Git repository (if applicable)

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## Windows Server Configuration

### Server Specifications

- \*\*Server OS\*\*: Windows Server 2019/2022

- \*\*Web Server\*\*: Internet Information Services (IIS) 10.0

- \*\*Application Pool\*\*: .NET Framework v4.0 (Classic Pipeline)

- \*\*Document Root\*\*: `C:\inetpub\wwwroot\gtmcopilot\`

- \*\*Port\*\*: 80 (HTTP), 443 (HTTPS)

### IIS Configuration Details

#### Website Settings

- \*\*Site Name\*\*: GTM Copilot

- \*\*Physical Path\*\*: `C:\inetpub\wwwroot\gtmcopilot\`

- \*\*Binding\*\*: HTTP (Port 80), HTTPS (Port 443)

- \*\*Default Document\*\*: index.html

- \*\*Directory Browsing\*\*: Disabled

- \*\*Error Pages\*\*: Custom error pages configured

#### Security Settings

- \*\*SSL Certificate\*\*: Synopsys internal certificate

- \*\*Authentication\*\*: Anonymous Authentication (Enabled)

- \*\*Authorization\*\*: All users (Read & Execute)

- \*\*IP Restrictions\*\*: Internal network only

### Required Windows Features

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- Internet Information Services

- Web Management Tools

- IIS Management Console

- World Wide Web Services

- Application Development Features

- .NET Extensibility 3.5

- .NET Extensibility 4.8

- Common HTTP Features

- Default Document

- Directory Browsing

- HTTP Errors

- Static Content

- Health and Diagnostics

- HTTP Logging

- Request Monitor

- Performance Features

- Static Content Compression

- Security

- Request Filtering

```

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## Server Logging & Monitoring

### IIS Logging Configuration

- \*\*Log Location\*\*: `C:\inetpub\logs\LogFiles\W3SVC1\`

- \*\*Log Format\*\*: W3C Extended Log File Format

- \*\*Rotation\*\*: Daily

- \*\*Retention\*\*: 30 days

- \*\*Fields Logged\*\*: Date, Time, Client IP, Method, URI, Status Code, Bytes Sent

### Application Logging

- \*\*Location\*\*: `C:\inetpub\wwwroot\gtmcopilot\logs\`

- \*\*Log Files\*\*:

- `access.log` - General access logs

- `error.log` - Error logs

- `performance.log` - Performance metrics

### Monitoring Tools

- \*\*Windows Performance Monitor\*\*: CPU, Memory, Disk I/O

- \*\*IIS Manager\*\*: Real-time request monitoring

- \*\*Event Viewer\*\*: System and application events

- \*\*Custom PowerShell Scripts\*\*: Automated health checks

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## Configuration Management

### Environment-Specific Configurations

#### Development Environment

- \*\*URL\*\*: `http://dev-gtmcopilot.synopsys.com`

- \*\*Debug Mode\*\*: Enabled

- \*\*Logging Level\*\*: Verbose

- \*\*Cache\*\*: Disabled

#### Staging Environment

- \*\*URL\*\*: `https://staging-gtmcopilot.synopsys.com`

- \*\*Debug Mode\*\*: Disabled

- \*\*Logging Level\*\*: Standard

- \*\*Cache\*\*: Enabled

#### Production Environment

- \*\*URL\*\*: `https://gtmcopilot.synopsys.com`

- \*\*Debug Mode\*\*: Disabled

- \*\*Logging Level\*\*: Errors only

- \*\*Cache\*\*: Enabled with compression

### Configuration Files

#### web.config (IIS Configuration)

```xml

<?xml version="1.0" encoding="UTF-8"?>

<configuration>

<system.webServer>

<defaultDocument>

<files>

<clear />

<add value="index.html" />

</files>

</defaultDocument>

<staticContent>

<mimeMap fileExtension=".svg" mimeType="image/svg+xml" />

<mimeMap fileExtension=".woff" mimeType="application/font-woff" />

<mimeMap fileExtension=".woff2" mimeType="application/font-woff2" />

</staticContent>

<httpCompression>

<dynamicTypes>

<add mimeType="text/\*" enabled="true" />

<add mimeType="message/\*" enabled="true" />

<add mimeType="application/javascript" enabled="true" />

<add mimeType="\*/\*" enabled="false" />

</dynamicTypes>

<staticTypes>

<add mimeType="text/\*" enabled="true" />

<add mimeType="message/\*" enabled="true" />

<add mimeType="application/javascript" enabled="true" />

<add mimeType="application/atom+xml" enabled="true" />

<add mimeType="application/xaml+xml" enabled="true" />

<add mimeType="image/svg+xml" enabled="true" />

<add mimeType="\*/\*" enabled="false" />

</staticTypes>

</httpCompression>

<urlCompression doStaticCompression="true" doDynamicCompression="true" />

<security>

<requestFiltering>

<fileExtensions>

<add fileExtension=".config" allowed="false" />

</fileExtensions>

</requestFiltering>

</security>

</system.webServer>

</configuration>

```

### Common Configuration Changes

#### Adding New Tools

1. Update `MENU\_CONFIG` in `script.js`

2. Update `URL\_ROUTES` in `script.js`

3. Add navigation item in `index.html` sidebar

4. Add tool card in `index.html` welcome page

5. Test URL routing functionality

#### Changing Tool URLs

1. Update URLs in `MENU\_CONFIG` object in `script.js`

2. Verify all URLs are accessible

3. Test iframe loading functionality

4. Update any documentation

#### Modifying Styling

1. Update CSS variables in `:root` section of `styles.css`

2. Modify component-specific styles

3. Test responsive design on all breakpoints

4. Verify cross-browser compatibility

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### Update Procedures

#### Content Updates

1. \*\*Tool Information Changes\*\*:

- Edit `index.html` for tool names/descriptions

- Update `script.js` for URL changes

- Test all affected functionality

2. \*\*Styling Updates\*\*:

- Modify `styles.css` for visual changes

- Test responsive design

- Verify cross-browser compatibility

3. \*\*Functionality Updates\*\*:

- Update `script.js` for new features

- Test all existing functionality

- Update documentation

#### Security Updates

1. \*\*SSL Certificate Renewal\*\*:

- Monitor expiration dates

- Renew certificates 30 days before expiration

- Update IIS bindings

- Test HTTPS functionality

2. \*\*Windows Updates\*\*:

- Schedule maintenance windows

- Apply security patches

- Test website functionality post-update

- Document any issues

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## Troubleshooting Guide

### Common Issues and Solutions

#### Website Not Loading

\*\*Symptoms\*\*: 500 error, blank page, connection timeout

\*\*Solutions\*\*:

1. Check IIS service status: `Get-Service W3SVC`

2. Verify application pool status: `Get-WebAppPool -Name "GTM\_Copilot\_Pool"`

3. Check file permissions on `C:\inetpub\wwwroot\gtmcopilot\`

4. Review IIS logs for specific error codes

5. Restart IIS: `iisreset`

#### Tools Not Loading in Iframe

\*\*Symptoms\*\*: Blank iframe, "This content cannot be displayed" message

\*\*Solutions\*\*:

1. Check iframe URLs in browser developer tools

2. Verify external tool URLs are accessible

3. Check for CORS issues in browser console

4. Review network connectivity to external services

5. Update URLs in `MENU\_CONFIG` if changed

#### Search Functionality Not Working

\*\*Symptoms\*\*: Search input not responding, no results displayed

\*\*Solutions\*\*:

1. Check browser console for JavaScript errors

2. Verify `script.js` is loading correctly

3. Test search functionality in different browsers

4. Check for JavaScript conflicts

5. Clear browser cache and test

#### Mobile/Responsive Issues

\*\*Symptoms\*\*: Layout broken on mobile devices, hamburger menu not working

\*\*Solutions\*\*:

1. Test on actual mobile devices

2. Check CSS media queries in `styles.css`

3. Verify viewport meta tag in `index.html`

4. Test touch interactions

5. Review CSS for mobile-specific styles

#### Performance Issues

\*\*Symptoms\*\*: Slow loading, high server resource usage

\*\*Solutions\*\*:

1. Enable IIS compression

2. Optimize images and assets

3. Review server resource usage

4. Check for memory leaks in JavaScript

5. Implement caching headers

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