

UI5

a robust HTML5-based user interface for VFX5

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History

- 2013 FATE "Forth Advanced Template Engine"
- 2014 Flink "Forth Link"
- 2016 f - packages
- 2018 redis

Outlook

- 1 History
- 2 Flink
- 3 Container
- 4 HTML5
- 5 Source
- 6 Demo
- 7 Future

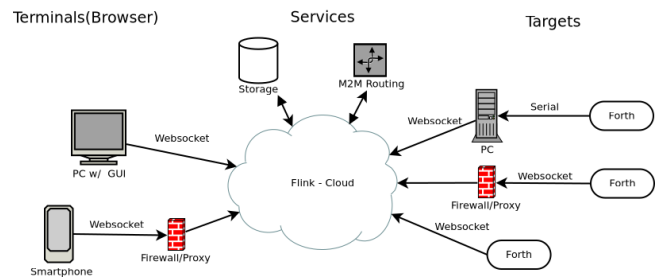
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- 2019 UI5 ← you are here

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Flink



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Forth on a Server

Highly customizable compiler with bare metal access

- Protect host from Forth
- Secure other instances

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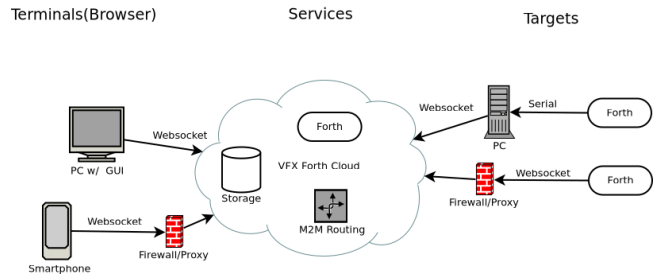
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Forth on a Server

Highly customizable compiler with bare metal access

- Protect host from Forth ✗
- Secure other instances ✗

VFX Forth Cloud



Forth on a Server in a container

Highly customizable compiler with bare metal access on a server in a container

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HTML5

- HTML Elements
- CSS Styling
- JS Interacting

Forth on a Server in a container

Highly customizable compiler with bare metal access on a server in a container

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index.html

```

1 <main>
2   <section id="terminal">
3     <vfx-terminal></vfx-terminal>
4   </section>
5   <section id="help">
6     <h2>Help</h2>
7     <p>
8       There is help, that needs to be found ;)
9     </p>
10  </section>
11 </main>

```

Forth on a Server in a container

Highly customizable compiler with bare metal access on a server in a container

- Protect host from Forth ✓
- Secure other instances ✓

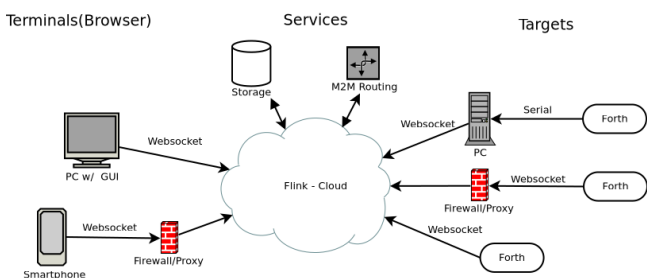
ui5.css - theming

```

1 :root {
2   --main-color: #333;
3   --main-background: #FFF;
4 }
5
6 body.theme-night {
7   --main-color: #FFF;
8   --main-background: #333;
9 }
10
11 main {
12   color: var(--main-color);
13   background: var(--main-background);
14 }

```

Original Flink



ui5.css - scaffolding

```

1 /*
2 * ┌──────────┴──────────┐
3 * │   HEADER   │
4 * └──────────┬──────────┘
5 * │ ASIDE │ CONTENT │
6 * └──────────┬──────────┘
7 * │   FOOTER   │
8 * └──────────┴──────────┘
9 */
10 body {
11   grid-template-columns: var(--aside-width) 1fr;
12   grid-template-rows: var(--header-height) 1fr var(--footer-height);
13   grid-template-areas: /* note how this text documents the layout */
14     'aside header'
15     'aside main'
16     'aside footer';
17 }

```

js/main.js - modules

```

1 /* navigation by hash */
2 import './vfx-navigation.js';
3
4 /* websocket connector */
5 import './vfx-connector.js';
6
7 /* custom elements */
8 import './vfx-terminal.js';
9
10 /* application specific */
11 import './night-theme.js';
    
```

app.fth - websocket

```

1 : app-ws
2 s" 101 Switching Protocols" http-status
3 s" Upgrade: websocket" http-header
4 s" Connection: Upgrade" http-header
5 SVIData Get-Sec-WebSocket-Accept
6 s" Sec-WebSocket-Accept" http-header-value
7 s" Sec-WebSocket-Protocol: ui5" http-header
8 crlf
9
10 mysid gen-handle @ mywss open-gio \ open
11 [io mywss setio
12 (.cold)
13 ['] websocket-quit catch >r
14 s0 @ sp! r>
15 io! ;
16 ' app-ws add-route-get /ws
    
```

js/night-theme.js

```

1 /* before interacting with the DOM wait for it to be fully parsed */
2 document.addEventListener( "DOMContentLoaded", () => {
3
4 /* querySelector works by getting the first match of a CSS path */
5 document.querySelector( "header button[name='night-mode']" )
6 .addEventListener( "click", (evt) => {
7
8 /* toggles theme-night class, all else is done by CSS */
9 document.body.classList.toggle("theme-night");
10
11 });
12
13 });
    
```

Demo

<http://cloud.vfxforth.com>

js/vfx-terminal.js

```

1 const template = document.createElement('template');
2 template.innerHTML = `
3 <style>
4 .terminalWrapper .input { color: var( --input-color, #FFF ); }
5 </style>
6 <div class="terminalWrapper">
7 VFX Terminal <button>Connect</button>
8 <input name="source" type="text" autofocus/>
9 </div>`;
10 class VfxTerminal extends HTMLElement {
11 constructor() {
12 const shadow = this.attachShadow({ mode: 'open' });
13 shadow.appendChild( template.content.cloneNode( true ) );
14 shadow.querySelector("button").addEventListener( "click", ... );
15 }
16 write( text ) { this.source.insertAdjacentHTML('beforebegin', text ); }
17
18 customElements.define( 'vfx-terminal', VfxTerminal );
    
```

Future

- Provide more than the full VFX- "Window"-Experience in UI5
- Migrate AIDE to UI5

app.fth - routing

```

1 : app-home
2 s" %APP%/index.html" s" text/html;encoding=utf8" http-file-type ;
3 ' app-home add-route-get /
4
5 : app-css
6 s" %APP%/ui5.css" s" text/css" http-file-type ;
7 ' app-css add-route-get /ui5.css
8
9 : app-favicon
10 s" %APP%/favicon.ico" s" image/x-icon" http-file-type ;
11 ' app-favicon add-route-get /favicon.ico
    
```

Participate!



app.fth - chunked

```

1 : app-chunked
2 s" 200 OK" http-status
3 s" Transfer-Encoding: chunked" http-header
4 s" Content-Type: text/plain;encoding=utf8" http-header
5 crlf
6 s\ " Hallo du\n" http-chunk
7 s" Wie geht's?" http-chunk
8 http-chunk-end ;
9 ' app-chunked add-route-get /chunked
    
```