

UI5

a robust HTML5-based user interface for VFX5

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Outlook

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

History

- **2013** FATE “Forth Advanced Template Engine”

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- **2018** redis

History

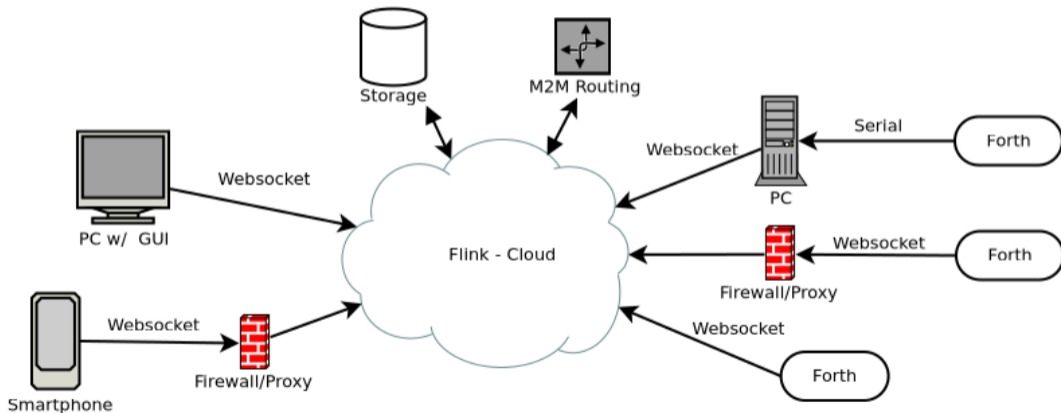
- **2013** FATE “Forth Advanced Template Engine”
- **2014** Flink “Forth Link”
- **2016** f - packages
- **2018** redis
- **2019** UI5 ← *you are here*

Flink

Terminals(Browser)

Services

Targets



Forth on a Server

Highly customizable compiler with bare metal access

- Protect host from Forth
- Secure other instances

Forth on a Server

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Forth on a Server

Highly customizable compiler with bare metal access

- Protect host from Forth ✗
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Forth ~~on a Server~~ in a container

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

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Forth ~~on a Server~~ in a container

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

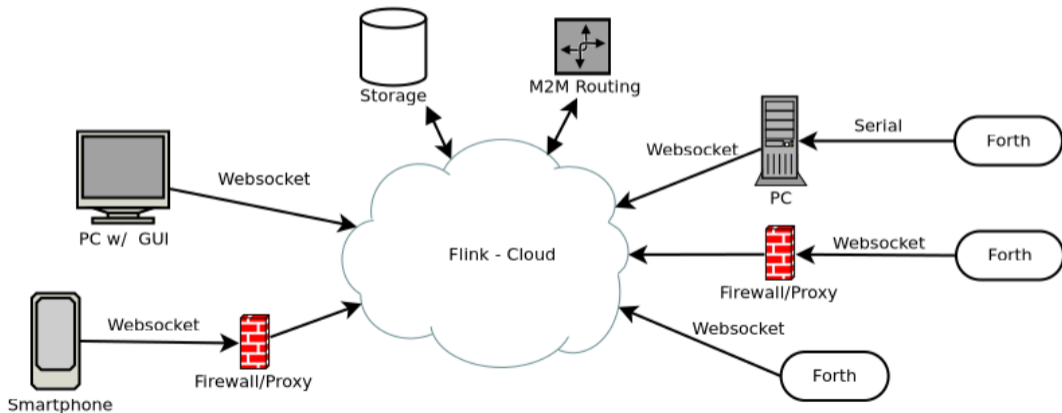
- Protect host from Forth ✓
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Original Flink

Terminals(Browser)

Services

Targets

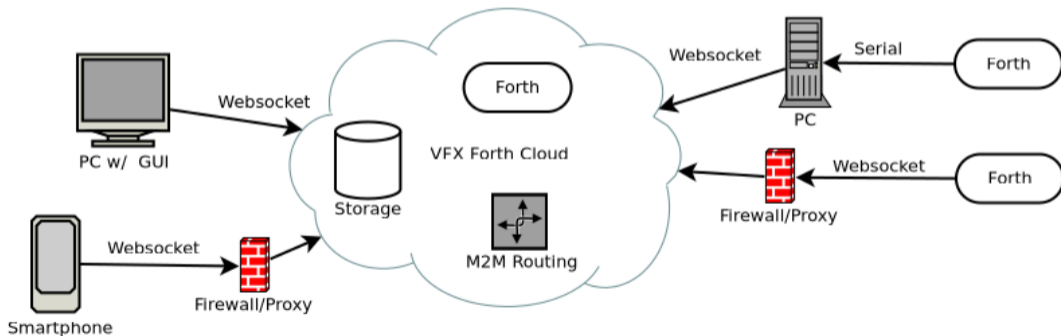


VFX Forth Cloud

Terminals(Browser)

Services

Targets



HTML5

- **HTML** Elements
- **CSS** Styling
- **JS** Interaction

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>
```

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 }
```

ui5.css - scaffolding

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

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';
```

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  });
```

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 );
```

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
```


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
```

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
```

UI5
○○

History
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Flink
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Container
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HTML5
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Source
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Demo
●

Future
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Demo

<http://cloud.vfxforth.com>

Future

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

Participate!

