

Security

Tightening up the locks and chains

Based on Blaise 5.8.3



Statistics
Netherlands

Agenda

- Introduction
- Blaise security
- Security in IIS
- SSL/TLS Certificates
- Implementing an HttpModule
- Blaise security updates

Please use the Q&A button for your questions.



Introduction

Authentication vs Authorization

“Authentication is the process of verifying who a user is, while authorization is the process of verifying what they have access to.”



Introduction

- Types of IT security:
 - Network
 - Internet
 - Endpoint
 - Cloud
 - Application

A screenshot of the Visual Studio Code editor. The Explorer view on the left shows a file tree with folders like 'server', 'web', 'node_modules', 'public', 'src', and 'views'. The main editor area shows a JavaScript file named 'getUserCount.js' with the following code:

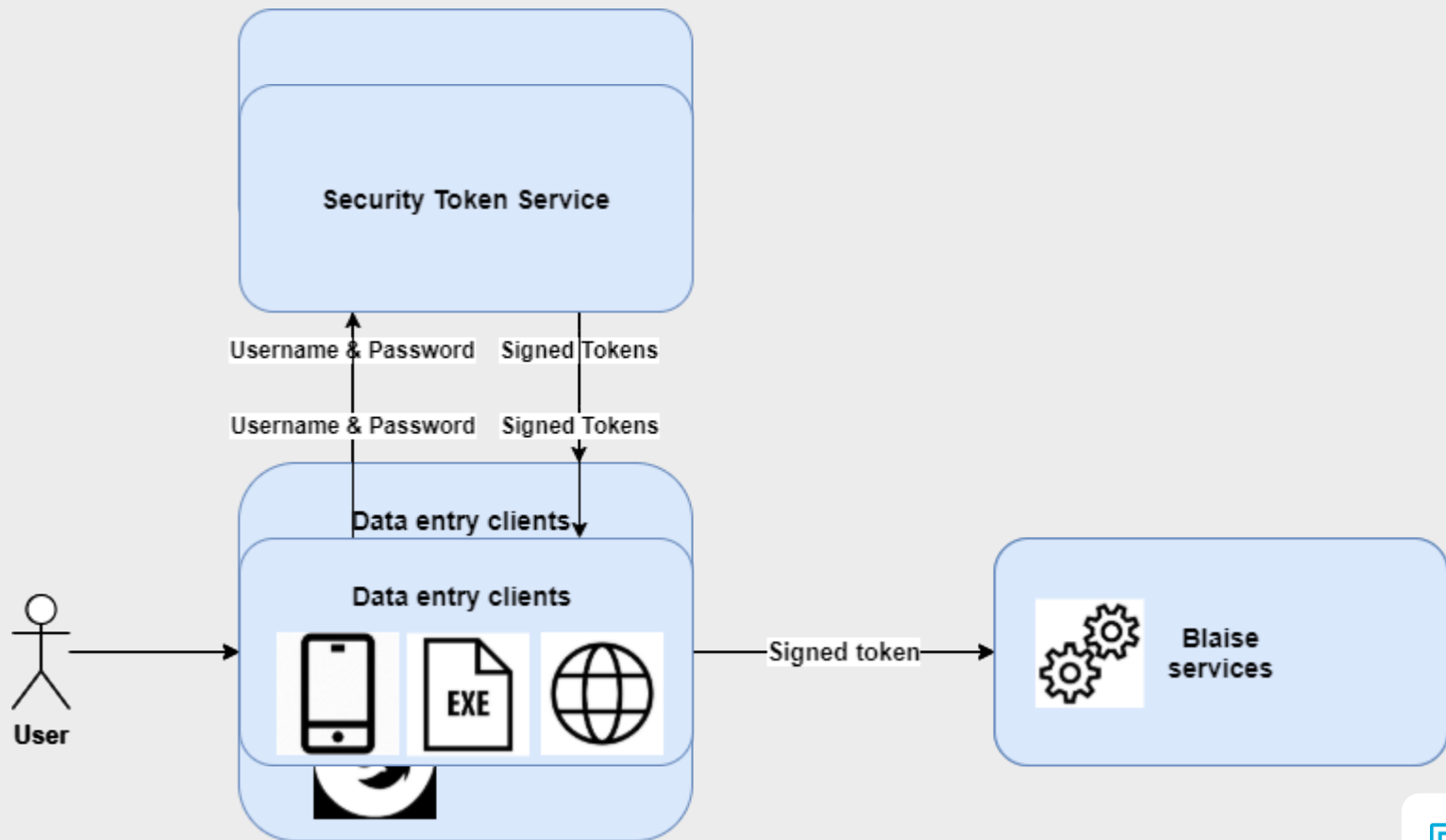
```
1 // @ts-check
2
3 import * as config from './config';
4 import * as moment from 'moment';
5
6 /++
7 + @param {boolean} [testMode] Enable demo mode.
8 +
9 + @return {Promise<number>} Number of users.
10 +/
11
12 export async function getUserCount(testMode = false) {
13   const response = await fetch(`${config.apiUrl}/v0/numberServed`);
14   const data = await response.json();
15   if (testMode) {
16     return data.numberServed * moment.now();
17   }
18   return data.number;
19 }
20
21
22
```

The code editor has a search bar at the top right with the text 'moment.now()'. A dropdown menu is open below the search bar, showing the following options: 'normalizeUnits', 'now', 'months', 'monthsShort', 'version', 'duration', 'parseZone', 'defineLocale', 'isDuration', 'calendarFormat', 'isMoment', and 'toString'. The terminal at the bottom shows a TypeScript error: 'Property 'jsonX' does not exist on type 'Response'. Did you mean 'json'? ts(2551) [13, 33]'. The status bar at the bottom indicates 'Ln 15, Col 45 Spaces: 4 UTF-8 LF JavaScript (ts)'.

```
function moment.now(): number
Returns unix time in milliseconds. Overwrite for profit.
```



Blaise security



Facebook tokens

Types of tokens

- User access tokens
- App access tokens
- Page access tokens
- Client access tokens



Security in IIS

- ASP.NET Impersonation
- Basic Authentication
- Windows Authentication
- Forms Authentication



Demonstrate Basic Authentication

SSL, TLS and Certificates [1]

- SSL / Secure Sockets Layer
- TLS / Transport Layer Security

Expectations:

- No one has read my message
- No one has changed my message

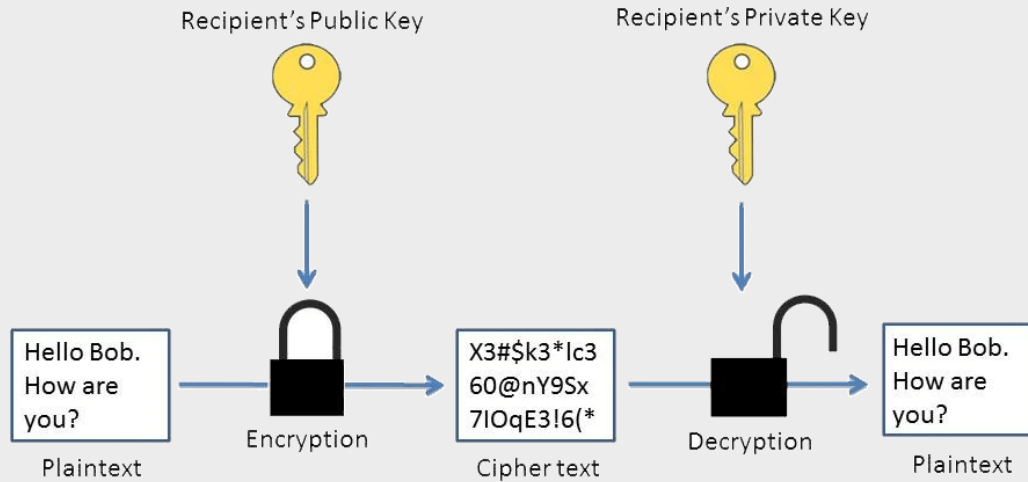
Solutions:

- Encrypt it
- Sign it



SSL, TLS and Certificates [2]

Public and private keys



How can we trust this?

Certificates



Implementing an HttpModule

What is an HttpModule?

“An HTTP module is an assembly that is called on every request to an application. It’s a part of the HTTP request and response pipeline.”

Typical use cases:

- Request type checking
- Security checking
- Logging



Blaise security updates

We release security patches in the following situations:

- We detect a security issue in our code.
- One of our customers detects a security leak.
- One of the third party libraries we use has a security leak

Important:

With every security patch we try to remain as backward compatible as possible.



Q&A

