PebbleTemplates / **pebble** Public

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Commit b3451c8

ebussieres authored on Dec 11, 2025 · 3 / 3 · Verified

```
CVE-2025-1686 (#715)
* fix: CVE-2025-1686

- use only a ClasspathLoader by default
- Modify the `FileLoader` to use a mandatory sandboxed base directory parameter

* chore: update version

* feat: protect FileLoader against path traversal

* chore: fix unit test to run on Windows

* feat: simplify FileLoader and add some unit tests

* Update FileLoader.java

* Update FileLoader.java
```

master (#715) · v4.1.0 ••• 4.1.0

1 parent a5a38be commit b3451c8

18 files changed +226 -152 lines changed

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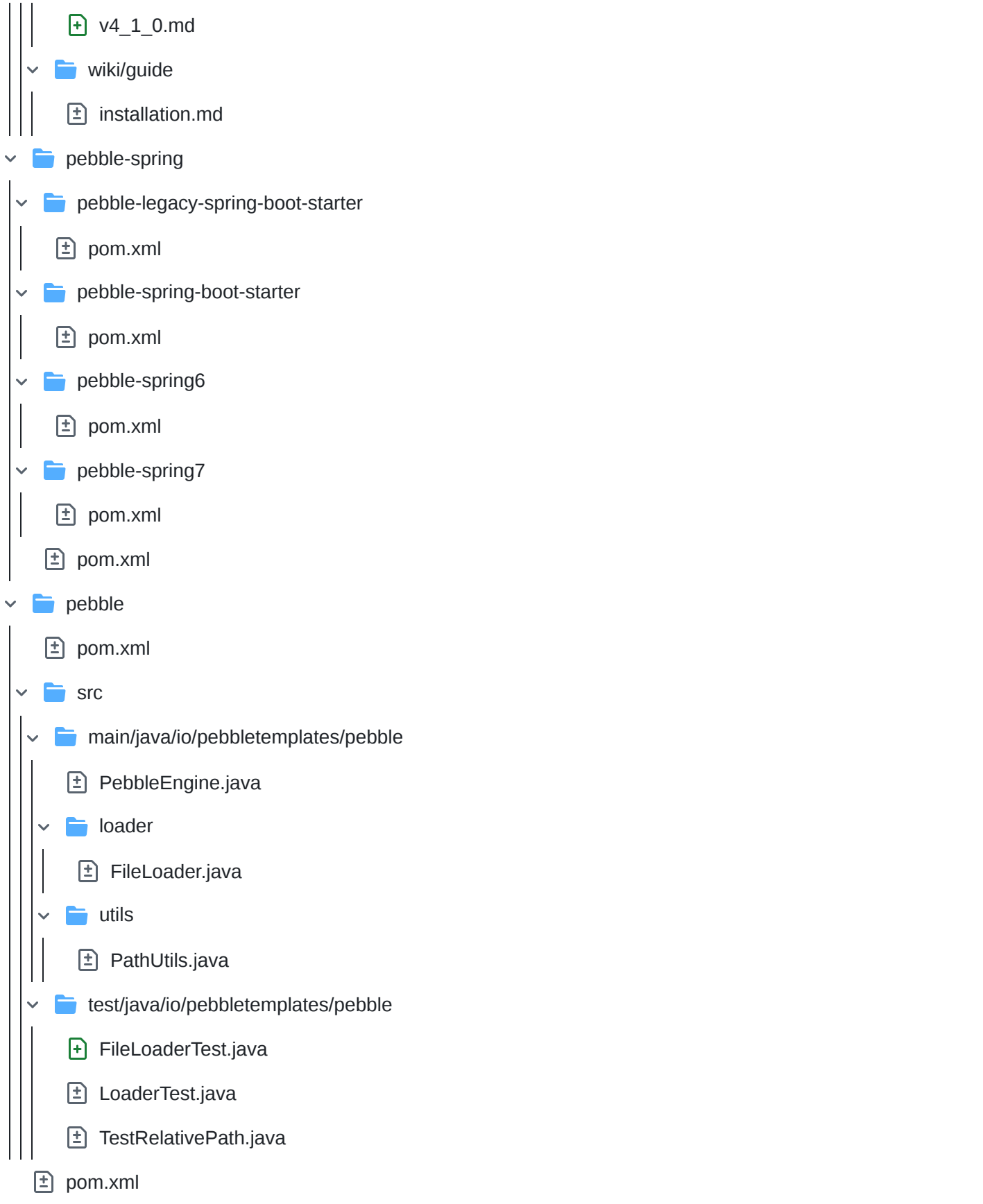

18 files changed +226 -152 lines changed

Search within code

README.md

```
@@ -6,6 +6,12 @@ includes integrated support for internationalization.

For more information please visit the [website](https://pebbletemplates.io).

+ # Breaking changes in version 4.1.x
+
+ - If you do not provide a custom Loader, Pebble will now use only a `ClasspathLoader` by default, same as the spring autoconfiguration.
+   Before that, it would have used an instance of the `DelegatingLoader` which consists of a `ClasspathLoader` and a `FileLoader` behind the scenes to find your templates.
+ - Modify the `FileLoader` to use a mandatory sandboxed base directory parameter.
+
 # Breaking changes in version 4.0.x

 - Use one of the following artifactId according to the spring boot version that you are using
```

docs/pom.xml

```
@@ -5,7 +5,7 @@
     <parent>
       <groupId>io.pebbletemplates</groupId>
       <artifactId>pebble-project</artifactId>
-      <version>4.0.1-SNAPSHOT</version>
+      <version>4.1.0-SNAPSHOT</version>
     </parent>

     <artifactId>docs</artifactId>
```

docs/src/orchid/resources/changelog/v4_0_1.md

Load Diff

This file was deleted.

docs/src/orchid/resources/changelog/v4_1_0.md

```
@@ -0,0 +1,17 @@
+ ---
+ version: '4.1.0'
+ ---
+
+ # BREAKING CHANGES
+ - Modify the `FileLoader` to use a mandatory sandboxed base directory parameter. (#715)
+ - If you do not provide a custom Loader, Pebble will now use only a `ClasspathLoader` by default, same as the spring autoconfiguration. (#715)
+   Before that, it would have used an instance of the `DelegatingLoader` which consists of a `ClasspathLoader` and a `FileLoader` behind the scenes to find your templates.
+
+ # New Features
+ - Use a default existing format of `yyyy-MM-dd'T'HH:mm:ssZ` when using date filter with a string (#677)
+ - Look for exact method / field match when doing reflection. Look for method get/is/has if none match
+ - Update some dependencies (#709)
+
+ # Bug Fixes
+ - NaN must return false instead of throwing an exception (#695)
+ - [CVE-2025-1686](https://nvd.nist.gov/vuln/detail/CVE-2025-1686).
```

...orchid/resources/wiki/guide/installation.md

```
@@ -61,18 +61,17 @@ finding your templates.

Pebble ships with the following loader implementations:

+ - `DelegatingLoader`: Delegates responsibility to a collection of children loaders.
  - `ClasspathLoader`: Uses a classloader to search the current classpath.
- - `FileLoader`:  Finds templates using a filesystem path.
+ - `FileLoader`:  Finds templates using a filesystem path. Must provide a mandatory absolute base path.
```

```
66  67    - `ServletLoader`:  Uses a servlet context to find the template. This is the recommended loader for use within an
67  68    application server but is not enabled by default.
68  69    - `Servlet5Loader`:  Same as `ServletLoader`, but for Jakarta Servlet 5.0 or newer.
69      - - `StringLoader`: Considers the name of the template to be the contents of the template.
70      - - `DelegatingLoader`: Delegates responsibility to a collection of children loaders.
71  70    - `MemoryLoader`: Loader that supports inheritance and doesn't require a filesystem. This is useful for applications
        71  + - `StringLoader`: Considers the name of the template to be the contents of the template. Should not be used in a production environment. It is primarily for testing and debugging. Many tags may not work when using this loader, such as "extends", "imports", etc.
72  72      that retrieve templates from a database for example.
73  73
74      - If you do not provide a custom Loader, Pebble will use an instance of the `DelegatingLoader` by default.
75      - This delegating loader will use a `ClasspathLoader` and a `FileLoader` behind the scenes to find your templates.
        74  + If you do not provide a custom Loader, Pebble will use an instance of the `ClasspathLoader` by default.
76  75
77  76    ## Pebble Engine Settings
78  77
        @@ -85,7 +84,7 @@ All the settings are set during the construction of the `PebbleEngine` object.
85  84    | `tagCache` | An implementation of a ConcurrentMap cache that the Pebble engine will use for {{ anchor('cache tag', 'cache') }}. | Default implementation is `ConcurrentMapTagCache` and another implementation based on Caffeine is available (`CaffeineTagCache`) |
86  85    | `defaultLocale` | The default locale which will be passed to each compiled template. The templates then use this locale for functions such as i18n, etc. A template can also be given a unique locale during evaluation.  | `Locale.getDefault()` |
87  86    | `executorService` | An `ExecutorService` that allows the usage of some advanced multithreading features, such as the `parallel` tag. | `null` |
88      - | `loader` | An implementation of the `Loader` interface which is used to find templates. | An implementation of the `DelegatingLoader` which uses a
```

```
                `ClasspathLoader` and a `FileLoader` behind the scenes. |
      87    + | `loader` | An implementation of the `Loader` interface which is used to find
                templates. | An implementation of the `ClasspathLoader` |
 89   88       | `strictVariables` | If set to true, Pebble will throw an exception if you try
                to access a variable or attribute that does not exist (or an attribute of a null
                variable). If set to false, your template will treat non-existing
                variables/attributes as null without ever skipping a beat. | `false` |
 90   89       | `methodAccessValidator` | Pebble provides two implementations.
                NoOpMethodAccessValidator which do nothing and BlacklistMethodAccessValidator
                which checks that the method being called is not blacklisted. |
                `BlacklistMethodAccessValidator`
 91   90       | `literalDecimalTreatedAsInteger` | option for treating literal decimals as
                `int`. Otherwise it is `long`. | `false` |
```

...g/pebble-legacy-spring-boot-starter/pom.xml

```
                @@ -4,7 +4,7 @@
  4    4          <parent>
  5    5            <artifactId>pebble-spring</artifactId>
  6    6            <groupId>io.pebbletemplates</groupId>
  7         -      <version>4.0.1-SNAPSHOT</version>
       7    +      <version>4.1.0-SNAPSHOT</version>
  8    8          </parent>
  9    9
 10   10          <artifactId>pebble-legacy-spring-boot-starter</artifactId>
```

...e-spring/pebble-spring-boot-starter/pom.xml

```
                @@ -4,7 +4,7 @@
  4    4          <parent>
  5    5            <artifactId>pebble-spring</artifactId>
  6    6            <groupId>io.pebbletemplates</groupId>
  7         -      <version>4.0.1-SNAPSHOT</version>
       7    +      <version>4.1.0-SNAPSHOT</version>
  8    8          </parent>
  9    9
 10   10          <artifactId>pebble-spring-boot-starter</artifactId>
```

pebble-spring/pebble-spring6/pom.xml

```
@@ -4,7 +4,7 @@
    <parent>
      <artifactId>pebble-spring</artifactId>
      <groupId>io.pebbletemplates</groupId>
-     <version>4.0.1-SNAPSHOT</version>
+     <version>4.1.0-SNAPSHOT</version>
    </parent>

    <artifactId>pebble-spring6</artifactId>
```

pebble-spring/pebble-spring7/pom.xml

```
@@ -4,7 +4,7 @@
    <parent>
      <artifactId>pebble-spring</artifactId>
      <groupId>io.pebbletemplates</groupId>
-     <version>4.0.1-SNAPSHOT</version>
+     <version>4.1.0-SNAPSHOT</version>
    </parent>

    <artifactId>pebble-spring7</artifactId>
```

pebble-spring/pom.xml

```
@@ -4,7 +4,7 @@
    <parent>
      <groupId>io.pebbletemplates</groupId>
      <artifactId>pebble-project</artifactId>
-     <version>4.0.1-SNAPSHOT</version>
+     <version>4.1.0-SNAPSHOT</version>
    </parent>

    <artifactId>pebble-spring</artifactId>
```

pebble/pom.xml

```
@@ -3,7 +3,7 @@
3  3    <parent>
4  4      <groupId>io.pebbletemplates</groupId>
5  5      <artifactId>pebble-project</artifactId>
6     -    <version>4.0.1-SNAPSHOT</version>
   6  +    <version>4.1.0-SNAPSHOT</version>
7  7    </parent>
8  8
9  9    <artifactId>pebble</artifactId>
```

...io/pebbletemplates/pebble/PebbleEngine.java

```
@@ -9,45 +9,40 @@
9  9  package io.pebbletemplates.pebble;
10 10
11 11
   12 + import
      io.pebbletemplates.pebble.attributes.methodaccess.BlacklistMethodAccessValidato
      r;
   13 + import io.pebbletemplates.pebble.attributes.methodaccess.MethodAccessValidator;
12 14  import io.pebbletemplates.pebble.cache.CacheKey;
13 15  import io.pebbletemplates.pebble.cache.PebbleCache;
14 16  import io.pebbletemplates.pebble.cache.tag.ConcurrentMapTagCache;
15 17  import io.pebbletemplates.pebble.cache.tag.NoOpTagCache;
16 18  import io.pebbletemplates.pebble.cache.template.ConcurrentMapTemplateCache;
17 19  import io.pebbletemplates.pebble.cache.template.NoOpTemplateCache;
18 20  import io.pebbletemplates.pebble.error.LoaderException;
   21 + import io.pebbletemplates.pebble.extension.*;
   22 + import io.pebbletemplates.pebble.extension.escaper.EscapingStrategy;
19 23  import io.pebbletemplates.pebble.lexer.LexerImpl;
20 24  import io.pebbletemplates.pebble.lexer.Syntax;
21 25  import io.pebbletemplates.pebble.lexer.TokenStream;
   26 + import io.pebbletemplates.pebble.loader.ClasspathLoader;
   27 + import io.pebbletemplates.pebble.loader.Loader;
   28 + import io.pebbletemplates.pebble.loader.StringLoader;
22 29  import io.pebbletemplates.pebble.node.RootNode;
23 30  import io.pebbletemplates.pebble.parser.Parser;
24 31  import io.pebbletemplates.pebble.parser.ParserImpl;
25 32  import io.pebbletemplates.pebble.parser.ParserOptions;
```

```
26        - import io.pebbletemplates.pebble.attributes.methodaccess.BlacklistMethodAccessValidator;
27        - import io.pebbletemplates.pebble.attributes.methodaccess.MethodAccessValidator;
28        - import io.pebbletemplates.pebble.extension.escaper.EscapingStrategy;
29        - import io.pebbletemplates.pebble.loader.ClasspathLoader;
30        - import io.pebbletemplates.pebble.loader.DelegatingLoader;
31        - import io.pebbletemplates.pebble.loader.FileLoader;
32        - import io.pebbletemplates.pebble.loader.Loader;
33        - import io.pebbletemplates.pebble.loader.StringLoader;
34        - import io.pebbletemplates.pebble.extension.*;
35  33      import io.pebbletemplates.pebble.template.EvaluationOptions;
36  34      import io.pebbletemplates.pebble.template.PebbleTemplate;
37  35      import io.pebbletemplates.pebble.template.PebbleTemplateImpl;
      36  + import io.pebbletemplates.pebble.utils.TypeUtils;
      37  + import org.slf4j.Logger;
      38  + import org.slf4j.LoggerFactory;
38  39
39  40      import java.io.IOException;
40  41      import java.io.Reader;
41        - import java.util.ArrayList;
42        - import java.util.List;
43  42      import java.util.Locale;
44  43      import java.util.concurrent.ExecutorService;
45  44      import java.util.function.Function;
46  45
47        - import io.pebbletemplates.pebble.utils.TypeUtils;
48        - import org.slf4j.Logger;
49        - import org.slf4j.LoggerFactory;
50        -
51  46      /**
52  47       * The main class used for compiling templates. The PebbleEngine is responsible for delegating
53  48       * responsibility to the lexer, parser, compiler, and template cache.
          @@ -584,10 +579,7 @@ public PebbleEngine build() {
584 579
585 580           // default loader
586 581           if (this.loader == null) {
587       -           List<Loader<?>> defaultLoadingStrategies = new ArrayList<>();
```

```
588      -          defaultLoadingStrategies.add(new ClasspathLoader());
589      -          defaultLoadingStrategies.add(new FileLoader());
590      -          this.loader = new DelegatingLoader(defaultLoadingStrategies);
         582 +          this.loader = new ClasspathLoader();
591      583          }
592      584
593      585          // default locale
```

...bbletemplates/pebble/loader/FileLoader.java

```
         @@ -10,18 +10,12 @@
10       10
11       11       import io.pebbletemplates.pebble.error.LoaderException;
12       12       import io.pebbletemplates.pebble.utils.PathUtils;
13       -
14       13       import org.slf4j.Logger;
15       14       import org.slf4j.LoggerFactory;
16       15
17       -   import java.io.BufferedReader;
18       -   import java.io.File;
19       -   import java.io.FileInputStream;
20       -   import java.io.FileNotFoundException;
21       -   import java.io.InputStream;
22       -   import java.io.InputStreamReader;
23       -   import java.io.Reader;
24       -   import java.io.UnsupportedEncodingException;
         16  +   import java.io.*;
         17  +   import java.nio.file.Path;
         18  +   import java.nio.file.Paths;
25       19
26       20       /**
27       21        * This loader searches for a file located anywhere on the filesystem. It uses
                   java.io.File to
         @@ -34,69 +28,35 @@ public class FileLoader implements Loader<String> {
34       28         private static final Logger logger =
                   LoggerFactory.getLogger(FileLoader.class);
35       29
36       30         private String prefix;
37       -
38       31         private String suffix;
```

```
39        -
40  32      private String charset = "UTF-8";
41  33
        34  +   public FileLoader(String prefix) {
        35  +     this.setPrefix(prefix);
        36  +   }
        37  +
42  38      @Override
43  39      public Reader getReader(String templateName) {
44        -     // try to load File
45        -     InputStream is = null;
46  40        File file = this.getFile(templateName);
47        -     if (file.exists() && file.isFile()) {
48        -       try {
49        -         is = new FileInputStream(file);
50        -       } catch (FileNotFoundException e) {
51        -       }
52        -     }
53        -
54        -     if (is == null) {
55        -       throw new LoaderException(null,
56        -           "Could not find template \"" + templateName + "\"");
57        -     }
58        -
59  41        try {
        42  +       InputStream is = new FileInputStream(file);
60  43          return new BufferedReader(new InputStreamReader(is, this.charset));
        44  +     } catch (FileNotFoundException e) {
        45  +       throw new LoaderException(e, String.format("Could not find template
            [prefix='%s', templateName='%s']", this.prefix, templateName));
61  46        } catch (UnsupportedEncodingException e) {
        47  +       throw new LoaderException(e, String.format("Invalid charset '%s'",
            this.charset));
62  48        }
63        -
64        -     return null;
65  49      }
66  50
67  51      private File getFile(String templateName) {
68        -     // add the prefix and ensure the prefix ends with a separator character
```

```
69        -     StringBuilder path = new StringBuilder();
70        -     if (this.getPrefix() != null) {
71        -
72        -       path.append(this.getPrefix());
73        -
74        -       if (!this.getPrefix().endsWith(String.valueOf(File.separatorChar))) {
75        -         path.append(File.separatorChar);
76        -       }
77        -     }
78        -
79    52          templateName = templateName + (this.getSuffix() == null ? "" :
                this.getSuffix());
          53  +     templateName = PathUtils.sanitize(templateName, File.separatorChar);
80    54
81        -     logger.trace("Looking for template in {}{}.", path.toString(),
                templateName);
          55  +     Path path = Paths.get(this.getPrefix(), templateName);
          56  +     logger.trace("Looking for template in {}.", path);
82    57
83        -     /*
84        -      * if template name contains path segments, move those segments into the
85        -      * path variable. The below technique needs to know the difference
86        -      * between the path and file name.
87        -      */
88        -     String[] pathSegments = PathUtils.PATH_SEPARATOR_REGEX.split(templateName);
89        -
90        -     if (pathSegments.length > 1) {
91        -       // file name is the last segment
92        -       templateName = pathSegments[pathSegments.length - 1];
93        -     }
94        -     for (int i = 0; i < (pathSegments.length - 1); i++) {
95        -       path.append(pathSegments[i]).append(File.separatorChar);
96        -     }
97        -
98        -     // try to load File
99        -     return new File(path.toString(), templateName);
          58  +     this.checkIfDirectoryTraversal(templateName);
          59  +     return path.toFile();
100   60      }
101   61
```

```
102  62      public String getSuffix() {
     @@ -114,7 +74,17 @@ public String getPrefix() {
114  74
115  75      @Override
116  76      public void setPrefix(String prefix) {
117      -      this.prefix = prefix;
         77  +      if (prefix == null) {
         78  +        throw new LoaderException(null, "Prefix cannot be null");
         79  +      }
         80  +      String trimmedPrefix = prefix.trim();
         81  +      if (trimmedPrefix.isEmpty()) {
         82  +        throw new LoaderException(null, "Prefix cannot be empty");
         83  +      }
         84  +      if (!Paths.get(trimmedPrefix).isAbsolute()) {
         85  +        throw new LoaderException(null, "Prefix must be an absolute path");
         86  +      }
         87  +      this.prefix = trimmedPrefix;
118  88      }
119  89
120  90      public String getCharset() {
     @@ -140,4 +110,23 @@ public String createCacheKey(String templateName) {
140  110     public boolean resourceExists(String templateName) {
141  111       return this.getFile(templateName).exists();
142  112     }
         113 +
         114 +   private void checkIfDirectoryTraversal(String templateName) {
         115 +     Path baseDirPath = Paths.get(prefix);
         116 +     Path userPath = Paths.get(templateName);
         117 +     if (userPath.isAbsolute()) {
         118 +       throw new LoaderException(null, String.format("templateName '%s' must be
               relative", templateName));
         119 +     }
         120 +
         121 +     // Join the two paths together, then normalize so that any ".." elements
         122 +     // in the userPath can remove parts of baseDirPath.
         123 +     // (e.g. "/foo/bar/baz" + "../attack" -> "/foo/bar/attack")
         124 +     Path resolvedPath = baseDirPath.resolve(userPath).normalize();
         125 +
         126 +     // Make sure the resulting path is still within the required directory.
         127 +     // (In the example above, "/foo/bar/attack" is not.)
```

```
      128 +     if (!resolvedPath.startsWith(baseDirPath)) {
      129 +       throw new LoaderException(null, String.format("template is not in the
          base directory path [baseDir='%s', templateName='%s']", this.prefix,
          templateName));
      130 +     }
      131 +   }
143   132     }
```

...pebbletemplates/pebble/utils/PathUtils.java

```
@@ -44,7 +44,7 @@ public static String resolveRelativePath(String
relativePath, String anchorPath,
44  44        return null;
45  45      }
46  46
47      -   private static String sanitize(String path, char expectedSeparator) {
    47  +   public static String sanitize(String path, char expectedSeparator) {
48  48        return PATH_SEPARATOR_REGEX.matcher(path)
49  49
                .replaceAll(Matcher.quoteReplacement(String.valueOf(expectedSeparator)));
50  50      }
```

Comments 0

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