Sitecore 10 Authenticated File upload to RCE / CVE-2021-38366

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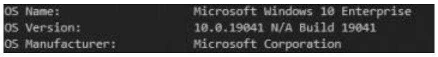
After looking for some extreme hardening of the Sitecore client I found a way to get Remote Code execution (RCE) via a Update center, described in this post.

It is possible for authenticated users, to upload arbitrary files, via update package functionality.It is possible for a malicious attacker to bypass file upload restrictions, hardened with the Sitecore hardening guide https://doc.sitecore.com/en/developers/101/platform-administration-and-architecture/security-guide.html and with secure file upload functionality, taken from this link https://doc.sitecore.com/developers/100/platform-administration-and-architecture/en/secure-thefile-upload-functionality.html.

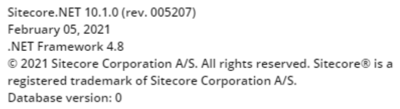
Test Instance information

The test of this was done on a local Windows 10 machine with Sitecore 10 XM installation, installed via Graphical installation wizard see more information below



```
OS Name:                   Microsoft Windows 10 Enterprise
OS Version:                10.0.19041 N/A Build 19041
OS Manufacturer:           Microsoft Corporation
```

System Information



Sitecore.NET 10.1.0 (rev. 005207)
February 05, 2021
.NET Framework 4.8
© 2021 Sitecore Corporation A/S. All rights reserved. Sitecore® is a registered trademark of Sitecore Corporation A/S.
Database version: 0

Sitecore version information

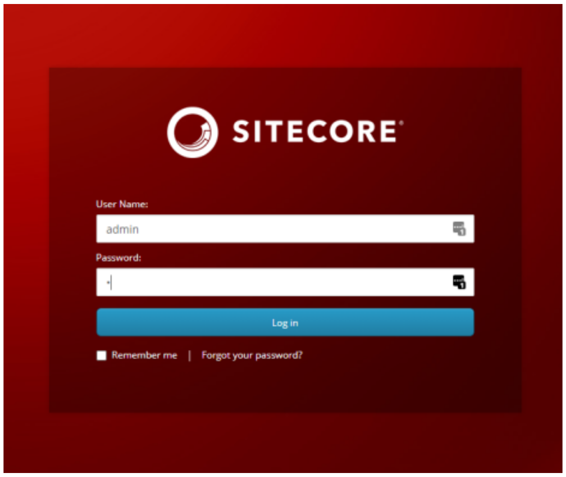
The Additional Filed upload restriction package was also installed with the following settings.

```
<?xml version="1.0" encoding="utf-8"?>
<configuration xmlns:patch="http://www.sitecore.net/xmlconfig/">
<sitecore>
<processors>
<uiUpload>
<processor mode="on"
type="Sitecore.Pipelines.Upload.CheckExtension,
Sitecore.UploadFilter" patch:before="*[1]">
<param desc="Allowed extensions (comma separated)"></param>
<param desc="Blocked extensions (comma separated)">exe,dll,aspx</param>
</processor>
</uiUpload>
</processors>
</sitecore>
</configuration>
```

Steps to reproduce

Keep in mind this is a autheticated file upload, so a compromised user must be obtained.

1. Authenticate / Login to Sitecore



2. Once correctly logged in. Navigate to the Upload center

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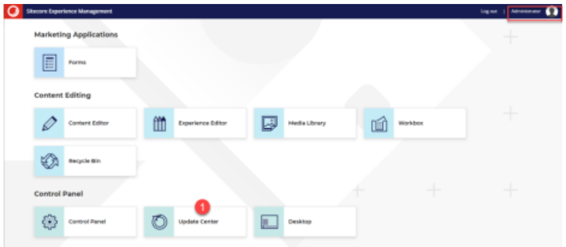
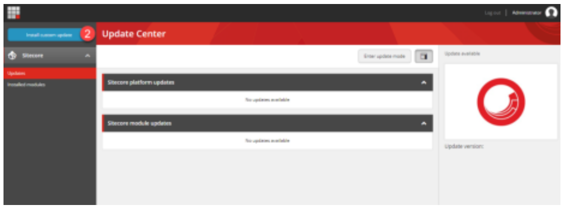
Close and accept



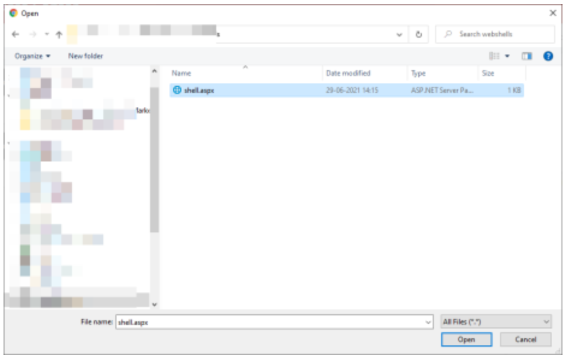
Navigated to update center

3. Choose/click the option to upload custom update



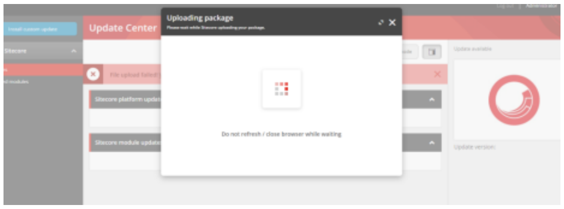
Upload via custom upload

4. Pick your custom webshell



Upload of custom webshell

5. If the installer hangs click anywhere in the windows, this is expected.


Install custom update
Update Center
Uploading package
Please wait while Sitecore uploading your package
Do not refresh / close browser while waiting
Sitecore platform updates
Sitecore module updates
Update available
Update version:

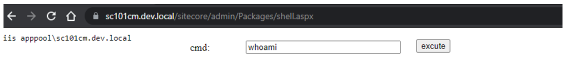
Uplaoder timesout / hangs

6. Since uploads of updates packages always goes into the same folder

https://HOSTNAME/sitecore/admin/Packages/

to find the uploaded file in our case
https://sc101cm.dev.local/sitecore/admin/Packages/shell.aspx

7. Now all that is left is running the webshell.



```
iis apppool\sc101cm.dev.local
```

cmd: whoami

Running our uploaded webshell

Remediation

Disabled the Update center functionality

One way of doing the in add restriction to path in web.config like below

```
 <location path="sitecore/api/ssc/updatecenter">
  <system.web>
      <authorization>
        <deny users="*" />
      </authorization>
    </system.web>
  </location>
```

Other

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Comments (2) Trackbacks (0) Leave a comment Trackback

1. Kenneth McAndrew (@kmac23va)
   10/08/2021 at 21:19
   Reply

   You say the remediation is to disable the update center. How do you go about doing this?

   - istern
     11/08/2021 at 09:17
     Reply

     Hi Kenneth
     Sorry somehow this part was missing, I've added in again, there might be better ways to do it but then one shown will limit all access to the updatecenter

1. No trackbacks yet.

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