Handling Less Than Zero Day Attack A Case Study

InfoComm Security/QA
Computer Centre
ccecert@nus.edu.sg
https://security.nus.edu.sg/



Handling Less Than Zero Day Attack



Agenda

- What is Less Than Zero Day Attack
- Threat A Case Study
- What We Can Do About It
- Q & A

What is Less Than Zero Day Attack



Zero Day

 Software, videos, music, or information unlawfully released or obtained on the day of public release.

What is Less Than Zero Day Attack



Zero Day Exploit

- The vulnerability is known to public
- The patch is NOT yet available
- The exploit is released

What is Less Than Zero Day Attack



Less Than Zero Day Exploit

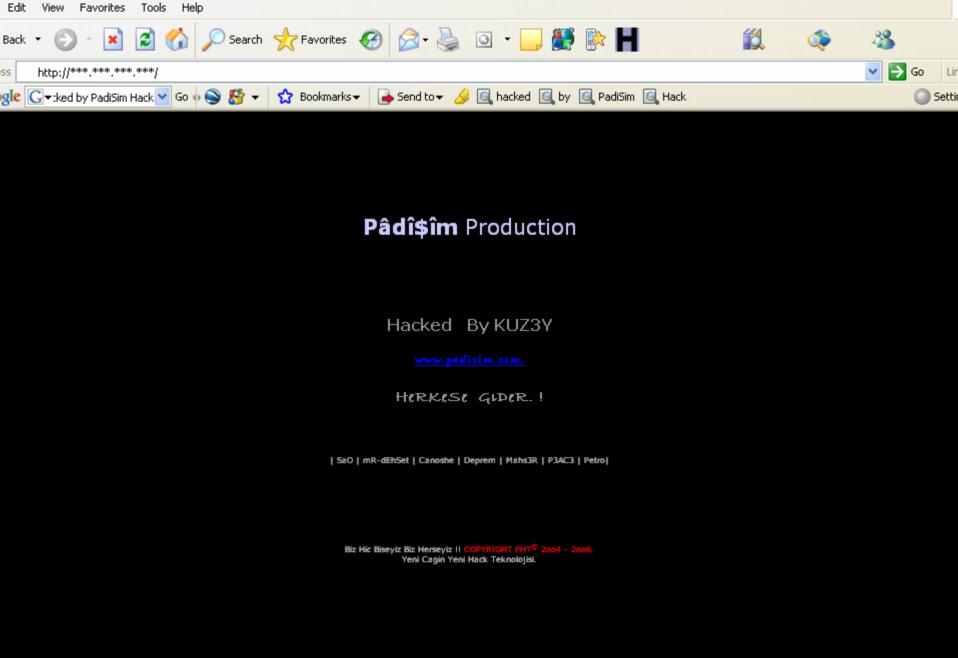
- The vulnerability is NOT known to public
- The patch is NOT yet available
- The exploit is released

Handling Less Than Zero Day Attack



Agenda

- What is Less Than Zero Day Attack
- Threat A Case Study
- What We Can Do About It
- Q & A





Agenda

Defacer: PadiSim Hack

Team

Domain:

http://***.***.***

IP address:

System: Win 2000

Web server: IIS/5.0

Attacker stats



Actions Taken

- Inform the administrator
- Disconnects the server
- Investigate



Actions Taken

- Clean result from previous scan
- Open the server to scanner
- Scan again
- Clean result again



Actions Taken

Check out server logs



Actions Taken

- Check out uploaded files
- Find malicious uploaded files



Actions Taken

- Web site powered by database
- Database can be updated by Internet Guest Account
- Run malicious file and deface the website
- Boom!



Actions Taken

- Download and install the forum application
- Try out http://127.0.0.1/forum/admin/***/** */upload.asp
- Boom!



Actions Taken

- Less than zero day attack!
- Report to vendor

Thank you so much for pointing out the security issue with the upload asp page.

We will work to fix it ASAP!

```
Regards, *******
```

Huijan,



Actions Taken

Report to Cert CC



Actions Taken

- Back to our server:
 - ✓ Remove the forum application
 - ✓ Cleanup
 - ✓ Harden
 - ✓ Connect and back online

Handling Less Than Zero Day Attack



Agenda

- What is Less Than Zero Day Attack
- Threat A Case Study
- What We Can Do About It
- Q & A

What We Can Do About It



Mitigation Measures

- Patch management not enough
- Harden the server
 - ✓ Remove unnecessary service
 - ✓ Remove unnecessary component in application
 - ✓ Audit the application

What We Can Do About It



Mitigation Measures

Monitor and alert



Any questions?