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- Published: date not stated
- Original: <http://xs-sniper.com/blog/2007/11/04/java-applets-and-dns-rebinding/>
- Preserved from: http://xs-sniper.com/blog/2007/11/04/java-applets-and-dns-rebinding/ (stored) on 2026-08-16
- Capture timestamp: 20160312042548
- Licence: unknown

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Sunday, November 4th, 2007

Java Applets and DNS Rebinding

For those of you who were able to see Billy and I present at Hack In the Box Malaysia this year, you already know that Java Applets were vulnerable to DNS Rebinding attacks. For the benefit of those of you who didn't get to see that presentation, ***here's a link to it***, but the simple of it is that we can XSS a victim, force a Java applet to be cached and then DNS Rebind that applet by reloading the JVM or loading a new JVM after we have modified the DNS entry for the name of the host the applet was served from. This is because, as many things on the Internet, applets are pinned to DNS name as opposed to IP address.

Why do we care? Well, unlike DNS pinning with Flash sockets, we can actually make request to ports less than 1024 and additionally, Java provides us with a huge set of libraries for doing everything from communicating with database servers to communicating with RMI servers.

Interestingly enough, a recent post by the NGS guys that was on seclists detailed how this was vulnerable in another way, which appeared to not have to rely on a new load of the JVM. Here's a comment from that post:

> By specifying a codebase URI prefixed by "verbatim:" it is possible to load an applet from a remote location but have the browser plugin believe it has been loaded from the local host. This allows an untrusted applet to connect to and attempt to exploit network services running on the local host. It should be noted that unlike binary sockets in Flash 9, an applet can connect to any port, not just those greater than 1024. At the time of reporting this issue, NGS

> provided Sun with a demonstration applet that exploited MS06-040 (“Vulnerability in Server Service could allow remote code execution”) on a vulnerable XP SP1 system.

Fortunately for all of us who have Java installed on our systems, this has now been patched by Sun, but I find it interesting that Java has its own URIs that it respects, like the verbatim: URI. Very interesting indeed.

Posted by xssniper | Filed in Security, Web Application Security

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