Comcast.net DNS Hijacking: What Could Have Happened

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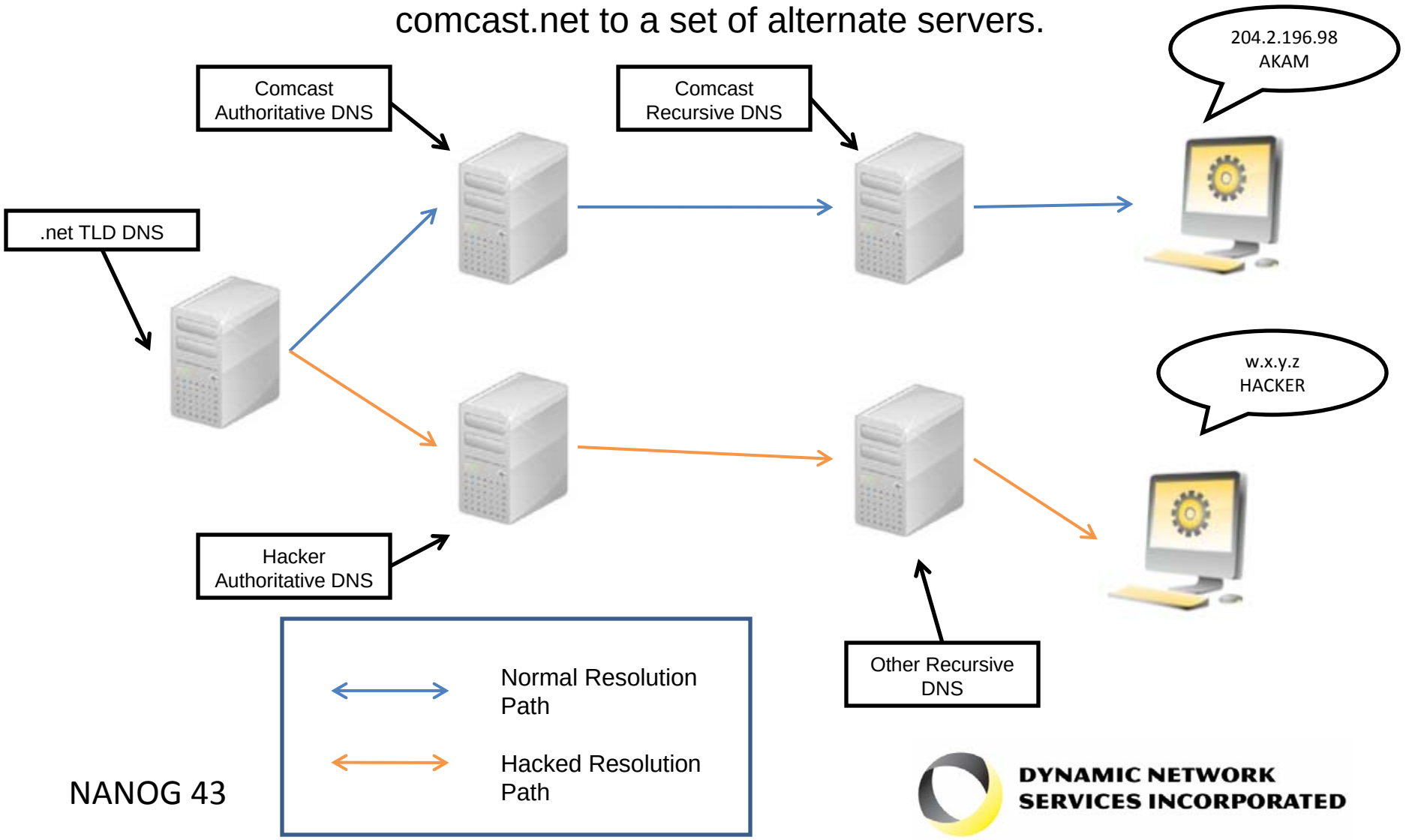
What happened?

Two hackers managed to manipulate the DNS name server delegation for comcast.net to a set of alternate servers.



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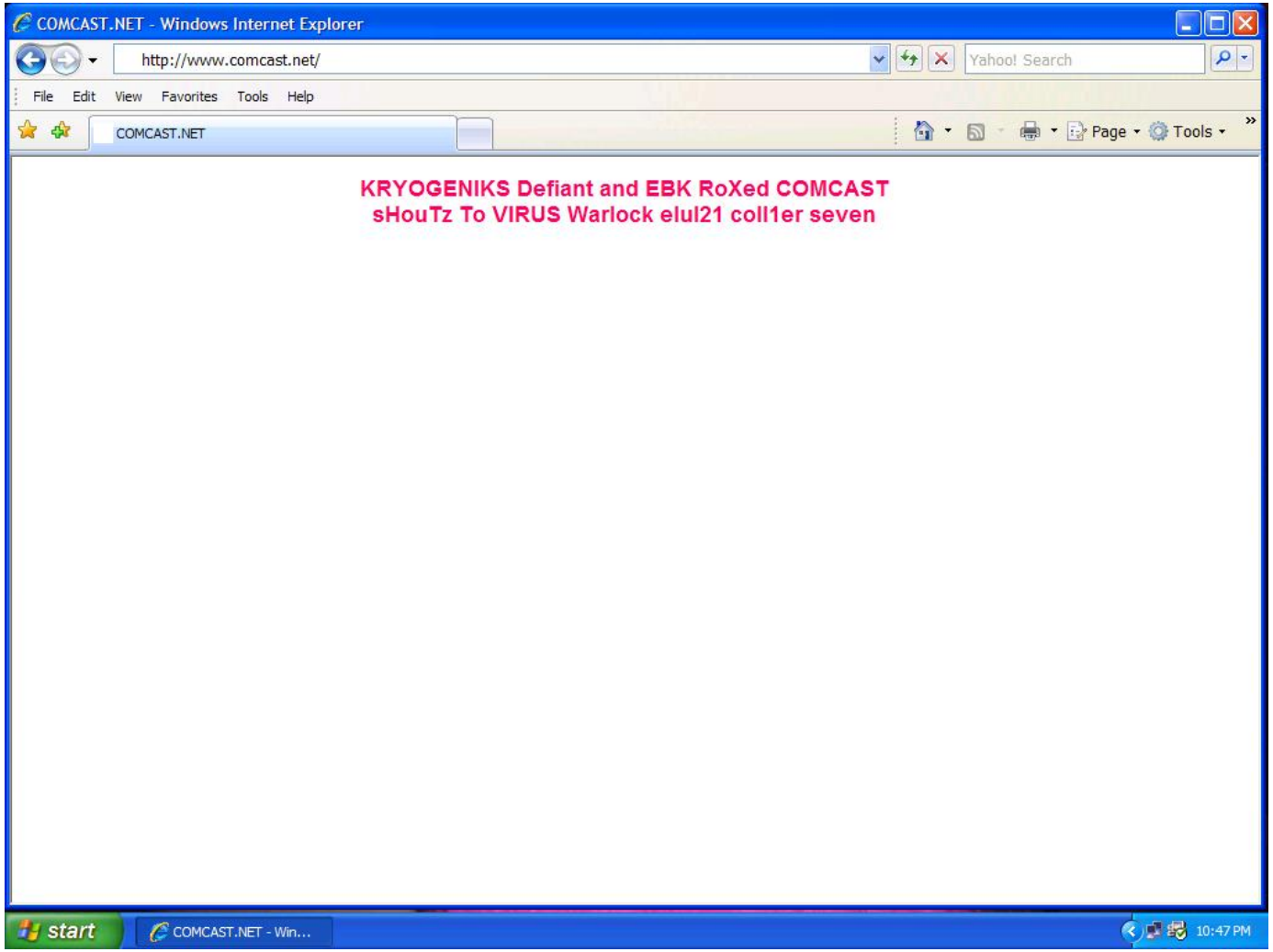
How did this happen?

- Hackers cracked comcast.net e-mail account (Domain Administrative Contact) to obtain a password reset token for NetSol admin portal?
- Hackers social engineered staff at Comcast to get them to give out the credentials.
- Hackers simply logged in with a weak password to NetSol?
- An exploit of security in the NetSol admin portal?

Known Effect on comcast.net



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What could have happened?

- www.comcast.net - password harvesting
- Hijack MX records to intercept inbound e-mail.
- Hack other services that use user@comcast.net e-mail accounts as a trust token.
- *.hsd.comcast.net wildcard
  (ex: www.bankofamerica.com.hsd.comcast.net)
- Redirect internal comcast.net network management functions to other IP addresses (provisioning, databases, AAA servers), anything that connects via a hostname externally.

Root Problems

- Was WHOIS disclosure part of the login token for NetSol? Did it provide half of the credentials?

```
   Administrative Contact:
      Administrator, Domain Registration ContactMiddleName
domregadmin@COMCAST.net
      Comcast Corporation
      1500 Market, West Tower
      Philadelphia, PA 19102
      US
      215-320-8774 fax: 215-564-0132
```

- E-mail addresses are weak trust anchors for online services. What's a better anchor to identify a user?

What could have stopped this?

- Fully validating DNSSEC resolvers, unable to forge the NS referral key from the .net TLD.
- But what if the hackers provided the TLD a new key?

- A better authorization system for domain name changes – let's depend on something more than an e-mail address and password.

Thank You

Q & A

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