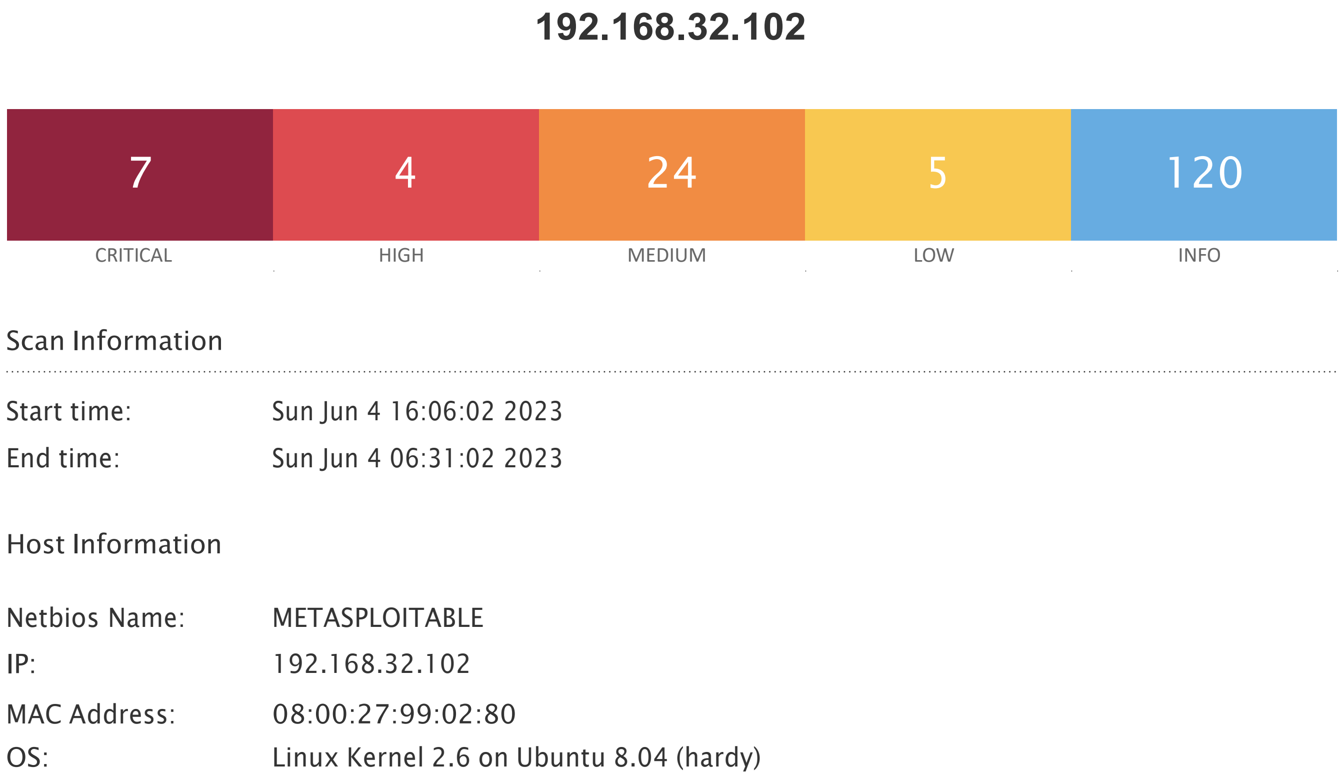
Epicode

Esercizio - Vulnerability scanner con Nessus

Riepilogo Fine scansione

Dopo la scansione iniziale e la remedation alle vulnerabilità della macchina Metasploibile con IP: 192.168.32.102 si è effettuata la scansione finale per dare riscontro alle vulnerabilità corrette. È stato riscontrato un totale di 160 vulnerabilità di sicurezza in confronto alle 175 viste nella scansione iniziale. Possiamo vedere che sono state messe in sicurezza le vulnerabilità chieste nella traccia perché non risultanti nella scansione . La suddivisione delle vulnerabilità è la seguente:

Scansione finale descrizione vulnerabilità.



192.168.32.102

7	4	24	5	120
CRITICAL	HIGH	MEDIUM	LOW	INFO

Scan Information

Start time:	Sun Jun 4 16:06:02 2023
End time:	Sun Jun 4 06:31:02 2023

Host Information

Netbios Name:	METASPLOITABLE
IP:	192.168.32.102
MAC Address:	08:00:27:99:02:80
OS:	Linux Kernel 2.6 on Ubuntu 8.04 (hardy)

Vulnerabilities

32314 - Debian OpenSSH/OpenSSL Package Random Number Generator Weakness

Synopsis

The remote SSH host keys are weak.

Description

The remote SSH host key has been generated on a Debian or Ubuntu system which contains a bug in the random number generator of its OpenSSL library.

The problem is due to a Debian packager removing nearly all sources of entropy in the remote version of OpenSSL.

An attacker can easily obtain the private part of the remote key and use this to set up decipher the remote session or set up a man in the middle attack.

Solution

Consider all cryptographic material generated on the remote host to be guessable. In particuliar, all SSH, SSL and OpenVPN key material should be re-generated.

Risk Factor

Critical

32321 - Debian OpenSSH/OpenSSL Package Random Number Generator Weakness (SSL check)

Synopsis

The remote SSL certificate uses a weak key.

Description

The remote x509 certificate on the remote SSL server has been generated on a Debian or Ubuntu system which contains a bug in the random number generator of its OpenSSL library.

The problem is due to a Debian packager removing nearly all sources of entropy in the remote version of OpenSSL.

An attacker can easily obtain the private part of the remote key and use this to decipher the remote session or set up a man in the middle attack.

Solution

Consider all cryptographic material generated on the remote host to be guessable. In particuliar, all SSH, SSL and OpenVPN key material should be re-generated.

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Solution

Consider all cryptographic material generated on the remote host to be guessable. In particuliar, all SSH, SSL and OpenVPN key material should be re-generated.

Risk Factor

Critical

134862 - Apache Tomcat AJP Connector Request Injection (Ghostcat)

Synopsis

There is a vulnerable AJP connector listening on the remote host.

Description

A file read/inclusion vulnerability was found in AJP connector. A remote, unauthenticated attacker could exploit this vulnerability to read web application files from a vulnerable server. In instances where the vulnerable server allows file uploads, an attacker could upload malicious JavaServer Pages (JSP) code within a variety of file types and gain remote

Solution

Update the AJP configuration to require authorization and/or upgrade the Tomcat server to 7.0.100, 8.5.51, 9.0.31 or later.

20007 - SSL Version 2 and 3 Protocol Detection

Synopsis

The remote service encrypts traffic using a protocol with known weaknesses.

Description

The remote service accepts connections encrypted using SSL 2.0 and/or SSL 3.0. These versions of SSL are affected by several cryptographic flaws, including:

- An insecure padding scheme with CBC ciphers.

- Insecure session renegotiation and resumption schemes.

An attacker can exploit these flaws to conduct man-in-the-middle attacks or to decrypt communications between the affected service and clients.

Although SSL/TLS has a secure means for choosing the highest supported version of the protocol (so that these versions will be used only if the client or server support nothing better), many web browsers implement this in an unsafe way that allows an attacker to downgrade a connection (such as in POODLE). Therefore, it is recommended that these protocols be disabled entirely.

NIST has determined that SSL 3.0 is no longer acceptable for secure communications. As of the date of enforcement found in PCI DSS v3.1, any version of SSL will not meet the PCI SSC's definition of 'strong cryptography'.

Solution

Consult the application's documentation to disable SSL 2.0 and 3.0.
Use TLS 1.2 (with approved cipher suites) or higher instead.

Risk Factor

Critical

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The remote service encrypts traffic using a protocol with known weaknesses.

Description

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- An insecure padding scheme with CBC ciphers.

- Insecure session renegotiation and resumption schemes.

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Although SSL/TLS has a secure means for choosing the highest supported version of the protocol (so that these versions will be used only if the client or server support nothing better), many web browsers implement this in an unsafe way that allows an attacker to downgrade a connection (such as in POODLE). Therefore, it is recommended that these protocols be disabled entirely.

NIST has determined that SSL 3.0 is no longer acceptable for secure communications. As of the date of enforcement found in PCI DSS v3.1, any version of SSL will not meet the PCI SSC's definition of 'strong cryptography'.

Solution

Consult the application's documentation to disable SSL 2.0 and 3.0.
Use TLS 1.2 (with approved cipher suites) or higher instead.

Risk Factor

Critical

33850 - Unix Operating System Unsupported Version Detection

Synopsis

The operating system running on the remote host is no longer supported.

Description

According to its self-reported version number, the Unix operating system running on the remote host is no longer supported.

Lack of support implies that no new security patches for the product will be released by the vendor. As a result, it is likely to contain security vulnerabilities.

Solution

Upgrade to a version of the Unix operating system that is currently supported.

Risk Factor

Critical

136769 - ISC BIND Service Downgrade / Reflected DoS

Synopsis

The remote name server is affected by Service Downgrade / Reflected DoS vulnerabilities.

Description

According to its self-reported version, the instance of ISC BIND 9 running on the remote name server is affected by performance downgrade and Reflected DoS vulnerabilities. This is due to BIND DNS not sufficiently limiting the number fetches which may be performed while processing a referral response.

An unauthenticated, remote attacker can exploit this to cause degrade the service of the recursive server or to use the affected server as a reflector in a reflection attack.

Solution

Upgrade to the ISC BIND version referenced in the vendor advisory.

Risk Factor

Medium

42873 - SSL Medium Strength Cipher Suites Supported (SWEET32)

Synopsis

The remote service supports the use of medium strength SSL ciphers.

Description

The remote host supports the use of SSL ciphers that offer medium strength encryption. Nessus regards medium strength as any encryption that uses key lengths at least 64 bits and less than 112 bits, or else that uses the 3DES encryption suite.

Note that it is considerably easier to circumvent medium strength encryption if the attacker is on the same physical network.

Solution

Reconfigure the affected application if possible to avoid use of medium strength ciphers.

Risk Factor

Medium

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Synopsis

The remote service supports the use of medium strength SSL ciphers.

Description

The remote host supports the use of SSL ciphers that offer medium strength encryption. Nessus regards medium strength as any encryption that uses key lengths at least 64 bits and less than 112 bits, or else that uses the 3DES encryption suite.

Note that it is considerably easier to circumvent medium strength encryption if the attacker is on the same physical network.

Solution

Reconfigure the affected application if possible to avoid use of medium strength ciphers.

Risk Factor

Medium

90509 - Samba Badlock Vulnerability

Synopsis

An SMB server running on the remote host is affected by the Badlock vulnerability.

Description

The version of Samba, a CIFS/SMB server for Linux and Unix, running on the remote host is affected by a flaw, known as Badlock, that exists in the Security Account Manager (SAM) and Local Security Authority (Domain Policy) (LSAD) protocols due to improper authentication level negotiation over Remote Procedure Call (RPC) channels. A man-in-the-middle attacker who is able to able to intercept the traffic between a client and a server hosting a SAM database can exploit this flaw to force a downgrade of the authentication level, which allows the execution of arbitrary Samba network calls in the context of the intercepted user, such as viewing or modifying sensitive security data in the Active Directory (AD) database or disabling critical services.

Solution

Upgrade to Samba version 4.2.11 / 4.3.8 / 4.4.2 or later.

11213 - HTTP TRACE / TRACK Methods Allowed

Synopsis

Debugging functions are enabled on the remote web server.

Description

The remote web server supports the TRACE and/or TRACK methods. TRACE and TRACK are HTTP methods that are used to debug web server connections.

Solution

Disable these HTTP methods. Refer to the plugin output for more information.

Risk Factor

Medium

139915 - ISC BIND 9.x < 9.11.22, 9.12.x < 9.16.6, 9.17.x < 9.17.4 DoS

Synopsis

The remote name server is affected by a denial of service vulnerability.

Description

According to its self-reported version number, the installation of ISC BIND running on the remote name server is version 9.x prior to 9.11.22, 9.12.x prior to 9.16.6 or 9.17.x prior to 9.17.4. It is, therefore, affected by a denial of service (DoS) vulnerability due to an assertion failure when attempting to verify a truncated response to a TSIG-signed request. An authenticated, remote attacker can exploit this issue by sending a truncated response to a TSIG-signed request to trigger an assertion failure, causing the server to exit.

Note that Nessus has not tested for this issue but has instead relied only on the application's self-reported version number.

Solution

Upgrade to BIND 9.11.22, 9.16.6, 9.17.4 or later.

Risk Factor

Medium

136808 - ISC BIND Denial of Service

Synopsis

The remote name server is affected by an assertion failure vulnerability.

Description

A denial of service (DoS) vulnerability exists in ISC BIND versions 9.11.18 / 9.11.18-S1 / 9.12.4-P2 / 9.13 / 9.14.11 / 9.15 / 9.16.2 / 9.17 / 9.17.1 and earlier. An unauthenticated, remote attacker can exploit this issue, via a specially-crafted message, to cause the service to stop responding.

Note that Nessus has not tested for this issue but has instead relied only on the application's self-reported version number.

Solution

Upgrade to the patched release most closely related to your current version of BIND.

Risk Factor

Medium

57608 - SMB Signing not required

Synopsis

Signing is not required on the remote SMB server.

Description

Signing is not required on the remote SMB server. An unauthenticated, remote attacker can exploit this to conduct man-in-the-middle attacks against the SMB server.

Solution

Enforce message signing in the host's configuration. On Windows, this is found in the policy setting 'Microsoft network server: Digitally sign communications (always)'. On Samba, the setting is called 'server signing'. See the 'see also' links for further details.

Risk Factor

Medium

52611 - SMTP Service STARTTLS Plaintext Command Injection

Synopsis

The remote mail service allows plaintext command injection while negotiating an encrypted communications channel.

Description

The remote SMTP service contains a software flaw in its STARTTLS implementation that could allow a remote, unauthenticated attacker to inject commands during the plaintext protocol phase that will be executed during the ciphertext protocol phase.

Successful exploitation could allow an attacker to steal a victim's email or associated SASL (Simple Authentication and Security Layer) credentials.

Solution

Contact the vendor to see if an update is available.

Risk Factor

Medium

90317 - SSH Weak Algorithms Supported

Synopsis

The remote SSH server is configured to allow weak encryption algorithms or no algorithm at all.

Description

Nessus has detected that the remote SSH server is configured to use the Arcfour stream cipher or no cipher at all. RFC 4253 advises against using Arcfour due to an issue with weak keys.

Solution

Contact the vendor or consult product documentation to remove the weak ciphers.

31705 - SSL Anonymous Cipher Suites Supported

Synopsis

The remote service supports the use of anonymous SSL ciphers.

Description

The remote host supports the use of anonymous SSL ciphers. While this enables an administrator to set up a service that encrypts traffic without having to generate and configure SSL certificates, it offers no way to verify the remote host's identity and renders the service vulnerable to a man-in-the-middle attack.

Note: This is considerably easier to exploit if the attacker is on the same physical network.

Solution

51192 - SSL Certificate Cannot Be Trusted

Synopsis

The SSL certificate for this service cannot be trusted.

Description

The server's X.509 certificate cannot be trusted. This situation can occur in three different ways, in which the chain of trust can be broken, as stated below :

- First, the top of the certificate chain sent by the server might not be descended from a known public certificate authority. This can occur either when the top of the chain is an unrecognized, self-signed certificate, or when intermediate certificates are missing that would connect the top of the certificate chain to a known public certificate authority.

- Second, the certificate chain may contain a certificate that is not valid at the time of the scan. This can occur either when the scan occurs before one of the certificate's 'notBefore' dates, or after one of the certificate's 'notAfter' dates.

- Third, the certificate chain may contain a signature that either didn't match the certificate's information or could not be verified. Bad signatures can be fixed by getting the certificate with the bad signature to be re-signed by its issuer. Signatures that could not be verified are the result of the certificate's issuer using a signing algorithm that Nessus either does not support or does not recognize.

If the remote host is a public host in production, any break in the chain makes it more difficult for users to verify the authenticity and identity of the web server. This could make it easier to carry out man-in-the-middle attacks against the remote host.

Solution

Purchase or generate a proper SSL certificate for this service.

Risk Factor

Medium

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Solution

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Risk Factor

Medium

15901 - SSL Certificate Expiry

Synopsis

The remote server's SSL certificate has already expired.

Description

This plugin checks expiry dates of certificates associated with SSL- enabled services on the target and reports whether any have already expired.

Solution

Purchase or generate a new SSL certificate to replace the existing one.

Risk Factor

Medium

15901 - SSL Certificate Expiry

Synopsis

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Description

This plugin checks expiry dates of certificates associated with SSL- enabled services on the target and reports whether any have already expired.

Solution

Purchase or generate a new SSL certificate to replace the existing one.

Risk Factor

Medium

45411 - SSL Certificate with Wrong Hostname

Synopsis

The SSL certificate for this service is for a different host.

Description

The 'commonName' (CN) attribute of the SSL certificate presented for this service is for a different machine.

Solution

Purchase or generate a proper SSL certificate for this service.

Risk Factor

Medium

45411 - SSL Certificate with Wrong Hostname

Synopsis

The SSL certificate for this service is for a different host.

Description

The 'commonName' (CN) attribute of the SSL certificate presented for this service is for a different machine.

Solution

Purchase or generate a proper SSL certificate for this service.

Risk Factor

Medium

89058 - SSL DROWN Attack Vulnerability (Decrypting RSA with Obsolete and Weakened eNcryption)

Synopsis

The remote host may be affected by a vulnerability that allows a remote attacker to potentially decrypt captured TLS traffic.

Description

The remote host supports SSLv2 and therefore may be affected by a vulnerability that allows a cross-protocol Bleichenbacher padding oracle attack known as DROWN (Decrypting RSA with Obsolete and Weakened eNcryption). This vulnerability exists due to a flaw in the Secure Sockets Layer Version 2 (SSLv2) implementation, and it allows captured TLS traffic to be decrypted. A man-in-the-middle attacker can exploit this to decrypt the TLS connection by utilizing previously captured traffic and weak cryptography along with a series of specially crafted connections to an SSLv2 server that uses the same private key.

Solution

Disable SSLv2 and export grade cryptography cipher suites. Ensure that private keys are not used anywhere with server software that supports SSLv2 connections.

65821 - SSL RC4 Cipher Suites Supported (Bar Mitzvah)

Synopsis

The remote service supports the use of the RC4 cipher.

Description

The remote host supports the use of RC4 in one or more cipher suites.
The RC4 cipher is flawed in its generation of a pseudo-random stream of bytes so that a wide variety of small biases are introduced into the stream, decreasing its randomness.

If plaintext is repeatedly encrypted (e.g., HTTP cookies), and an attacker is able to obtain many (i.e., tens of millions) ciphertexts, the attacker may be able to derive the plaintext.

Solution

Reconfigure the affected application, if possible, to avoid use of RC4 ciphers. Consider using TLS 1.2 with AES-GCM suites subject to browser and web server support.

Risk Factor

Medium

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Solution

Reconfigure the affected application, if possible, to avoid use of RC4 ciphers. Consider using TLS 1.2 with AES-GCM suites subject to browser and web server support.

Risk Factor

Medium

57582 - SSL Self-Signed Certificate

Synopsis

The SSL certificate chain for this service ends in an unrecognized self-signed certificate.

Description

The X.509 certificate chain for this service is not signed by a recognized certificate authority. If the remote host is a public host in production, this nullifies the use of SSL as anyone could establish a man-in-the-middle attack against the remote host.

Note that this plugin does not check for certificate chains that end in a certificate that is not self-signed, but is signed by an unrecognized certificate authority.

Solution

Purchase or generate a proper SSL certificate for this service.

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Note that this plugin does not check for certificate chains that end in a certificate that is not self-signed, but is signed by an unrecognized certificate authority.

Solution

Purchase or generate a proper SSL certificate for this service.

Risk Factor

Medium

26928 - SSL Weak Cipher Suites Supported

Synopsis

The remote service supports the use of weak SSL ciphers.

Description

The remote host supports the use of SSL ciphers that offer weak encryption.

Note: This is considerably easier to exploit if the attacker is on the same physical network.

Solution

Reconfigure the affected application, if possible to avoid the use of weak ciphers.

81606 - SSL/TLS EXPORT_RSA <= 512-bit Cipher Suites Supported (FREAK)

-

Synopsis

The remote host supports a set of weak ciphers.

Description

The remote host supports EXPORT_RSA cipher suites with keys less than or equal to 512 bits. An attacker can factor a 512-bit RSA modulus in a short amount of time.

A man-in-the middle attacker may be able to downgrade the session to use EXPORT_RSA cipher suites (e.g. CVE-2015-0204). Thus, it is recommended to remove support for weak cipher suites.

Solution

Reconfigure the service to remove support for EXPORT_RSA cipher suites.

Risk Factor

Medium

78479 - SSLv3 Padding Oracle On Downgraded Legacy Encryption Vulnerability (POODLE)

Synopsis

It is possible to obtain sensitive information from the remote host with SSL/TLS-enabled services.

Description

The remote host is affected by a man-in-the-middle (MitM) information disclosure vulnerability known as POODLE. The vulnerability is due to the way SSL 3.0 handles padding bytes when decrypting messages encrypted using block ciphers in cipher block chaining (CBC) mode.
MitM attackers can decrypt a selected byte of a cipher text in as few as 256 tries if they are able to force a victim application to repeatedly send the same data over newly created SSL 3.0 connections.

As long as a client and service both support SSLv3, a connection can be 'rolled back' to SSLv3, even if TLSv1 or newer is supported by the client and service.

The TLS Fallback SCSV mechanism prevents 'version rollback' attacks without impacting legacy clients; however, it can only protect connections when the client and service support the mechanism. Sites that cannot disable SSLv3 immediately should enable this mechanism.

This is a vulnerability in the SSLv3 specification, not in any particular SSL implementation. Disabling SSLv3 is the only way to completely mitigate the vulnerability.

Solution

Disable SSLv3.

Services that must support SSLv3 should enable the TLS Fallback SCSV mechanism until SSLv3 can be disabled.

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Solution

Disable SSLv3.

Services that must support SSLv3 should enable the TLS Fallback SCSV mechanism until SSLv3 can be disabled.

Risk Factor

104743 - TLS Version 1.0 Protocol Detection

Synopsis

The remote service encrypts traffic using an older version of TLS.

Description

The remote service accepts connections encrypted using TLS 1.0. TLS 1.0 has a number of cryptographic design flaws. Modern implementations of TLS 1.0 mitigate these problems, but newer versions of TLS like 1.2 and 1.3 are designed against these flaws and should be used whenever possible.

As of March 31, 2020, Endpoints that aren't enabled for TLS 1.2 and higher will no longer function properly with major web browsers and major vendors.

PCI DSS v3.2 requires that TLS 1.0 be disabled entirely by June 30, 2018, except for POS POI terminals (and the SSL/TLS termination points to which they connect) that can be verified as not being susceptible to any known exploits.

Solution

Enable support for TLS 1.2 and 1.3, and disable support for TLS 1.0.

Risk Factor

Medium

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PCI DSS v3.2 requires that TLS 1.0 be disabled entirely by June 30, 2018, except for POS POI terminals (and the SSL/TLS termination points to which they connect) that can be verified as not being susceptible to any known exploits.

Solution

Enable support for TLS 1.2 and 1.3, and disable support for TLS 1.0.

Risk Factor

Medium

70658 - SSH Server CBC Mode Ciphers Enabled

Synopsis

The SSH server is configured to use Cipher Block Chaining.

Description

The SSH server is configured to support Cipher Block Chaining (CBC) encryption. This may allow an attacker to recover the plaintext message from the ciphertext.

Note that this plugin only checks for the options of the SSH server and does not check for vulnerable software versions.

Solution

Contact the vendor or consult product documentation to disable CBC mode cipher encryption, and enable CTR or GCM cipher mode encryption.

Risk Factor

Low

153953 - SSH Weak Key Exchange Algorithms Enabled

Synopsis

The remote SSH server is configured to allow weak key exchange algorithms.

Description

The remote SSH server is configured to allow key exchange algorithms which are considered weak.

This is based on the IETF draft document Key Exchange (KEX) Method Updates and Recommendations for Secure Shell (SSH) draft-ietf-curdle-ssh-kex-sha2-20. Section 4 lists guidance on key exchange algorithms that SHOULD NOT and MUST NOT be enabled. This includes:

diffie-hellman-group-exchange-sha1

diffie-hellman-group1-sha1

gss-gex-sha1-*

gss-group1-sha1-*

gss-group14-sha1-*

rsa1024-sha1

Note that this plugin only checks for the options of the SSH server, and it does not check for vulnerable software versions.

Solution

Contact the vendor or consult product documentation to disable the weak algorithms.

Risk Factor

Low

71049 - SSH Weak MAC Algorithms Enabled

Synopsis

The remote SSH server is configured to allow MD5 and 96-bit MAC algorithms.

Description

The remote SSH server is configured to allow either MD5 or 96-bit MAC algorithms, both of which are considered weak.

Note that this plugin only checks for the options of the SSH server, and it does not check for vulnerable software versions.

Solution

Contact the vendor or consult product documentation to disable MD5 and 96-bit MAC algorithms.

Risk Factor

Low

83738 - SSL/TLS EXPORT_DHE <= 512-bit Export Cipher Suites Supported (Logjam)

Synopsis

The remote host supports a set of weak ciphers.

Description

The remote host supports EXPORT_DHE cipher suites with keys less than or equal to 512 bits. Through cryptanalysis, a third party can find the shared secret in a short amount of time.

A man-in-the middle attacker may be able to downgrade the session to use EXPORT_DHE cipher suites. Thus, it is recommended to remove support for weak cipher suites.

Solution

Reconfigure the service to remove support for EXPORT_DHE cipher suites.

Risk Factor

Low

10407 - X Server Detection

Synopsis

An X11 server is listening on the remote host

Description

The remote host is running an X11 server. X11 is a client-server protocol that can be used to display graphical applications running on a given host on a remote client.

Since the X11 traffic is not ciphered, it is possible for an attacker to eavesdrop on the connection.

Solution

Restrict access to this port. If the X11 client/server facility is not used, disable TCP support in X11 entirely (-nolisten tcp).

21186 - AJP Connector Detection

Synopsis

There is an AJP connector listening on the remote host.

Description

The remote host is running an AJP (Apache JServ Protocol) connector, a service by which a standalone web server such as Apache communicates over TCP with a Java servlet container such as Tomcat.

18261 - Apache Banner Linux Distribution Disclosure

Synopsis

The name of the Linux distribution running on the remote host was found in the banner of the web server.

Description

Nessus was able to extract the banner of the Apache web server and determine which Linux distribution the remote host is running.

Solution

If you do not wish to display this information, edit 'httpd.conf' and set the directive 'ServerTokens Prod' and restart Apache.

48204 - Apache HTTP Server Version

Synopsis

It is possible to obtain the version number of the remote Apache HTTP server.

Description

The remote host is running the Apache HTTP Server, an open source web server. It was possible to read the version number from the banner.

84574 - Backported Security Patch Detection (PHP)

Synopsis

Security patches have been backported.

Description

Security patches may have been 'backported' to the remote PHP install without changing its version number.

Banner-based checks have been disabled to avoid false positives.

Note that this test is informational only and does not denote any security problem.

39520 - Backported Security Patch Detection (SSH)

Synopsis

Security patches are backported.

Description

Security patches may have been 'backported' to the remote SSH server without changing its version number.

Banner-based checks have been disabled to avoid false positives.

Note that this test is informational only and does not denote any security problem.

39521 - Backported Security Patch Detection (WWW)

Synopsis

Security patches are backported.

Description

Security patches may have been 'backported' to the remote HTTP server without changing its version number.

Banner-based checks have been disabled to avoid false positives.

Note that this test is informational only and does not denote any security problem.

45590 - Common Platform Enumeration (CPE)

Synopsis

It was possible to enumerate CPE names that matched on the remote system.

Description

By using information obtained from a Nessus scan, this plugin reports CPE (Common Platform Enumeration) matches for various hardware and software products found on a host.

Note that if an official CPE is not available for the product, this plugin computes the best possible CPE based on the information available from the scan.

10028 - DNS Server BIND version Directive Remote Version Detection

Synopsis

It is possible to obtain the version number of the remote DNS server.

Description

The remote host is running BIND or another DNS server that reports its version number when it receives a special request for the text 'version.bind' in the domain 'chaos'.

This version is not necessarily accurate and could even be forged, as some DNS servers send the information based on a configuration file.

Solution

It is possible to hide the version number of BIND by using the 'version' directive in the 'options' section in named.conf.

11002 - DNS Server Detection

Synopsis

A DNS server is listening on the remote host.

Description

The remote service is a Domain Name System (DNS) server, which provides a mapping between hostnames and IP addresses.

Solution

Disable this service if it is not needed or restrict access to internal hosts only if the service is available externally.

11002 - DNS Server Detection

Synopsis

A DNS server is listening on the remote host.

Description

The remote service is a Domain Name System (DNS) server, which provides a mapping between hostnames and IP addresses.

Solution

Disable this service if it is not needed or restrict access to internal hosts only if the service is available externally.

72779 - DNS Server Version Detection

Synopsis

Nessus was able to obtain version information on the remote DNS server.

Description

Nessus was able to obtain version information by sending a special TXT record query to the remote host.

Note that this version is not necessarily accurate and could even be forged, as some DNS servers send the information based on a configuration file.

35371 - DNS Server hostname.bind Map Hostname Disclosure

Synopsis

The DNS server discloses the remote host name.

Description

It is possible to learn the remote host name by querying the remote DNS server for 'hostname.bind' in the CHAOS domain.

Solution

It may be possible to disable this feature. Consult the vendor's documentation for more information.

132634 - Deprecated SSLv2 Connection Attempts

Synopsis

Secure Connections, using a deprecated protocol were attempted as part of the scan

Description

This plugin enumerates and reports any SSLv2 connections which were attempted as part of a scan. This protocol has been deemed prohibited since 2011 because of security vulnerabilities and most major ssl libraries such as openssl, nss, mbed and wolfssl do not provide this functionality in their latest versions. This protocol has been deprecated in Nessus 8.9 and later.

54615 - Device Type

Synopsis

It is possible to guess the remote device type.

Description

Based on the remote operating system, it is possible to determine what the remote system type is (eg: a printer, router, general-purpose computer, etc).

35716 - Ethernet Card Manufacturer Detection

Synopsis

The manufacturer can be identified from the Ethernet OUI.

Description

Each ethernet MAC address starts with a 24-bit Organizationally Unique Identifier (OUI). These OUIs are registered by IEEE.

86420 - Ethernet MAC Addresses

Synopsis

This plugin gathers MAC addresses from various sources and consolidates them into a list.

Description

This plugin gathers MAC addresses discovered from both remote probing of the host (e.g. SNMP and Netbios) and from running local checks (e.g. ifconfig). It then consolidates the MAC addresses into a single, unique, and uniform list.

10092 - FTP Server Detection

Synopsis

An FTP server is listening on a remote port.

Description

It is possible to obtain the banner of the remote FTP server by connecting to a remote port.

10107 - HTTP Server Type and Version

Synopsis

A web server is running on the remote host.

Description

This plugin attempts to determine the type and the version of the remote web server.

24260 - HyperText Transfer Protocol (HTTP) Information

Synopsis

Some information about the remote HTTP configuration can be extracted.

Description

This test gives some information about the remote HTTP protocol - the version used, whether HTTP Keep-Alive and HTTP pipelining are enabled, etc...

This test is informational only and does not denote any security problem.

10114 - ICMP Timestamp Request Remote Date Disclosure

Synopsis

It is possible to determine the exact time set on the remote host.

Description

The remote host answers to an ICMP timestamp request. This allows an attacker to know the date that is set on the targeted machine, which may assist an unauthenticated, remote attacker in defeating time-based authentication protocols.

Timestamps returned from machines running Windows Vista / 7 / 2008 / 2008 R2 are deliberately incorrect, but usually within 1000 seconds of the actual system time.

Solution

Filter out the ICMP timestamp requests (13), and the outgoing ICMP timestamp replies (14).

11156 - IRC Daemon Version Detection

Synopsis

The remote host is an IRC server.

Description

This plugin determines the version of the IRC daemon.

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The remote host is an IRC server.

Description

This plugin determines the version of the IRC daemon.

10397 - Microsoft Windows SMB LanMan Pipe Server Listing Disclosure

Synopsis

It is possible to obtain network information.

Description

It was possible to obtain the browse list of the remote Windows system by sending a request to the LANMAN pipe. The browse list is the list of the nearest Windows systems of the remote host.

10785 - Microsoft Windows SMB NativeLanManager Remote System Information Disclosure

Synopsis

It was possible to obtain information about the remote operating system.

Description

Nessus was able to obtain the remote operating system name and version (Windows and/or Samba) by sending an authentication request to port 139 or 445. Note that this plugin requires SMB to be enabled on the host.

11011 - Microsoft Windows SMB Service Detection

Synopsis

A file / print sharing service is listening on the remote host.

Description

The remote service understands the CIFS (Common Internet File System) or Server Message Block (SMB) protocol, used to provide shared access to files, printers, etc between nodes on a network.

11011 - Microsoft Windows SMB Service Detection

Synopsis

A file / print sharing service is listening on the remote host.

Description

The remote service understands the CIFS (Common Internet File System) or Server Message Block (SMB) protocol, used to provide shared access to files, printers, etc between nodes on a network.

100871 - Microsoft Windows SMB Versions Supported (remote check)

Synopsis

It was possible to obtain information about the version of SMB running on the remote host.

Description

Nessus was able to obtain the version of SMB running on the remote host by sending an authentication request to port 139 or 445.

Note that this plugin is a remote check and does not work on agents.

106716 - Microsoft Windows SMB2 and SMB3 Dialects Supported (remote check)

Synopsis

It was possible to obtain information about the dialects of SMB2 and SMB3 available on the remote host.

Description

Nessus was able to obtain the set of SMB2 and SMB3 dialects running on the remote host by sending an authentication request to port 139 or 445.

10437 - NFS Share Export List

Synopsis

The remote NFS server exports a list of shares.

Description

This plugin retrieves the list of NFS exported shares.

Solution

Ensure each share is intended to be exported.

11219 - Nessus SYN scanner

Synopsis

It is possible to determine which TCP ports are open.

Description

This plugin is a SYN 'half-open' port scanner. It shall be reasonably quick even against a firewalled target.

Note that SYN scans are less intrusive than TCP (full connect) scans against broken services, but they might cause problems for less robust firewalls and also leave unclosed connections on the remote target, if the network is loaded.

Solution

Protect your target with an IP filter.

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Solution

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19506 - Nessus Scan Information

Synopsis

This plugin displays information about the Nessus scan.

Description

This plugin displays, for each tested host, information about the scan itself :

- The version of the plugin set.
- The type of scanner (Nessus or Nessus Home).
- The version of the Nessus Engine.
- The port scanner(s) used.
- The port range scanned.
- The ping round trip time
- Whether credentialed or third-party patch management checks are possible.
- Whether the display of superseded patches is enabled
- The date of the scan.
- The duration of the scan.
- The number of hosts scanned in parallel.
- The number of checks done in parallel.

11936 - OS Identification

Synopsis

It is possible to guess the remote operating system.

Description

Using a combination of remote probes (e.g., TCP/IP, SMB, HTTP, NTP, SNMP, etc.), it is possible to guess the name of the remote operating system in use. It is also possible sometimes to guess the version of the operating system.

117886 - OS Security Patch Assessment Not Available

Synopsis

OS Security Patch Assessment is not available.

Description

OS Security Patch Assessment is not available on the remote host.
This does not necessarily indicate a problem with the scan.
Credentials may not have been provided, OS security patch assessment may not be supported for the target, the target may not have been identified, or another issue may have occurred that prevented OS security patch assessment from being available. See plugin output for details.

This plugin reports non-failure information impacting the availability of OS Security Patch Assessment. Failure information is reported by plugin 21745 : 'OS Security Patch Assessment failed'. If a target host is not supported for OS Security Patch Assessment, plugin 110695 : 'OS Security Patch Assessment Checks Not Supported' will report concurrently with this plugin.

50845 - OpenSSL Detection

Synopsis

The remote service appears to use OpenSSL to encrypt traffic.

Description

Based on its response to a TLS request with a specially crafted server name extension, it seems that the remote service is using the OpenSSL library to encrypt traffic.

Note that this plugin can only detect OpenSSL implementations that have enabled support for TLS extensions (RFC 4366).

50845 - OpenSSL Detection

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The remote service appears to use OpenSSL to encrypt traffic.

Description

Based on its response to a TLS request with a specially crafted server name extension, it seems that the remote service is using the OpenSSL library to encrypt traffic.

Note that this plugin can only detect OpenSSL implementations that have enabled support for TLS extensions (RFC 4366).

48243 - PHP Version Detection

Synopsis

It was possible to obtain the version number of the remote PHP installation.

Description

Nessus was able to determine the version of PHP available on the remote web server.

66334 - Patch Report

Synopsis

The remote host is missing several patches.

Description

The remote host is missing one or more security patches. This plugin lists the newest version of each patch to install to make sure the remote host is up-to-date.

Note: Because the 'Show missing patches that have been superseded' setting in your scan policy depends on this plugin, it will always run and cannot be disabled.

Solution

Install the patches listed below.

118224 - PostgreSQL STARTTLS Support

Synopsis

The remote service supports encrypting traffic.

Description

The remote PostgreSQL server supports the use of encryption initiated during pre-login to switch from a cleartext to an encrypted communications channel.

26024 - PostgreSQL Server Detection

Synopsis

A database service is listening on the remote host.

Description

The remote service is a PostgreSQL database server, or a derivative such as EnterpriseDB.

Solution

Limit incoming traffic to this port if desired.

22227 - RMI Registry Detection

Synopsis

An RMI registry is listening on the remote host.

Description

The remote host is running an RMI registry, which acts as a bootstrap naming service for registering and retrieving remote objects with simple names in the Java Remote Method Invocation (RMI) system.

11111 - RPC Services Enumeration

Synopsis

An ONC RPC service is running on the remote host.

Description

By sending a DUMP request to the portmapper, it was possible to enumerate the ONC RPC services running on the remote port. Using this information, it is possible to connect and bind to each service by sending an RPC request to the remote port.

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53335 - RPC portmapper (TCP)

Synopsis

An ONC RPC portmapper is running on the remote host.

Description

The RPC portmapper is running on this port.

The portmapper allows someone to get the port number of each RPC service running on the remote host by sending either multiple lookup requests or a DUMP request.

10223 - RPC portmapper Service Detection

Synopsis

An ONC RPC portmapper is running on the remote host.

Description

The RPC portmapper is running on this port.

The portmapper allows someone to get the port number of each RPC service running on the remote host by sending either multiple lookup requests or a DUMP request.

10263 - SMTP Server Detection

Synopsis

An SMTP server is listening on the remote port.

Description

The remote host is running a mail (SMTP) server on this port.

Since SMTP servers are the targets of spammers, it is recommended you disable it if you do not use it.

Solution

Disable this service if you do not use it, or filter incoming traffic to this port.

42088 - SMTP Service STARTTLS Command Support

Synopsis

The remote mail service supports encrypting traffic.

Description

The remote SMTP service supports the use of the 'STARTTLS' command to switch from a cleartext to an encrypted communications channel.

70657 - SSH Algorithms and Languages Supported

Synopsis

An SSH server is listening on this port.

Description

This script detects which algorithms and languages are supported by the remote service for encrypting communications.

149334 - SSH Password Authentication Accepted

Synopsis

The SSH server on the remote host accepts password authentication.

Description

The SSH server on the remote host accepts password authentication.

10881 - SSH Protocol Versions Supported

Synopsis

A SSH server is running on the remote host.

Description

This plugin determines the versions of the SSH protocol supported by the remote SSH daemon.

153588 - SSH SHA-1 HMAC Algorithms Enabled

Synopsis

The remote SSH server is configured to enable SHA-1 HMAC algorithms.

Description

The remote SSH server is configured to enable SHA-1 HMAC algorithms.

Although NIST has formally deprecated use of SHA-1 for digital signatures, SHA-1 is still considered secure for HMAC as the security of HMAC does not rely on the underlying hash function being resistant to collisions.

Note that this plugin only checks for the options of the remote SSH server.

10267 - SSH Server Type and Version Information

Synopsis

An SSH server is listening on this port.

Description

It is possible to obtain information about the remote SSH server by sending an empty authentication request.

56984 - SSL / TLS Versions Supported

Synopsis

The remote service encrypts communications.

Description

This plugin detects which SSL and TLS versions are supported by the remote service for encrypting communications.

Solution

n/a

56984 - SSL / TLS Versions Supported

Synopsis

The remote service encrypts communications.

Description

This plugin detects which SSL and TLS versions are supported by the remote service for encrypting communications.

45410 - SSL Certificate 'commonName' Mismatch

Synopsis

The 'commonName' (CN) attribute in the SSL certificate does not match the hostname.

Description

The service running on the remote host presents an SSL certificate for which the 'commonName' (CN) attribute does not match the hostname on which the service listens.

Solution

If the machine has several names, make sure that users connect to the service through the DNS hostname that matches the common name in the certificate.

Risk Factor

None

45410 - SSL Certificate 'commonName' Mismatch

Synopsis

The 'commonName' (CN) attribute in the SSL certificate does not match the hostname.

Description

The service running on the remote host presents an SSL certificate for which the 'commonName' (CN) attribute does not match the hostname on which the service listens.

Solution

If the machine has several names, make sure that users connect to the service through the DNS hostname that matches the common name in the certificate.

10863 - SSL Certificate Information

Synopsis

This plugin displays the SSL certificate.

Description

This plugin connects to every SSL-related port and attempts to extract and dump the X.509 certificate.

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70544 - SSL Cipher Block Chaining Cipher Suites Supported

Synopsis

The remote service supports the use of SSL Cipher Block Chaining ciphers, which combine previous blocks with subsequent ones.

Description

The remote host supports the use of SSL ciphers that operate in Cipher Block Chaining (CBC) mode. These cipher suites offer additional security over Electronic Codebook (ECB) mode, but have the potential to leak information if used improperly.

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21643 - SSL Cipher Suites Supported

Synopsis

The remote service encrypts communications using SSL.

Description

This plugin detects which SSL ciphers are supported by the remote service for encrypting communications.

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57041 - SSL Perfect Forward Secrecy Cipher Suites Supported

Synopsis

The remote service supports the use of SSL Perfect Forward Secrecy ciphers, which maintain confidentiality even if the key is stolen.

Description

The remote host supports the use of SSL ciphers that offer Perfect Forward Secrecy (PFS) encryption. These cipher suites ensure that recorded SSL traffic cannot be broken at a future date if the server's private key is compromised.

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51891 - SSL Session Resume Supported

Synopsis

The remote host allows resuming SSL sessions.

Description

This script detects whether a host allows resuming SSL sessions by performing a full SSL handshake to receive a session ID, and then reconnecting with the previously used session ID. If the server accepts the session ID in the second connection, the server maintains a cache of sessions that can be resumed.

156899 - SSL/TLS Recommended Cipher Suites

Synopsis

The remote host advertises discouraged SSL/TLS ciphers.

Description

The remote host has open SSL/TLS ports which advertise discouraged cipher suites. It is recommended to only enable support for the following cipher suites:

TLSv1.3:
- 0x13,0x01 TLS_AES_128_GCM_SHA256
- 0x13,0x02 TLS_AES_256_GCM_SHA384
- 0x13,0x03 TLS_CHACHA20_POLY1305_SHA256

TLSv1.2:
- 0xC0,0x2B ECDHE-ECDSA-AES128-GCM-SHA256
- 0xC0,0x2F ECDHE-RSA-AES128-GCM-SHA256
- 0xC0,0x2C ECDHE-ECDSA-AES256-GCM-SHA384
- 0xC0,0x30 ECDHE-RSA-AES256-GCM-SHA384
- 0xCC,0xA9 ECDHE-ECDSA-CHACHA20-POLY1305
- 0xCC,0xA8 ECDHE-RSA-CHACHA20-POLY1305
- 0x00,0x9E DHE-RSA-AES128-GCM-SHA256
- 0x00,0x9F DHE-RSA-AES256-GCM-SHA384

This is the recommended configuration for the vast majority of services, as it is highly secure and compatible with nearly every client released in the last five (or more) years.

Solution

Only enable support for recommened cipher suites.

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- 0xC0,0x30 ECDHE-RSA-AES256-GCM-SHA384
- 0xCC,0xA9 ECDHE-ECDSA-CHACHA20-POLY1305
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- 0x00,0x9E DHE-RSA-AES128-GCM-SHA256
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This is the recommended configuration for the vast majority of services, as it is highly secure and compatible with nearly every client released in the last five (or more) years.

Solution

Only enable support for recommened cipher suites.

Risk Factor

None

25240 - Samba Server Detection

Synopsis

An SMB server is running on the remote host.

Description

The remote host is running Samba, a CIFS/SMB server for Linux and Unix.

104887 - Samba Version

Synopsis

It was possible to obtain the samba version from the remote operating system.

Description

Nessus was able to obtain the samba version from the remote operating by sending an authentication request to port 139 or 445. Note that this plugin requires SMB1 to be enabled on the host.

96982 - Server Message Block (SMB) Protocol Version 1 Enabled (uncredentialed check)

Synopsis

The remote Windows host supports the SMBv1 protocol.

Description

The remote Windows host supports Server Message Block Protocol version 1 (SMBv1). Microsoft recommends that users discontinue the use of SMBv1 due to the lack of security features that were included in later SMB versions. Additionally, the Shadow Brokers group reportedly has an exploit that affects SMB; however, it is unknown if the exploit affects SMBv1 or another version. In response to this, US-CERT recommends that users disable SMBv1 per SMB best practices to mitigate these potential issues.

Solution

Disable SMBv1 according to the vendor instructions in Microsoft KB2696547. Additionally, block SMB directly by blocking TCP port 445 on all network boundary devices. For SMB over the NetBIOS API, block TCP ports 137 / 139 and UDP ports 137 / 138 on all network boundary devices.

22964 - Service Detection

Synopsis

The remote service could be identified.

Description

Nessus was able to identify the remote service by its banner or by looking at the error message it sends when it receives an HTTP request.

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17975 - Service Detection (GET request)

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11153 - Service Detection (HELP Request)

Synopsis

The remote service could be identified.

Description

It was possible to identify the remote service by its banner or by looking at the error message it sends when it receives a
'HELP'
request.

25220 - TCP/IP Timestamps Supported

Synopsis

The remote service implements TCP timestamps.

Description

The remote host implements TCP timestamps, as defined by RFC1323. A side effect of this feature is that the uptime of the remote host can sometimes be computed.

11819 - TFTP Daemon Detection

Synopsis

A TFTP server is listening on the remote port.

Description

The remote host is running a TFTP (Trivial File Transfer Protocol) daemon. TFTP is often used by routers and diskless hosts to retrieve their configuration. It can also be used by worms to propagate.

Solution

Disable this service if you do not use it.

110723 - Target Credential Status by Authentication Protocol - No Credentials Provided

Synopsis

Nessus was able to find common ports used for local checks, however, no credentials were provided in the scan policy.

Description

Nessus was not able to successfully authenticate directly to the remote target on an available authentication protocol. Nessus was able to connect to the remote port and identify that the service running on the port supports an authentication protocol, but Nessus failed to authenticate to the remote service using the provided credentials. There may have been a protocol failure that prevented authentication from being attempted or all of the provided credentials for the authentication protocol may be invalid. See plugin output for error details.

Please note the following :

- This plugin reports per protocol, so it is possible for valid credentials to be provided for one protocol and not another. For example, authentication may succeed via SSH but fail via SMB, while no credentials were provided for an available SNMP service.

- Providing valid credentials for all available authentication protocols may improve scan coverage, but the value of successful authentication for a given protocol may vary from target to target depending upon what data (if any) is gathered from the target via that protocol. For example, successful authentication via SSH is more valuable for Linux targets than for Windows targets, and likewise successful authentication via SMB is more valuable for Windows targets than for Linux targets.

10287 - Traceroute Information

Synopsis

It was possible to obtain traceroute information.

Description

Makes a traceroute to the remote host.

11154 - Unknown Service Detection: Banner Retrieval

Synopsis

There is an unknown service running on the remote host.

Description

Nessus was unable to identify a service on the remote host even though it returned a banner of some type.

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19288 - VNC Server Security Type Detection

Synopsis

A VNC server is running on the remote host.

Description

This script checks the remote VNC server protocol version and the available 'security types'.

65792 - VNC Server Unencrypted Communication Detection

Synopsis

A VNC server with one or more unencrypted 'security-types' is running on the remote host.

Description

This script checks the remote VNC server protocol version and the available 'security types' to determine if any unencrypted 'security-types' are in use or available.

10342 - VNC Software Detection

Synopsis

The remote host is running a remote display software (VNC).

Description

The remote host is running VNC (Virtual Network Computing), which uses the RFB (Remote Framebuffer) protocol to provide remote access to graphical user interfaces and thus permits a console on the remote host to be displayed on another.

Solution

Make sure use of this software is done in accordance with your organization's security policy and filter incoming traffic to this port.

135860 - WMI Not Available

Synopsis

WMI queries could not be made against the remote host.

Description

WMI (Windows Management Instrumentation) is not available on the remote host over DCOM. WMI queries are used to gather information about the remote host, such as its current state, network interface configuration, etc.

Without this information Nessus may not be able to identify installed software or security vunerabilities that exist on the remote host.

11424 - WebDAV Detection

Synopsis

The remote server is running with WebDAV enabled.

Description

WebDAV is an industry standard extension to the HTTP specification.
It adds a capability for authorized users to remotely add and manage the content of a web server.

If you do not use this extension, you should disable it.

Solution

http://support.microsoft.com/default.aspx?kbid=241520

10150 - Windows NetBIOS / SMB Remote Host Information Disclosure

Synopsis

It was possible to obtain the network name of the remote host.

Description

The remote host is listening on UDP port 137 or TCP port 445, and replies to NetBIOS nbtscan or SMB requests.

Note that this plugin gathers information to be used in other plugins, but does not itself generate a report.

52703 - vsftpd Detection

Synopsis

An FTP server is listening on the remote port.

Description

The remote host is running vsftpd, an FTP server for UNIX-like systems written in C.