

User's Guide JSCAPE MFT Monitor

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Overview

File transfer services are the backbone of many organizations data exchange processes. For an organization to function properly these critical file transfer services must offer reliability, high-performance and security.

The performance and reliability of file transfer services can greatly impact an organizations ability to conduct business with it's clients and trading partners. Left undetected, poor performing file transfer services can result in breaches of SLAs (Service Level Agreement), breakdown of internal processes, disappointed customers and possible loss of revenue.

Furthermore, file transfer services must be properly configured and secured in order to prevent possible data breaches. Failure to properly configure and secure file transfer services can lead to data breaches leaking sensitive data, violation of government compliance regulations and possible fines.

JSCAPE MFT Monitor is a software application developed to monitor the health and security of file transfer services. Using JSCAPE MFT Monitor you can ensure that file transfer services maintain a high level of reliability, performance and security.

Example Uses

- Detect and shutdown rogue file transfer services
- · Identify network security and compliance violations in file transfer services
- · Monitor availability and performance of file transfer services
- Test performance of file transfer services under heavy load
- Schedule automated network scans and performance monitors
- Receive customized email alerts

Evaluation Edition limitations

The evaluation version of JSCAPE MFT Monitor has the following limitations:

- Limited to user load of 3 users when running a Monitor.
- Limited to detecting 3 services when running a Scan.
- Schedulers are disabled for both Monitors and Scans.

Purchase JSCAPE MFT Monitor License

System requirements

- Sun or IBM JVM (Java Virtual Machine) 1.6 or above
- Windows XP/2003/Vista/2008/7/2012 (32 or 64 bit), Mac OS X, Solaris, Linux.

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Version history

Release 3.1 Sep. 25, 2014

Enhancement: Added dashboard panel to track memory and thread statistics over time.

Release 3.0

Feb. 21, 2014

Enhancement: Replaced Java management client with web based interface.

Enhancement: Added ability to clear results for a scan or monitor.

Enhancement: Added wait period parameter to monitors which controls amount of time to wait before client disconnects.

Enhancement: Added ability to load credentials from a file for monitors.

Enhancement: Added ability to create administrative users for managing application using web interface. Enhancement: Added ability to store monitor and scan results in a relational database.

Release 2.3

Jan. 4, 2013

Enhancement: Updated "Create" action for "Load" section of monitors to use random data rather than null data.

Bug Fix: Resolved issue where "Remote directory" for monitors was ignored.

Bug Fix: Resolved public key and client certificate authentication issue in SFTP and FTPS monitors. Bug Fix: Resolved issue where making changes to "Key Authentication" section of a monitor did not activate "Save" button.

Release 2.2

Nov. 9, 2012

Enhancement: Renamed product to JSCAPE MFT Monitor.

Enhancement: Renamed Sessions module to Monitors.

Enhancement: Added scheduler support to Monitors.

Enhancement: Added Alerts support to Monitors.

Enhancement: Added Scans module to detect and audit file transfer services on a host or network.

Release 2.1

Apr. 12, 2012

Enhancement: Changed default file size in Create File dialog to 100KB.

Enhancement: Added visual indicator to sessions tree for failed sessions.

Enhancement: Updated right click context menu for sessions to include Run and Refresh options.

Enhancement: Updated default view for session to display Summary tab.

Enhancement: Change default logging directory so that each session run has it's own unique directory utilizing %name% and %datetime% variables.

Enhancement: Sessions view is now automatically updated to show latest session results.

Chapter 1 Introduction

Enhancement: Added ability to copy a session. Enhancement: Added ability to delete session results.

Release 2.0

Mar. 16, 2012

Enhancement: Added ability to schedule load testing sessions. Enhancement: Added support for AFTP (Accelerated File Transfer Protocol).

Release 1.2

Oct. 17, 2011

Enhancement: Added ability to create files of specified size for use in load testing. Enhancement: Various performance enhancements to underlying client protocols. Enhancement: Moved documentation online. Bug Fix: Various bug fixes.

Release 1.1

Dec. 15, 2010

Enhancement: Added support for client certificates in FTPS protocol. Enhancement: Added support for Windows 64 bit installer.

Release 1.0.18

Mar. 31, 2009

Enhancement: Old debug log files are cleared when running a session. Bug Fix: Fixed issue with threads not running concurrently.

Release 1.0.14 Mar. 16, 2009

Initial release Installing on Windows

To install JSCAPE MFT Monitor on a Windows platform perform the following:

- 1. Download and run the install.exe installation file for JSCAPE MFT Monitor.
- 2. Follow the steps in the installation wizard.
- 3. If you are running any firewall software make sure that it is setup to allow JSCAPE MFT Monitor to run.
- 4. Start the JSCAPE MFT Monitor service.
- 5. Launch web interface to configure your server.

See also

Launching web interface Installing on Linux

RPM Console Installation

To install using the RPM file perform the following steps as a user with root privileges.

1. Place the install.rpm file in a directory on the destination server.

2. Install. Run the following command from the directory containing the RPM file you placed on your server:

rpm -ivh install.rpm

3. Configure Administration Service. Go to the /opt/JSCAPE_MFT_Monitor directory and run the following command:

./add-administrator -u [username] -p [password]

For example:

./add-administrator -u admin -p secret

This will configure your JSCAPE MFT Monitor instance, where [username] [password] are the credentials you will use when managing the server.

4. Start the JSCAPE MFT Monitor service. From the JSCAPE MFT Monitor installation directory run the following command:

./start service.sh

The JSCAPE MFT Monitor service should now be running. To connect to this service and manage your server see the topics below.

ZIP Console Installation

1. Place the install.zip file in a directory on the destination server.

2. Install. Run the following command from the directory containing the ZIP file you placed on your server:

unzip install.zip

3. Configure Administration Service. Go to the JSCAPE MFT Monitor installation directory, located in the JSCAPE_MFT_Monitor directory relative to where the unzip command was executed, and run the following command:

./add-administrator -u [username] -p [password]

For example:

./add-administrator -u admin -p secret

This will configure your JSCAPE MFT Monitor instance, where [username] [password] are the credentials you will use when managing the server.

4. Start the JSCAPE MFT Monitor service. From the JSCAPE MFT Monitor installation directory run the following command:

./start service.sh

The JSCAPE MFT Monitor service should now be running. To connect to this service and manage your server see the topics below.

See also

Launching web interface

Installing on Mac OS X

To install JSCAPE MFT Monitor on a Mac OS X platform perform the following:

- 1. Download and run the install.dmg installation file for JSCAPE MFT Monitor.
- 2. Follow the steps in the installation wizard.

3. If you are running any firewall software make sure that it is setup to allow JSCAPE MFT Monitor to run.

4. Start the JSCAPE MFT Monitor service. Service will start automatically following installation. If service is not started then you may start it manually as root user using the ./start_service.sh command from a terminal shell prompt.

In order to have service start automatically upon system reboot, edit the /Library/LaunchDaemons/ com.jscape.MFTMonitor.plist file and set the value for the OnDemand parameter to false.

5. Verify that JSCAPE MFT Monitor is running using the following command from your shell prompt:

netstat -a | grep 30881

where 30881 is the HTTP listening port for JSCAPE MFT Monitor service.

6. Launch web interface and configure your server.

See also

Launching web interface

Installing on Solaris

ZIP Console Installation

1. Place the install.zip file in a directory on the destination server.

2. Install. Run the following command from the directory containing the ZIP file you placed on your server:

unzip install.zip

3. Configure Administration Service. Go to the JSCAPE MFT Monitor installation directory, located in the JSCAPE_MFT_Monitor directory relative to where the unzip command was executed, and run the following command:

./add-administrator -u [username] -p [password]

For example:

./add-administrator -u admin -p secret

This will configure your JSCAPE MFT Monitor instance, where [username] [password] are the credentials you will use when managing the server.

4. Start the JSCAPE MFT Monitor service. From the JSCAPE MFT Monitor installation directory run the following command:

./start service.sh

The JSCAPE MFT Monitor service should now be running. To connect to this service and manage your server see the topics below.

See also

Launching web interface

Auto starting in Linux and Solaris 9 environments

For Linux environments you may have JSCAPE MFT Monitor start up automatically during system start-up by creating a service configuration file for JSCAPE MFT Monitor and placing it in your /etc/init.d directory. This same configuration file will be used for gracefully stopping JSCAPE MFT Monitor when shutting down the system. A sample service configuration file, monitor, has been placed in the init.d directory of your JSCAPE MFT Monitor installation.

Installing the service configuration file

1. As root user, copy the monitor sample service configuration file to your /etc/init.d directory.

2. Grant execute permissions to this file using the command:

chmod 755 monitor

3. Using a text editor, change the value of the INSTALL_DIR variable to the absolute path of your JSCAPE MFT Monitor installation directory. The default value for the INSTALL_DIR variable is /opt/JSCAPE_MFT_Monitor which is consistent with Linux RPM installations. Your installation directory may vary.

4. Set this script to be executed automatically upon system start-up using the following command(s):

Linux

/sbin/chkconfig --add monitor

Solaris 9

ln /etc/init.d/monitor /etc/rc3.d/Sxxmonitor

ln /etc/init.d/monitor /etc/rc0.d/Kxxmonitor

Note

If you are running under Ubuntu environment then the chkconfig command is not available. Instead you must run the following command as root user from /etc/init.d directory.

update-rc.d monitor defaults

Starting the service

From the /etc/init.d directory and as root user run the command ./monitor start to start the service.

Stopping the service

From the $/{\tt etc/init.d}$ directory and as root user run the command ./monitor stop to stop the service.

Restarting the service

From the /etc/init.d directory and as root user run the command ./monitor restart to restart the service.

Auto starting in Solaris 10 environments

Solaris 10 uses SMF (Service Management Facility) for creating and managing services. To enable JSCAPE MFT Monitor as a service perform the following.

1. As root user, create a user and group named mftmonitor.

2. As root user, run the command usermod -K defaultpriv=basic,net_privaddr mftmonitor to grant mftmonitor user permissions to run services on ports less than 1024.

3. As mftmonitor user, run installer for Solaris as described in Installing on Solaris.

4. Open the sample SMF manifest file monitor_smf.xml found in the JSCAPE MFT Monitor installation directory using vi or other text editor.

5. Change references to /opt/JSCAPE_MFT_Monitor with the absolute path of JSCAPE MFT Monitor installation directory.

6. As root user, validate SMF manifest file using svccfg validate monitor_smf.xml command.

7. As root user, import SMF manifest file using svccfg import monitor_smf.xml command.

8. As root user, enable service using svcadm enable svc:/application/mftmonitor: default command.

9. Check that service was started successfully and not in maintenance using svcs -x mftmonitor: default command.

10. Verify that JSCAPE MFT Monitor is running using netstat -na | grep 30881 command.

See also

For more information on creating services using SMF please see the following links:

http://www.sun.com/software/solaris/howtoguides/smfmanifesthowto.jsp

http://www.sun.com/software/solaris/howtoguides/servicemgmthowto.jsp

Launching web interface

To launch the web based user interface for managing JSCAPE MFT Monitor, navigate to http://lostname]:[port] where <a href="http://lostname] and http://lostname] are the IP address and port that JSCAPE MFT Monitor is listening on. Using default values as an example:

http://localhost:30881

This will display the login page for JSCAPE MFT Monitor. To login enter the administrative credentials that you supplied when first installing JSCAPE MFT Monitor and click the "Login" button.

JSCAPE MFT Monitor - Mozilla Firefox		
Eile Edit View Higtory Bookmarks Iools Help Image: State of the s	p	
	JSCAPE MFT Monitor Login	
	Username* admin Password ••••••	
	Login	
	Powered by JSCAPE MFT Monitor. Copyright 1999-2014 JSCAPE LLC.	

Monitors

Overview

Monitors may be used to check the health and performance of file transfer services.

Example Uses

- Monitor availability and performance of file transfer services
- Test performance of file transfer services behave under heavy load
- Schedule automated performance monitors
- Receive customized email alerts

Creating a monitor

To create a new monitor navigate to "Monitors" in the web interface and click the "Add" button. Enter monitor Name, Server, Load/Alerts information and click the Save button.

CAPE MFT Monitor - M Edit View History	ozila Firefox Bookmarks Iools Help
CAPE MFT Monitor	+
Help 👻 Logoui	
	Add FTP Monitor
State	FTP Monitor
Monitors	Specify monitor parameters
Scans	
Known Services	Name* ftp-monitor
	Server
Administrators	
Keys	IP/host* 10.1.1.1 port 21
Email	Timeout 30 🗘 s
Web	Access
	O Username test password ••••
	O Upload credentials file Browse_ No file selected.
	Browse credentials file Browse
	O Anonymous
	Remote directory Delete
	✓ Passive transfer mode
	Enable debug log
	Load/Alerts
	Save Save/Start Cancel

Figure 1

Name - Unique name for monitor configuration.

Server

Connection type - The connection protocol to use. Available types are FTP, FTP/SSL (AUTH TLS), FTP/ Implicit SSL, SFTP/SSH and AFTP.

Anonymous - For use in FTP and FTPS connections only. If selected client session will connect anonymously. Server must be configured to allow anonymous connections.

Passive transfer mode - For use in FTP and FTPS connections only. If selected client session will perform data transfers using passive (PASV) mode. Deselect to use active (PORT) mode.

Remote directory - The remote directory in which to place uploaded file. Default is user root directory.

Enable debug log - Enables debug mode of client sessions. Debug log of each client connection can be seen in "Results" by clicking "Log" button for desired session.

Private Key

For use in SFTP/FTPS connections where client key authentication is used.

Access

Username - The client session username.

Password - The client session password.

Upload credentials file - Upload a credentials file to be used. Each session will read next line from credentials file with username and password supplied in comma delimited format. Example below.

```
user1,pass1
user2,pass2
user3,pass3
...
```

Browse credentials file - Select credentials file from location on server. Each session will read next line from credentials file with username and password supplied in comma delimited format. Example below.

```
user1,pass1
user2,pass2
user3,pass3
...
```

Anonymous - Connect using anonymous credentials using username of "anonymous" and random password.

Load

File - The local file to be uploaded to server and subsequently downloaded from server. A file upload/ download will be performed in order to collect throughput statistics.

Users - The number of client user sessions to simulate.

Ramp up period - The amount of time (in milliseconds) to wait before initiating each client user session. The lower the value the more quickly client sessions are initiated resulting in higher number of concurrent

connections.

Wait period - The amount of time (in milliseconds) to wait before disconnecting each client user session.

Use unique filename - If checked then a unique filename is used when transferring file.

Delete file after transfer - If checked then file is deleted from server after transfer.

Alerts

Receive email alerts when certain conditions are met.

Manually running a monitor

To manually run a monitor, first select desired monitor from "Monitors" module in JSCAPE MFT Monitor. Next, click the "Start" button for the monitor. Status of monitor can be seen in the "Results" tab.

	rks <u>T</u> ools <u>H</u> elp							
APE MFT Monitor	+							
Help - Logout								
	Monitors Result	ts						
State								
Monitors	Name	Target Host	Protocol	User	rs File Size	Schedule	Alerts	
Scans	ftp	localhost:21	FTP	100	100.00 KB	****		
Known Services	ftpse	localhost21	FTP/S	3	1.00 MB	****		
	ftpsi	localhost.990	FTP/Implic	it (3	1.00 MB	****		
Administrators	sftp	localhost.22	SFTP	50	100.00 KB	****		
Keys Email								
Web								
					Add	Сору Еб	it Start Clear Dele	ete
					Add	Copy Ed	it <u>Start</u> Clear Dele	ete
		Powered by ISCAPE MET	Monitor Conver	1ht 1000			it Clear Dele	ete
		Powered by JSCAPE MFT	Monitor. Copyrig	1999			it Start Clear Dele	ete
		Powered by JSCAPE MFT I	Monitor. Copyrig	ht 1999			it Start Clear Dele	ete
		Powered by JSCAPE MFT I	Monitor. Copyrig	ht 1999			it Start Clear Dele	ete
		Powered by JSCAPE MFT I	Monitor. Copyrig	ht 1999			it Start Clear Dele	ete
		Powered by JSCAPE MFT	Monitor. Copyrig	ht 1999			it Start Clear Deld	ete

Scheduling a monitor

To schedule a monitor to be run on a one-time or recurring basis first select the desired monitor and click "Edit". Next, scroll to the bottom of the dialog and enable the "Schedule automatic run" checkbox. Lastly, enter the date/time conditions for which this monitor should be run and click Save.

The settings shown in *Figure 13* below are an example of a monitor to be run every day at 5:30 AM local time.

Help 👻 Logout				
Logoar				
	Monitors Results			
	Edit 'ftp' FTP Monitor			
Monitors	Browse credenti	als file	Browse	
Scans	Anonymous			
Known Services	r i l	Schedule		
Administrators	Remote directory	schedule		
Keys	Passive transfer mo	Schedule		
Email	🗷 Enable debug log	Specify schedule parameters		
Web		Minute 30 🗘		
	Load/Alerts	V Hour 5		
	Use 100.00 KB file with 1	Day of month 1		
		Month 1		
	Settings	Day of week 1		
	No alerts set			=
	Settings			
		ОКС	ancel	Clear Delete
	🗵 Schedule automatic run (*****) Settings		
				T
			Save Save/Start	Cancel



Hour - The hour of the day.

Minute - The minute of the hour.

Day of month - The day of the month.

Month - The month of the year.

Day of week - The day of the week where the 1st day of the week is Sunday.

Examples

5:00 AM every day

Chapter 3 Usage

3:30 PM every Sunday

Hour = 15 Minute = 30 Day of Month = * Month = * Day of Week = 1

First day of the month, every month at 1 AM

Hour = 1 Minute = 0 Day of Month = 1 Month = * Day of Week = *

Receiving email alerts

Email alerts may be sent based on conditions that you configure in the Alerts module. To enable an alert go to the Alerts section for the desired monitor. Next, enable alerts by clicking the desired checkbox(es) setting alert conditions (if available), delivery address and message settings. Upon the next run of monitor, for each alert condition that is met an email alert will be sent.

Note

Before enabling email alerts ensure that you have defined SMTP server settings in <u>Settings > Email</u>.

APE MFT Monitor	+							
Help 👻 Logout								
	Monitor	s Results						
State	Edit 'ftp' FTP N Ale	ort Sottings				×		
Monitors		en setungs						
Scans		Alerts						
Known Services		Specify alerts para	meters					
Administrators	Remo		en one or more connectio					
Keys	I F	Recipient*	admin@domain.co	m	Details			
Email	I E					E		
Web			en all connections and tra	ansfers succeeded				
1160	Load	Recipient*			Details			
	Louis							
	Use 1			exceeds a particular value	e			
	Se	Max connect time	30000 🗘 ms					
		Recipient*			Details		=	
	No al						=	
	Se		en average upload time e	exceeds a particular value				
		Max upload time	30000 🗘 ms					Clear Delete
		Recipient*			Details	_		
	Schee							
		Send alert where	en average upload speed	l is below a particular valu	le	-	Ŧ	
					ОК Са	incel C	ancel	

Figure 12

3

APE MFT Monitor	+					
Help 👻 Logout						
	Monitors					
State Monitors	Edit 'ftp' FTP N Alert	Settings	6	3	X	
Scans		lerts becify alerts par	amatan		*	
Known Services		ail Details	ameters			
Administrators		ail Details				
Keys	<u>N</u>	cify email param	neters			
	Sut	ject	Session Failure Notification			
		sage	JSCAPE MFT Monitor has raised an alert.			
			Details:			
	Us		The session %Name% has failed on date %Date% at time %Time%. Please review your session			
			summary and debug logs for additional details.			
	NC	Add Variable				
			OK Cance			
	Scl.					
		Send alert wi	hen average upload speed is below a particular value) Cance	+	

See also

Settings > Email

Viewing monitor results

To view the session results for a monitor, navigate to the Monitors > Results page in JSCAPE MFT Monitor. To view the results of a session select desired session and click the "View" button.

Summary

This panel displays a high level summary of the session including load settings and average connect, throughput, upload and download times.

	Monitors Results										
State											
Monitors	Monitor	Target Host	State	Start Date	End Date	User	File Size Connect T	Upload Tii	Upload S	pownload	d Download Sp
Scans	ftpse	localhost:21	compl	11:03:38 02-	11:03:39 02-	3	1.00 MB 586	84	12245	91	11746
Known Services	sftp	localhost:22	compl	11:03:38 02-	11:03:44 02-	50	100.00 178	19	5676	19	5635
	ftp	localhost:21	compl	11:03:38 02-	11:03:51 02-	100	100.00195	8	16731	7	19587
Administrators	ftpsi	localhost:99	compl	11:03:38 02-	11:03:38 02-	3	1.00 MB 90	130	8234	275	3735
Keys	ftpse	localhost:21	compl	11:03:08 02-	11:03:09 02-	3	1.00 MB 654	108	9793	112	9477
-	sftp	localhost:22	compl	11:03:08 02-	11:03:15 02-	50	100.00 318	18	5821	20	5860
Email	ftp	localhost:21	compl	11:03:08 02-	11:03:19 02-	100	100.001 126	8	16189	10	20803
Web	ftpsi	localhost:99	compl	11:03:08 02-	11:03:09 02-	3	1.00 MB 86	262	5297	247	5334
	ftpse	localhost:21	compl	11:02:38 02-	11:02:39 02-	3	1.00 MB 504	131	8828	110	9345
	sftp	localhost:22	compl	11:02:38 02-	11:02:44 02-	50	100.00 212	17	5983	17	6297
	10 💌 📢	Page 1	of 9	36 🕨 🕨	Ó				Displa	aying 1 to 10	of 9357 result(s)
	Refresh							View	Lo	g Sto	p Delete
		Powered by JS	CAPE	MFT Monitor.	Copyright 199	99-201	14 JSCAPE LLC.				

Connect Time

This panel includes a graph of the connection time for each user session.



Download Time

This panel includes a graph of the download time for each user session.



Upload Time

This panel includes a graph of the upload time for each user session.



Download Speed

This panel includes a graph of the download speed (KB/s) for each user session.



Download Speed (KB/s)

Upload Speed

This panel includes a graph of the upload speed (KB/s) for each user session.

Usage 3 14,000 13,000 12,000 -11,000 -10,000 -9,000 -Connection 8,000 -7,000 -6,000 -5,000 -4,000 . 3,000 -2,000 -1,000 0

Upload Speed (KB/s)

Connections

This panel shows the connect, upload and download times in ms (milliseconds) for each user session.

Мо	nitor Result ftp:	e					
	Settings						
	Host	localhost:2	1				
	Protocol File size	FTP/S 1.00 MB					
	User count	1.00 MB 3					
	Ramp up period	3 100 ms					
	Wait period	1000 ms					
	Statistics						
	Start time	13/0	2/14 11:03				
	End time	13/0	2/14 11:03				
	Average connect tin						
	Average upload tim						
	Average upload spe		45 KB/s				
	Average download		18 16 KB/s				
	Average download	speed 11/4	IN ND/S				
	Connect Time (r	ns)	Upload Time (ms)	Upload Speed (KB/s)	Download Time (ms)	Download Speed (KB/s)	
#	428		84	12.190	116	8.827	
# 1	420			10.893	84	12.190	
_	565		94	10.000			

Load Testing

Overview

Load testing is a way to simulate heavy user and/or network load against your file transfer services. The results of a load test can help you to identify and resolve potential stress points in file transfer services before they become a problem. The Monitors module in JSCAPE MFT Monitor allows you to run manual or scheduled load tests against your file transfer services. This section will discuss some of the topics that you should consider when performing a load test.

See also

Setting up a load test environment

How a load test works Setting up a load test environment

In any load test it is important that the environment used closely match the environment which will be used by actual users. Failure to do so may result in unreliable load test data. Below are some tips in setting up a load test environment that will achieve the best results.

Tips

1. **DO NOT** run JSCAPE MFT Monitor on the same machine as the server you running the load tester against. Depending on the number of concurrent users, JSCAPE MFT Monitor can consume a large



number of CPU and network resources. This can affect your server ability to process client connections thus skewing load test data.

- 2. DO use a separate dedicated machine to from which to run JSCAPE MFT Monitor. Each concurrent connection made by JSCAPE MFT Monitor will consume a small amount of memory, network resources and CPU. For the most accurate results it is important that the machine you are running the load test from not be busy with other high priority processes.
- 3. DO tests under varying network conditions. Depending on location of the server, a user who is connecting to your server over the Internet may have a different experience than users connecting from an internal network.

How a load test works

JSCAPE MFT Monitor performs a load test by simulating several client sessions to the server you are testing against. Each client session performs the following tasks:

- 1. Establish connection.
- 2. Upload file.
- 3. Download file.
- 4. Disconnect.

The number of client sessions, and the speed and concurrency with which client sessions are initiated during a load test depends on monitor settings in JSCAPE MFT Monitor.

During the load test performance data is collected by JSCAPE MFT Monitor. Upon completion of the load test, data is used to generate a report to help you gauge the performance and scalability of the server you are testing under various conditions.

Scans

Overview

Scans may be used to audit file transfer services on the network.

Example Uses

- Detect and shutdown rogue file transfer services
- · Identify network security and compliance violations in file transfer services
- Detect file transfer services with expired/expiring SSL certificates
- Schedule automated network scans
- Receive customized email alerts

Creating a scan

To create a new scan, navigate to the "Scans" module and click the "Add" button. Enter scan Name, Target IP/host and Services information and click the "Save" button.

CAPE MFT Monitor	ools <u>H</u> elp	
State	Scans Results Add Scan Image: Specify scan parameters Name* Ian Target IP/host* 10.1.1.1 Timeout 30 © s Threads 1 © Services Image: FTP/S Image: Priper Strice Image: Service Strice Image: FTP/S 21 © Image: Service Strice Image: Service Strice Image: FTP/S 21 © Image: Service Strice Image: Service Strice Image: FTP/S 21 © Image: Service Strice Image: Service Strice Image: Service Strice Image: Service Strice Strice Image: Service Strice Strice Image: Service Strice St	te Expiration

Name - The name of this scan.

Target IP/host - The IP address or network to scan. Valid values are as follows:

Single Address - e.g. 192.168.0.102

Comma Delimited Addresses - e.g. 192.168.0.102,192.168.0.103,192.168.0.104

CIDR (Classless Inter-Domain Routing) - e.g. 192.168.0.2/32

Timeout - The connection timeout used when scanning network services.

Threads - The number of threads to use when scanning network services.

Services

FTP/S - Plain FTP and FTPS using Explicit SSL

FTP/Implicit SSL - FTPS using Implicit SSL

- SFTP SSH (Secure Shell) using SFTP
- AFTP Accelerated File Transfer Protocol (JSCAPE)

- HTTP Hypertext Transfer Protocol
- HTTPS Hypertext Transfer Protocol using SSL

Alerts

Receive email alerts when certain conditions are met.

Setting known services

When performing a scan, you may wish to be alerted when an unknown service is detected. This is particularly important in detecting possible rogue file transfer services. In the Known Services module you may add valid known services. Services listed in the Known Services panel will not raise a Unknown Service alert when performing a scan.

😻 JSCAPE MFT Monitor - Mozilla Firefo:			×
<u>File Edit View History Bookmarks</u>	Iools Help		
L. JSCAPE MET Monitor	Ŧ		
Help 👻 Logout			
	Known Services		
State			
Monitors	Host	Port	
Scans	localhost	990	
Known Services	localhost	22	
	localhost	80	
Administrators	localhost	443	
Keys			
Email			
Web			
			_
		Add Delete	
	Baurrad hu 1004 PE M		-
	FOWBIEG BY JSCAPE M	MFT Monitor. Copyright 1999-2014 JSCAPE LLC.	

Figure 23

Scanning multiple hosts

To scan multiple hosts, there are a couple options when populating the IP Address field.

1. Enter a comma delimited list of IP addresses.

e.g.

192.168.0.102,192.168.0.103

2. Enter a CIDR (Classless Inter-Domain Routing) address.

e.g.

192.168.0.0/24

The above CIDR will include the entire class C network 192.168.0.0 - 192.168.0.255

<u>CIDR Reference</u> (External Link) Improving scan performance

There are a couple methods by which you can improve the amount of time it takes to perform a scan.

1. Reduce Connection Timeout - The longer the connection timeout the longer it will take a thread to abort a connection for a non-existing service. The connection timeout should be long enough so that services don't go undetected, yet short enough so that threads are left waiting too long.

2. Increase Thread Count - The more threads you have performing a scan the quicker the scan can complete. Each thread takes up a small amount of CPU and memory so the number of threads should be large enough to provide the best level of performance, but small enough so that they do not take over the system.

Manually running a scan

To manually run a scan, first select the scan from the Scans module in JSCAPE MFT Monitor. Next, click the "Start" button for the scan. Status of scan can be seen in the "Results" tab.

JSCAPE MFT Monitor - Mozilla Firefox				
Eile Edit View History Bookmarks	Loois Heip			
Help 👻 Logout				
	Scans Results			
State				
Monitors	Name 🔺 Target H		Schedule Alerts	
Scans	localhost localhos	FTP/S:21, FTP/Implicit SSL:990, SFTP:2	2, ****	
Known Services				
Administrators				
Keys				
Email				
Web				
web				
		Ad	d Copy Edit Start Clear	Delete
	Powered by	JSCAPE MFT Monitor. Copyright 1999-2014 JS	CAPE LLC.	

Scheduling a scan

To schedule a scan to be run on a one-time or recurring basis first select the desired scan and click "Edit". Next, scroll to the bottom of the dialog and enable the "Schedule automatic run" checkbox. Lastly, enter the date/time conditions for which this scan should be run and click "Save".

The settings shown in *Figure 16* below are an example of a scan to be run every day at 5:30 AM local time.

CAPE MFT Monitor Help → Logout State Monitors Scans Known Services Administrators Keys Email Web	+ Scans Results Edit 'localhost' Scan Image: Construction of the state o
---	---

Hour - The hour of the day.

Minute - The minute of the hour.

Day of Month - The day of the month.

Month - The month of the year.

Day of Week - The day of the week where the 1st day of the week is Sunday.

Examples

5:00 AM every day

Hour = 5 Minute = 0 Day of Month = * Month = * Day of Week = *

3:30 PM every Sunday

Hour = 15

Minute = 30 Day of Month = * Month = * Day of Week = 1

First day of the month, every month at 1 AM

Hour = 1 Minute = 0 Day of Month = 1 Month = * Day of Week = *

Receiving email alerts

Email alerts may be sent based on conditions that you configure in the Alerts module. To enable an alert go to the Alerts section for the desired scan. Next, enable alerts by clicking the desired checkbox(es) setting alert conditions (if available), delivery address and message settings. Upon the next run of scan, for each alert condition that is met an email alert will be sent.

Note

Before enabling email alerts ensure that you have defined SMTP server settings in <u>Settings > Email</u>.

<u>Edit View History Bookmarks</u> CAPE MFT Monitor	Tools Help	
Help 👻 Logout		
	Scans Results	
State	Alert Settings	
Monitors	N:	
Scans	Alerts Specify alerts parameters	
Known Services		
	Send alert when an unknown service is detected	cted
Administrators	Recipient* admin@domain.com	Details
Keys		
Email	Send alert when service certificate expires	
Web	Min expiration period 60 🛟 days	
	Recipient*	Details
	Send alert when service allows anonymous I Recipient*	Ogins Details
		Details
	Send alert when service allows unencrypted I	logins
	Recipient*	Details Start Clear Delete
		OK Cancel

Figure 18

3

CAPE MFT Monitor	+	
Help 👻 Logout		
	Scans Results	
	Alert Settings	
Monitors Scans	N. Io Alerts	
Known Services	Specify alerts parameters	
	Alert Email Details	
Administrators	Email Details Specify email parameters	
Keys		
	Subject Unknown Service Notification	
	Message JSCAPE MFT Monitor has raised an alert.	
	Details:	
	The scan %Name% has detected an unknown %Protocol% service on %Host%:%Port%.	
	Add Variable	
	OK Cancel	
	OK Cancel	

See also

Settings > Email

Viewing scan results

To view the session results for a scan, navigate to the Scans > Results page in JSCAPE MFT Monitor. To view the results of a session, select desired session and click the "View" button.

Summary

This panel displays a high level summary of the session including IP address, services scanned, number of hosts scanned and number of services detected.

Help 👻 Logout						
State	Scans Results					
Monitors	Scan	Target Host	State	Start Date	End Date	Services Detecte
Scans	localhost	localhost	completed	11:29:08 02-13-2014	11:29:11 02-13-2014	5
Known Services	localhost	localhost	completed	11:28:38 02-13-2014	11:28:41 02-13-2014	5
	localhost	localhost	completed	11:28:08 02-13-2014	11:28:11 02-13-2014	5
Administrators	localhost	localhost	completed	11:27:38 02-13-2014	11:27:41 02-13-2014	5
Keys	localhost	localhost	completed	11:27:08 02-13-2014	11:27:11 02-13-2014	5
	localhost	localhost	completed	11:26:38 02-13-2014	11:26:41 02-13-2014	5
Email	localhost	localhost	completed	11:26:08 02-13-2014	11:26:11 02-13-2014	5
Web	localhost	localhost	completed	11:25:38 02-13-2014	11:25:41 02-13-2014	5
	localhost	localhost	completed	11:25:08 02-13-2014	11:25:11 02-13-2014	5
	localhost	localhost	completed	11:24:38 02-13-2014	11:24:40 02-13-2014	5
	10 💌 🛛 🖌 Pag	ge 1 of 235 🕨 🕅	0		Displaying 1 to	o 10 of 2343 result(s)
	Refresh				View	Stop Delete
	Powered	I by JSCAPE MFT Monitor. C	opyright 1999-20	014 JSCAPE LLC.		

Hosts

This panel displays the services detected for the scan along with information about each service.

Figure 20

3

Settings							
Host	localhost						
Services	FTP/S:21, F	TP/Implicit SSL:990, SFTP:2	2, AFTP:3000, HTTP:	:80, HTTPS:443			
Statistics							
Start time	13/02/14 11:						
End time Services detected	13/02/14 11: 1 5	:29					
Known services	4						
Kilowit Services	4						
Host	Port	Protocol	Known Servic	Anonymous A	Insecure	Certificate Expiration	
localhost	21	FTPS			V	2/06/18 11:09	
localhost	990	FTPS_IMPLICIT	V			2/06/18 11:09	
localhost	22	SFTP	V				
localhost	80	HTTP	V		1		
localhost	443	HTTPS	V			2/06/18 11:09	

Host - The IP address that service is running on.

Port - The port that service is running on.

Protocol - The protocol that service is running.

Anonymous Access - If anonymous login is enabled. (FTP/S, SFTP)

Insecure - If non-encrypted login is allowed. (FTP/S)

Known Service - If Host/Port is a known service.

Certificate Expiration - Date of SSL certificate expiration. (MM/DD/YYYY)

See also

<u>Settings > Known Services</u> Settings

Administrators

Administrators are users who may manage your instance of JSCAPE MFT Monitor from the web administrative interface. To add a new administrator navigate to the "Administrators" page and click on the "Add" button.



dit <u>V</u> iew Hi <u>s</u> tory <u>B</u> ookm APE MFT Monitor	harks Iools Help		
Help - Logout			
State	Administrators		
Monitors	Name	Login	Permissions
Scans	admin	admin	manage admins
Known Services			
Administrators	-		
Keys			
Email			
Web			
	-		
]
			Add Edit Delete
	Powered by	JSCAPE MFT Monitor. Copyright 1999-2014 JSCAPE LLC	C.

Name - The administrator's name.

Login - The administrator's username.

Permissions - The administrator's permissions. Manage admins indicates that this administrator can manage other administrators.

Keys

The "Keys" module may be used for configuring SSL server keys and certificates to be used by the HTTPS web service. A pair of example keys have been provided for your convenience. You should create your own server keys when enabling HTTPS services.



See also

<u>Web</u>

Email

The Email panel may be used to configure the SMTP server used for sending email alerts.

JSCAPE MFT Monitor - Mozilla Firefox <u>File</u> <u>Edit</u> <u>View</u> <u>Higtory</u> <u>B</u> ookmarks <u>JSCAPE</u> MFT Monitor			
Help Logout State Monitors Scans Known Services Administrators Keys Email Web	Email Enable email server Email Server Host/IP* Protocol Username Password Debug file	vice smtp.domain.com plain admin@domain.com	E
	Message From*	admin@domain.com	
	Test		Apply Cancel
	Po	owered by JSCAPE MFT Monitor. Copyright 1999-2014 JSCAPE LLC.	

Email Server

Host/IP - The hostname or IP address of SMTP server.

Port - The port of SMTP server.

Protocol - The connection type to use when connecting to SMTP server. Supported types include plain, SSL and start TLS.

Username - The username used to authenticate against SMTP server.

Password - The password used to authenticate against SMTP server.

Debug file - The server side debug file to use when debugging SMTP server connections.

Message

From - The From address used when sending email alert.

Web

The "Web" module may be used to define the web based management service(s) for JSCAPE MFT Monitor.

JSCAPE MFT Monitor - Mozilla Firefo Eile Edit View History Bookmarks		
JSCAPE MFT Monitor	+	
Help 🕶 Logout		
	Web	
State		
Monitors	✓ HTTP host 0.0.0.0 ✓ port 30881	
Scans	HTTPS host 0.0.0.0 v port 30882 v example_rsa v	
Known Services	Session timeout 30 🗘 min	
Administrators		
Keys		
Email		
Web		
	(Apply) Car	ICE
	Powered by JSCAPE MFT Monitor. Copyright 1999-2014 JSCAPE LLC.	

Figure 28

HTTP host/port - The host and port combination for HTTP service.

HTTPS host/port - The host and port combination for HTTPS service.

Key - The server key used in encrypting HTTPS communications.

See also

<u>Keys</u>

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