安裝和使用Fluidmesh (FM)顯示器

目錄

簡介

本文檔介紹Cisco FM Monitor及其在Ubuntu伺服器上的安裝。

背景資訊

Cisco FM Monitor是一種網路範圍的本地監控工具,允許任何<u>思科超可靠無線回程</u>(URWB)使用者主 動維護和監控一個或多個無線運營技術(OT)網路。它會即時顯示網路中每個Cisco URWB裝置發出 的資料和狀況警報。該工具是基於虛擬影象的診斷和分析介面,該虛擬影象以Docker格式提供。

必要條件

◎ CURWB裝置韌體:

CURWB硬體必須採用較新的韌體版本,才能與FM監視工具相容。請參閱最新的配置指 南,確定特定FM顯示器和CURWB韌體版本之間的相容性。 要升級Fluidmesh裝置韌體 ,請參閱CURWB安裝及設定指南的「覆蓋和升級裝置韌體」部分以瞭解具體的硬體型 別。

伺服器:

若要執行應用程式的Docker容器,您需要具有這些規格的專用伺服器。

Operating system	Windows 7 or later	Mac OS X 10.9.x or later	Linux (32-bit or 64-bit): • Ubuntu 14.04 or later • Debian 9 or later • OpenSuSE 14.2 or later • Fedora Linux 19 or later
Docker application	Yes	Yes	Yes
Base system	Virtual machine or bare metal	Virtual machine or bare metal	Virtual machine or bare metal
Processor	Intel Core i7 or Xeon (any frequency, mandatory minimum of four cores)	Intel Core i7 or Xeon (any frequency, mandatory minimum of four cores)	Intel Core i7 or Xeon (any frequency, mandatory minimum of four cores)
RAM	16 GB minimum	16 GB minimum	16 GB minimum
Hard disk	100 GB minimum* 1 TB or greater recommended	100 GB minimum* 1 TB or greater recommended	100 GB minimum* 1 TB or greater recommended
High-speed connection to local networks and radio transceiver units	Preferred	Preferred	Preferred
Screen resolution	1024x768 minimum	1024x768 minimum	1024x768 minimum

伺服器規格下限

◎ 支援的Web瀏覽器:

Mozilla Firefox Google Chrome Microsoft Internet Explorer Microsoft Edge Apple Safari

軟體外掛

監控舊版CURWB硬體需要軟體外掛,而IW硬體則不需要外掛。

- 多克爾 :

在伺服器上安裝Docker後,必須確保伺服器支援虛擬化及第二層位址翻譯(SLAT)。 Intel的SLAT版本稱為EPT (延伸頁表)。」

安裝及執行Docker容器

- 在本文檔中,我們主要介紹在初始設定期間在連線到Internet的Ubuntu伺服器上進行安裝。
- 登入software.cisco.com並將最新的監控影像檔下載到您的伺服器。
- 下一步是安裝伺服器的docker引擎。有關詳細資訊,請參閱<u>Docker文檔</u>,但基本步驟如下:
 - 執行此命令可解除安裝所有衝突的套件:

for pkg in docker.io docker-doc docker-compose docker-compose-v2 podman-docker containerd runc; do sudo

- 設定Docker apt儲存庫。
- > sudo apt-get update
- > sudo apt-get install ca-certificates curl
- > sudo install -m 0755 -d /etc/apt/keyrings
- > sudo curl -fsSL https://download.docker.com/linux/ubuntu/gpg -o /etc/apt/keyrings/docker.asc
- > sudo chmod a+r /etc/apt/keyrings/docker.asc
- > echo \setminus

```
"deb [arch=$(dpkg --print-architecture) signed-by=/etc/apt/keyrings/docker.asc] https://download.dock
```

 $(. /etc/os-release \&\& echo "$VERSION_CODENAME") stable" |$

sudo tee /etc/apt/sources.list.d/docker.list > /dev/null

- > sudo apt-get update
 - 安裝Docker套件

請運行此命令以安裝最新的docker軟體套件:

sudo apt-get install docker-ce docker-ce-cli containerd.io docker-buildx-plugin docker-compose-plugin

• 透過運行hello-world映像驗證Docker引擎安裝是否成功

sudo docker run hello-world

sudo docker images

fm-iw-monit	tor@fmiwmon	itor-virtual-mac	: <mark>hine:~</mark> \$ sudo do	cker images
REPOSITORY	TAG	IMAGE ID	CREATED	SIZE
hello-world	l latest	d2c94e258dcb	11 months ago	13.3kB

• 現在,已安裝docker引擎,請使用以下命令將Cisco FM監控器映像載入到監控器伺服器:

docker load -i fm-monitor-docker-v1.x.x.tar.

fm-iw-monitor(afmiwmonitor-	/irtual-machine:~\$ sudo docker load -i '/home/fm-iw-monitor/	<pre>/Downloads/fm-monitor-docker-v2.0-rc2.0.tar.gz'</pre>
8cf5d74bcf68:	Loading layer	· [====================================	4.4MB/134.4MB
bce5b7b7ae9a:	Loading layer	· [====================================	5.6MB/965.6MB
1d2e5de37b47:	Loading layer	· [====================================	072kB/3.072kB
72a57e173486:	Loading layer	· [====================================	.11kB/26.11kB
eed00e336fdc:	Loading layer	· [====================================	533MB/1.633MB
f43525ea70c4:	Loading layer	· [====================================	.67MB/17.67MB
54162be3e4b4:	Loading layer	· [====================================	.47MB/68.47MB
5f70bf18a086:	Loading layer	· [====================================	024kB/1.024kB
ca58e150d27c:	Loading layer	· [====================================	.03MB/75.03MB
d78879eea568:	Loading layer	· [====================================	532kB/5.632kB
e3d74964f28f:	Loading layer	· [====================================	508kB/4.608kB
c6958528657a:	Loading layer	· [====================================	.12kB/5.12kB
145cbf33218d:	Loading layer	· [====================================	144kB/6.144kB
0786591577bc:	Loading layer	· [====================================	508kB/4.608kB
69c239009c34:	Loading layer	· [====================================	.47kB/41.47kB
Loaded image:	dockerhub.ci	<pre>sco.com/fm-dev-artifactory-docker/monitor:v2.0-rc2.0</pre>	

• 再次運行此命令,確保已載入此命令。此外,請記下影像ID:

sudo docker images

fm-iw-monitor@fmiwmonitor-virtual-machine:~\$ sudo docker	• images			
REPOSITORY	TAG	IMAGE ID	CREATED	SIZE
dockerhub.cisco.com/fm-dev-artifactory-docker/monitor	v2.0-rc2.0	3e610b47c38b	5 weeks ago	1.25GB
hello-world	latest	d2c94e258dcb	11 months ago	13.3kB

• 執行下列步驟,第一次執行Docker容器:

sudo docker run -d --name fm_monitor -p 8080:8080 -p 8443:8443 --restart always X

```
(其中X是MONITOR Docker映像的映像ID值。)
```

存取Web UI

- 最後,從您選擇的瀏覽器訪問網頁。從https://X:Y瀏覽至URL,其中X是伺服器的IP位址,Y是 設定的主機連線埠號碼。
- 現在,在首次安裝期間,您需要輸入您的姓名電子郵件和密碼,為FM-Monitor建立離線帳戶。
- 完成後,您可以開始將CURWB裝置註冊到FM-Monitor。確保伺服器IP地址正確。

E FM-IW	-MONIT	OR-BETA					9 Q	Actions X
Activitie	s	Firefox Web Brow	rser	Mar 27 23:35			A	 ● ●
	Ō	🐸 New Tab	× 📀	Install Docker Engine on × 🗰 Cisco Ultra Reliable Wire × +		~		ø x
	\leftarrow	\rightarrow C	0 8	https://10.122.136.8:8443/wizard นั	7	${igsidential}$	٤	ර ≡
•	÷	MONITOR v2.0-rc2.0	Dashboard	Image: previous Analysis, Image: Table View Table View Data Analysis, Topology Log.		© -	D	diada cisco
Â				2. Report				
?								
. ^				Configure server settings 10.122.136.8 8443 ©				
				Attach devices				
				Enter one or more IP addresses separated by comma				
0				10.122.136.9 × 10.122.136.10 × 10.122.136.11 × p.g. 192.168.0.1, 192.168.0				
				Associate devices				
:::								

🜠 (3) IoT lab RTP U X 🕎 (3) RTP - IoT Lab X 🗮 Cisco URWB IW91 X 🗮 Cisco FM-QUADRC X 🏥 Cisco FM-QUADRC X 🗮 Cisco URWB IW91 X 🗮 Cisco URWB IW91 X	w to delete a vi: x 🟥 Cisco Ultra Reliabi x +	•
← → C O Not Secure https://10.122.136.8:8443/wizard	* 🖲 Ď 🖬	🔹 :
🗅 Cisco 🧰 V4.9.5.1000 - Rel 🔯 CURWB 😄 Spaces Admin 🔗 Cisco Certified De 🛃 CART - Search/Re 🗅 Birds 🟥 Cisco Catalyst IW Cb JSON Fixer Online W WireGuard - Wikip 🏥 IW91	167E Heavy D 🟮 IoT Learning Serie 🙆 Shift	>>
The MONITOR A C PARAMENT C C C C C C C C C C C C C C C C C C C	© -1	ahaha cisco
Attach report *		
Devices: 3 Port 8443	0	
Q. Search Ta		
0 selected		
D Ni Status		
C If you're still having issues please contact support_fm@cisco.com		
3 Records Close 0 >	»	
Next		

• 將所有無線電裝置增加到FM監視器後,您可以在控制台的主螢幕上看到所有無線裝置。

÷	MONITOR v2.0+rc2.0	Dashboard	°C Table View		Topology	Log							© -1	altalta cisco
	Real-time r	nonitoring												
	Se En Se	able network Informance check Intlings > Network	k in c KPL	URWB devices online	3 out of 3		1.17 Mbps Throughput TX	580 Kbps Throughput RX	412 Sent Packets/s	206 Received Packets/s	5.52 ms Average latency	0 Edge devices	100 % Average uptime	
	+ ADD	SECTION												
				You can cre	ate one or mor	re custor	m sections which will	show information only	on those URWB devi	ices you decide to put i	nside them.			

• 所有增加到監視器的裝置都可以在表檢視中進一步檢視。

÷.	MONITOR v2.0-rc2.0	Dashboard Table V	بمر New Data Analysis	s Topology Log							Ô	-1	cisco
	Q Search	by Mesh ID, label or IP ad	Idress	Filter by status	critical 🗌 • Warnin	ng 🗌 • Disco	nnected						
	All sections	(3) Uncategorized	(3)										
						Uncategorize	ed (3)					^	
	Status	Label	IP Address	Mesh ID	FW version		Role	Frequency	TX Power	Channel width	More		
	• MP	Cisco-137.250.80	10.122.136.10	5.137.250.80	17.13.0.109	R1 R2	Fluidity Infra Fixed Infra	5180 MHz 5745 MHz	17 dBm 20 dBm	20 MHz 20 MHz			
	ME	Cisco-137.250.148	10.122.136.9	5.137.250.148	17.13.0.109	R1 R2	Fluidity Infra Fixed Infra	5180 MHz 5745 MHz	17 dBm 20 dBm	20 MHz 20 MHz			
	• MP	Cisco-246.2.120	10.122.136.11	5.246.2.120 P	17.13.0.109	R1 R2	Fluidity Vehicle Disabled	5180 MHz	22 dBm -	20 MHz -			
	1 - 3					« « ()	> >>						

• 導航到設定>裝置頁,可以將這些裝置從監控器中刪除或增加。

÷	MONITOR v2.0-rc2.0	Dashboard	°o Table View	پیج Data Analysis	Topology	Log							Ô	-0	cisco
=	Database		« Device	əs: 3								Server IP: 10.122.1	Settings 36.8 Po	rt 8443	I
~~	Statistics		Q s	Search Table	Add device:										
	Network KPI		0	Na	ne		IP Address	Mesh ID	N	fodel	Role		Status		
ů	Account		0	Ci	co-137.250.80		10.122.136.10	5.137.250.80	n	W9165DH-B	Fluidity Infra Fixed Infra Fluidity Infra		•		
	Log		0	Cit	ico-137.250.148	5	10.122.136.11	5.246.2.120	n	W9165DH-B W9167EH-B	Fixed Infra Fluidity Vehicle Disabled				
٥	Devices														
t.	Upgrade														

 • 根據位置/功能,可以將大量無線電進一步分組為較小的部分,以便從控制台首頁進行更簡單 的監控。

pe section name				
luidity				Info 🖗
Select URWB devices lick the box to add a device to this section.	Untick the box to remove the device. Devices alm	eady added in other sections are not displayed	4.	
Find URWB device Search by Mesh ID, label or	P address Show selected devices	only 🔽 Deselect all		
		-		
Cisco-137.250.80	Cisco-137.250.148	Cisco-246.2.120		
5.137.250.80 10.122.136.10	5.137.250.148 10.122.136.9	5.246.2.120 10.122.136.11		
Fluidity Infra (R1) Fixed Infra (R2)	Fluidity Infra (R1) Fixed Infra (R2)	Vehicle (R1) Disabled (R2)		
			3 selected	units Cancel Confirm

luidity			
	1.57 ms	3	100 %
3 out of 3	Average latency	Edge devices	Average uptime
	Last 6 hours trend		Last 7 days

資料監控

 連線可以即時監控或查詢歷史資料,並可進行分析以進行故障排除。若要從無線電的角度檢視 需要選取特定無線電的效能。



RSSI





授權啟用

您必須先從思科獲取並輸入啟用許可證,然後才能使用FM監控器監控網路。您安裝的啟用許可證級 別決定了可監控的Fluidmesh無線電收發器裝置的數量。其範圍從5到5000個裝置。

還提供演示許可證選項。如果啟用,演示許可證將保持啟用三個月。FM Monitor許可證升級允許您 從最初許可的計數增加在單個許可證下可監控的裝置數量。

關於此翻譯

思科已使用電腦和人工技術翻譯本文件,讓全世界的使用者能夠以自己的語言理解支援內容。請注 意,即使是最佳機器翻譯,也不如專業譯者翻譯的內容準確。Cisco Systems, Inc. 對這些翻譯的準 確度概不負責,並建議一律查看原始英文文件(提供連結)。