Docker FP Install on Linux

Thursday, May 23, 2016 12:51 AM

Overview:

The CA APM Docker FP monitors the performance and health of running Docker containers and reports statistics to the APM EM server. This FP can able to discover all Servers under docker swarm and it lists the available Docker container in the Docker Server and each Docker container. Container ID, memory, CPU, NET I/O, uptime, image name, command, and other information are gathered. Docker monitor leverages the Docker Stats API to retrieve and monitor Docker Servers.

Resources:

https://docs.docker.com/engine/admin/configuring/ https://docs.docker.com/engine/reference/api/docker_remote_api/

Download:

ftp://ftpca.ca.com/APM%20FP%20Docker/

Prerequisite:

1. JAVA 1.7+

Best Practices:

- When install the Docker agent for first time use no security to verify everything is working and then make sure certs are valid.
- Verify the Docker server has is open to access.
- Verify the ports used are open.
- Verify firewalls are not blocking communication

Prerequisite: Docker

- 1. Obtain Security keys and certificates
- 2. Edit /etc/default/docker
 - a. DOCKER OPTS="-H tcp://0.0.0.:2375 -H unix:///var/run/docker.sock"
 - b. Add appropriate security and setup certificates
 - c. -d --tlsverify --tlscacert=ca.pem --tlscert=server-cert.pem --tlskey=server-key.pem H=0.0.0.0:2376
 - d. If -H Unix is not set you may not be able to start a Docker image.
- 3. Restart the Docker service

Install Steps:

- 1. Download Docker and un-tar to <> which creates a directory called apmFPdocker
- 2. Copy <apmFPdocker>/em/docker.typeviewers.xml to MOM or Standalone EM <em root>/ext/xmltv
- 3. Restart EM
- 4. Get security keys and certificates
- 5. Edit <apmFPdocker>/config/docker.properties
 - a. docker.hostname= <ip of docker host>
 - b. docker.port=<port you set in docker file, default 2375>

- c. apm.apihost=<IP of Epagent running rest>
 - i. Required if using the EP Agent rather than connecting EM
- d. apm.apiport=<Epagent HTTP server port, default 8080>
 - Required if using the EP agent rather than connection to EM directly
- e. docker.ca.key=<CA Key file name>
- f. docker.client.key=<client key file name>
- g. docker.client.certificate=<certificate file name>
- 6. Edit ./bin/dockerAgentCtrl.sh and change the default EM configuration or pass from command line
 - a. Min Java Heap = 16
 - b. Max Java heap = 256
 - c. DEFEM = 192.168.1.187
 - d. DEFPORT = 5001
 - e. Agent Process Name = Docker
 - f. Agent Name = DockerMonitor
 - g. JRE=/opt/ca/jre/bin
- 7. Start the Docker agent in <apmFPdocker>/bin

sudo ./dockerAgentCtrl.sh start

sudo ./dockerAgentCtrl.sh status

sudo ./dockerAgentCtrl.sh stop

sudo ./dockerAgentCtrl.sh help

sudo ./dockerAgentCtrl.sh start <memory start> <mem max> <EM IP> <EM Port> <Process Name> <Agent Name> <JRE>

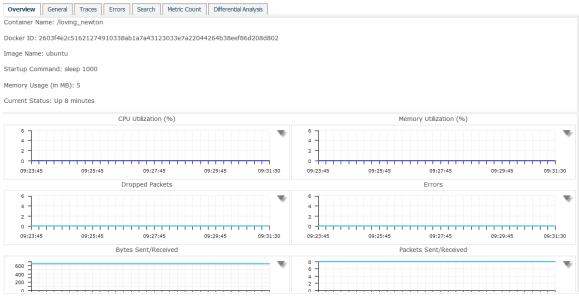
- 8. Review the log file <apmFPdocker>/logs
- 9. Connect to APM WebView and select Introscope

Docker FP in WebView:

Type View: List of Containers In Docker Server

Ove	rview	General	Traces	Errors	Search	Metric Count	Differential Analysis				
		to Timo: 12		UU-5U-E.	AM EDT	Host No	ma: Dackar197	Varial Variant 42 0.27 gaparia			Total CDII- 2
Container Details											
		Container Name		Image Name		CPU Utilizatio	n (%)	Memory Utilization (%) ▼	Errors Sent	Packets Dropped	
	>>	/loving_newton			ubuntu		0.062		0.132	0	0
	>>	/tiny_almeida			apm102		0.0		0.094	0	0
	>>	/agitated_allen			ubuntu		0.0		0.0	0	0
	>>	/agitated_bohr			ubuntu		0.0		0.0	0	0
	>>	/agitated_box	oth		ubuntu		0.0		0.0	0	0
							Page 1 of 1		Displaying 1 - 43 of 43	Select Columns to Grap	h 🕶 Draw Graph

Type View: Docker Container:



Investigator Metrics:

- 🖃 🖥 /agitated_allen
 - Bytes Received
 - Bytes Sent
 - PU % (rounded)
 - PU % (string)
 - Command
 - Created (rounded)
 - Created (string)
 - Propped Packets during Receive
 - Dropped Packets during Sent
 - Errors Received
 - Errors Sent
 - 📮 Id
 - Image
 - Memory % (rounded)
 - Memory % (string)
 - Memory (in MB)
 - Names
 - Packets Received
 - Packets Sent
 - Status