



# Kafka Data Collector

## Cloud Insights

Tony Lavoie

February 27, 2020

This PDF was generated from [https://docs.netapp.com/us-en/cloudinsights/task\\_config\\_telegraf\\_kafka.html](https://docs.netapp.com/us-en/cloudinsights/task_config_telegraf_kafka.html) on April 23, 2020. Always check docs.netapp.com for the latest.

# Table of Contents

- Kafka Data Collector..... 1
  - Installation..... 1
  - Setup ..... 2
  - Objects and Counters..... 3
  - Troubleshooting ..... 6

# Kafka Data Collector

Cloud Insights uses this data collector to gather metrics from Kafka.

## Installation

1. From **Admin > Data Collectors**, click **+Data Collector**. Under **Services**, choose Kafka.

Select the Operating System or Platform on which the Telegraf agent is installed.

2. If you haven't already installed an Agent for collection, or you wish to install an Agent for a different Operating System or Platform, click *Show Instructions* to expand the [Agent installation](#) instructions.
3. Select the Agent Access Key for use with this data collector. You can add a new Agent Access Key by clicking the **+ Agent Access Key** button. Best practice: Use a different Agent Access Key only when you want to group data collectors, for example, by OS/Platform.
4. Follow the configuration steps to configure the data collector. The instructions vary depending on the type of Operating System or Platform you are using to collect data.



## Kafka Configuration

Gathers Kafka metrics.

### What Operating System or Platform Are You Using?

[Need Help?](#)

Windows

### Select existing Agent Access Key or create a new one

Default (405fb5ec-d4cb-4404-977b-71fa931e1ad3)

+ Agent Access Key

\*Please ensure that you have a Telegraf Agent in you environment before configuring [Show Instructions](#)

### Follow Configuration Steps

[Need Help?](#)

- 1 Install Jolokia on your Kafka brokers. For details refer to the following [document](#).
- 2 Copy the contents below into a new .conf file under the C:\Program Files\telegraf\telegraf.d\ folder. For example, copy the contents to the C:\Program Files\telegraf\telegraf.d\cloudinsights-kafka.conf file.

```
# Read JMX metrics through Jolokia
[[inputs.jolokia2_agent]]
  ## USER-ACTION: Provide address(es) of kafka broker(s), port for jolokia, add one URL for
  ## each broker in your cluster
  ## Please specify actual machine IP address, and refrain from using a loopback address (i.e.
  ## 127.0.0.1)
```

- 3 Replace <INSERT\_KAFKA\_BROKER\_ADDRESS> with the applicable Kafka broker address. Please specify a real machine address, and refrain from using a loopback address.
- 4 Replace <INSERT\_JOLOKIA\_PORT> with the applicable Kafka broker jolokia port.
- 5 Modify 'Namespace' if needed for server disambiguation (to avoid name clashes).
- 6 Modify 'Cluster' if needed for Kafka cluster designation.
- 7 Restart the Telegraf service.

```
Stop-Service -Name telegraf -ErrorAction SilentlyContinue; Start-Service -Name telegraf
```

## Setup

The Kafka plugin is based on the telegraf's Jolokia plugin. As such as a requirement to gather info from all Kafka brokers, JMX needs to be configured and exposed via Jolokia on all components.

## Compatibility

Configuration was developed against Kafka version 0.11.0.2.

## Setting up

All the instructions below assume your install location for kafka is '/opt/kafka'. You can adapt instructions below to reflect your install location.

## Jolokia Agent Jar

A version the Jolokia agent jar file must be [downloaded](#). The version tested against was Jolokia agent 1.6.0.

Instructions below assume that the downloaded jar file (jolokia-jvm-1.6.0-agent.jar) is placed under the location '/opt/kafka/libs/'.

## Kafka Brokers

To configure Kafka Brokers to expose the Jolokia API, you can add the following in <KAFKA\_HOME>/bin/kafka-server-start.sh, just before the 'kafka-run-class.sh' call:

```
export JMX_PORT=9999
export RMI_HOSTNAME='hostname -I'
export KAFKA_JMX_OPTS="-javaagent:/opt/kafka/libs/jolokia-jvm-1.6.0-
agent.jar=port=8778,host=0.0.0.0
-Dcom.sun.management.jmxremote.password.file=/opt/kafka/config/jmxremote.password
-Dcom.sun.management.jmxremote.ssl=false -Djava.rmi.server.hostname=$RMI_HOSTNAME
-Dcom.sun.management.jmxremote.rmi.port=$JMX_PORT"
```

Note that example above is using 'hostname -I' to setup the 'RMI\_HOSTNAME' environment variable. In multiple IP machines, this will need to be tweaked to gather the IP you care about for RMI connections.

You can choose a different port for JMX (9999 above) and Jolokia (8778). If you have an internal IP to lock Jolokia onto you can replace the "catch all" 0.0.0.0 by your own IP. Notice this IP needs to be accessible from the telegraf plugin. You can use the option '-Dcom.sun.management.jmxremote.authenticate=false' if you don't want to authenticate. Use at your own risk.

## Objects and Counters

The following objects and their counters are collected:



Object:	Identifiers:	Attributes:	Datapoints:
Kafka Broker	Cluster Namespace Broker	Node Name Node IP	Replica Manager Fetcher Max Lag Zookeeper Client Connections Zookeeper Client Connections (15m rate) Zookeeper Client Connections (5m rate) Zookeeper Client Connections (mean rate) Zookeeper Client Connections (1m rate) Replica Manager Partition Count Thread Count Daemon Thread Count Peak Thread Count Current Thread Count Total Started Offline Partitions Produce Requests Total Time (50th Percentile) Produce Requests Total Time (75th Percentile) Produce Requests Total Time (95th Percentile) Produce Requests Total Time (98 Percentile) Produce Requests Total Time (999th Percentile) Produce Requests Total Time (99th Percentile) Produce Requests Total Time Produce Requests Total Time Max Produce Requests Total Time Mean Produce Requests Total Time Min Produce Requests Total Time Stddev Replica Manager ISR Shrinks

# Troubleshooting

Additional information may be found from the [Support](#) page.



## Copyright Information

Copyright © 2019–2020 NetApp, Inc. All rights reserved. Printed in the U.S. No part of this document covered by copyright may be reproduced in any form or by any means-graphic, electronic, or mechanical, including photocopying, recording, taping, or storage in an electronic retrieval system-without prior written permission of the copyright owner.

Software derived from copyrighted NetApp material is subject to the following license and disclaimer:

THIS SOFTWARE IS PROVIDED BY NETAPP “AS IS” AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY DISCLAIMED. IN NO EVENT SHALL NETAPP BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

NetApp reserves the right to change any products described herein at any time, and without notice. NetApp assumes no responsibility or liability arising from the use of products described herein, except as expressly agreed to in writing by NetApp. The use or purchase of this product does not convey a license under any patent rights, trademark rights, or any other intellectual property rights of NetApp.

The product described in this manual may be protected by one or more U.S. patents, foreign patents, or pending applications.

RESTRICTED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause at DFARS 252.277-7103 (October 1988) and FAR 52-227-19 (June 1987).

## Trademark Information

NETAPP, the NETAPP logo, and the marks listed at <http://www.netapp.com/TM> are trademarks of NetApp, Inc. Other company and product names may be trademarks of their respective owners.