Mirth Consolidated Dashboard User Guide

NextGen Connect Server Monitoring Dashboards

VERSION 1.0

CitiusTech

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Intended Audience

This document is intended for the users of CitiusTech's NextGen (previously known as Mirth) Connect server monitoring dashboards developed for monitoring the server health of NextGen Connect servers.

Revision History

Document Version #	Revision Date	Prepared By	Approved By	Approval Date	Summary of Changes
1.0	27-07-2020	Pravin Gadade	Akshaya Subramaniam	21-08-2020	First Version
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How to Use this Document

This user guide provides a suggested workflow and step-by step walkthrough of the various dashboard screens of NextGen Connect Dashboards. Use this document as a guide to sign in to NextGen Connect dashboards and view various screens on dashboards.

Before you Begin

To use this guide successfully, end-users must have:

1. Valid link of Grafana based NextGen Connect server monitoring dashboards
2. Valid login credentials to sign in to the dashboards

Acronyms and Abbreviations

This section defines the acronyms and abbreviations used in the document.

Term	Definition
Instance	This term identifies the NextGen Connect server instance name on the dashboard
Channel	Channel represents the integration interface configured on each NextGen Connect server instance. There can be around 150+ interfaces configured on each of the server instance.
CT	CT is the short form of term 'CitiusTech'.

Contents

1 Accessing the Consolidated Dashboard

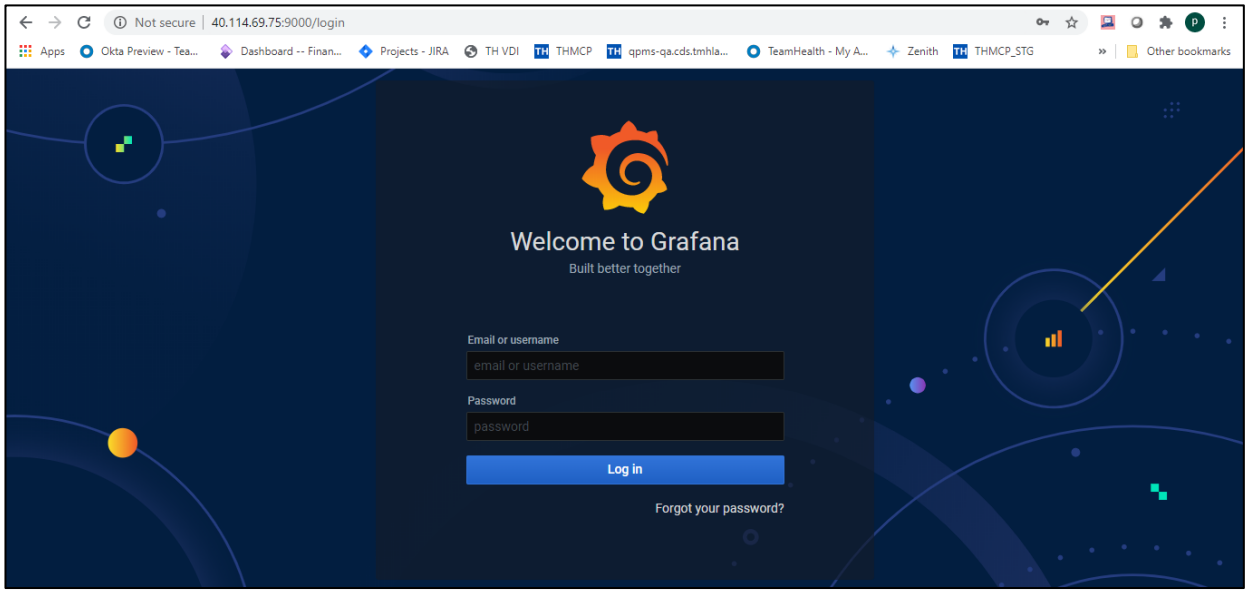
This section describes step by step process to access the NextGen Connect Server monitoring dashboards.

1.1 Signing in to Grafana for Monitoring Dashboard

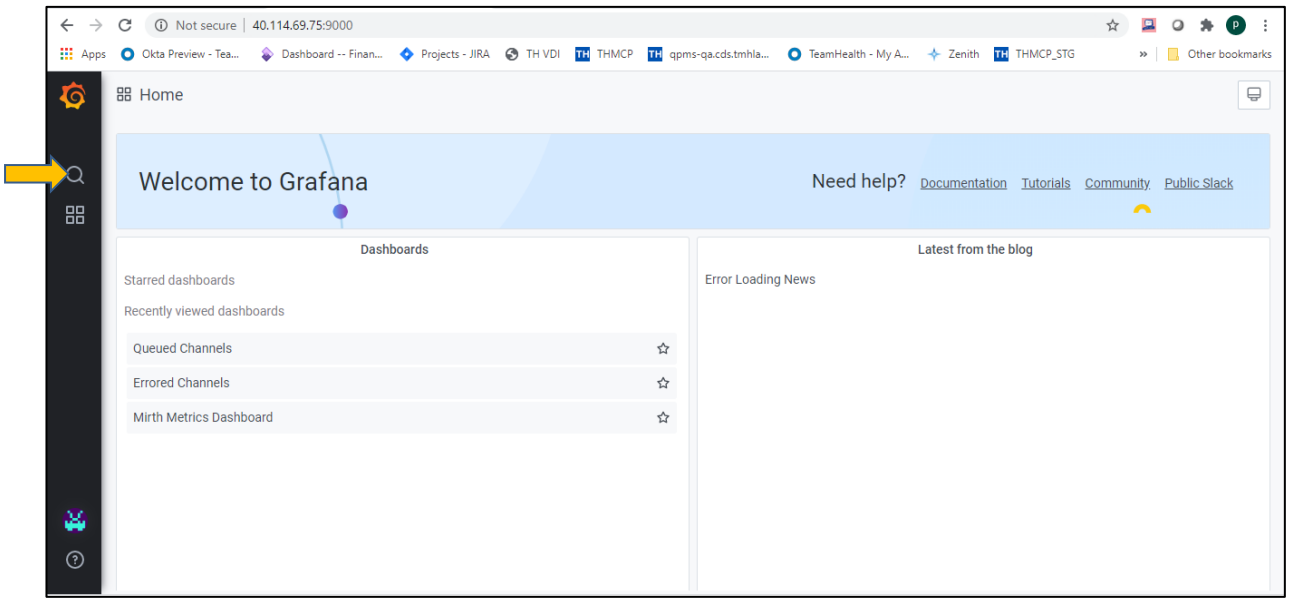
1. Open the Grafana by clicking the following link. You will be navigated to **Welcome to Grafana** screen:

   https://ip:port/loginn

2. Enter valid username and password in the **Email or username** and **Password** fields and click **Log in** to access the Grafana dashboards:



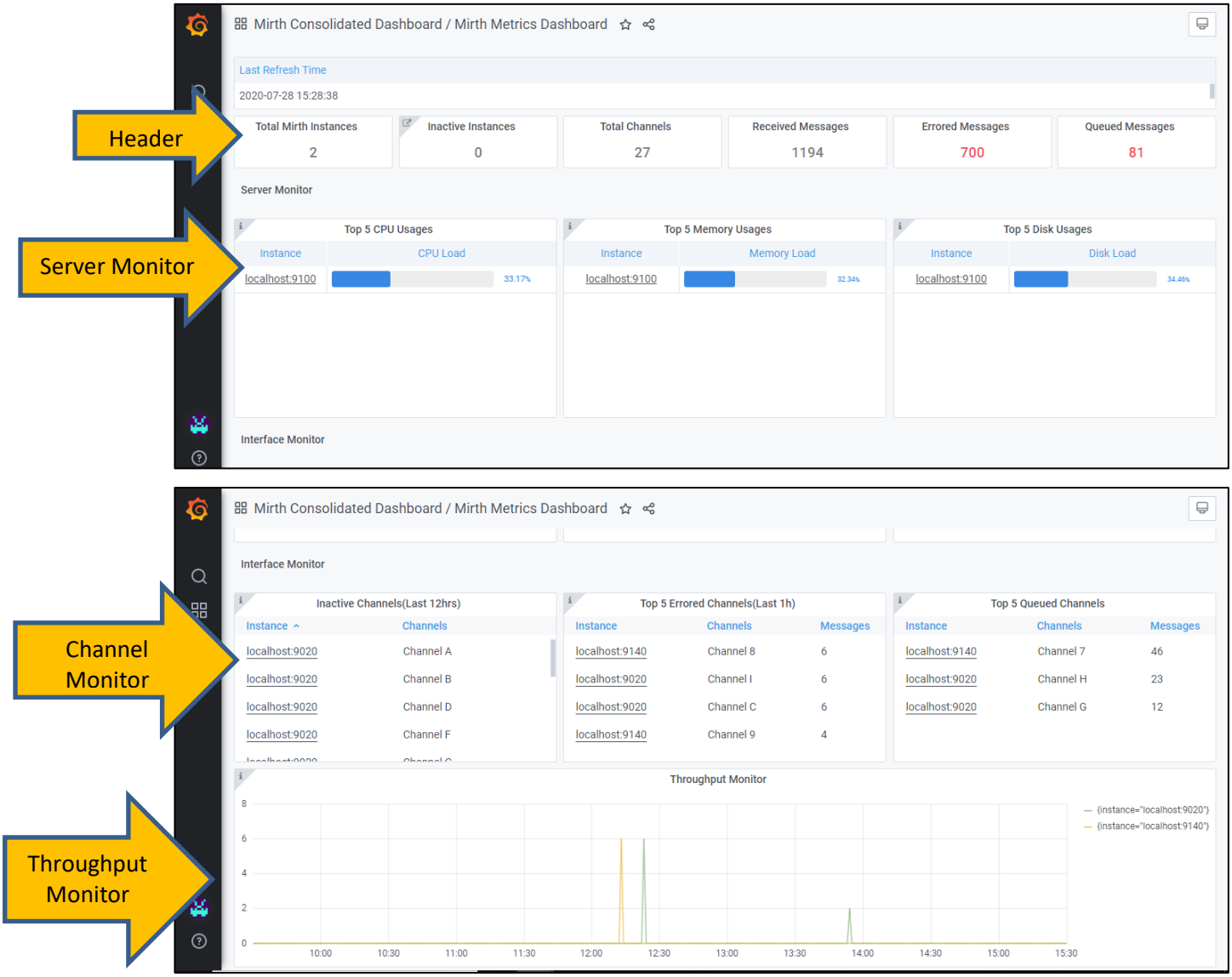
3. After signing in, click the Search icon on the **Home** screen of the Grafana dashboard:



4. Click the List icon to list the dashboards and select the **Mirth Metrics Dashboard** card for logging in to **Mirth Metrics Dashboard**:

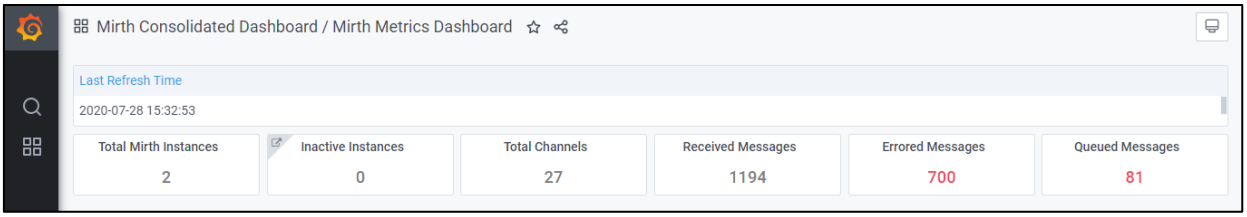
1.2 Using Mirth Metrics Dashboard

1. This is the landing screen of Mirth Metrics Dashboard and it has four sections as follows:
   a. Header Section
   b. Server Monitor Section
   c. Channel/Interface Monitor Section and
   d. Throughput Monitor Section



2. This dashboard is refreshed every 5 seconds to display near real time values of metrices.
3. The top most section alternatively called as Header section of dashboard displays key metrices as follows:
   a. **Total Mirth Instances**: This displays the total number of deployed Mirth instances
   b. **Inactive Instances**: Displays the number of inactive Mirth instances which have not received or sent any messages since last 12 hours
   c. **Total Channels**: Total number channels configured on all the deployed Mirth server instances
   d. **Received Messages**: Total number of received messages on all the Mirth server instances since last reset of the Prometheus services

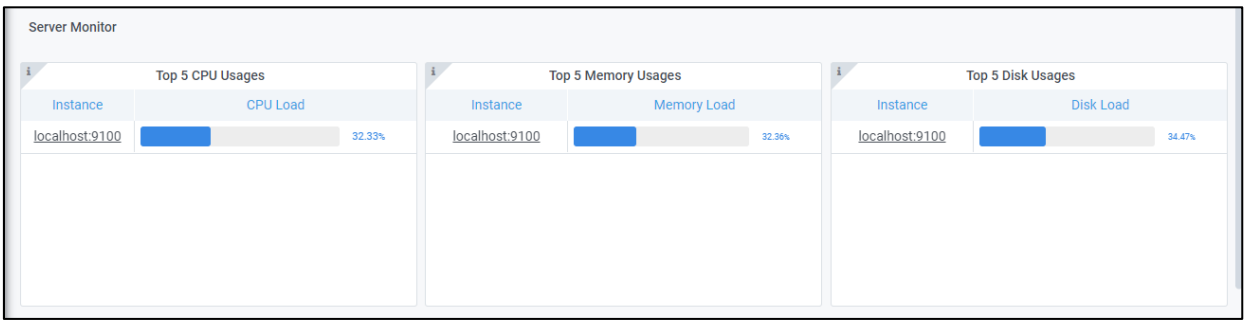
e. **Errored Messages**: Total number of errored messages on all the Mirth server instances since last reset of the Prometheus services
f. **Queued Messages**: Total number of queued messages on all the Mirth server instances since last reset of the Prometheus services:



4. The section below the header section displays all the metrices related to Mirth server Health; hence, it is called as **Server Monitor** section. This section has following panels:

a. **Top 5 CPU Usages**: This panel displays the list of top Mirth instances by percentage of CPU usage
b. **Top 5 Memory Usages**: This panel displays the list of top Mirth instances by percentage of Memory usage
c. **Top 5 Disk Usages**: This panel displays the list of top Mirth instances by percentage of Disk usage

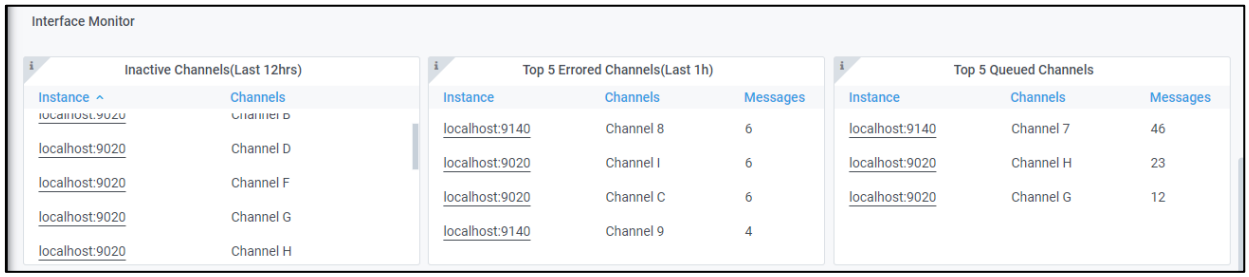
The Mirth instances are arranged in descending order of their CPU, Memory and disk usage respectively. User can drill down to view more details by selecting the instance name from any of these panels:



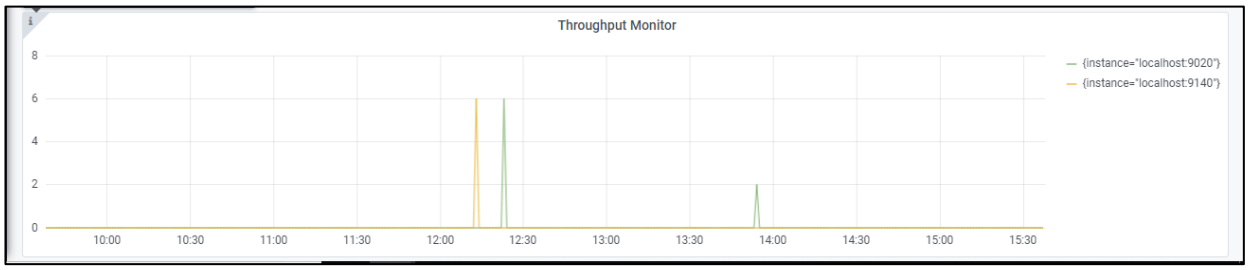
5. The section below **Server Monitor** is called as **Channel Monitor** / **Interface Monitor** and it displays following panels:

a. **Inactive Channels (Last 12 hrs.)**: This panel displays the list of Inactive Channels which haven't received or sent any message since last 12 hours
b. **Top 5 errored Channels (Last 1 hr.)**: This panel displays the list of top 5 channels by number of errored messages arranged in descending order
c. **Top 5 Queued Messages**: This panel displays the list of top 5 channels by number of queued messages arranged in descending order

The top 5 channels in each panel of errored and queued channels are arranged in descending order of number of errored and queued messages respectively. Server instance name in each panel can be selected to drill down in to more details of each metric:



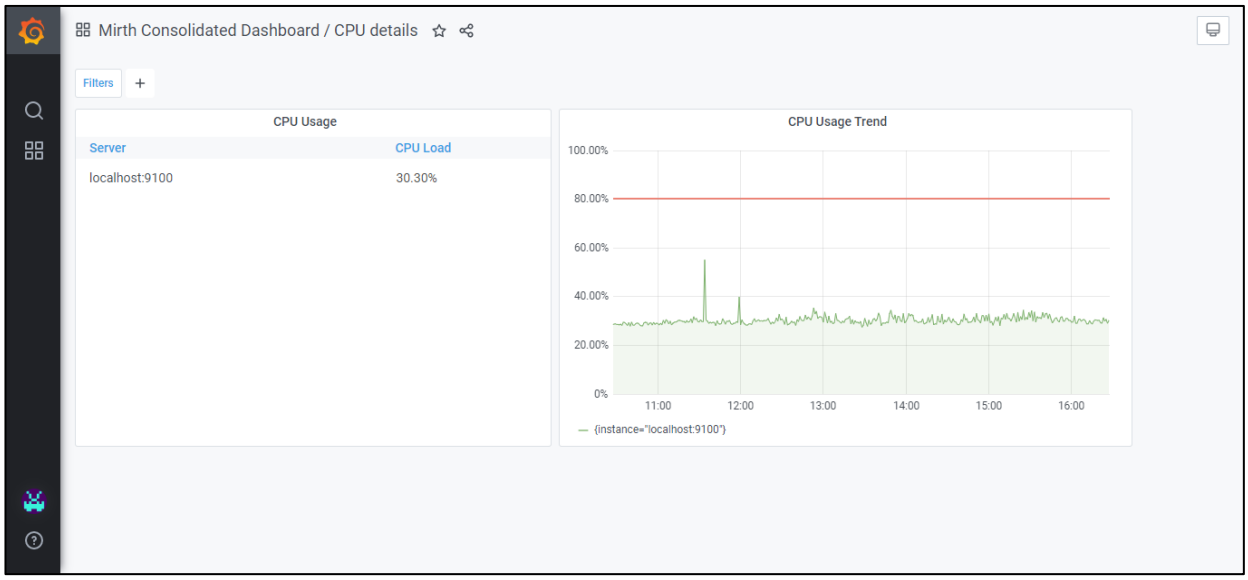
6. The section at the bottom of the dashboard is named as **Throughput Monitor**. It displays graphical representation of the number of messages sent by each Mirth Server instance, every minute over last six trailing hours in the form of a line graph. Each line in this graph represents one Mirth Server Instance:



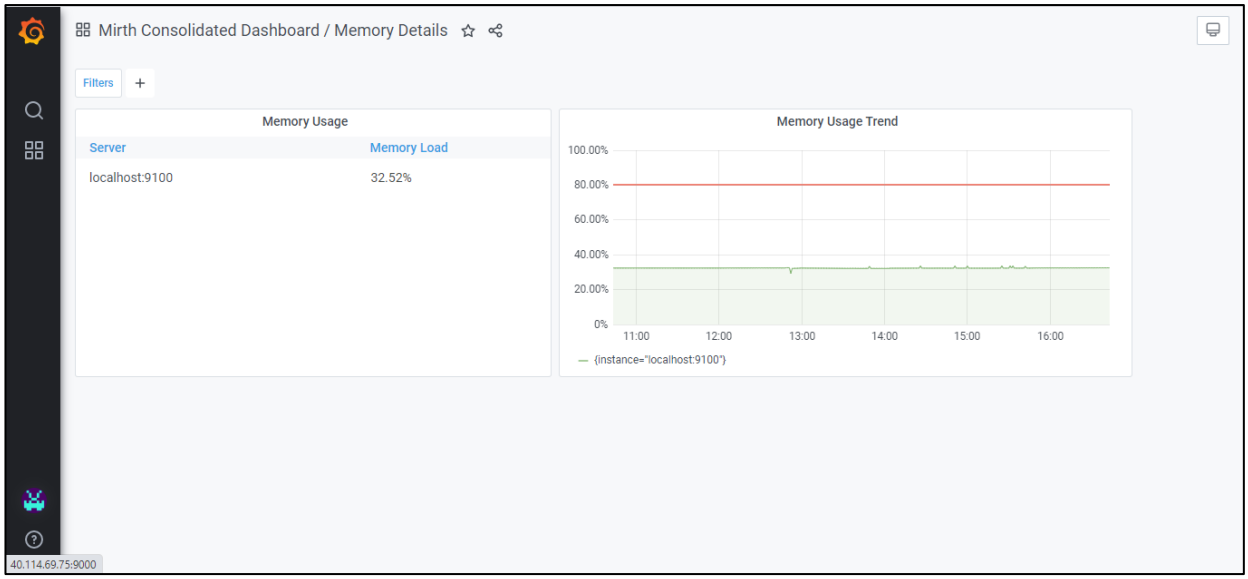
1.3 Drill down Views

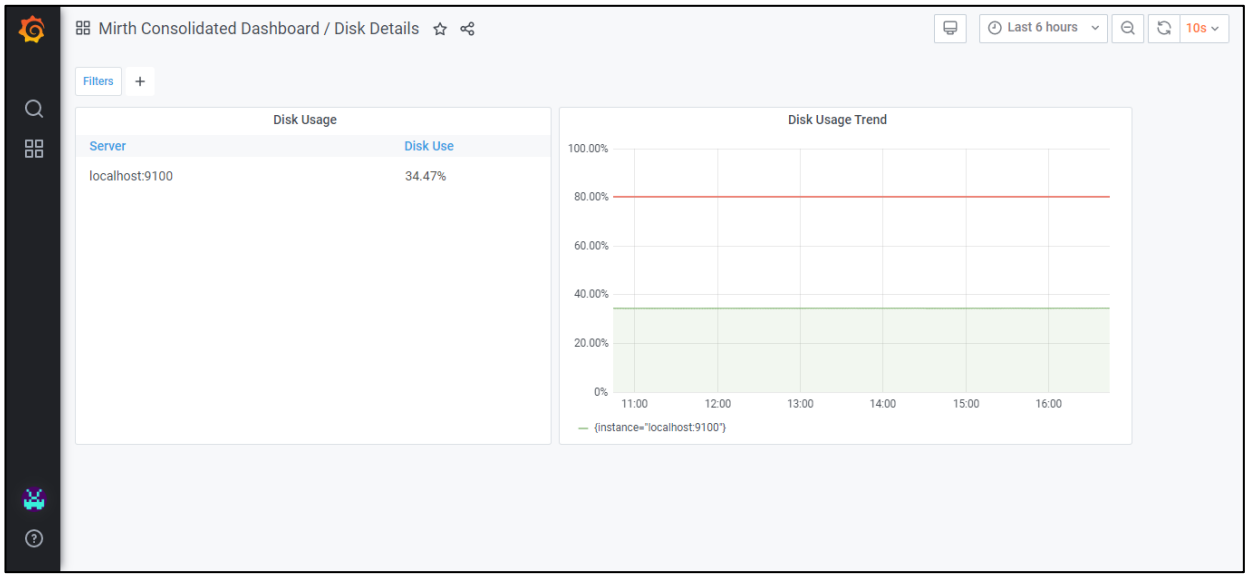
1.3.1 Drill Down from Server Monitor Section

1. Select instance name from each panel of the Server Monitor dashboard section to navigate to the CPU Details, Memory Details and Disk Details dashboards respectively.
2. The drill down screen from **Top 5 CPU Usage** panel displays the list of all the deployed NextGen Connect instances in the descending order of their CPU usage:

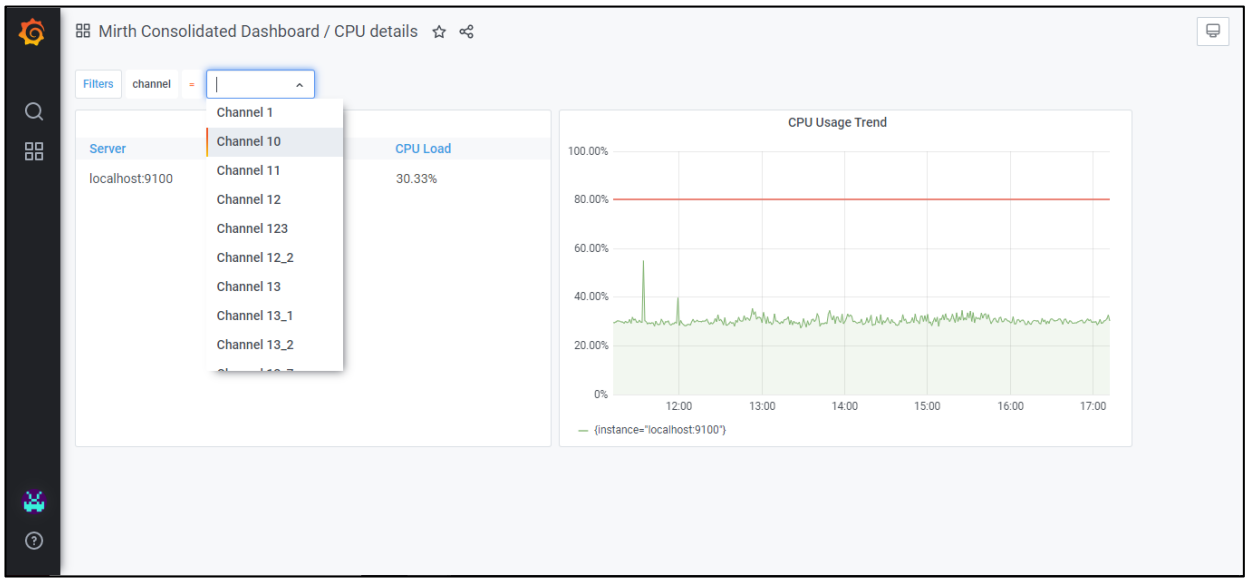


3. This screen also has the graphical representation of the trend of CPU usage of all the server instances in the form of line graphs over last six hours.
4. CPU usage values are highlighted when the usage percentages cross the threshold values. Users can also filter the list of instances by selecting the filter option on the top left corner of the screen.
5. Drill down view from **Top 5 Memory Usage** and **Top 5 Disk Usage** panel is similar to that of the **Top 5 CPU Usage** drill down screens and lists down instances by their memory usage and disk usage respectively:


Mirth Consolidated Dashboard / Memory Details
Filters
Memory Usage
Server
Memory Load
localhost:9100
32.52%
Memory Usage Trend
100.00%
80.00%
60.00%
40.00%
20.00%
0%
11:00
12:00
13:00
14:00
15:00
16:00
{instance="localhost:9100"}
40.114.69.75:9000


Mirth Consolidated Dashboard / Disk Details
Last 6 hours
10s
Filters
Disk Usage
Server
Disk Use
localhost:9100
34.47%
Disk Usage Trend
100.00%
80.00%
60.00%
40.00%
20.00%
0%
11:00
12:00
13:00
14:00
15:00
16:00
{instance="localhost:9100"}

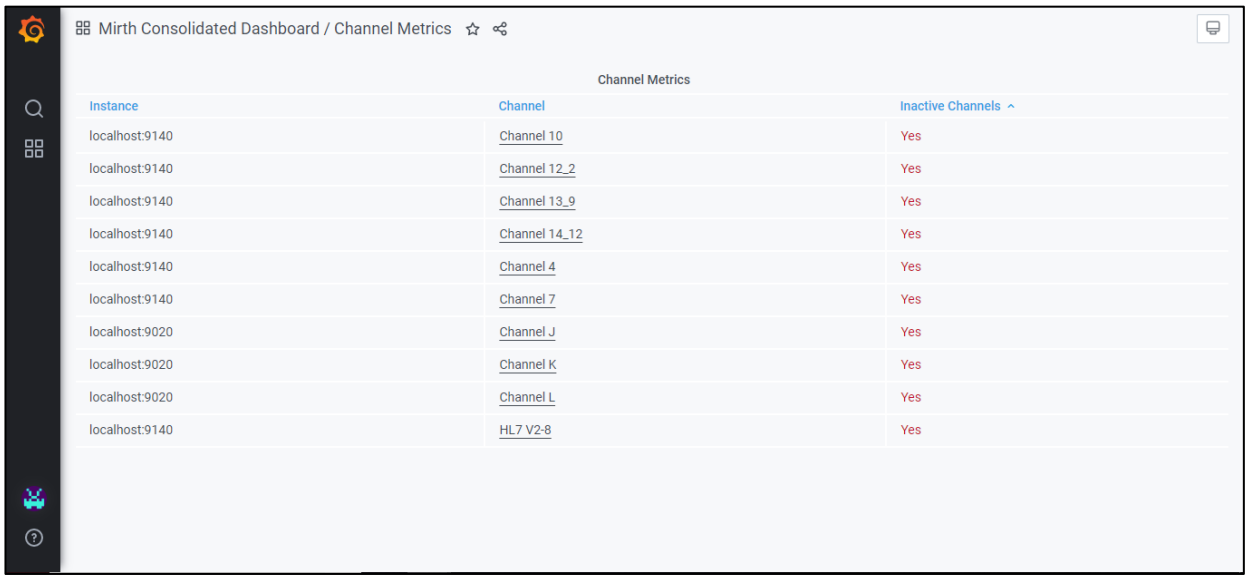
6. To filter a specific Mirth channel, click the **+** icon in front of **Filter** and select the **Channel** and specific **Channel Name**:



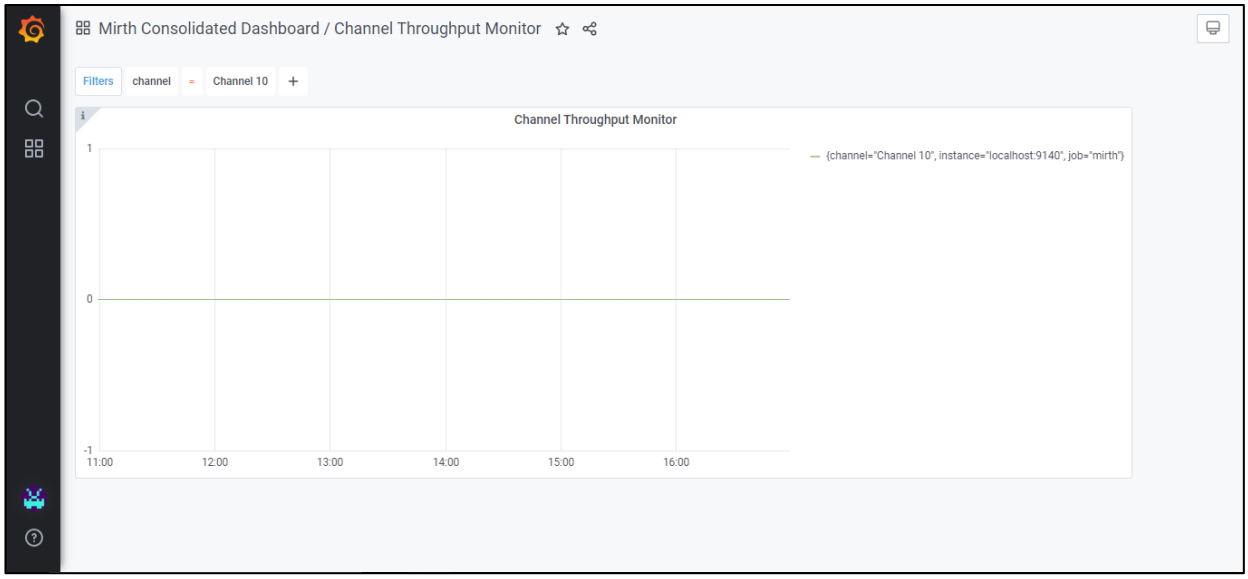
1.3.2 Drill Down from Interface/Channel Monitor Section

To drill down from **Inactive Channels** section, perform the following steps:

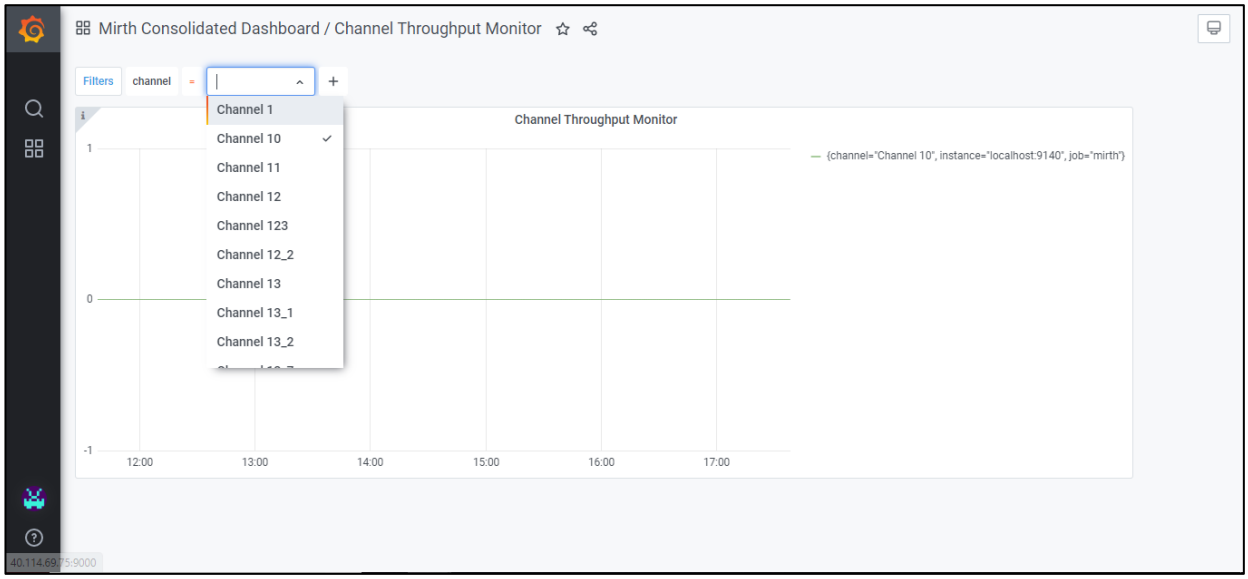
1. Select the instance name from the **Inactive Channels** panel of **Channel Monitor** to navigate to **Channel Metrics** dashboard, where the list of inactive channels and their corresponding instances are displayed:



2. The **Inactive Channels** are the ones which have not received or sent any message since last 12 trailing hours.
3. Select a channel name on the **Channel Metrics** screen to navigate to the **Channel Throughput Monitor** screen, where a graphical representation of sent messages via that channel in trailing last 6 hours is displayed in the form of a line graph:

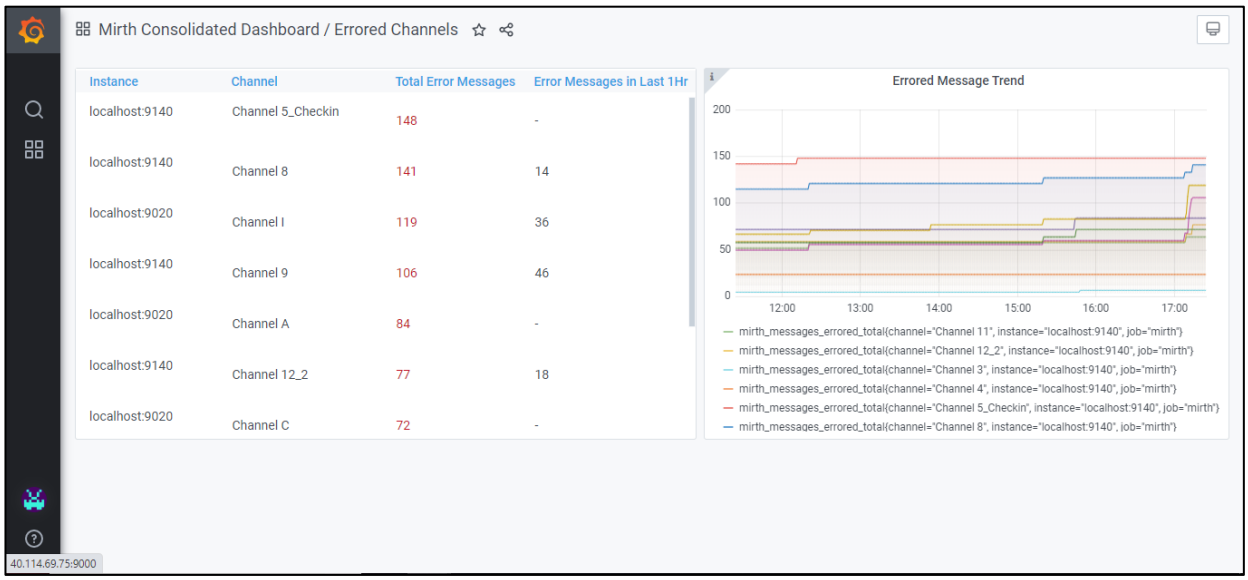


4. Click the **+**icon in front of **Filter** and select the specific Channel Name to view the **Throughput Monitor** for a specific Mirth channel:



To drill down from Top 5 Errored Channels (Last 1 hr.), perform the following steps:

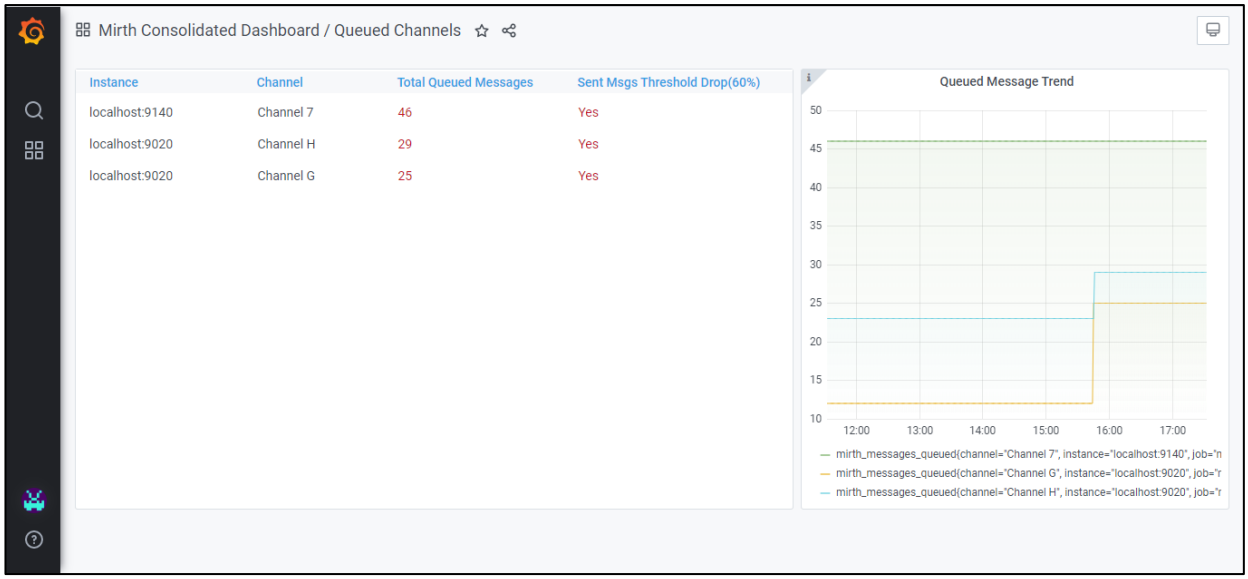
1. Select an instance name from the **Top 5 Errored Channels** (Last 1 Hr.) panel to navigate to **Errored Channels** dashboard, where a list of channels with their corresponding server instance names are displayed along with the number of errored messages since last reset of Prometheus services, and number of errored messages in last one hour:



2. The list of channels is arranged in descending order of the total number of errored messages.
3. On the right side of the **Errored Channels** dashboard, a graphical representation of the trend of errored channels in the form of line graphs is displayed. In this graph, each line represents one channel.
4. No further drill down views or filters are available on this screen.

To drill down from Top 5 Errored Channels (Last 1 hr.), perform the following steps:

1. Select an instance name from the **Top 5 Queued Channels** panel to navigate to **Queued Channels** dashboard, where a list of channels with their corresponding server instance names are displayed along with the number of total Queued messages on that channel since last reset of Prometheus services, and an indicator indicating whether the drop in the sent message percentage is > 60 percent of its last 12 hour sent messages:



2. No further drill down views or filters are available on this screen.