

MICHIGAN STATE  
UNIVERSITY

# Alpha Presentation Project Plato

The Capstone Experience

Team GM

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*From Students...  
...to Professionals*

Department of Computer Science and Engineering  
Michigan State University  
Spring 2018

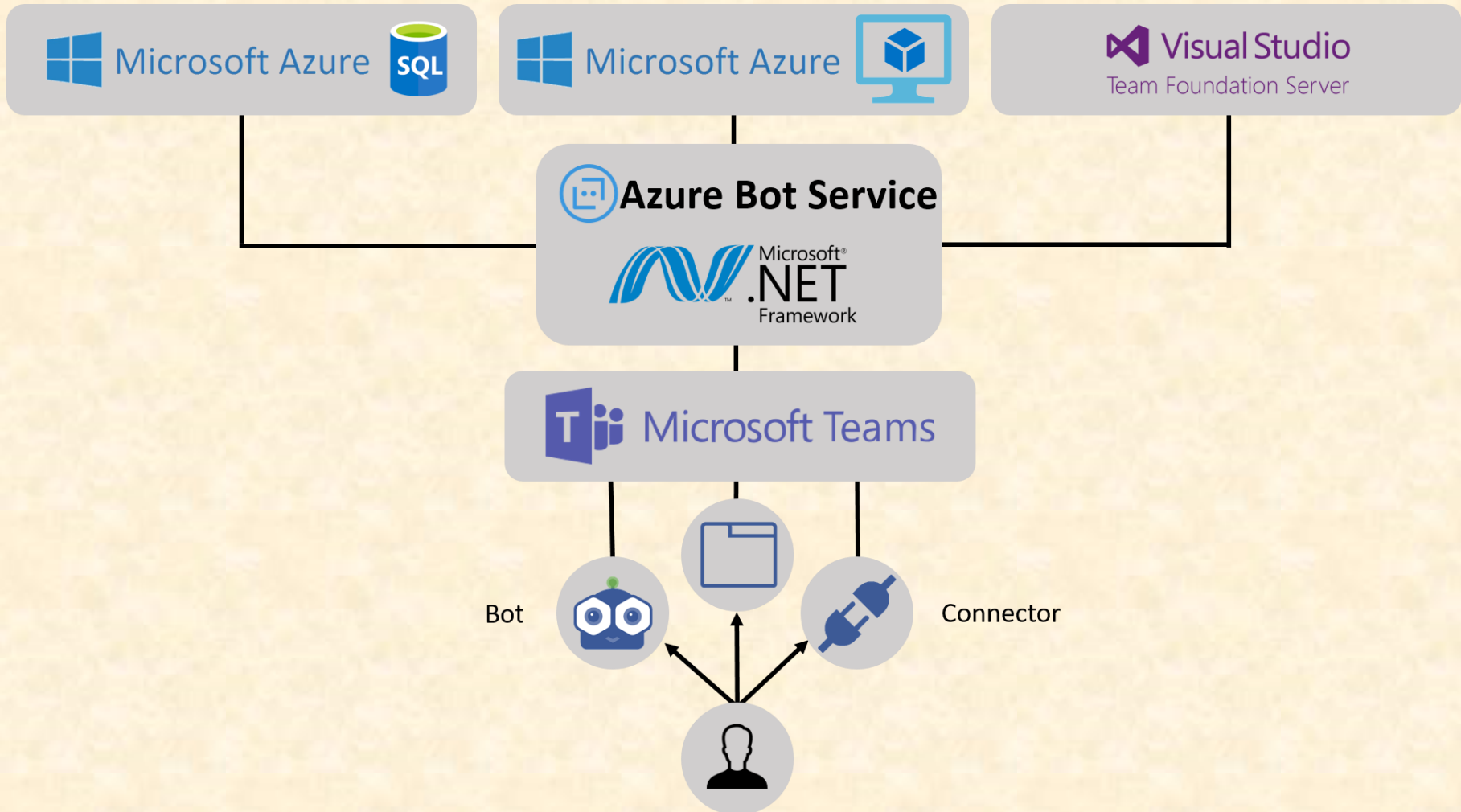
# Project Overview

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- Consolidate Common Developer Tasks Into Microsoft Teams
- Create and Manipulate Virtual Machines
- Discover and Run Test Cases
- Consists of Three Components:
  1. AI Chatbot
  2. Microsoft Teams Tab
  3. Microsoft Teams Connector
- Provide a Unified and Familiar Environment for Developers



# System Architecture

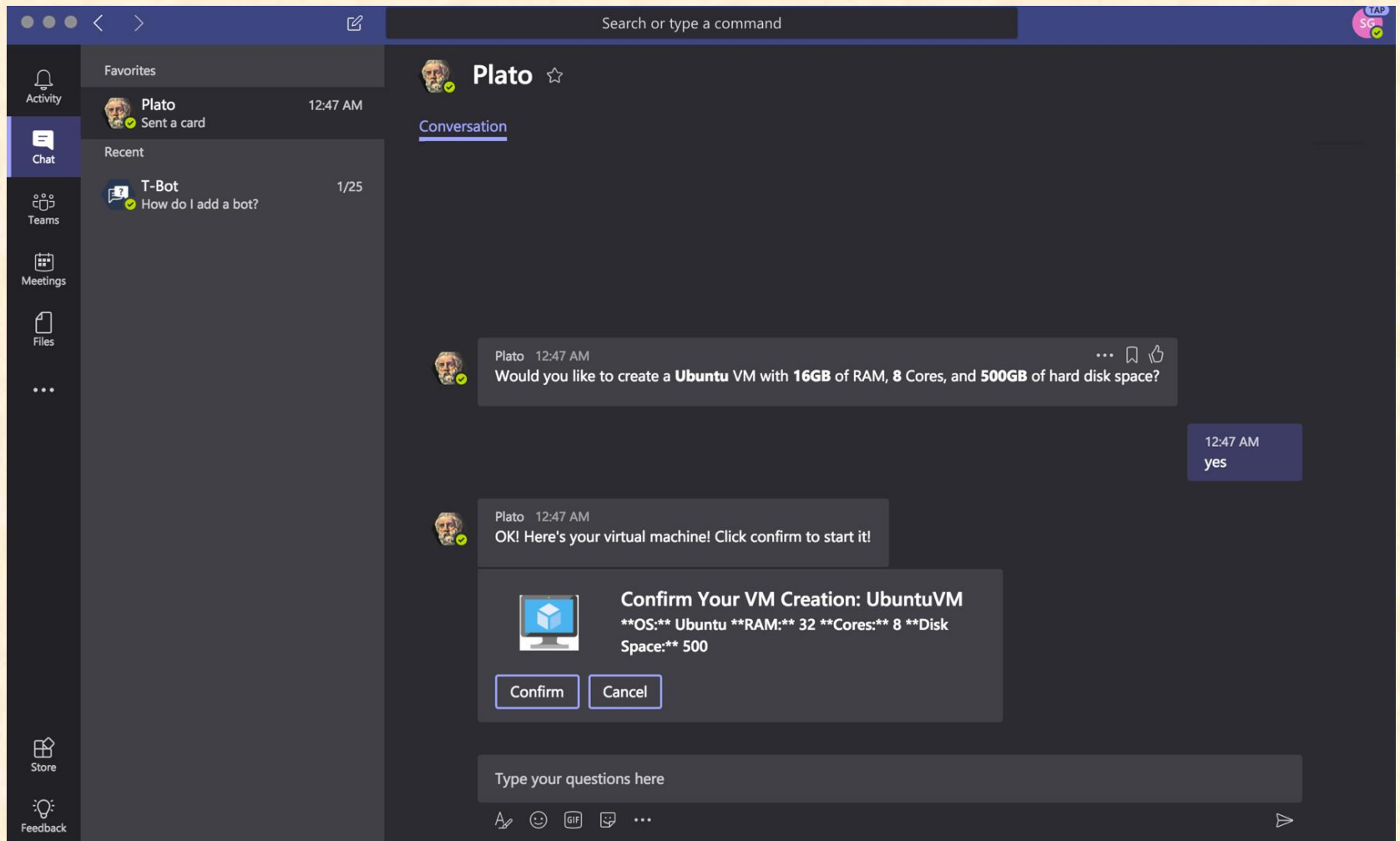


# VM Creation Through Bot

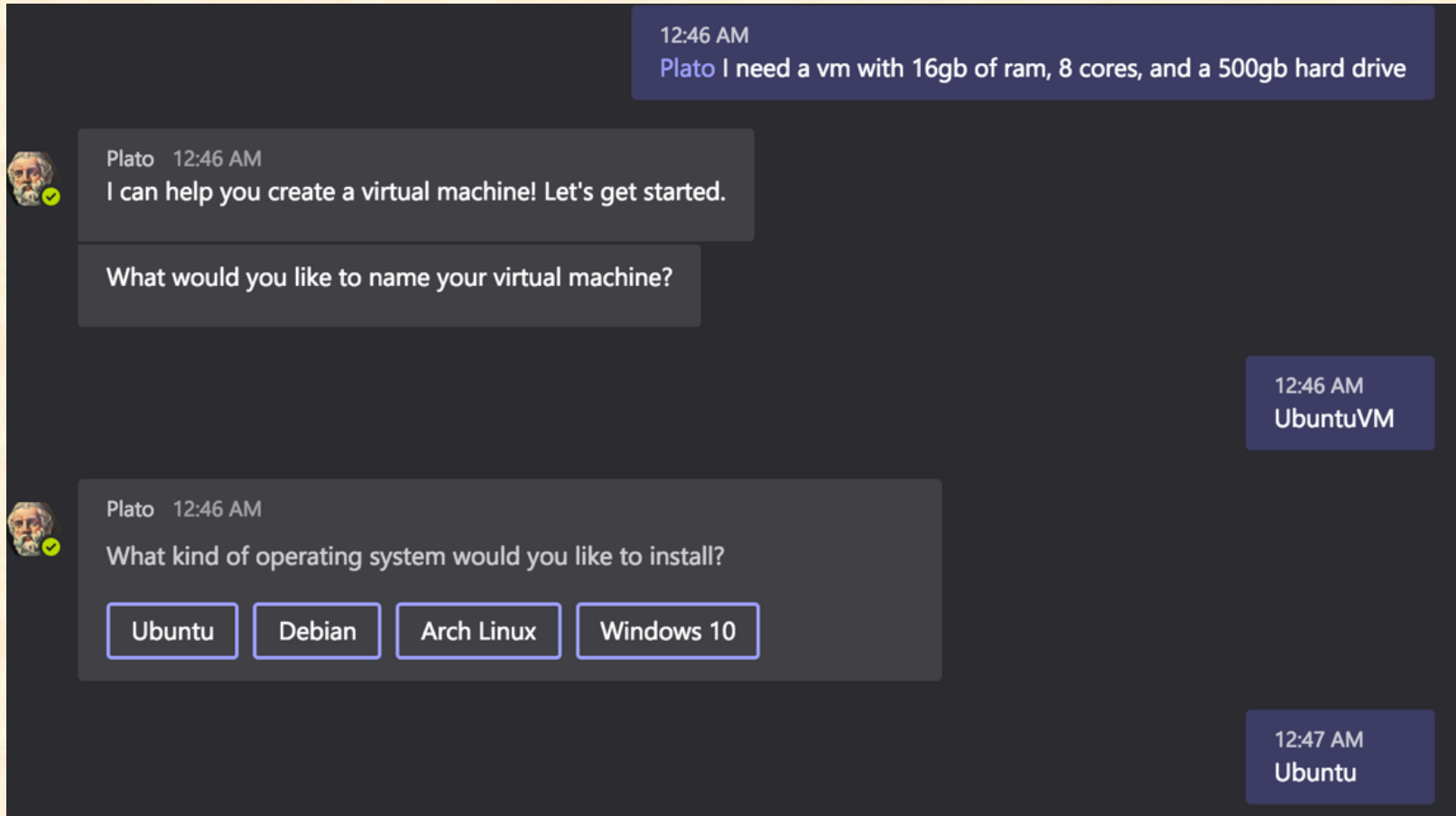
The screenshot shows a Microsoft Teams interface. On the left is a sidebar with navigation icons for Activity, Chat, Teams, Meetings, Files, Store, and Feedback. The main area displays a chat conversation with a bot named 'Plato'. The chat history shows a message from Plato at 12:47 AM: 'Sent a card'. Below that, a 'Recent' section shows a message from 'T-Bot' at 1/25: 'How do I add a bot?'. The current conversation with Plato starts at 12:46 AM with the message: 'Plato I need a vm with 16gb of ram, 8 cores, and a 500gb hard drive'. Plato responds at 12:46 AM: 'I can help you create a virtual machine! Let's get started. What would you like to name your virtual machine?'. The user responds at 12:46 AM: 'UbuntuVM'. Plato then asks at 12:46 AM: 'What kind of operating system would you like to install?'. Below this question are four buttons: 'Ubuntu', 'Debian', 'Arch Linux', and 'Windows 10'. The user responds at 12:47 AM: 'Ubuntu'. At the bottom of the chat window is a text input field with the placeholder 'Type your questions here' and a send button.



# VM Creation Through Bot



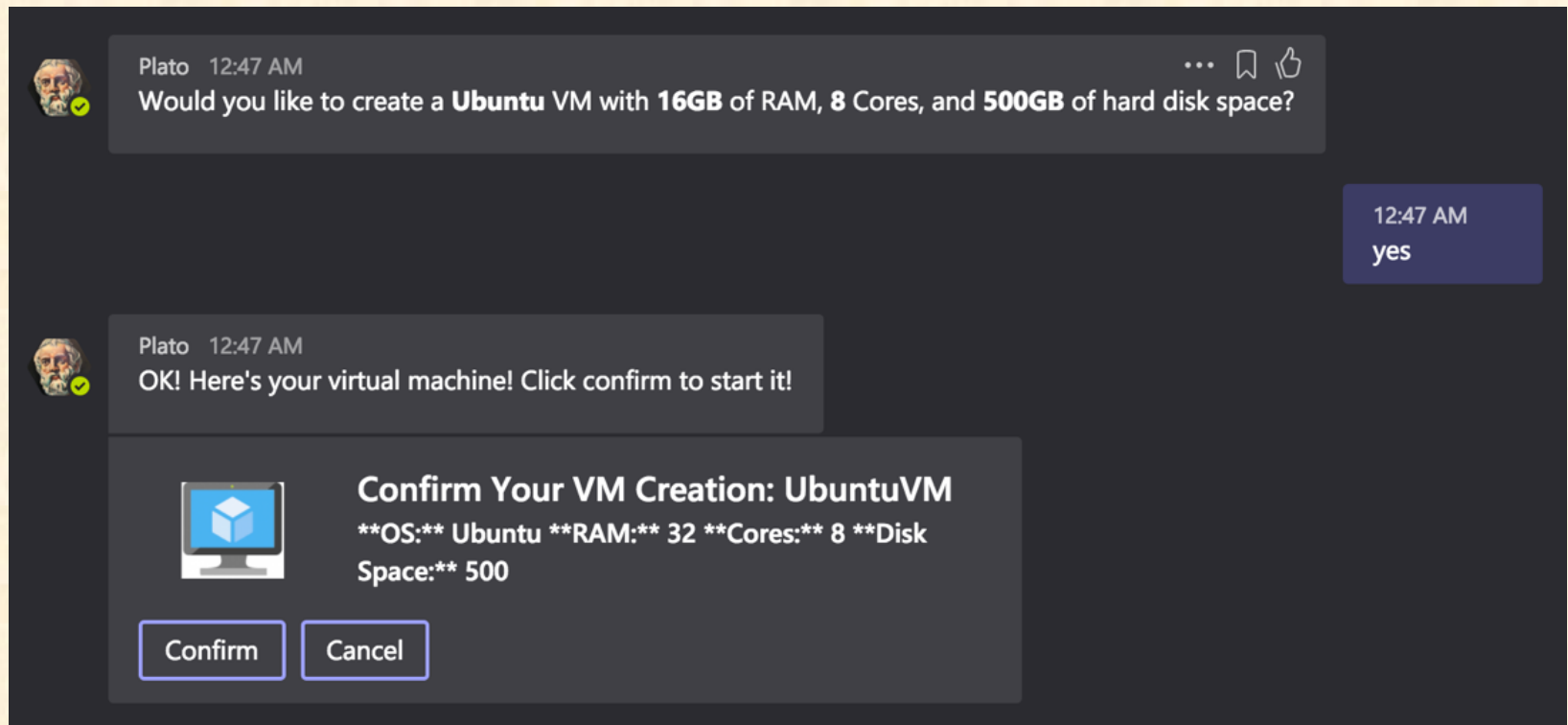
# VM Creation Through Bot



The screenshot shows a chat interface with a dark background. On the right, a user's message in a blue bubble says: "12:46 AM Plato I need a vm with 16gb of ram, 8 cores, and a 500gb hard drive". On the left, a bot named Plato, represented by a small icon of a man's head, responds in a grey bubble: "Plato 12:46 AM I can help you create a virtual machine! Let's get started." Below this, another grey bubble asks: "What would you like to name your virtual machine?". On the right, the user's response in a blue bubble is: "12:46 AM UbuntuVM". On the left, Plato responds in a grey bubble: "Plato 12:46 AM What kind of operating system would you like to install?". Below this, there are four buttons: "Ubuntu", "Debian", "Arch Linux", and "Windows 10". On the right, the user's final response in a blue bubble is: "12:47 AM Ubuntu".



# VM Creation Through Bot




The screenshot shows a chat window with a dark background. At the top, a message from 'Plato' at 12:47 AM asks: 'Would you like to create a **Ubuntu** VM with **16GB** of RAM, **8** Cores, and **500GB** of hard disk space?'. To the right of the message are three icons: a three-dot menu, a bookmark, and a thumbs-up. Below this, a response bubble on the right shows the time '12:47 AM' and the text 'yes'. Another message from 'Plato' at 12:47 AM follows: 'OK! Here's your virtual machine! Click confirm to start it!'. Below this message is a confirmation dialog box. It features a monitor icon with a blue cube on the screen. The title is 'Confirm Your VM Creation: UbuntuVM'. The details are: '\*\*OS:\*\* Ubuntu \*\*RAM:\*\* 32 \*\*Cores:\*\* 8 \*\*Disk Space:\*\* 500'. At the bottom of the dialog are two buttons: 'Confirm' and 'Cancel'.

Plato 12:47 AM  
Would you like to create a **Ubuntu** VM with **16GB** of RAM, **8** Cores, and **500GB** of hard disk space?

12:47 AM  
yes

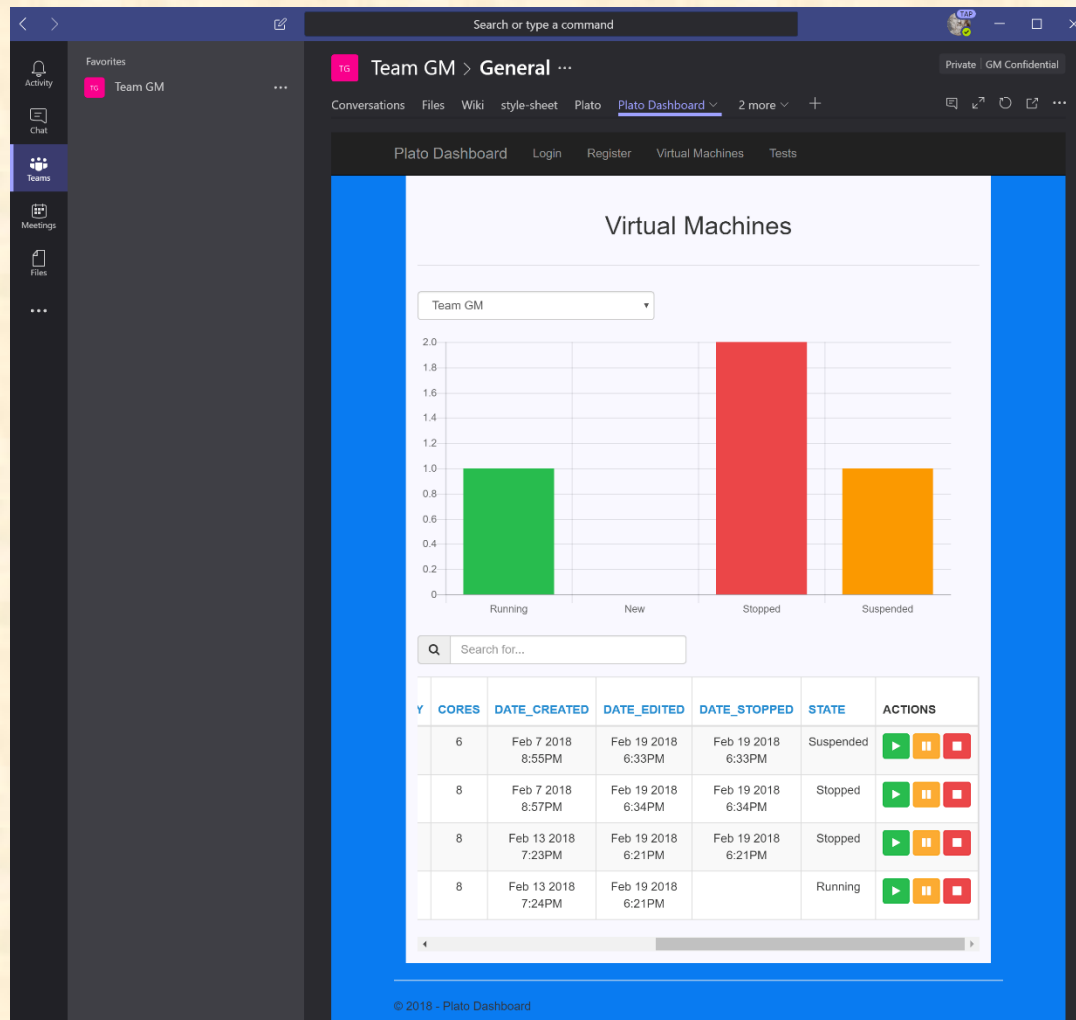
Plato 12:47 AM  
OK! Here's your virtual machine! Click confirm to start it!

 **Confirm Your VM Creation: UbuntuVM**  
\*\*OS:\*\* Ubuntu \*\*RAM:\*\* 32 \*\*Cores:\*\* 8 \*\*Disk Space:\*\* 500

Confirm Cancel

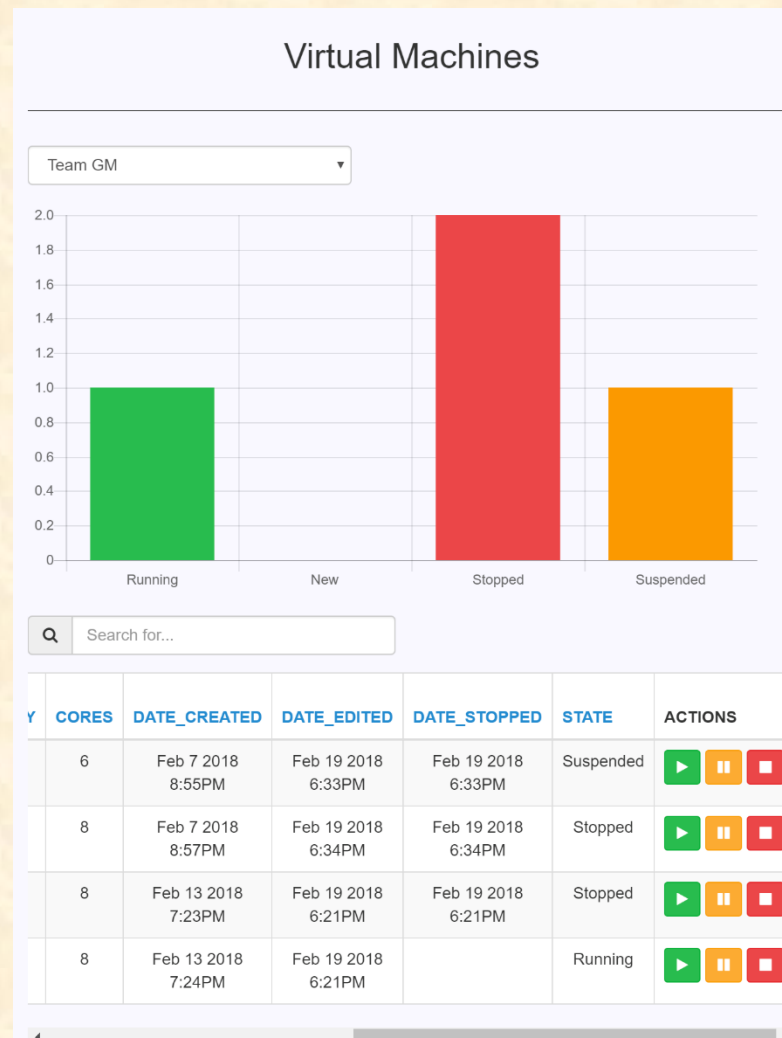


# Virtual Machines Dashboard

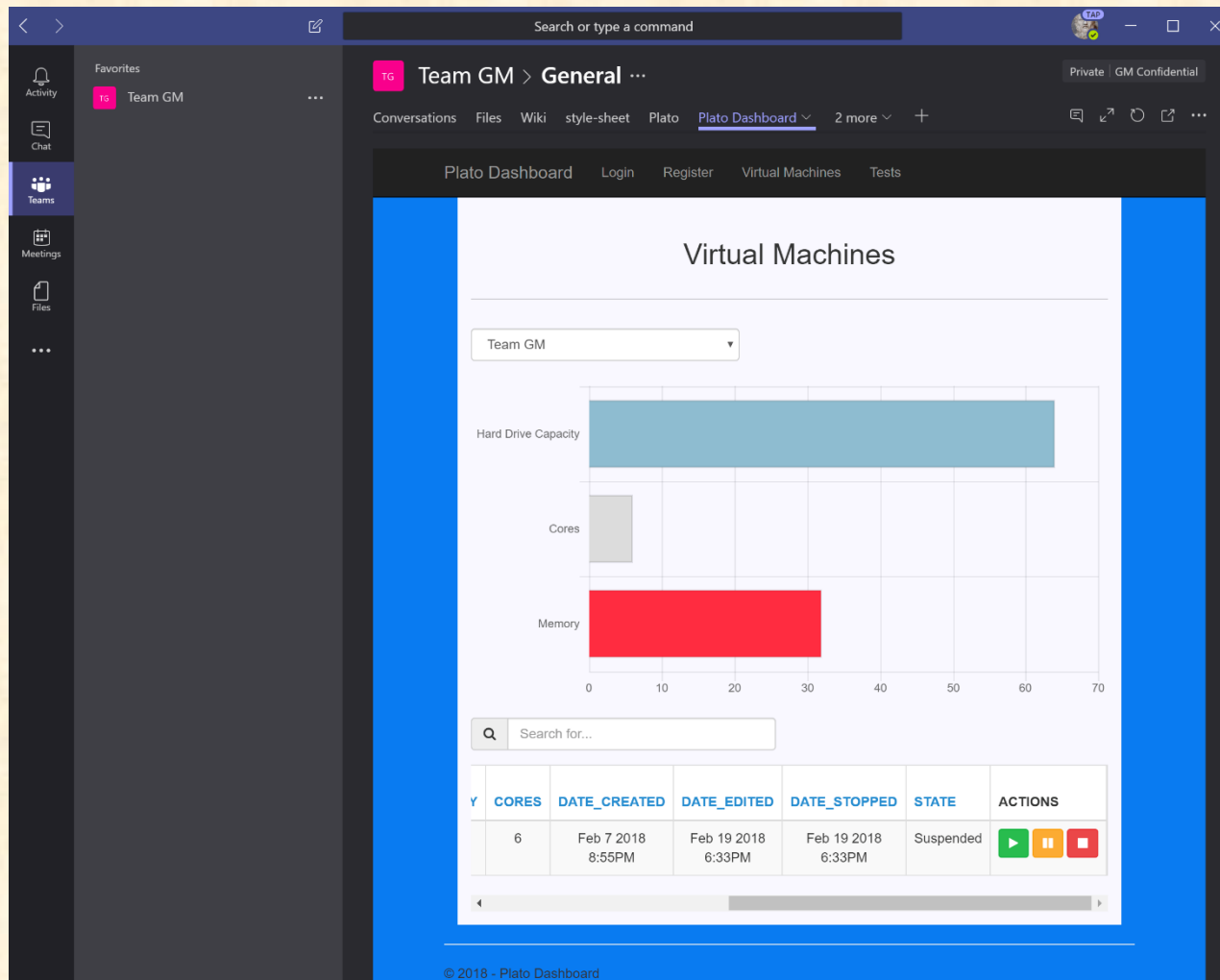




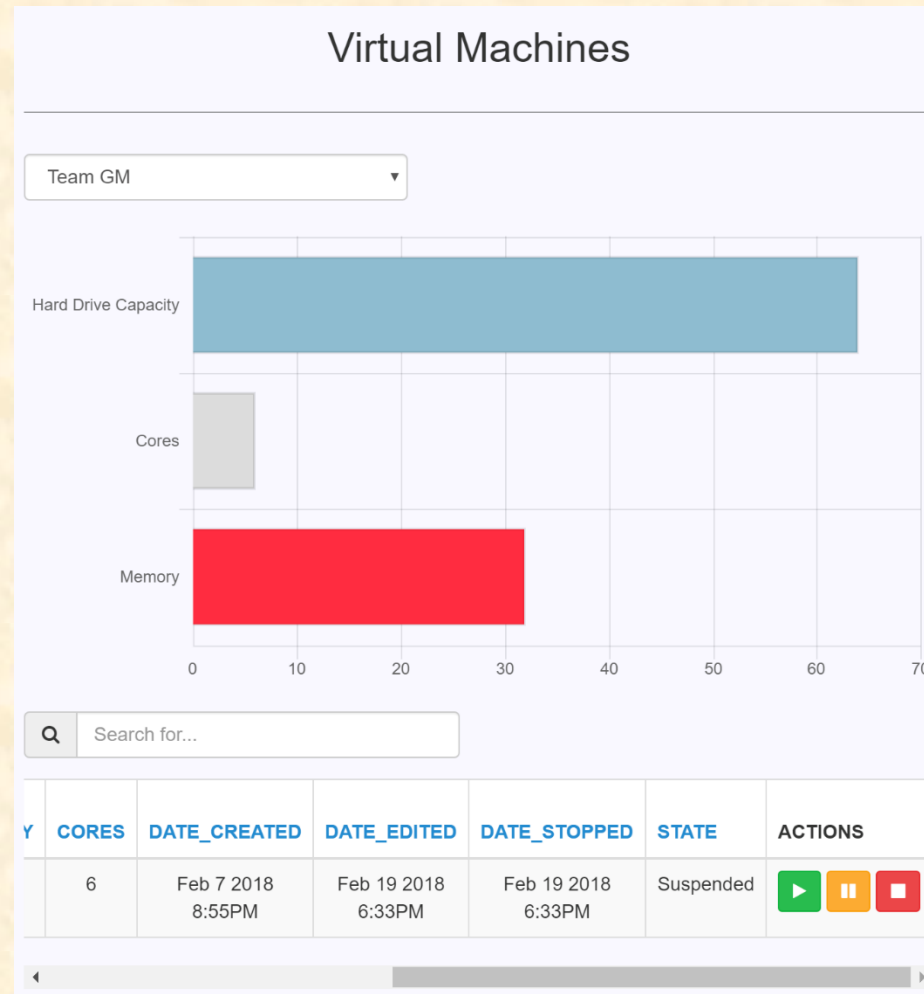
# Virtual Machines Dashboard



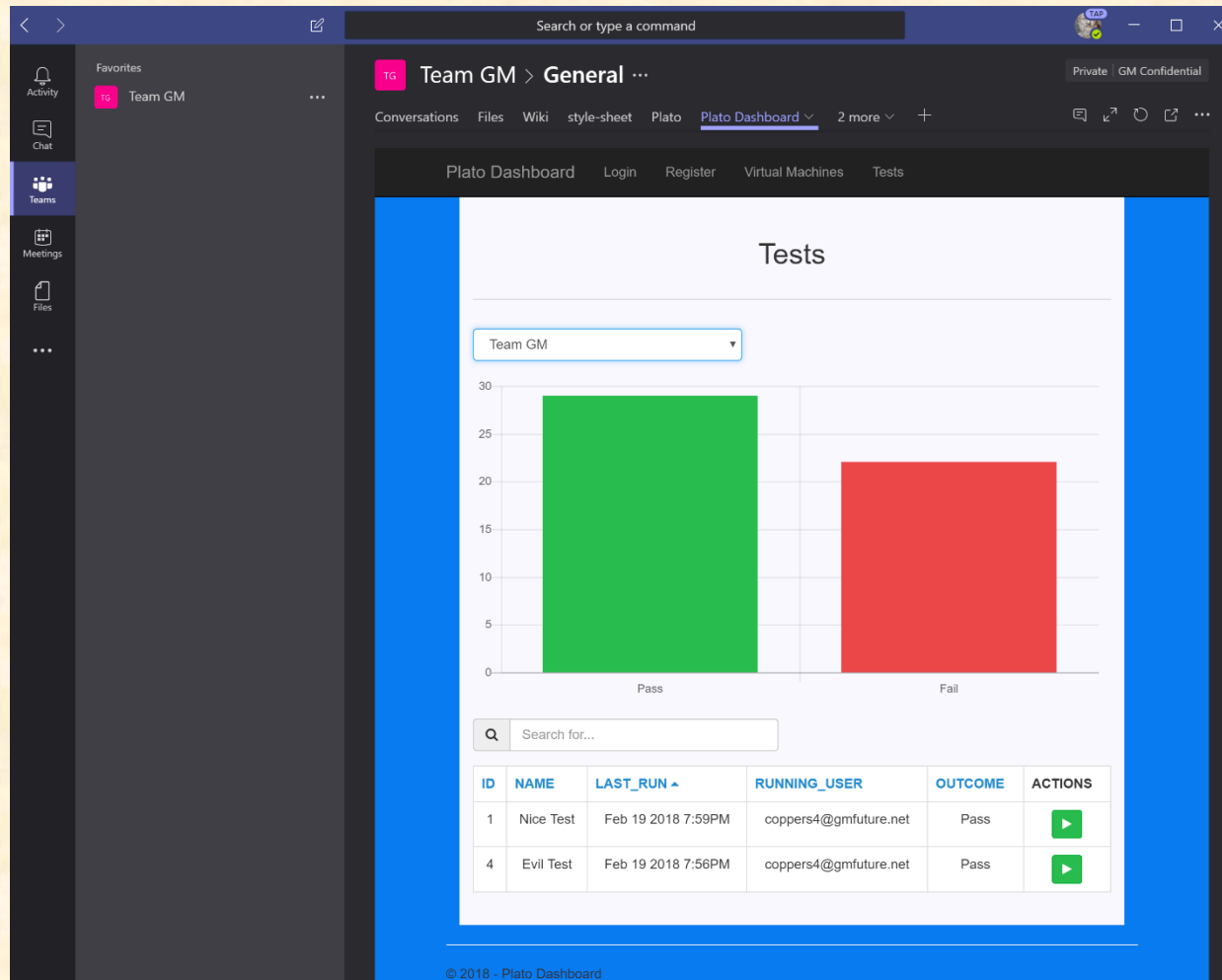
# Information on Clicked VM



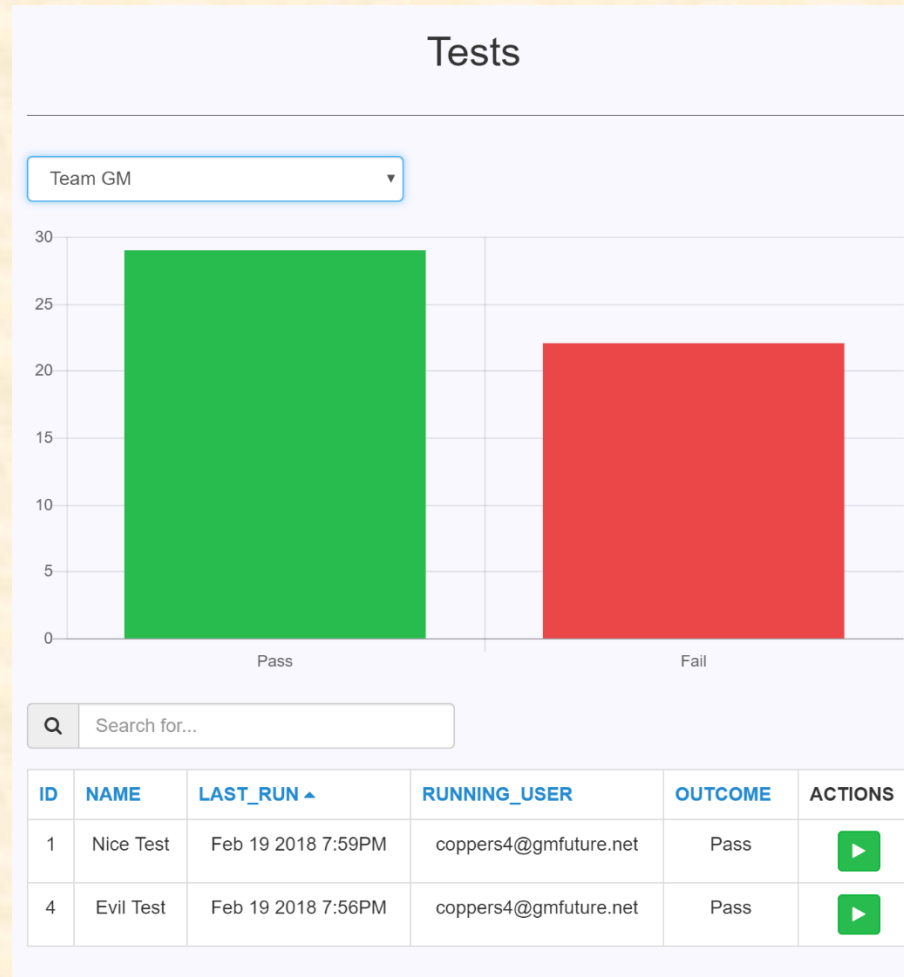
# Information on Clicked VM



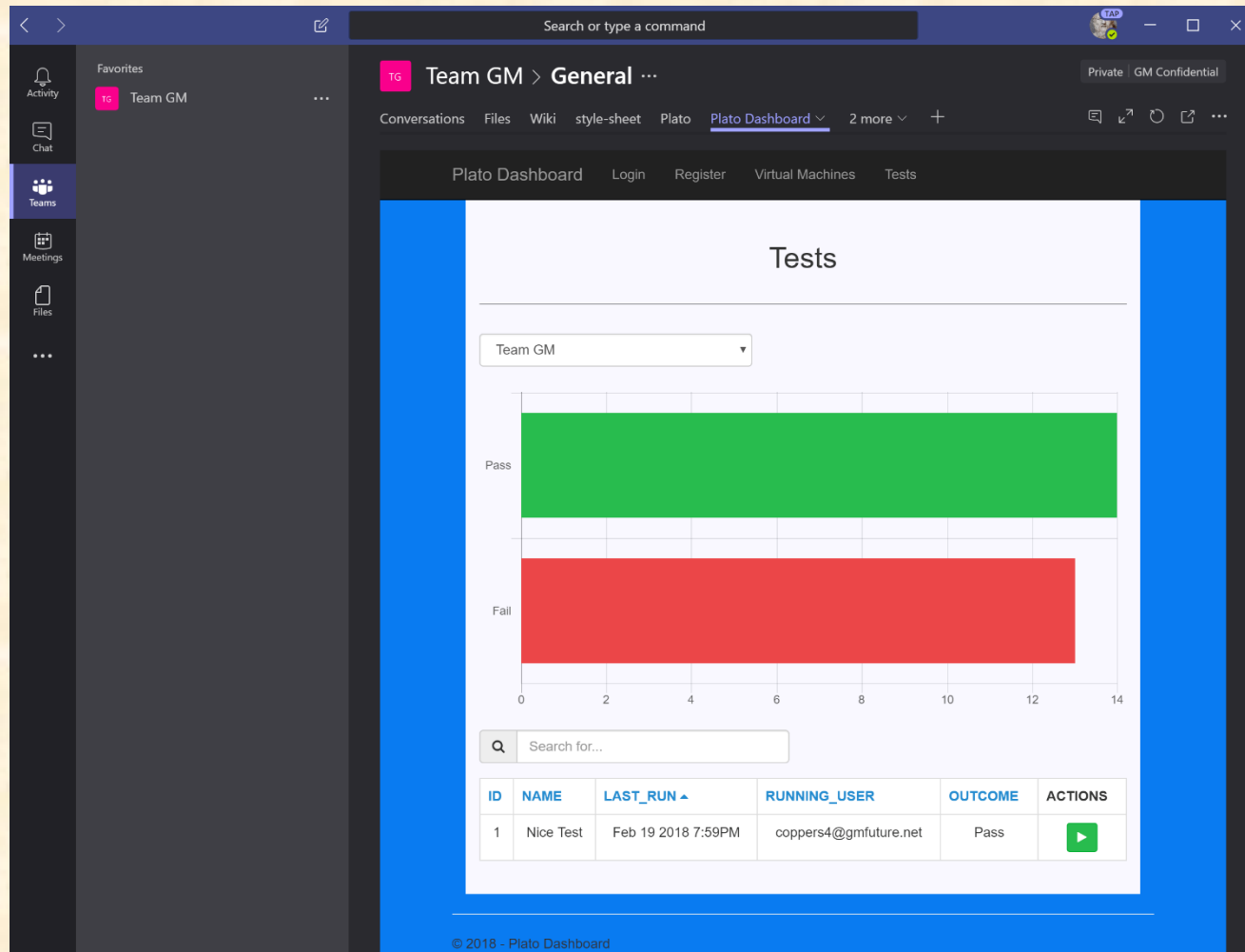
# Tests Dashboard



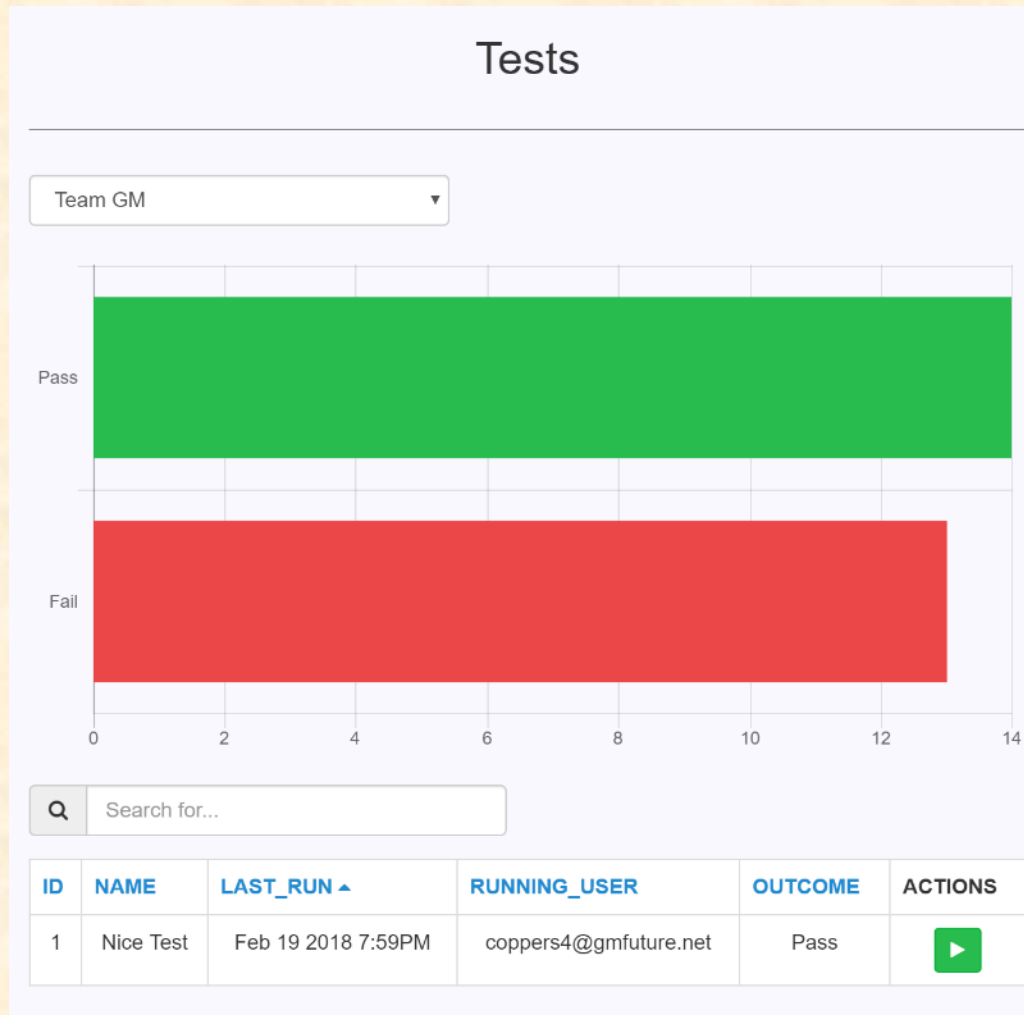
# Tests Dashboard



# Information on Clicked Test



# Information on Clicked Test



# Connector for Test Case Runs

The screenshot displays a Microsoft Teams interface. On the left is a sidebar with navigation icons for Activity, Chat, Teams, Meetings, Files, and Store. The main area shows a chat window for 'Team GM' in the 'General' channel. At the top of the chat is a search bar and a status bar indicating 'Private' and 'GM Confidential'. Two messages from 'PlatoConnector' are visible, each titled 'Test Case Ran' and marked 'On Project'. Each message contains a table of test results.

**Message 1 (11:32 PM):**

Test Case	Good Test
Time Ran	2/19/2018 11:32:30 PM
Running User	coppers4@gmfuture.net
Outcome	Pass

**Message 2 (11:34 PM):**

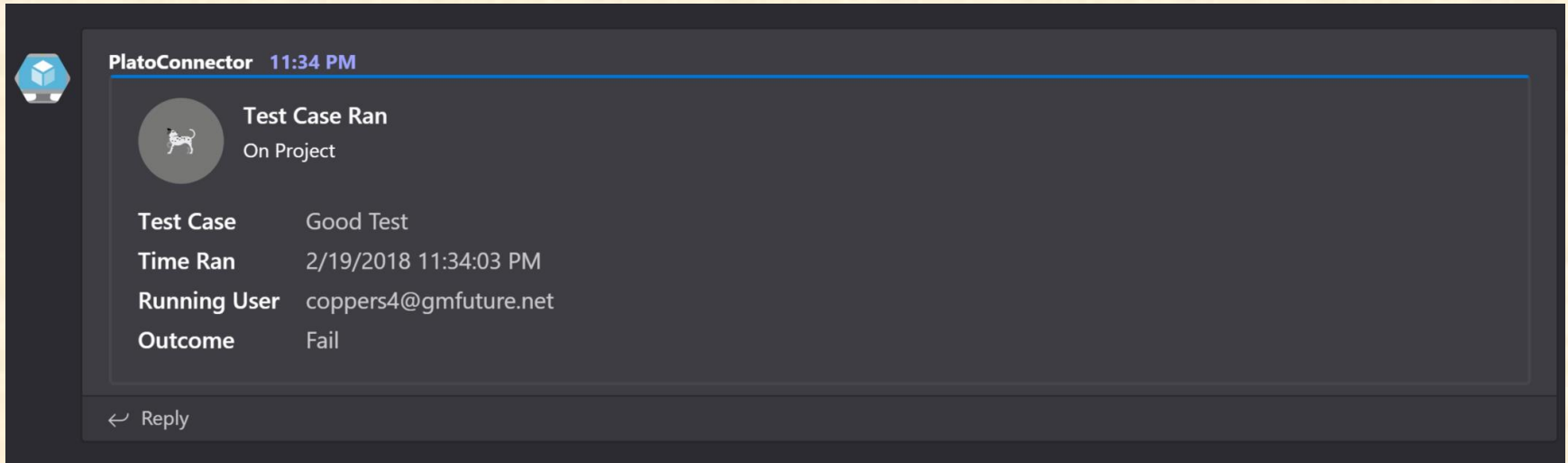
Test Case	Good Test
Time Ran	2/19/2018 11:34:03 PM
Running User	coppers4@gmfuture.net
Outcome	Fail

At the bottom of the chat window is a text input field with the placeholder 'Start a new conversation, use @ to mention someone' and a row of icons for text, link, emoji, GIF, and more options.






# Connector for Test Case Runs



A screenshot of a Slack message interface. The message is from a bot named 'PlatoConnector' and is titled 'Test Case Ran'. The message content includes a status 'On Project' and a table of test run details. At the bottom of the message box is a 'Reply' button with a left-pointing arrow icon.

**PlatoConnector** 11:34 PM

 **Test Case Ran**  
On Project

Test Case	Good Test
Time Ran	2/19/2018 11:34:03 PM
Running User	coppers4@gmfuture.net
Outcome	Fail

← Reply

# What's left to do?

- Elaborate on Connector
  - Added Directly from Teams
  - Need to Send Data From Backend to Connector
- Extend Bot Functionality
- Connect Tab to Bot Backend
- Create More Charts for Tab
  - Want to Display Different Metrics
  - Will Need More Data
  - Embed Each Chart in a Partial View
- Implement User Sessions and Teams Functionality



# Questions?

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