

**SMART INDIA  
HACKATHON  
2022**

# Basic Details of the Team and Problem Statement

**Ministry:** National Institute of Ocean Technology (NIOT), Ministry of Earth Sciences (MoES).

**PS Code:** GR917

**Problem Statement Title:** To track list of software installed in the PC's / Workstation's attached to the network.

**Team Name:** Stack Smashers

**Team Leader Name:** Nishit Patel

**Institute Code (AISHE):** U-1085

**Institute Name:** K J Somaiya College of Engineering

**Theme Name:** Miscellaneous

# Idea/Approach Details

Describe your idea/Solution/Prototype here:

- **Remote monitoring and Management**

Our solution will include a web-based interface that will allow IT network administrators to remotely monitor and manage PCs under their control, even if they are not on the same local network.

- **How it works**

- The client computers will have a background service that is scheduled to check for updates from the server for commands, maintenance, etc.
- The server administrator can do a wide range of operations on the client server, including uninstalling software, monitoring logs for security issues, and remotely executing shell commands in a secure manner while ensuring that the employee's privacy is respected.
- Only the administrator will be able to add authorized software and only certain commands decided by the organization will be allowed to run.

- **Software Integrity**






When a client computer downloads a software installer, our background service prompts it to compare the downloaded installation file's checksum to the officially released checksum. If the checksum fails, the file is erased, indicating that the software has integrity flaws.

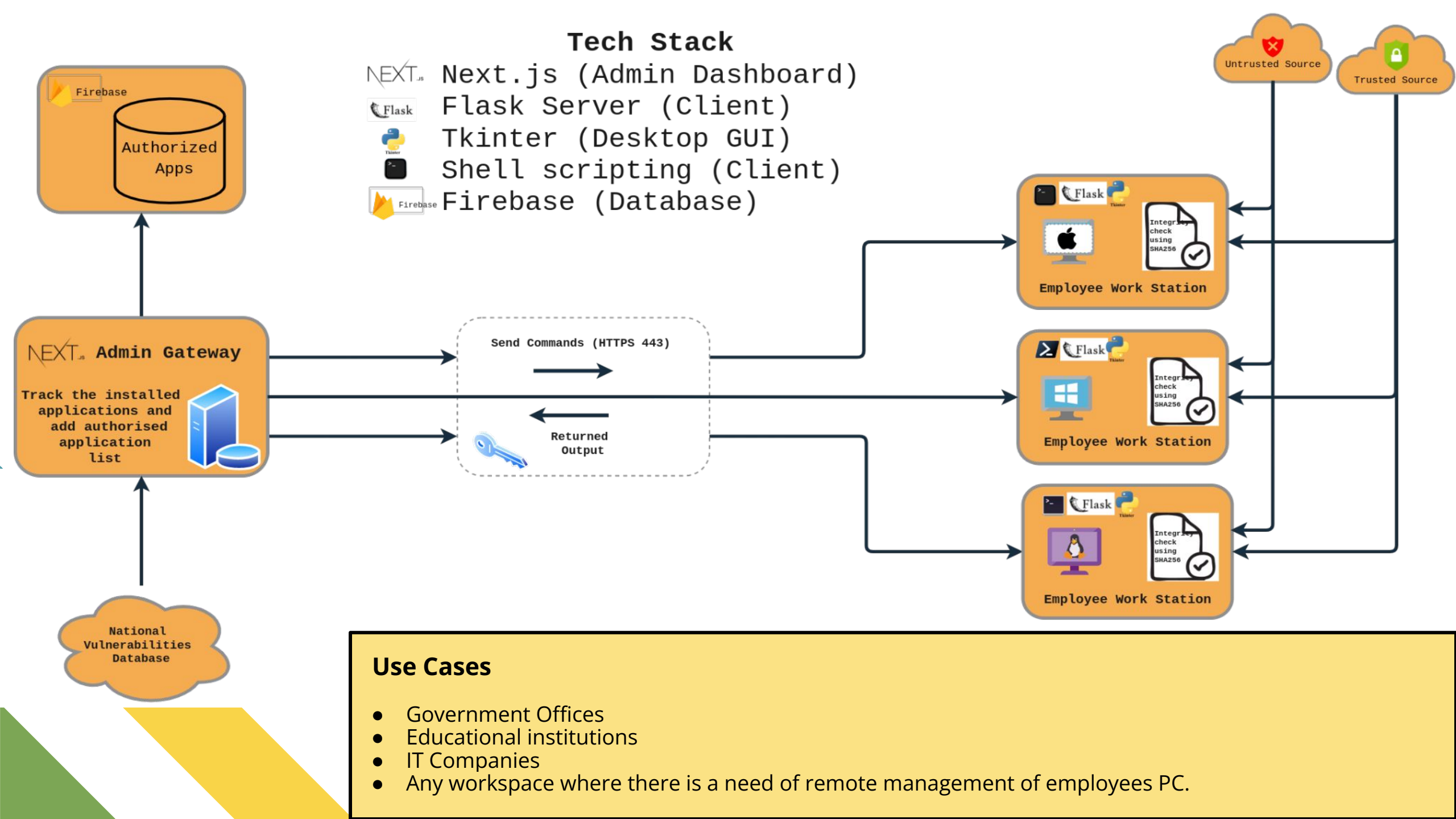
- **Security**

Administrator will only be able to executed few selected networking commands due to security reasons. There are two levels of permissions preconfigured when uninstalling programs.

1. Background Uninstall (Silent Uninstall)
2. A popup with proper reason for uninstallation will be displayed after which employee can opt to keep/uninstall application.

## Tech Stack

 Next.js (Admin Dashboard)  
 Flask Server (Client)  
 Tkinter (Desktop GUI)  
 Shell scripting (Client)  
 Firebase (Database)



## Use Cases

- Government Offices
- Educational institutions
- IT Companies
- Any workspace where there is a need of remote management of employees PC.

# Team Member Details

## Team Leader Name: Nishit Patel

Branch : B.Tech                      Stream: Computer Engineering                      Year: III

## Team Member 1 Name: Raj Tiwari

Branch : B.Tech                      Stream Information Technology                      Year : III

## Team Member 2 Name: Manasi Varaiya

Branch : B.Tech                      Stream : Computer Engineering                      Year : III

## Team Member 3 Name: Manan Pandya

Branch : B.Tech                      Stream : Computer Engineering                      Year : III

## Team Member 4 Name: Neelansh Mathur

Branch : B.Tech                      Stream : Computer Engineering                      Year : III

## Team Member 5 Name: Jayesh Nirve

Branch : B.Tech                      Stream : Electronics and Telecommunications Engineering                      Year : III

## Team Mentor 1 Name: Avani Sakhapara

Category:    Academic                      Expertise: ML/NLP/Blockchain                      Domain Experience: 13 years

## Team Mentor 2 Name: Dipti Pawade

Category:    Academic                      Expertise: AI/Blockchain/image processing                      Domain Experience: 11 years