

MICHIGAN STATE

UNIVERSITY

Beta Presentation

SmartSat™ Satellite App Store

The Capstone Experience

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Fall 2021



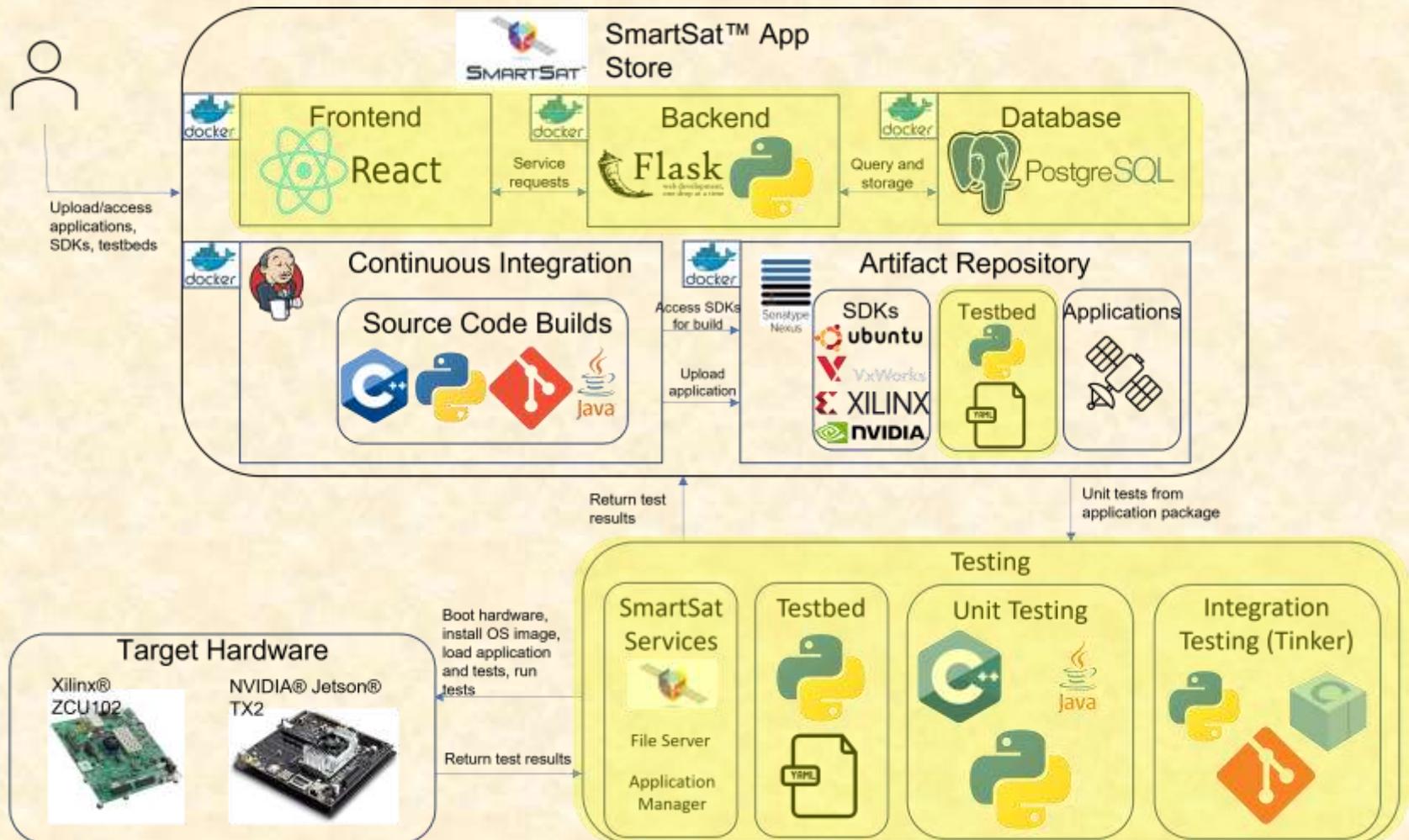
*From Students...
...to Professionals*

Project Overview

- Users can upload new SmartSat applications to the App Store
- The AppStore builds the new application against specified SDKs
- The built applications are tested on specified target hardware
- Test results can be seen from the test results page on the App Store



System Architecture



Application Upload Form

The screenshot shows a web browser window with the URL `localhost:5000/new/project`. The page is titled "Project" and includes a search bar at the top. A left sidebar contains navigation items: Explore, New, Project (highlighted), Asset, Group, Testbed, Applications, Assets, Groups, User, and Help. The main content area is a form for creating a new project. The form fields and their values are:

- Avatar:** Click to upload (Recommended: 140px x 140px, .png and .jpg accepted)
- Name:** ZCU 104
- Category:** Application
- Tags:** Resource Management
- Version Number:** 1.1
- Private Project:**
- Format:** Source Binary
- Type:** Bus Payload Mission
- Compatible SDKs:** Compatible With All SDKs
- Description:** ZCU 104 Resource Management
- Source:** Git Repository Link Direct Upload

A large grey box with a folder icon and the text "Click or drag file to this area to upload" is positioned below the "Direct Upload" option. A "Submit" button is located at the bottom right of the form.



Testbed Class Upload

The screenshot shows a web browser window with the URL `localhost:5000/new/testbed`. The page is titled "Create New" and is for creating a "Testbed Class". The left sidebar contains navigation options: Explore, New, Testbeds, New Testbed Class (highlighted), New Testbed Insta..., Testbeds, Applications, Test Results, Assets, Design, Use, and Help.

Testbed Class Testbed Classes are configurations or packages, which are intended to be tested against applications.

Avatar: Recommended: 140px x 140px. png and jpg accepted.

Name: ✔

Version Number:

Compatible SDKs:

Individual SDKs: SmartSat Linux - Embedded (Latest) Linux - Desktop (Latest) VxWorks (Latest)

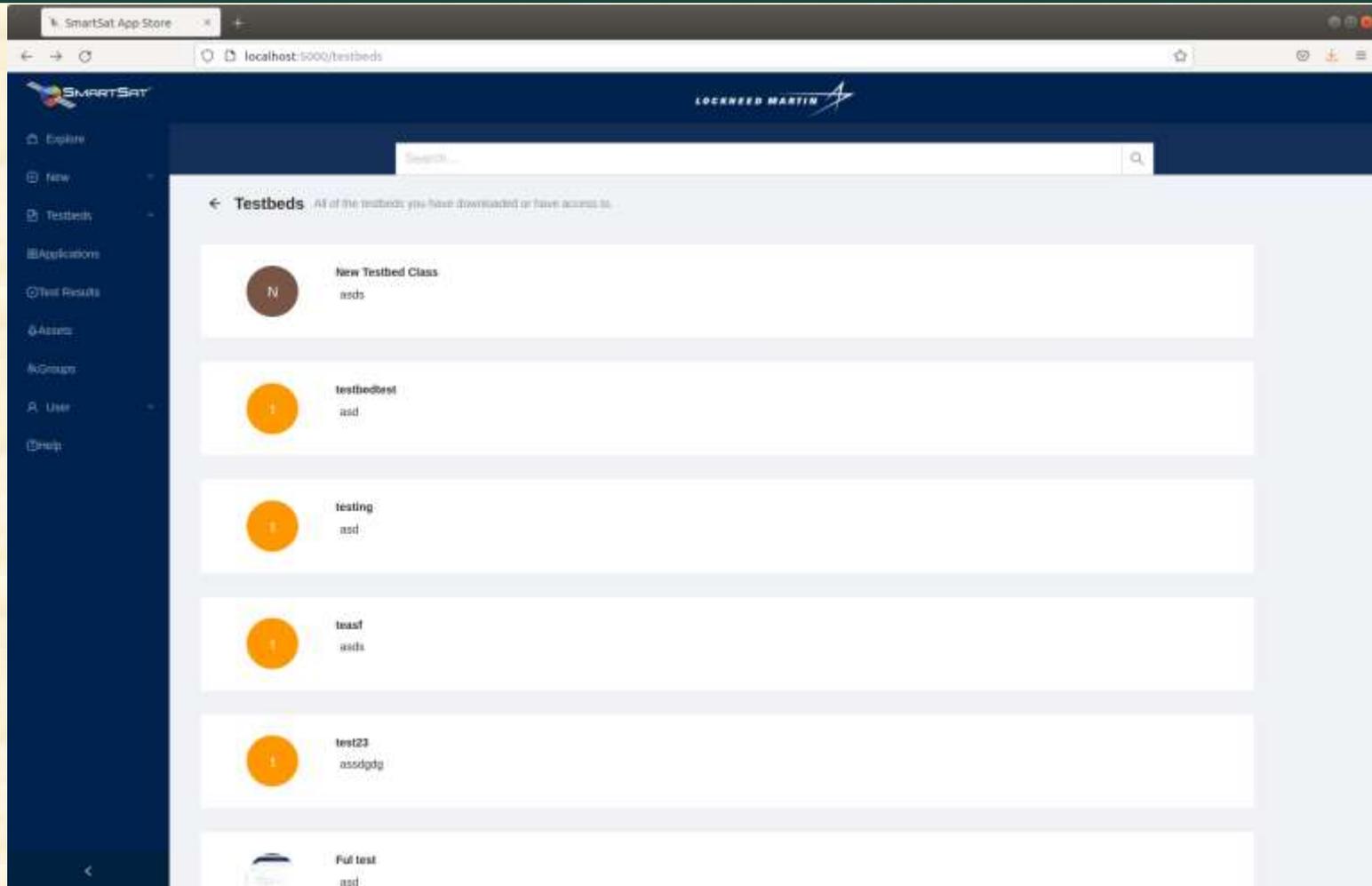
Description:

Python Package:

Support for a single or bulk upload.
zcu102_smartsat_linux-1-py3-none-any.whl



Testbeds Page



Test Results Page

The screenshot displays the SmartSat App Store interface. The browser address bar shows the URL: localhost:5000/application/4253960-472c-4949-958c-9b26ed96269a/1.1. The application title is "ghog149/Version: 1.1". Below the title, there are two tabs: "Build Log" and "Test Results Log", with "Test Results Log" being the active tab. An "Edit" button is visible in the top right corner of the log area. The test results are organized into two columns: "Software" and "Hardware".

Software	Hardware
Ubuntu Bionic	ZCU
ZCU102 SmartSat Linux	NVIDIA
ZCU1023 VXWorks	
Jetson TX2 SmartSat Linux	
RHEL 7	



What's left to do?

- Features
 - Support for VxWorks hardware testing
 - Ability to select custom PyPi Server
- Stretch Goals
 - RESTful API that supports App Store Automation
 - Site Backup and Site Mirroring
 - Patch outstanding App Store bugs



Questions?

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