MICHIGAN STATE UNIVERSITY

Beta Presentation

CMS: Cybersecurity Management System

The Capstone Experience

Team Aptiv

Dillon Brown
Wei Jiang
Clayton Peters
Ashtaan Rapanos
Winton Qian

Department of Computer Science and Engineering
Michigan State University

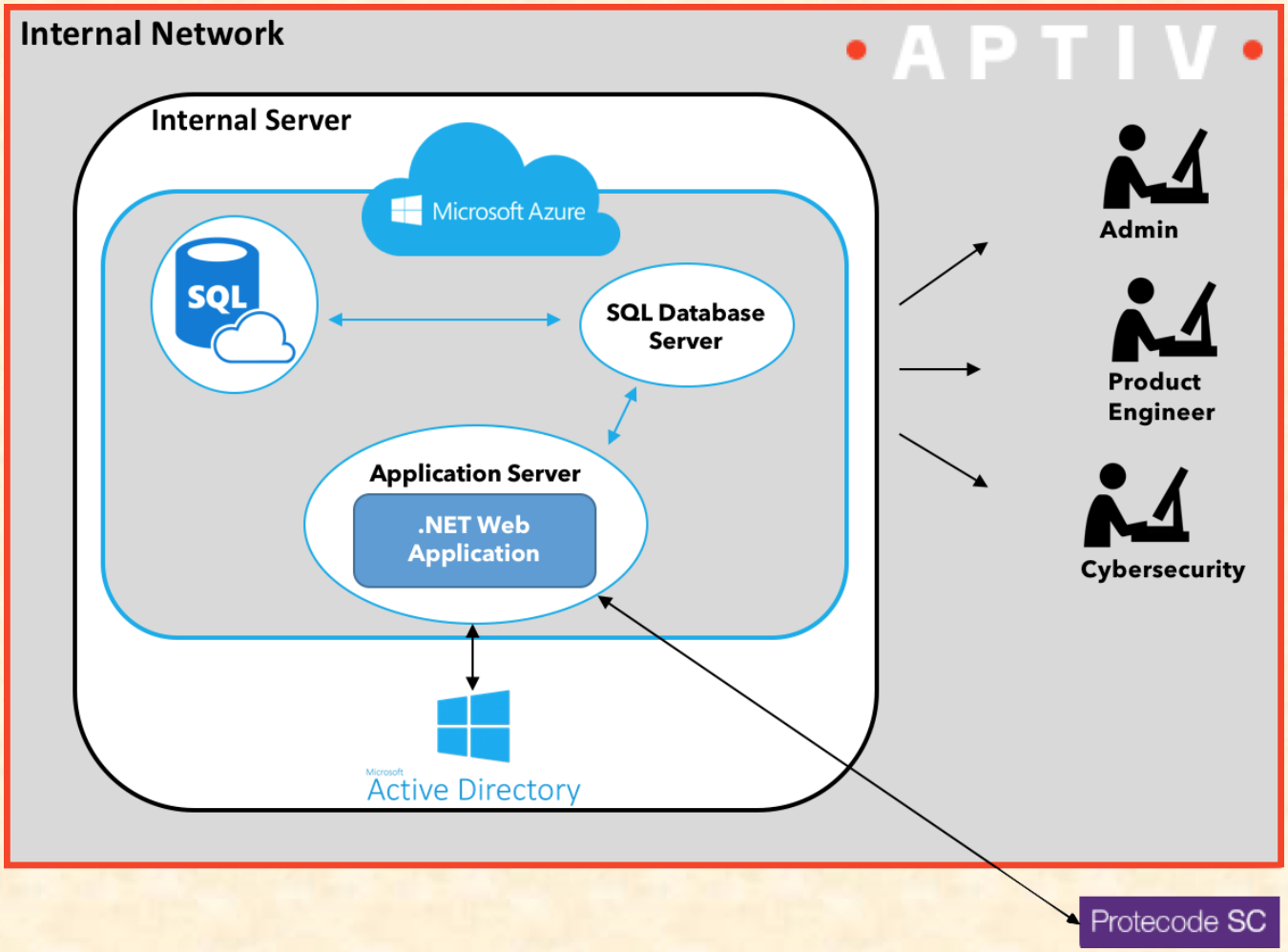
Spring 2018

From Students…
…to Professionals

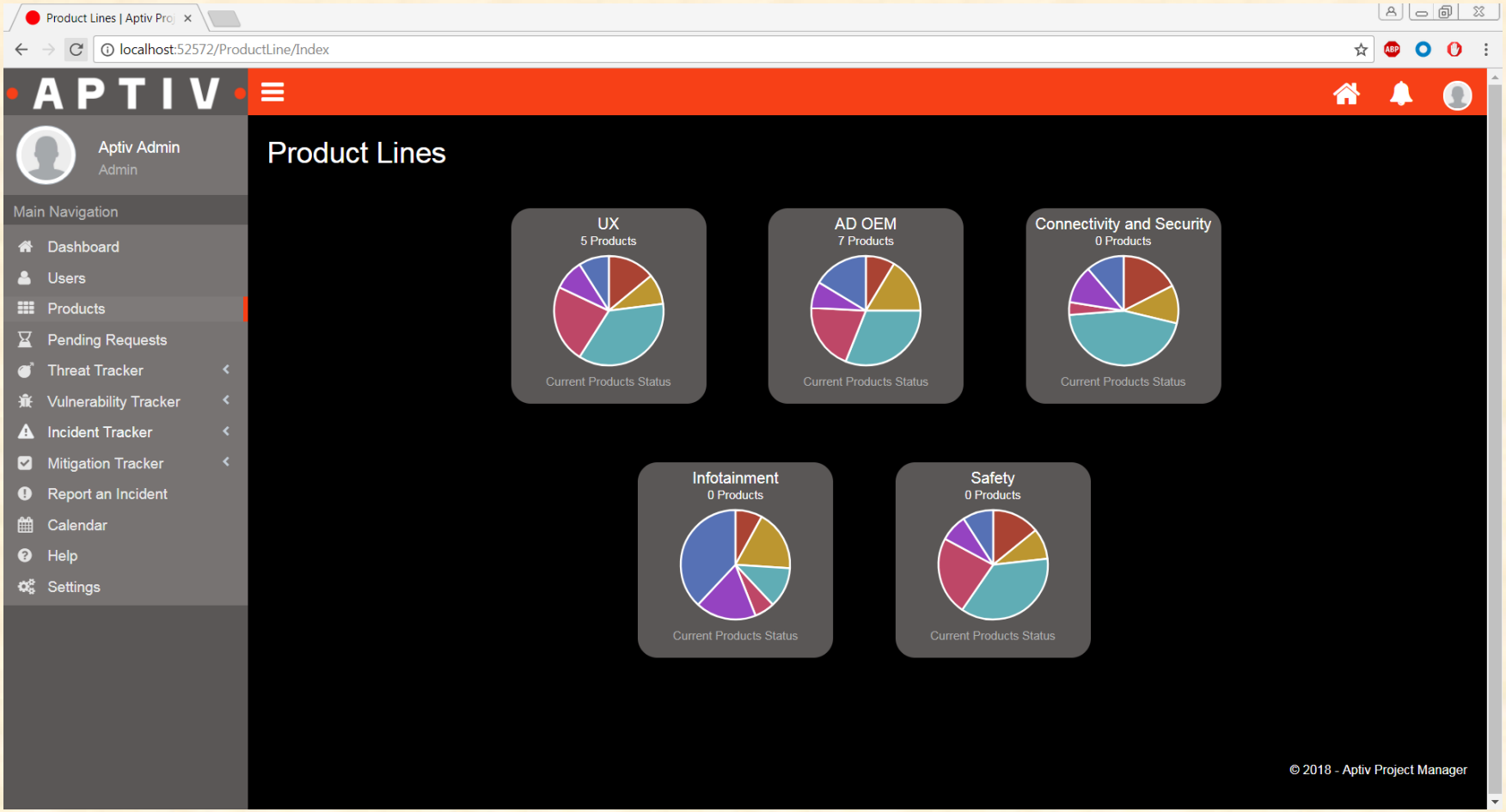
Project Overview

- Web application to help with automation and consolidation of Aptiv's product cybersecurity processes
- 4 Trackers for analysis and visualization of information collected by system
  - Threats/Risks
  - Vulnerabilities
  - Incidents
  - Mitigations
- Increase productivity and help communication by implementing request system, email alerts and notifications

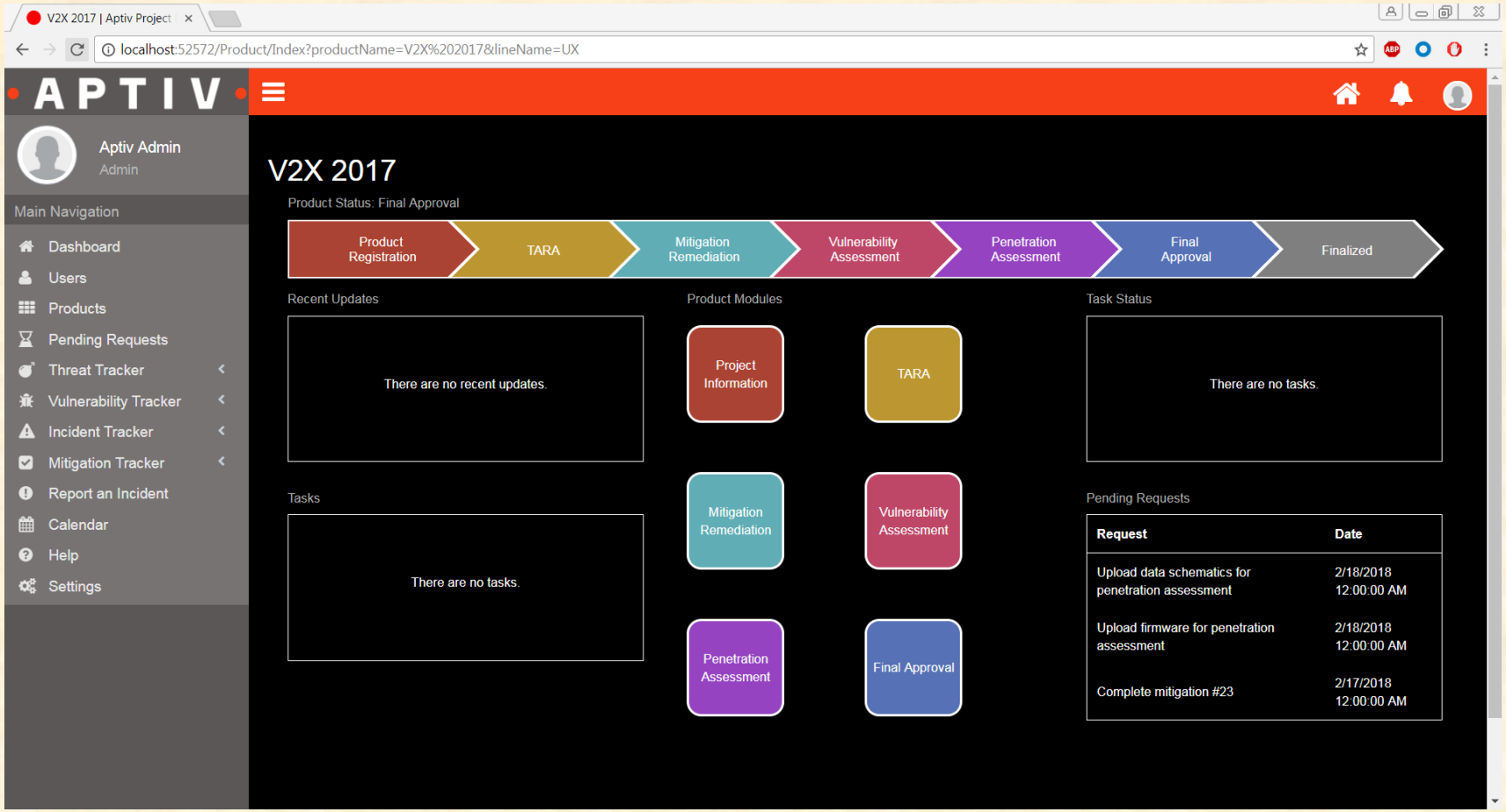
System Architecture



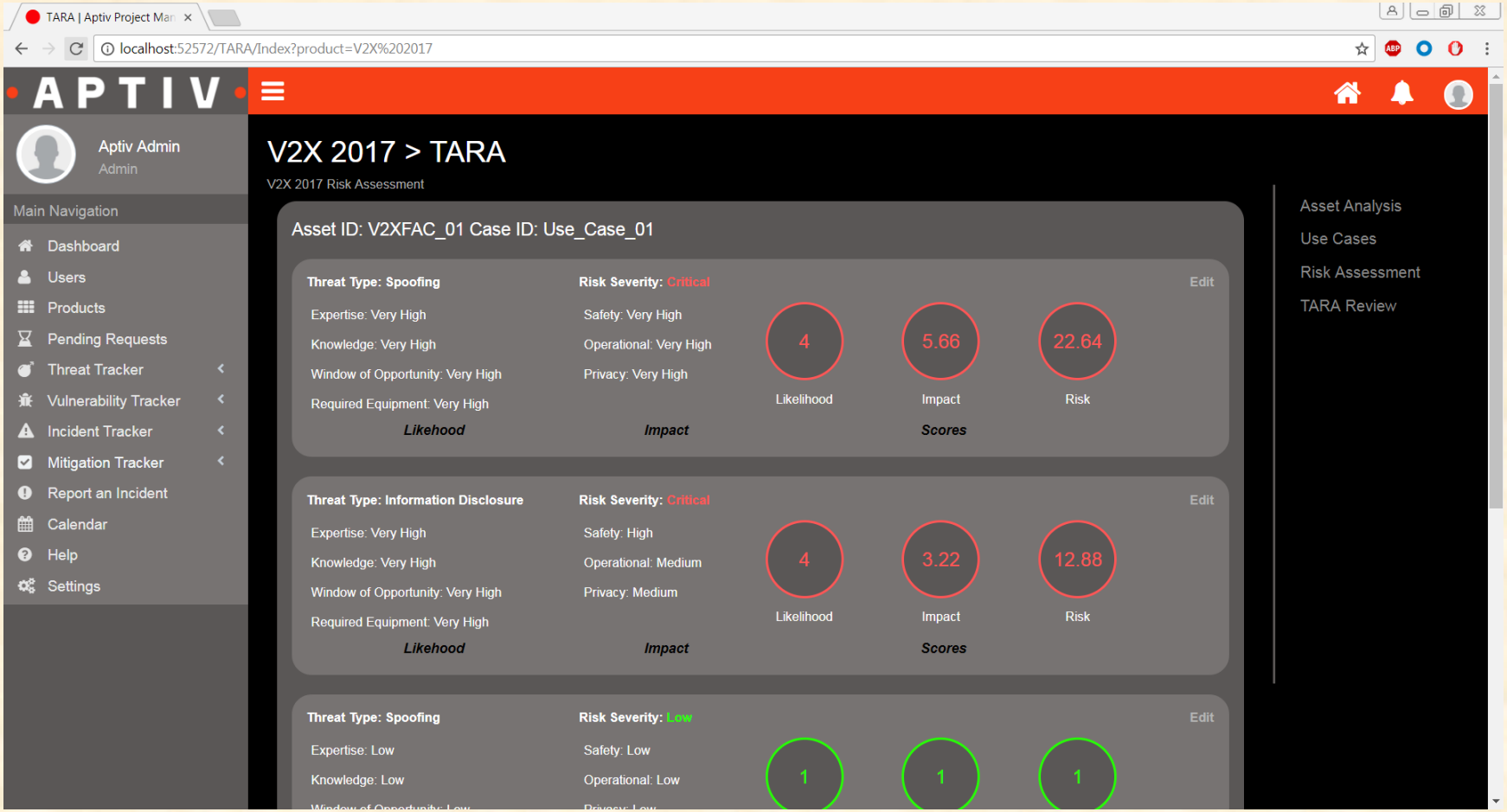
Product Lines



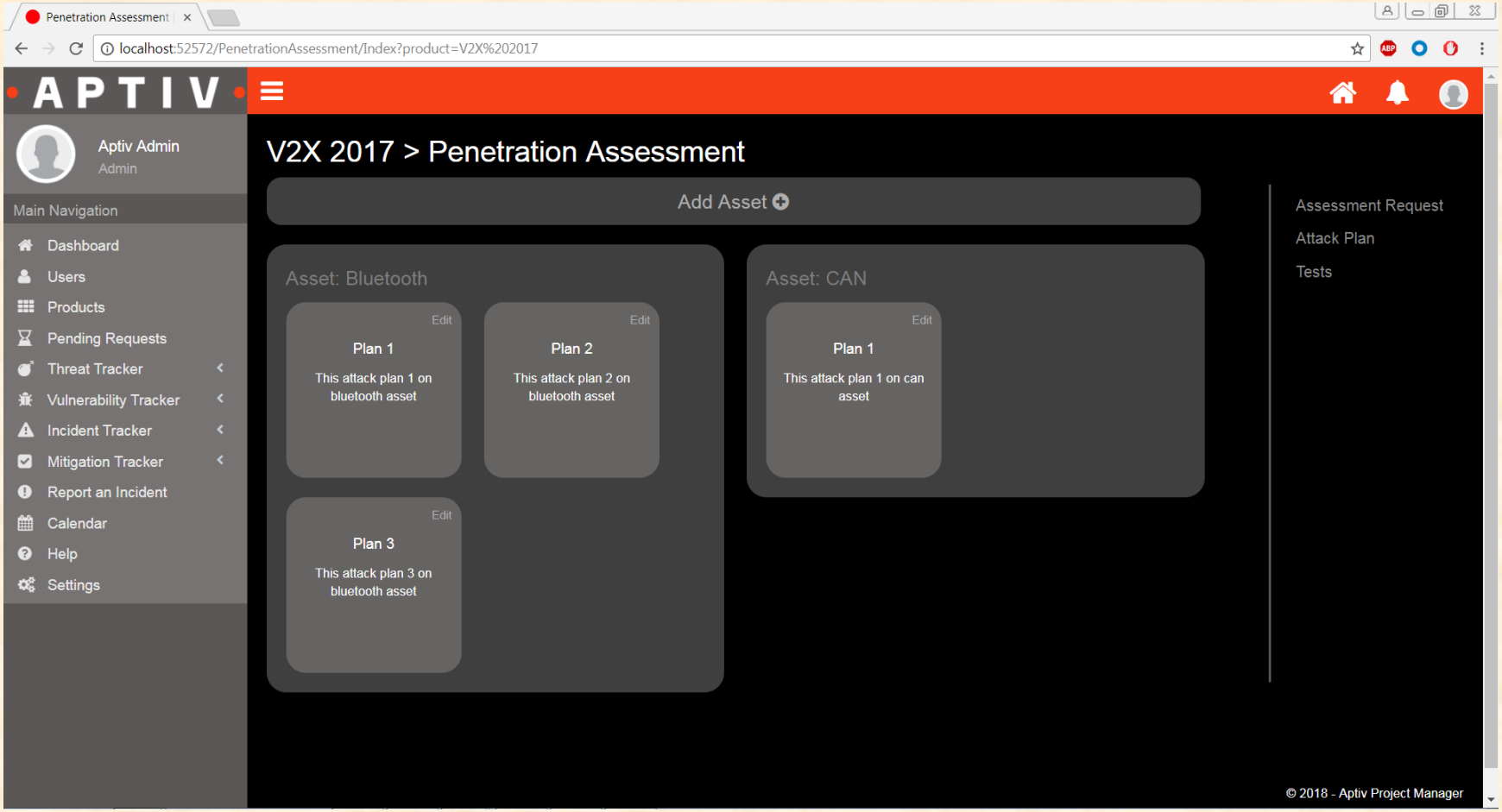
Product Page



TARA Module


TARA | Aptiv Project Mar
localhost:52572/TARA/Index?product=V2X%202017
APTIV
Aptiv Admin
Admin
Main Navigation
Dashboard
Users
Products
Pending Requests
Threat Tracker
Vulnerability Tracker
Incident Tracker
Mitigation Tracker
Report an Incident
Calendar
Help
Settings
V2X 2017 > TARA
V2X 2017 Risk Assessment
Asset ID: V2XFAC_01 Case ID: Use_Case_01
Threat Type: Spoofing
Risk Severity: Critical
Edit
Expertise: Very High
Knowledge: Very High
Window of Opportunity: Very High
Required Equipment: Very High
Likehood
Safety: Very High
Operational: Very High
Privacy: Very High
Impact
4
5.66
22.64
Likelihood
Impact
Risk
Scores
Threat Type: Information Disclosure
Risk Severity: Critical
Edit
Expertise: Very High
Knowledge: Very High
Window of Opportunity: Very High
Required Equipment: Very High
Likehood
Safety: High
Operational: Medium
Privacy: Medium
Impact
4
3.22
12.88
Likelihood
Impact
Risk
Scores
Threat Type: Spoofing
Risk Severity: Low
Edit
Expertise: Low
Knowledge: Low
Safety: Low
Operational: Low
1
1
1
Asset Analysis
Use Cases
Risk Assessment
TARA Review

Penetration Assessment Module



What’s left to do?

- Project video
- Bug fixes
- Input validation
- Small UX changes

Questions?