1 Group Id

Group ID: SCOE(01)

2 Project Title

Endpoint Software/Application Management Portal

3 Project Option

Industry Sponsored

4 Internal Guide

Mrs. A.R Joshi

5 Sponsorship and External Guide

Sponsorship: Persistent Systems Pvt. Ltd.
External Guide 1: Mr. Saheel Inamdar
External Guide 2: Mrs. Akanksha Jain

6 Problem Statement

Develop a solution which will work as a platform to provide softwares on any endpoint accessible.

7 Abstract

The installation of any software requires prior knowledge of the software dependencies which only a person with some technical background will have. The installation process could be tedious and time consuming at times. Endpoint Software/Application management portal will work to manage software and applications on any endpoint. It will be used to automate the process of software installation to reduce the manual efforts required during installation of a software such as- extraction, installation, post-configurations, etc. and will also be time saving.

The software will consist of a Web UI that would be used to take the requirements from the user such as - name of the software, version, end-point operating system. The extraction and installation of the software will be done by the chef tool. Installation of applications would be done by the docker tool. Rest API will act as an interface between the front end and the back end.

8 Goals and Objectives

- To manage softwares and applications on any endpoint.
- Install multiple softwares on a single endpoint in parallel.
- Install a single software on multiple endpoints in parallel.

9 Relevant mathematics associated with the Project

System Description:{ I , O , F , Fs , Ff }

- Input I = {R1,R2,R3,...,Rn }
  R1 = Request made by Client1.
  R2 = Request made by Client2.
  R3 = Request made by Client3.
  . . Rn = Request made by Client4.

  For each Client R1 = {R11,R12,R13,...,R1n }
  R11,R12,R13,...,R1n can be the multiple requests made by the Client 1 in Parallel.

  U = {U1,U2,U3,U4 }
  Where U1,U2,U3,U4 are tuples
  U1 = Operating System name
  U2 = Software name
  U3 = User Credentials
  U4 = Prerequisites

- Intermediate Output J = {J1,J2,J3,...,Jn }
  J1 = Request R1 is prcessed by job J1.
  J2 = Request R2 is prcessed by job J2.
  J3 = Request R3 is prcessed by job J3.

. . Jn = Request Rn is prcessed by job Jn.

- Output O = Set of processed requests
  O = {PR1,PR2,PR3,...,PRn}

- Functional Requirements, F ={ F1, F2 }

  Where,
  F1 = Install a software.
  F2 = Install an application.

  F1 = {F11 , F12}
  Where,
  F11 = Install chef client on the endpoint.
  F12 = Get the installer from the specified location and generate a chef recipe.

  F2 = {F21 , F22 , F23} Where,
  F21 = Install docker on the endpoint.
  F22 = Build docker images to hold the applications.
  F23 = Create docker container that holds the docker images.

- Success Conditions:
  1. Software successfully installed.
  2. Application successfully started.

- Failure Conditions:
  1. Connection not established.
  2. Incompatible dependencies.
  3. Chef client not available for the Operating System.
  4. Docker installation not done properly.

10 Plan of Project Execution

- List of Activity Performed By Tushar Dahibhate

S.No	Activity Performed	Start Date	End Date
1	Literature Survey	14-07-2015	30-07-2015
2	Study of Docker	30-07-2015	17-08-2015
3	Study of UML Diagrams	5-09-2015	12-09-2015
4	Study and implementation of Data Design	14-09-2015	20-09-2015
5	Study of Latex Environment.	25-09-2015	02-10-2015
6	Preparation of Project Report in Latex	15-10-2015	21-10-2015

- List of Activity Performed By Sushant Dharmadhikari

S.No	Activity Performed	Start Date	End Date
1	Literature Survey	14-07-2015	30-07-2015
2	Study of Chef	30-07-2015	17-08-2015
3	Study and implementation chef	5-09-2015	12-09-2015
4	Study of Feasibility Analysis	14-09-2015	20-09-2015
5	Study of Latex Environment	25-09-2015	02-10-2015
6	Preparation of Project Report in Latex	15-10-2015	21-10-2015

- List of Activity Performed By Krish Gambhir

S.No	Activity Performed	Start Date	End Date
1	Literature Survey	14-07-2015	30-07-2015
2	Study of Rest API	30-07-2015	17-08-2015
3	Study of Software Requirement Specification	5-09-2015	12-09-2015
4	Study of Mathematical Model	14-09-2015	20-09-2015
5	Study of Idea Matrix.	25-09-2015	02-10-2015
6	Preparation of Chapterwise Project Report	15-10-2015	21-10-2015

- List of Activity Performed By Shruti Kothari

S.No	Activity Performed	Start Date	End Date
1	Literature Survey	14-07-2015	30-07-2015
2	Study of development of Web UI using HTML/CSS	30-07-2015	17-08-2015
3	Study of Software Requirement Specification	5-09-2015	12-09-2015
4	Study of Goals and Objectives	14-09-2015	20-09-2015
5	Study of Idea Matrix.	25-09-2015	02-10-2015
6	Preparation of Chapterwise Project Report	15-10-2015	21-10-2015