101 Solutions

CSIR - Distributed Application Manager Project Management Document

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Version 0.5

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Change Log

Date	Version	Description
12 Sept	Version 0.1	Document Created
12 Sept	Version 0.2	Added member profiles
12 Sept	Version 0.3	Added burndown chart
12 Sept	Version 0.4	Added issue management content
12 Sept	Version 0.5	Outstanding tasks / risks
12 Sept	Version 0.6	Additions to software development process

Contents

1 Overview

1.1 Background

The CSIR is actively developing a distributed simulation framework that ties in with various other real systems and is used to exchange information between them. The client has a number of configurations of this system depending on the requirements of the client which can involve various external applications as well.

One of the issues the client has is to quickly distribute the latest build or configuration files of their software over various computers that are needed for an experiment. In some cases the same computers may be used for other experiments which mean each of the computers may need to have various builds and configuration options.

Another issue they experience is the running, stopping and restarting of the complete simulation. During a simulation it may be determined that certain configuration options may need to be changed and distributed to the affected machines, in which case either all or some components will need to be restarted which can become tedious and time consuming.

1.2 Business opportunity

The goal of our project is to develop an application which is able to maintain various build versions of the simulation framework and distribute these builds to certain designated machines that may be required for an experiment. The application will monitor system statistics of the various machines attached to an experiment and will have the ability to execute applications on those machines which will have different configuration options.

The application will consist of a master and slave component where the master is used to control the distribution of slaves. From the master one will be able to start an experiment which will run the relevant applications on all the necessary machines.

2 Software development process

The software development process that we have opted for are an agile based approach by which we are able to continually improve on the current state

that the project is in. We strive to always have a working project in version control(Git) to ensure that if we need to show our progress, it is there.

Our framework for project management we are using is scrum methodology which we use to ensure that our project stays on track. Our sprints takes place on a week to week basis where we meet in the beginning of each week and also have met during a weekend. During these meetings we discuss the progress and what is to be done for the next week. Daily however we sometimes also have small meetings where we discuss project related work and problems that occur.

Other reasons for taking agile is the continous change that it allows us to incoroporate. This allows us to change when the client changes the requirement and allows us to more easily adapt to that change.

3 Member Profiles

3.1 Francois Germishuizen

Skills:

- General

  - Web Development
  - Database Design
  - Software Design
  - Particular interest in computer networks

- Programming and Markup Languages

– C++	– XML
– C#	– XSLT
– Java	– HTML
– PHP	– CSS
– MySQL	– Javascript
– Microsoft SQL Server	– Qt, learn't during project

Responsibilities:

- Continuous work on the main project

3.2 Jaco Swanepoel

Skills:

- General

  - Organized
  - Detail Oriented
  - Reliable
  - Work well under pressure

- Programming Languages

– C	– Basic Ruby
– C++	
– C#	– Delphi
– Java	– Qt, learn't during project

- Web development

- HTML5
- CSS3
- JavaScript
- JSON
- JQuery
- Microsoft Sql Server
- MySql
- PHP
- XML
- Basic XSL
- Basic DTD and Schema

Responsibilities:

- Continuous work on the main project

- Admin and client communications

3.3 Henko van Koesveld
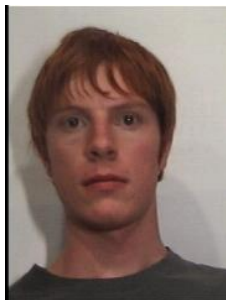
Skills:

- General

  - Database Design and Setup as well as normalization

  - Software design with a focus on extensibility and maintenance

  - Experience in various programming languages

  - Hard working, dedicated

  - Patience in solving problems

  - Well experienced with HTML5 Web development

  - Past experience with Qt framework

- Programming and Markup Languages

- C++
- Qt
- C#
- Java
- PHP

- MySQL, Microsoft SQL Server
- XML, XSLT, HTML, CSS, JSON, JQuery, Javascript
- Knowledge in Assembly, Ruby and Delphi

Responsibilities:

- Continuous work on the main project

- Keep the team updated on some work that needs to be done

4 Issue Management

This section describes how we report issues with the current software as it is and how we will go about resolving those issues.

4.1 Priorities

Each issue is assigned a priority whereby it is handled as such.

4.2 Tools

We first opted for a document based bug tracking software. We then later changed bugtracking to an online available form. We have changed to making use of FogBugz which allows us to have a 45 day free period where we can file any.

FogBugz allows us to set certain tasks that are to be done. One can set the priority of the task such as, scale from 4 to 6 for "Fix if time" where one can be able to fix it if there is time, and a scale of 1 to 3 for "Must Fix" where it must be fixed. The last one is 7 which means that it does not have to be fixed.

This website is not however only meant for the use in errors in code, but also things that must be changed and work that needs to be done. Work such as features that is still misssing, or even work that is still to be done. Other features that are used are the dates where we set out dates in which we believe that item should be done and handled.

Our link to the bug tracking and handling site is appman.fogbugz.com. That is where the majority of bug tracking and job tasks are tracked and handled. The goals we set out are prioritized according to how important that is. Thus we can easily see what is more important than other tasks.

5   Burndown Chart

Burndown chart as at Friday 6 September, iteration 3 demo
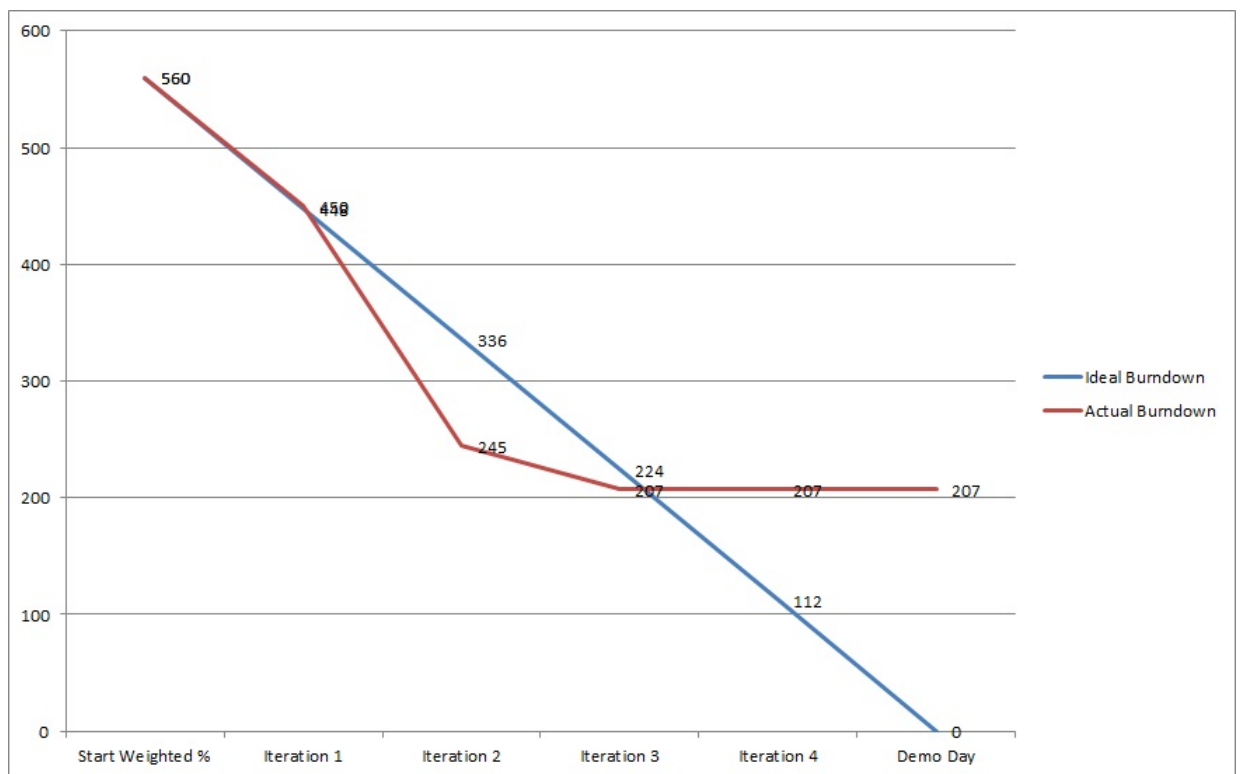
6   Outstanding tasks / risks

We are currently still working on the following things:

- Simulation creation

- Simulation execution

- Storing slave vitals in a MySql database

- Physical copy of builds

- Performance issues such as slow md5 generation