Quality of Service - FFI
IT2901 - Group 7
Preliminary Report

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January 30, 2012

This version is intended to help you get started with important aspects of the project work. As regards analysis and design, you are not expected to provide elaborate accounts in the report; some initial thoughts and sketches will do. However, you should demonstrate in your report that you have come to a mutual understanding with the customer about the project task (including its motivation and scope), and that your team has thoroughly worked on the planning and organization of the project.

We want you to create a chapter structure for the whole report and start filling it with contents. You may modify the structure later.

Contents:

- A description, in your own words, of the problem that you are going to solve for the customer. It might be useful to provide a high-level description of the current situation (AS-IS) and of the target situation (TO-BE). 2.1.2[taskdesc]

- A high-level description of the main requirements (functional and non-functional) for the system to be developed. The level of details depends on the type of project and the approach you are choosing. It is however important that you work to reach an agreement with the customer.2.2[taskreq]

- A brief outline of alternative solutions. The relevance of this point depends on your project. In general, you are expected to check if there are already existing solutions available on the market or as open source and make an evaluation of them. When you are evaluating different alternatives, it is important to make clear your evaluation criteria. Evaluation should be discussed with the customer and any choice should be agreed upon with the customer.

- A tentative outline / sketch of the architecture of your solution. We do not require much here, but make a try!

- A description of your team organization Roles and responsibilities

- A justified choice of process model for the development work Will you work iteratively and/or incrementally, will you make a mock-up or prototype; phases and iterations...

- A preliminary overview of the development environment Which tools/infrastructure do you plan to use for development and collaboration, e.g. for programming, versioning, testing, documenting, archiving, communicating within your team, communicating with other stakeholders,..
- A tentative time-plan of the project

Abstract

This is the paper's abstract ...

Contents

1 Project Introduction

1.1 Outline

The remainder of this article is organized as follows. Section **??** gives account of previous work. Our new and exciting results are described in Section 9. Finally, Section 10 gives the conclusions.

2 Task Description and Requirements

2.1 Task Description

2.1.1 Abstract

Our task is to provide a quality of service (QoS) layer to web services for use in military tactical networks. These networks tend to have severely limited bandwidth, and our QoS-layer must prioritise between different messages, of varying importance, that clients and services want to send. Our middleware will have to recognize the role of clients, and together with the service they are trying to communicate with, decide the priority of the message.

2.1.2 Description

2.2 Requirements

- Written in java
- High priority messages must arrive, even at the cost of dropping lower priority messages.
- Use standards where they can be used

  SAML

  Diffserv

  XACML

  WS-Security
- Test thoroughly

  Use NS3 for testing

- Extensive documentation
- Use metadata to determine priority
- GlassFish must be supported as the application server
- Must be able to set priority on network layer packets

  Currently there is only one priority class defined by NATO, the BULK class, but this will most likely change in the future, as such our middleware layer needs to be expandable enough to handle this change in the future.

- There are no requirements on resource usage, but we should try to keep it lightweight.

  The customer has only said that we can expect the product to be used on a standard current laptop with full Java support

3 Project Management

How we organize ourselves.

3.1 Team Organization

3.2 Risk Assesment

3.3 Process Evaluation

4 Project Methodoloogy

How we organize the project.