

PROJECT INTRODUCTION

Objectives

To deploy commercial certificates on the National Grid Pilot Platform (NGPP) to increase security robustness.

Project Investigator / Manager

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<http://www.ngpp.ngp.org.sg/ngppca.html>

Abstract

The effort was undertaken to migrate from the free digital certificates to commercial certificates. Netrust was chosen as the certificate authority through an open tender. The migration has been completed.

PROJECT DETAILS

Description

Digital Certificates are used in the Globus Toolkit (GT) middleware as part of their Public Key Infrastructure (PKI) framework for security. While the creation of digital certificates could be accomplished by using public source certificate generation tool (e.g. simpleCA), the level of security implemented is dependent on the processes in checking the identity of the user or host before issuing the certificate, and also the extent to which the root key is stored. These are processes stated in the Certificate Policies (CP) and the Certification Practice Statement (CPS). It is the CP and CPS that constitute a basis for the accreditation of a Certification Authority (CA).

This effort entails the migration from free digital certificates to commercial CA digital certificates so as to:

- Increase security robustness, in preparation for industry focus in Phase 2 of the NGPP; and
- Understand security procedures & issues pertaining to commercial CA certificates.

Netrust Pte Ltd was chosen as the Certificate Authority in an open tender. NGPP uses commercial digital certificates issued by Netrust. NGO is the Organisation Registration Authority that handles all digital certificate applications.

For test-bedding and trial use, NGPP has its own Test CA to handle adhoc, short-lived certificates, which do not require the security level that commercial digital certificate serves.

NGPP sites nominate representatives to receive digital certificates. All existing NGPP sites have migrated their host certificates to Netrust certificates.

Effort is carried out on a continuing basis to issue certificates for new users of NGPP resources and additional hosts added to NGPP.

Collaborating Organizations:

- Netrust Pte Ltd
- APGrid PMA