Neda Libre Email Appliance
Design and Implementation Notes
Debian Qmail++ – A Family of Adopted LSIP Components

Draft Document – Reflects Work in Progress

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Mohsen Banan
http://mohsen.banan.1.bbyname.net/ContactMe

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Chapter 1

Overview

1.1 This is a Draft Document

It reflects work in progress. It is subject to frequent changes. Use at your own risk.

1.2 Part of LSIP

This document is part of Libre Sercices Integration Platform Neda-LSIP.

Neda-LSIP is a comprehensive set of tools and conventions for the transformation of software into services. Neda-LSIP is the key technological component of our realization of the concept of Libre Services, allowing practical and cost-effective aggregation of free software components into coherent services. Neda-LSIP is free software itself, available under the Affero GPL version 3 license. For complete details see the document titled, Neda-LSIP Design and Implementation Notes [6].

You can obtain Neda-LSIP by following the instructions below:

```
cvs -d "@pserver:anoncvs@cvs.bysource.org:/rep1" checkout -d osmt public/osmt
```

Neda-LSIP is a series of self documenting scripts. The most current and complete documentation is embedded in the scripts.

This document is for the most part auto generated and includes much information that is extracted from the LSIP scripts directly.

This document provides structure and organization to the individual script information.

1.2.1 Realizations and Uses of Neda-LSIP

Neda-LSIP is a platform it allows for good things to be built on top of it.

The 3 categories of things that use Neda-LSIP are:

- Ready to run Software. To be installed by the user.
- Pre-Configured Servers. Ready to be plugged in. See http://store.neda.com
• Ready to use ByStar Internet Application Services.
• As part of a Libre Service Engine.

1.2.2 About Neda Libre Appliances

Certain functional profiles (sub-sets of Neda-LSIP) are often desired as dedicated ready to run servers. In that spirit, we have created the following Neda Libre Appliances.

• Neda Libre Email Appliance. See [7]
• Neda Libre Web Appliance.
• Neda Libre Intranet Office Appliance.
• Neda Libre Fax Appliance. See [5]

1.3 Neda-LSIP Approach and Policy

General Preference for std debian distribution packages. Bystar is layered on top of Debian/Ubuntu. qmail and all else is part of Debian/Ubuntu.

Versions – Stable and testing.

Goals
-----

Highly Scalable
--------------

Plug and Play
-------------

Robust and Secure
-----------------

Expandable
----------

Best of Breed incorporation

1.4 About This Document

Neda Libre Email Appliance is based on Debian and qmail++ as a coherent family of adopted LSIP components.

Neda Libre Appliances can be used as:

UL
• Ready to run Software. To be installed by the user.
Pre-Configured Servers. Ready to be plugged in. See [http://store.neda.com](http://store.neda.com).

Ready to use ByStar Internet Application Services.

As part of a Libre Service Engine.
Chapter 2

Email Facilities

2.1 Big Picture Perspective

lpEmailHosts.sh
lcaQmailHosts.sh

OBSOLETED BY: /libre/ByStar/InitialTemplates/activeDocs/bxServices/mailManage/roadmap/fullUsagePanel-en.org

2.2 Summary of Lower Layer LSIP Facilities

2.3 Summary of Mail Layer LSIP Facilities

2.4 Summary of Peer Layer LSIP Facilities

2.5 MTA Facilities

qmail 1.03 ++
CHAPTER 2. EMAIL FACILITIES

2.5.1 Incoming Mail Processing

2.5.1.1 RBL

2.5.2 Mail Queue Processing

2.5.3 Outgoing Mail Processing

2.5.4 MMA Qmail

2.5.4.1 Model and Terminology – MMA Qmail

2.5.4.2 Files Overview – MMA Qmail

2.5.4.3 Hints – MMA Qmail

2.5.4.4 Pointer and References – MMA Qmail

2.5.5 MTA Anti-Spam Facilities

- RLB - qrlbcheck - Reject at SMTP (Priority 2) - spamGuard
  - qconfirm

2.6 Mail Submission and Injection

SMTP Auth
2.7 MAIL DELIVERY

2.6.1 Mail Submission Anti-Spam

2.7 Mail Delivery

Extracted by mmaQmailAddrs.sh -i help

Description of help -- help

Account Processing:
===================

vis_acct(Manipulate): -p acctName
do_acct(Manipulate): -s qmailAcctsList_

** Manipulate an account entry as locDeliveryAcct
in /var/qmail/users/

Address Processing:
====================

vis_addr(Manipulate): -p acctName -p localPart -p mbox,forward,progs
- p FQMA -p mbox,forward,progs
do_addr(Manipulate): -s qmailAddrsList_

** Manipulate an addr by editing the dotQmailFile

Account/Address Processing:
============================

do_acctAddrs(Manipulate): -s qmailAcctsList_

** Manipulate an account entry as locDeliveryAcct
in /var/qmail/users/
and manipulate addresses associated with the account.

Account VirDom Manipulate:
==========================

vis_virDom(Manipulate): -p acctName -p domainPart

do_acctAddrsVirDom(Manipulate): -s qmailAcctsList_

** Manipulate a virtual domain

Address ControlFile Show:
===========================
CHAPTER 2. EMAIL FACILITIES

vis_addrCtlFileShow : -p acctName -p localPart
                    -p FQMA

do_addrCtlFileShow : -p acctName -s qmailAddr_

** Show the dotQmailFile for an address

Account Addresses FQMA Show:
============================
vis_addrsFqmaShow: -p acctName

do_acctAddrsFqmaShow: -s qmailAcctsList_
                   -s qmailAcct_
                   -s qmailAddrList_

** Show all addresses corresponding to
an account in FQMA format.

2.7.1 Mail Delivery Anti-Spam: SpamAssassin

2.7.2 Mail Delivery Anti-Virus: ClamAV

2.8 MailBox Management Facilities

MaildirToMbox
  Vacation
  Autoresponder
  qsecretary

2.9 MailBox Access Facilities

2.9.1 POP

2.9.2 IMAP

Our Choice of IMAP server is courier.
We Considered the below mentioned alternatives:

cyrus       = Cyrus IMAP server
uw          = University of Washington’s IMAP server
courier     = Courier IMAP server
dovcod
2.9. MAILBOX ACCESS FACILITIES

2.9.2.1 Model and Terminology – MMA IMAP

Extracted by mmaImapRoadmap.sh -i modelAndTerminology

Description of modelAndTerminology -- modelAndTerminology

Terminology and Model:
=================================

Objects Overview:
-----------------

mmaGnats Object Processors and Containers:
-------------------------------------------

mmaGnatsServerHosts.sh

2.9.2.2 Files Overview – MMA IMAP

Extracted by mmaImapRoadmap.sh -i help

Description of help -- help

DESCRIPTION

mmaGnats (MailMeAnywhere QMAIL) is a set of consistent policies built on the QMAIL as a CAPABILITY and on (OSMT) Open Services Management Tools.

mmaGnats Commands, each contain a set of related functions which allow you to accomplish specific tasks. Specifically:

<table>
<thead>
<tr>
<th>COMMAND</th>
<th>TYPE</th>
<th>USED BY</th>
</tr>
</thead>
<tbody>
<tr>
<td>mmaGnats.sh</td>
<td>action.sh</td>
<td>any</td>
</tr>
<tr>
<td>mmaGnatsLib.sh</td>
<td>library.sh</td>
<td>root/any</td>
</tr>
<tr>
<td>mmaGnatsBinsPrep.sh</td>
<td>action.sh</td>
<td>root</td>
</tr>
<tr>
<td>mmaGnatsServerHosts.sh</td>
<td>subjectAction.sh</td>
<td>root/any</td>
</tr>
<tr>
<td>mmaGnatsAdmin.sh</td>
<td>action.sh</td>
<td>root/any</td>
</tr>
</tbody>
</table>

At A Glance
-----------
CHAPTER 2. EMAIL FACILITIES

Basic qmail
-----------
mmaGnats.sh -- This File. General Orientation and Information
mmaGnatsLib.sh -- To be included in all mmaGnats scripts. General configuration parameters and general useful functions go here
mmaGnatsBinsPrep.sh -- Prepare binary files for qmail/ezmlm -- for relevant platforms and versions
mmaGnatsBinsInstall.sh -- Install mmaGnats binaries on opRunHostName
mmaGnatsServerHosts.sh -- For subject host, configure qmail
mmaGnatsAdmin.sh -- Start, stop and addNewAccounts
mmaGnatsUserConfig.sh -- Setup Per user environment parameters.

2.9.2.3 Hints – MMA IMAP

Extracted by mmaImapRoadmap.sh -i howTos

Description of howTos -- howTos

A) How Do I setup a null client from scratch?
Follow (A-1), and then:

3) Specify basic null client parameters (smarthost, domain, ...)
In ../siteControl/nedaPlus/mmaGnatsListItems.main
add an entry for your host. Then:

mmaGnatsHosts.sh -s bacs0021 -a configure

4) Verify and Monitor installation

mmaGnatsAdmin.sh -i fullReport

5) Sendout a test message.

mmaGnatsUserConfig.sh -i mailTest

6) Allow users to customize their desired parameters.

mmaGnatsUserConfig.sh
2.10. USER AGENT FACILITIES

2.9.2.4 Pointer and References – MMA IMAP

Extracted by mmaImapRoadmap.sh -i pointersAndReferences

Description of pointersAndReferences -- pointersAndReferences
cgi-bin is: /usr/lib/cgi-bin/gnatsweb.pl
Gnats web conf params are in: /etc/gnatsweb/
Web config is in: + /usr/doc/gnatsweb/CUSTOMIZE.vars.gz

2.9.3 WebMail

2.9.3.1 Squirrelmail

sqwebmail

2.10 User Agent Facilities

2.10.1 Gnus

2.10.2 Mozilla

2.11 Mailing List Facilities

2.11.1 ezmlm

2.11.2 mhonarc

2.12 In Access Units

2.12.1 In Fax Access Unit - Mail


2.12.2 WhiteBerry: In EMSD Access Unit - Mail

See [1], [2], [3], [4] for details.
2.13 Out Access Units

2.13.1 Mail - Out Access Unit

2.13.2 WhiteBerry: Mail - Out Access Unit
See [1], [2], [3], [4] for details.

2.14 Mail Processing Tools

2.14.1 mess822

2.15 Mail Monitoring and Analysis

2.15.1 qmailanalog
Chapter 3

Peer and Lower Layer Facilities

3.1 Related Peer Facilities

3.1.1 web

3.2 Lower Layer Facilities

daemontools ucspi tcpserver djbdns splogger
Chapter 4

Large Site Deployment

4.1 Introduction

4.1.1 General Policies & Procedures

4.1.2 Site Deployment Policies & Procedures

The abbreviations that are used in Figure 4.1

EMR-IN: Edge Mail Router - Inbound
MB provide the description.

EMR-OUT: Edge Mail Router - Outbound
MB provide the description.

SMR-DS: Site Mail Router - Delivery Server
MB provide the description.

SMR-DS-LIST: Site Mail Router - Delivery Server - List
MB provide the description.

SMR-SS: Site Mail Router - Submit Server
MB provide the description.

SMR-SA: Site Mail Router - Submission Agent
MB provide the description.

MBAS: Mail Box Access Server
MB provide the description.

FDS: Final Delivery Server
MB provide the description.

MUA: Mail User Agent
MB provide the description.

MRUA: Mail Retrieval User Agent
MB provide the description.
Figure 4.1: MailMeAnywhere Site Deployment
4.1. INTRODUCTION

**MSUA:** Mail Submission User Agent

MB provide the description.
Bibliography


