

1.0 Overview

The Federal Emergency Management Information System (FEMIS^{®(a)}) is an emergency management planning and response tool that was developed by the Pacific Northwest National Laboratory^(b) (PNNL) under the direction of the U.S. Army Soldier and Biological Chemical Command (SBCCOM). The *FEMIS Installation Guide* provides instructions for installing the FEMIS software package as well as the Commercial-Off-The-Shelf (COTS) software applications that are necessary for FEMIS to operate.

1.1 Point of Contact

We encourage you to contact us with suggestions or to ask questions. You can contact us by mail, telephone, fax, or E-mail:

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1.2 Document Organization

This document is organized into three sections and two appendices, which include details on the installation and configuration of FEMIS.

- Section 1.0 – Overview – describes the point of contact, acknowledgment, document organization, software products, installation environment and storage requirements, and FEMIS directory structures.
- Section 2.0 – FEMIS UNIX Installation – describes installing the UNIX operating system, the UNIX-based COTS software, installing the FEMIS UNIX software, and creating the FEMIS database.
- Section 3.0 – FEMIS GIS Migration and Configuration – discusses the installation and configuration for upgrading the FEMIS GIS from v1.4.5 to v1.4.6.
- Section 4.0 – FEMIS PC Installation – discusses the installation, configuration, and validation of the FEMIS application on client PCs.

(a) FEMIS software was copyrighted in 1995 by Battelle Memorial Institute.

(b) Pacific Northwest National Laboratory is operated for the U.S. Department of Energy by Battelle Memorial Institute under Contract DE-AC06-76RLO 1830.

- Section 5.0 – Remote Evacuee Registration and Point-to-Point Protocol – discusses the Remote Evacuee Registration feature and establishing and setting up the Point-to Point (PPP)
- Section 6.0 – Stand-Alone Installation of FEMIS v1.4.6 – discusses the installation configuration, and validation of the FEMIS Stand-Alone application.

1.3 Software Products

FEMIS integrates the following COTS software products.

Software Application	Software Company
ArcView GIS	Environmental Systems Research Institute, Inc. (ESRI)
NFS Maestro	Hummingbird Communications Ltd.
Solstice NFS Client	Sun Microsystems, Inc.
Microsoft Windows NT Workstation	Microsoft Corporation
Microsoft Project for Windows	Microsoft Corporation
Oracle	Oracle Corporation
SQL*Net, TCP/IP Adapter, and ODBC Driver	Oracle Corporation
Solaris	Sun Microsystems, Inc.

FEMIS integrates the following government-furnished software products.

D2PC (February 2000)	U.S. Army Soldier and Biological Chemical Command (SBCCOM)
PARDOS v3.1 (May 1997)	U.S. Army SBCCOM
Evacuation SIMulation Model (ESIM v2.1f13)	Oak Ridge National Laboratory

The following software products are optional.

ARC/INFO	Environmental Systems Research Institute, Inc.
Corel WordPerfect	Corel Corporation
Microsoft Office	Microsoft Corporation

1.4 Installation

This section discusses the FEMIS environment and storage requirements.

1.4.1 Environment

For FEMIS to operate correctly, the first step is to install all of the COTS software, including Oracle v8.1.6 on your UNIX system. FEMIS will not operate correctly if versions of the COTS software other than those specified in the *FEMIS Bill of Material (BOM)* are installed.

FEMIS uses SAMBA, NFS Maestro (a Hummingbird Communications Ltd. product), or Solstice NFS Client (a Sun Microsystems product) as its Network File System for PC network communications. The NFS Maestro client, Solstice NFS Client, and SAMBA have been tested by PNNL and are compatible with FEMIS requirements.

Although other vendors may claim to offer a fully standard NFS, or Service Message Block (SMB) emulation, PNNL has not verified and tested any other NFS/SMB configurations for PCs, and thus, cannot endorse such installations.

1.4.2 Storage Requirements

The FEMIS application requires disk space on both the client and server machines. PNNL has estimated the disk space requirements for each.

1.4.2.1 FEMIS Server

Disk space on the FEMIS server is used for:

- Server software (such as, the RDBMS [relational database management system] and the evacuation model).
- FEMIS application.
- FEMIS server utilities (notification, database monitor, replication).
- EOC databases (including archived and historic data).
- Storage of the FEMIS COTS software and the original GIS maps.

The above items can require 15+GB of storage to properly support FEMIS.

There are two sources of disk space associated with a FEMIS server as defined by the *FEMIS Bill of Materials (BOM)*:

1. System disk(s) resident in the Sun Server.
2. Sun SPARCstorage Array connected to the Sun Server.

As stated in the *FEMIS Bill of Materials (BOM)*, PNNL recommends that the FEMIS storage requirement be fulfilled by using arrayed storage disks (StorEdge Array, or an array-like cage system) to ensure that speed and reliability are provided to the FEMIS operational system. PNNL expects the FEMIS application to be placed in its entirety on the arrayed storage disks, which will enable the System Administrators (and PNNL) to better manage the FEMIS product and the EOC databases. PNNL expects the Sun SPARCstorage Array to be reserved solely for FEMIS use.

The system disks are not directly used by FEMIS. The disks are used for the operating system and the supporting applications. PNNL estimates that approximately 2GB of system disk space will be used for the operating system and swap space. Additional system disk space should be used at the System Administrator's discretion.

1.4.2.2 FEMIS PC

Disk space on the client PC is required for the following:

- COTS software needed for FEMIS (Windows NT, ArcView GIS, Microsoft Project, Oracle Net8, and other supporting applications).
- FEMIS application.
- Site specific GIS maps.

The amount of space required by the FEMIS application and supporting software will vary depending on the size of the GIS the user chooses to install. A FEMIS with a medium size GIS installation requires approximately 900MB of disk space, COTS included.

1.4.3 Pre-installation Issues

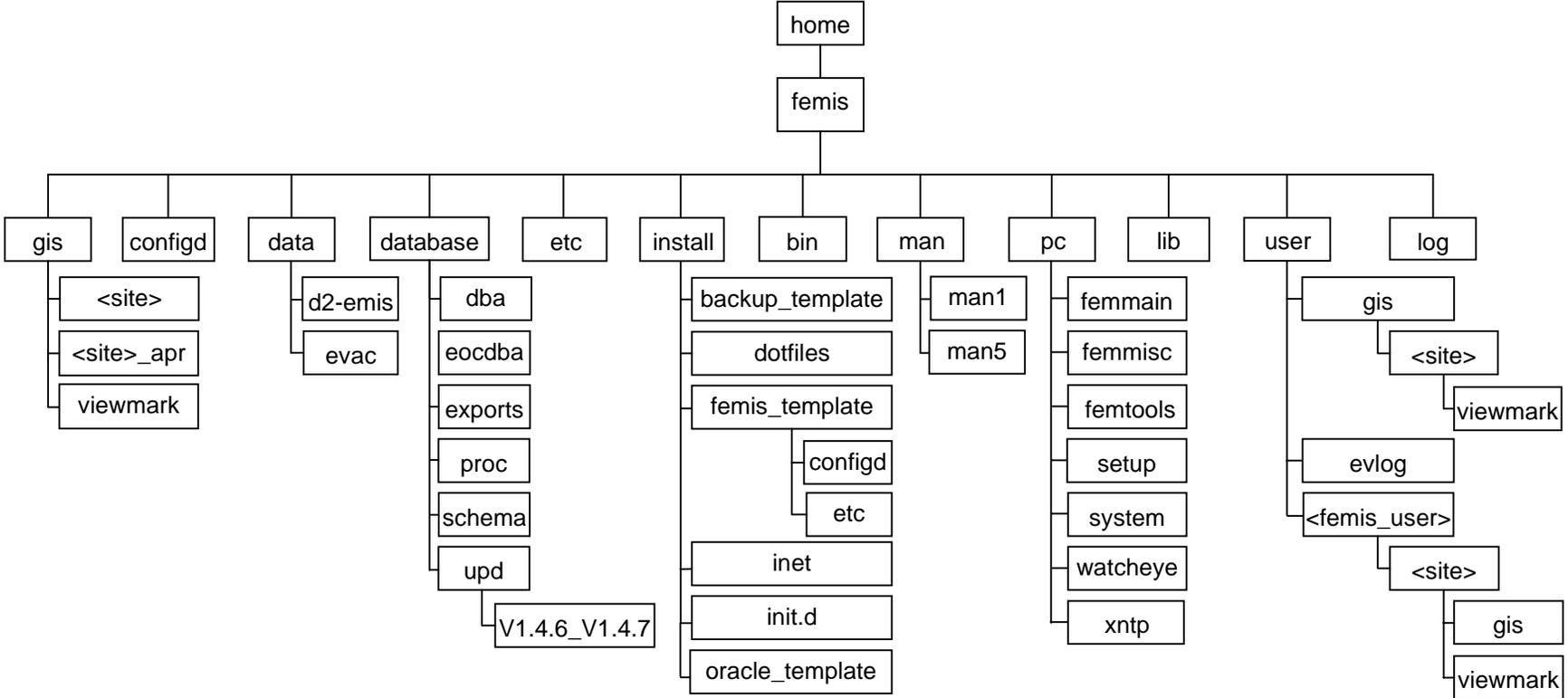
Before you proceed with the installation of FEMIS v1.4.7, the following are pre-installation issues that should be addressed.

- Remove obsolete data such as unneeded exercises and obsolete user accounts.
- Make sure your system has been backed up.
- Remove obsolete D2PC archive cases.
- Clean up any obsolete server data such as obsolete versions FEMIS packages.
- If a general hazard zone theme has not already been added, **the general hazard zone must be added in v1.4.6. prior to the installation of FEMIS COTS and FEMIS in v1.4.7.** Existing General Hazard functionality is supported in FEMIS v1.4.7; however, the scripts to add a general hazard zone theme are not supported in v1.4.7. If you will be adding the County Zone layer, see the v1.4.6 *FEMIS Installation Guide*, Section 5.0, Adding General Hazard Zones to the FEMIS Database.

1.5 FEMIS Directory Structures

The following figures illustrate the FEMIS directory structure on the UNIX server and the directory structure for an emergency management PC workstation.

UNIX Server FEMIS Directory Structure



Emergency Management Workstation

