

# C.V. Hans Feringa

## Personalia:

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## Education:

- Secondary education MAVO/HAVO (graduation 1973 and 1975)
- Social Work, Professional level (B Sw)(graduation 1979)
- Cultural Anthropology, University level (no graduation; period 1980-1984)
- Electronics Engineer (mid level graduation, correspondence education; period 1984 - 1989)
- Computer Science courses (Open University; 1990)
- Several product trainings, mainly on network technology, unix, network management (SNMP,HP Openview), Perl, Python(3), and Unix shell scripting, LAN and WAN protocols, TCP/IP, Sniffer, Internet Security, Prince2 Foundation. (Period 1988 – 2002)
- Puppet Fundamentals (2014)
- Mirantis OpenStack OS100 Bootcamp (2015)
- Puppet Fundamentals (update) and Puppet Practitioner (2015)
- Many meetups (Openstack, Docker, micro services, continuous delivery, AWS), workshops (Docker, Jenkins, Kubernetes)
- CloudBees Jenkins Platform User & Admin Training (2016)

## Certifications:

- LPIC-1 (2005) (Junior Level Linux Professional)
- LPIC-2 (2008) (Advanced Level Linux Professional)
- RHCT (2009) (Red Hat Certified Technician)
- Novell LCA (2010) (Linux Certified Administrator) SUSE Linux Enterprise 11
- RHCE (2010) (Red Hat Certified Engineer) Certificate number 110-347-473
- RHCDS (2011) (Redhat Certified Datacenter Specialist). Exams: Redhat Directory Services and Authentication, Redhat Enterprise Clustering and Storage Management, Redhat Enterprise Deployment and Systems Management.
- Redhat (2011) Security: Network Services Certificate of Expertise
- Redhat (2012) Red Hat Enterprise Performance Tuning Certificate of Expertise
- RHCA (2012) Red Hat Certified Architect
- RHCSA (2015) Red Hat Certified Systems Administrator RHEL7
- Mirantis Certified Administrator for OpenStack (2015)
- RHCE (2016) Red Hat Certified Engineer RHEL7
- RHCA (2016) Renewed Red Hat Certified Architect
- PCP 2015 (Puppet Certified Professional) (july 2016)

- AWS Certified SysOps Administrator - Associate Level (nov 2016)
- LOI Python3 programming (april 2017)
- Red Hat Certified Specialist in Ansible Automation (june 2018)

### **Operating system knowledge:**

- Unix, Linux
- MS Windows (user level)

### **Databases**

- MySQL basic DBA level
- PostgreSQL basic Level
- SQL basic Level

### **Language skills**

- Dutch native speaker
- English good

### **Memberships**

- ITGilde
- FNV Zelfstandigen
- ZZP Nederland
- NLUUG

### **Hobbies**

- Socializing, Cooking and BBQ with friends and family
- Linux and Open Source proliferation
- Domotica

### **Some professional areas of interest**

- Virtualisation (KVM, RHEV manager)
- Docker/Kubernetes (Container Technology)
- Cloud technology (Openstack, AWS)
- Linux interoperability (hybrid environments)
- VOIP (Asterisk, FreePBX, FreeSWITCH)
- Management and Monitoring (with open source tooling)
- Perl, Python, Lua and Unix shell scripting
- Provisioning (RH Satellite, building rpms, kickstart)
- Configuration Management and automation (Ansible, Puppet)
- Web technology (LAMP)
- LDAP (Redhat Directory Server/OpenLDAP)
- Single Sign On
- Identity Management (Redhat IdM server/FreeIPA)
- Kerberos
- OpenVPN
- Build automation (Gitlab, Jenkins)

## **Summary Statement**

Worked since 1989 in the IT industry. Started in networking equipment and network monitoring tooling. Working as a contractor with Unix since the late 90's, concentrating since 2007 exclusively on Linux and Open Source infrastructure solutions. Acquired Red Hat Certified Architect level in 2012. Focusing on cloud technology, configuration management and build automation in the recent past.

## **Employment History**

### **April 2017 – Today (SURFsara)**

HPC Cloud Engineer. Mainly ops related work on OpenNebula, Ceph, CentOS, KVM/libvirt, cobbler, ansible, shell and python scripting. Automating procedures using Rundeck to a.o. provide an execute-only environment for first-line support. Monitoring using Zabbix (4.x). Training on the job for new employees. Tools and technologies not mentioned previously: Gitlab, and Gitlab CI, MySQL/MariaDB, LDAP authentication (both application and OS), HAProxy, bind, nginx.

### **Januari 2017 – March 2017 (Ordina Hosting Solutions)**

Linux Engineer Ordina Hosting Solutions. Mainly Ops related work on RH / CentOS servers (5,6,7) in on premises datacenters as well as in Azure (mostly Azure Resource Manager). Installing and maintaining new servers both physical, virtual and in the (Azure) cloud. Using Foreman/Puppet for deployment and configuration management.

### **December 2015 – today**

Designing, building and maintaining a small business environment with automation tools (Jenkins, Gitlab, Gitlab CI(replacing Jenkins), Rundeck), and a custom rpm repository with procedures to do controlled releases to staging and production. Using basic custom Puppet modules and Hieradata for configuration management. Educating involved engineers in using non-root users to run business applications and helping to design and implement the environment to accommodate this.

Documenting the design with an emphasis on justification of implementation choices and security guidelines as well as explaining the functional implementation in some detail.

Created and show cased a working pilot for SAMBA integration with a MS Directory Server (using SSSD). Still waiting to be implemented on production.

Monitoring using Icinga over SSH, migrating to Zabbix with Zabbix Agent on client systems.

Added encryption at rest using GPG Keys for sensitive data, using an off-line master key.

### **May 2015 (ITGilde)**

Sharing knowledge about Docker in a workshop, building basic services in linked Docker containers.

### **May 2015 - July 2016 (ING)**

ING Bank DevOps Engineer Linux. Mostly focussing on Ops processes, doing large scale patching and maintenance (+10k linux servers). Using scrum methodology to structure and prioritize team workload. Building re-usable automated procedures for recurrent as well as ad-hoc maintenance. Third line support of and updating the Red Hat “Linux stack”, and legacy support on the SuSE Linux stack. The stacks are mainly deployed as VM's on a Vmware infrastructure. Using tools like Gitblit, Gitlab, Jenkins, Ansible, Rundeck, Red Hat Satellite (5), Tivoli Endpoint Manager, Jira, Confluence, HPSC, Vsphere, etc.

### **January 09 – February 15 (VX Company - projects and contract assignments)**

Given inhouse workshops and presentations on Asterisk(VOIP),Identity Management (Red Hat IdM), Nagios/Icinga monitoring, Openstack, Docker, as well as certification preparation sessions for colleagues.

### **July 13 – February 15 (Dutch Police)**

Building Red Hat infrastructure solutions. Preparing for technical sessions to inform Architects and

product managers about open source solutions in general and specific Red Hat Linux solutions. Special attention to designing a Identity Management solution using Red Hat IdM on RHEL 7 for clients running RHEL 5 and 6. Scope is restricted to admin-accounts . Automating install of bulk VM's(VMware) using Satellite/cobbler and Puppet. Creating custom Puppet modules.

**May 14 – Jun 14 (EMO)**

Setting up several RHEL 6 systems for intranet and extranet functionality. Setting up SELinux.

**September 13 – October 13 (EMO)**

Implementing single sign on solution for Linux based intranet server in a Windows AD environment. Supporting web developers in using the Linux environment.

**August 13 (VX Company)**

Implementing Nagios/PNP4Nagios for a managed services department.

**December 12 – July 13 (Onderlinge van 's Gravenhage)**

Korn shell scripting support for a GCOS 7 to Linux Redhat RHEL 5 migration project. JCL procedures are translated to a KSH framework and related tooling. Writing instruction handbook and improving on KSH scripts. Support for Subversion. Redhat Linux support.

**February 13 (Kwintes)**

Adding functionality to an Asterisk implementation.

**September – December 12 (EMO)**

Migrating external hosted webservers to an inhouse operated secured Redhat (RHEL) 6 (virtual) server. Tuning SELinux, configuring chrooted sftponly access and writing backup procedures. Writing an implementation and maintenance manual.

**(Kwintes)**

Migrating and upgrading a number of linux server to a different virtualization platform. One of the servers has a database that is central in the operation of the Asterisk based telephone solution (multiple servers). On-site support for a “big bang” infrastructure migration weekend to monitor the Asterisk based telephony systems (24x7 operation), making adjustments where necessary.

**(RWS)**

Maintenance work and additions to an Icinga/Nconf implementation as well as end user instruction (operators).

**June 12 - August 12**

Installing/configuring replacement Asterisk PABX hardware and software, tuning memory usage for an Oracle database server (RHEL 4), troubleshooting usb dongle mobile internet connectivity on a ubuntu 10.04 netbook, ISDN-SIP gateway troubleshooting.

**May 12 – August 12 Rijks Water Staat (RWS)**

Implementation/Configuration Icinga/Nconf on RHEL 5.5. Writing shell and Perl scripts to process data for bulk inserts. Writing instruction handbook.

**October 11 - April 12 (Kwintes)**

Investigating and documenting an existing Asterisk implementation existing of five servers distributed over five locations. Part of the job was adding configurations and provisioning for a new type of SIP phone as well as working on some urgent problems. Part of the documentation process was identifying areas for improvement and advise on possible solutions. The assignment was

ultimately extended to include improvements in a.o. Queue handling, voiceprompt management, AGI and AMI scripting using both Unix shell (bash) and PHP scripting. Developing as a proof of concept a custom AMI interface for Queue monitoring and interfacing with an ethernet Ledsign display to display realtime Queue status for a helpdesk environment.

**Juli 11 (LeanApps)**

Extending the existing Nagios configuration. Advise on a solution for centralized user (access) management and demonstrate in a test environment as a proof of concept. The POC involved authentication against Windows AD(Kerberos), while storing account information in Redhat Directory Server.

**September 10 - June 11 (ING)**

Migration of mainly Solaris servers to BoKS 6.5.x. Involves analysis of system accounts, access rights and implementation of Business Role access control.

**April 10 - August 10 (LeanApps)**

Technical Application Manager. Implementation of Nagios at LeanApps BV on CentOS 5. Writing additional plugins and adding performance monitoring/trending extension NagiosGrapher. Using NRPE, SNMP and NSClient++ to monitor local resources on remote systems (Linux, Windows and network equipment).

**March 10 (LeanApps)**

Nagios proposal and implementation plan.

**January 09 – January 10 (ING)**

Unix specialist at ING Bank (BoKS project; see below)

## **June 07 – Today (Own company - projects and assignments)**

### **November 12 – August 13 (STI)**

Designing and testing failover of a custom application on Linux Redhat/CentOS 3.9 servers and performing a failover during several hardware failures on the main production platform.

### **November 12 – April 13 (EWT)**

Designing an OpenVPN infrastructure for datacollection using industrial routers with an OpenVPN client initiating connections to a central site. Implemented and presented a proof of concept. Writing design and user documentation. Setting up a initial limited production environment to start testing datacollection procedures.

### **May - June 12**

Building an OpenVPN reference implementation. Limited number of clients, including android (4.1) smartphones. Using certificate based authentication combined with TLS authentication and user/password authentication (using OpenLDAP) for mobile users.

Implementing Zarafa 7 Mailserver. Multi-tenancy implementation using OpenLDAP, phpLDAPadmin, postfix, postgrey, smtp auth, smtp tls, amavis, clamv, spamassassin on a CentOS 6.2 platform.

### **May 11 – October 11 (STI)**

Installing and configuring new CentOS 5 server for data processing. Virtual machine image. SFTP/SSH access (public key authentication only) for uploading data. Writing scripts for regular maintenance and adding users with specific properties. Data will be presented in a webgui that is developed by a third party.

### **May 11**

Upgrade Postfix/Dovecot Mailserver for a daycare center.

### **January 11 - Juli 11**

Monitoring and maintaining Debian mailserver (Postfix, Courier, LDAP, Horde).

### **May/August 10**

Upgrading and redesigning Joomla website. Rewriting user instruction manuals. Instructing local staff to work with the new administration backend.

### **March 10 (STI)**

Deploying CentOS 3 as a replacement for RedHat EL 3 without support subscription. Optimizing along the way. Old Linux version was mandatory because of particular software in use by the customers' business.

### **October/November 09 (STI)**

Implementing sftp as a replacement for ftp transfers of payment transactions.

### **September 07 – Today (STI)**

Technical and user support for small organizations with two Linux servers. Writing scripts to maintain the health of the systems and monitoring scripts (Perl, Unix shell) either in combination with Nagios or via email reporting.

### **December 08**

Installation of a mailserver based on Postfix and Dovecot maildir including roundcube webmail for a daycare center (ubuntu 8.04 LTS). Created facilities for the local staff to do simple administrative

tasks. Also added an vncserver autostart on boot, and backup procedures.

### **August 08 (STI)**

Migration of Linux (LPD) print environment to a limited CUPS environment. Writing a printjob dispatching helper shell script that dispatches to a particular printer based on a string in the name of the printjob(file) stored in an application queue directory.

### **January 04 – June 12**

Design, implementation and technical support of a website ([www.zeeburgia.nl](http://www.zeeburgia.nl)) for a soccer club. Includes product selection, provider selection, training of internal staff. The website was first built using Mambo and later migrated to Joomla.

### **June 07 – June 08**

Technical support Joomla / MySQL for a small webdesign company.

### **September 07 – February 15 (Omega/P4-ICT)**

Linux related support work for a small consultancy organization, mainly for an infrastructure used to implement a invoice handling system.

## **October 98 – December 08 (Ordina – projects and contract assignments)**

### **Assignments and projects completed for Ordina:**

#### **November 08 – December 08 (ING)**

Unix specialist at ING Bank. Working on BoKS Access Control for Servers (6.5.x) implementation. BoKS offers a flexible centralized authentication and authorization infrastructure for Unix systems. The assignment involves translating existing sudo definitions currently stored in LDAP to the BoKS infrastructure as well as improving the security according to security guidelines. Automating/simplifying manual tasks using ksh shell scripts as well as extending the functionality of the BoKS product (Perl). Giving early life support both on the functional and the technical operation level. On the job training of local staff.

#### **January 03 – June 08 (ING)**

Developer Security Monitoring Application for ING Bank. Consolidating, extending and maintaining an in house developed application for security monitoring. The application is built using open source tooling (Perl, Apache, PHP) and a Sybase database for storage. Running on Solaris 8,9 and 10 systems the distribution of the application was done using Solaris Application Packaging tools. The application monitors events coming from a multitude of sources like firewalls, unix logs, ids etc. It handles filtering and classifying of events as well as forwarding critical events to a Central Management Console (Tivoli). I co-designed and implemented monitoring administrator activity on the infrastructure (Windows and Unix), which was correlated with the existing information from the change and incident management systems. The goal was to enforce administrators to always comply with the policy of administering changes and incidents. Another extension was used to give an status overview of the compliance of (Unix) systems configurations. These systems were checked daily, and a status report sent to the central monitoring server. The application was in house developed and the complete support and maintenance was the responsibility of the team (two persons) including DBA and systems administration support.

#### **May 02 – November 02 (Rabo Bank)**

Technical Writer. Writing of the Global and Technical Detail Design based on the information of the design specialists. The design was for the new transport network of the Rabobank, based on a



MPLS/VPN service of KPN (eCapacity Office 2.0). The equipment used was Cisco.

### **January 02 – May 02**

Several small assignments. Supporting sales related activities. Working out a template design for a secure extranet connection, including firewalls (Checkpoint and Nokia), content scanning and virus-scanning systems for email and web traffic.

### **November 01 – December 01 (Politie Amsterdam Amstelland)**

HP Openview specialist (Politie Amsterdam Amstelland). Assignment: Setting up and executing performance measurements and reporting for a new network/server environment. Tooling: HP Openview NNM.

### **October 01 – Nov 01**

Written a basic proto-type document storage and retrieval system in PHP4. Goal was to implement a system based on open source tooling, that would store any type of document transparently. Used tooling: Apache, SSL, PHP4 and PostgreSQL.

### **July 00 – October 01 (Interpay)**

Specialist Network Management systems (Interpay). Extending the functionality of HP Openview NNM 6.1 NT. Added Perl and cygwin environment and created scripts and procedures to automatically collect (using SNMP) all ISDN call-in and call-out activity on Cisco routers. The information was stored using ODBC in a MS Access database. The system created daily reports and reported on abnormal behavior. Training the internal staff on how to use the HP Openview tooling. Created a semi-automatic console-switchover between the two HP Openview servers for redundancy.

### **May 00 – June 00 (dagblad Trouw)**

Web application programmer (Trouw). Adding functionality to the web based forum software written in Perl.

### **December 99 – April 00**

Supporting sales activities. Supporting colleagues in the field. Adding content to the intranet. Setting up an internal Linux test environment (Apache and Samba).

### **May 99 – November 99 (KPN)**

Support Specialist HP Openview NNM (KPN). The organization did remote management of mainly Cisco equipment of customer networks. Task: Training the internal staff in the use of HP Openview. Made proposals and defined procedures to do event volume control within HP Openview. Wrote some extensions on HP Openview; integrated a graphical tool to use the Cisco Ping MIB to be able to ping remote routers via the management network. The interfaces of the management network are not pingable from the operators consoles. This tool was created using Perl/Tk and integrated into the HP Openview console. Created user manuals and procedures.

### **January 99 – April 99 (ING)**

Participating in a team of technical Unix specialists to incorporate the administration of non AIX unix systems (mainly Solaris) in the regular system administration teams (at the time only AIX). Also investigate and test how DNS and DHCP services (a custom implementation of dynamic DNS of sorts) can work together with the security product AutoSecure on SUN Solaris systems in a NIS+ environment. Written Perl and shell script to help in hiding the complexities for systems administrators

### **October 98 – December 98**

Coordinated an internal discussion about Service Products, a kind of template for creating new services for customers. This also involved discussing ideas to create a web based platform for exchanging knowledge between colleagues.

## Period prior to Ordina:

### **September 95 – September 98 (3Com)**

System Engineer European Technical Escalation Support. Specialization: (SNMP/RMON) Network Management; OS specialization is UNIX (Solaris, AIX, HP-UX), NM specialization is HP Openview and IBM AIX Netview6000.

### **May 90 – August 95 (Getronics Service)**

Network Support Engineer. Specialization Tokenring and Ethernet networks. UB Networks equipment, Network Management (Netdirector OS/2). PC-Connectivity.

### **March 89 – April 90 (Getronics Service)**

Service Engineer micro-computers. Assembling hardware and software. Small Novell networks (ELS I/II, advanced 2.1x) including specific customer software packages.

### **March 88 – March 89 (Phonemaster Amsterdam)**

Electronics Engineer (Phonemaster Amsterdam); installing, programming and repairing and modifying telephone equipment and pabx's. Sales support.

### **October 86 – April 88 (UvA)**

Service Engineer Language Lab University of Amsterdam. Repair, modification, maintenance of audio, video and computer equipment. Instruction to students and teachers on how to use the fully automated Language Lab, making recordings of native speakers in the studio.

### **September 86 – October 86 (AMC)**

Inventory taking and labeling of hospital and laboratory equipment (AMC – Amsterdam).

### **October 85 – September 86 (Allen Airmotive)**

Electronics Engineer Avionics (Allen Airmotive, Hoofddorp); repair/calibration of avionics equipment.

### **July 84 – October 85**

Several administration type jobs.

### **September 79 – September 80**

Production work, warehouse assistant and administrative type jobs.