

Name: Volodymyr Khomenko

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Education

- 1998 - 2004 Kyiv National University of T.Shevchenko, Radiophysics department, master's degree in “Radiophysics and electronics”
- 2002 – 2004 Regional network Cisco Academy, 1- 4 semester of Cisco Certified Network Associate courses (CCNA)

Occupation

Software engineer, Embedded engineer, Web-developer

Skills

Software development

C,C++ (Platform-independent, Linux, Windows)

Development tools

- UNIX development (glibc, GNU toolkit - make, gdb, gprof, bash shell scripting, vim editor)
- Version control: CVS, ClearCase
- Bug tracking system: ClearQuest, bugzilla
- Design tools: MagicDraw, MS Visio

Web development

DHTML, JavaScript, PHP, MySQL, Apache, CSS

Languages

- Ukrainian - (native)
- Russian - (fluent)
- English – Read/Write – fluent, Speak – intermediate

Experience

Project Title: DellFs (former Exastore) NAS

Description	Development of DellFs Network Area Storage (NAS) clustering solution. The solution provides Network Area Storage service by NFS, CIFS and AFP networking protocols for UNIX/Windows/Mac clients. Own distributed filesystem used by DellFs provides access to the virtual volumes within single namespace while spreading them across many physical SCSI
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	devices of RAIDs, thus giving significant throughput gain. Design of solution provides high level of robustness by the meaning of redundant resources (cluster's nodes are working in the pairs); failover/failback procedure manages the transformation of failed tasks to the working nodes thus giving uninterrupted service for clients.
Duration	2007-2012
Team size	5 persons (2007), 3 persons (2008-2012)
Contribution	<p><u>Cluster team</u>: some significant improvements were implemented in the Failover Management System (FMS).</p> <p><u>Core2/Protocols team</u>: integration of new version of Samba (open-source solution used by DellFS to provide the service for Windows clients over CIFS protocol) was performed. Proprietary VFS modules and clustering patches were ported to new Samba API.</p> <p>Native SID feature (support of native Windows SID identifiers) was implemented for filesystem daemon (FSD) to improve cross-platform compatibility for Windows users.</p> <p>Also customized supportability events were added to both Samba and FSD to improve Protocols traceability by administrator on client side.</p>
Technology Skills	C/C++, Linux, GNU tools

Project Title: CPSS shared library

Description	<p>Additional shared features implementation for CPSS library. CPSS (Core Presteria Software Suite) library is low-level software for whole family of Marvell networking devices. It provides low-level API to perform networking communication by dedicated ASIC Packet Processors on Layer 2/Layer3 of OSI model. Library can be used by miscellaneous customers to implement own stacks of upper-layer protocols under different OSes (Linux, VxWorks, FreeBSD, etc).</p> <p>We were concerned with additional sharing features for this library under Linux OS which enable special "shared" mode. In this mode all meta-data of the library can be shared and used simultaneously by different customers in different processes.</p>
Duration	2006, 2007
Team size	4 persons
Contribution	<p>Features were integrated into development branch of CPSS library.</p> <p>They are available for customers in the next release version of the product.</p>
Technology Skills	Ansi-C, Linux, Embedded applications

Project Title: SmartBits simulation

Description	SmartBits networking traffic generator software simulator. Spirent SmarBits hardware is special networking equipment for testing network devices. Modular architecture enables to test different topologies and devices with many networks types and media. Unified API supports similar ways to generate traffic for different protocols. We were concerned with development of software emulation of this expensive hardware by usual PC. Simulator can be used both with software-emulated switch and with real NICs as transmission units. Portable-safe code has several OS-dependent modules to enable low-level support for different Oses like Win32, Linux, FreeBSD.
Duration	2006
Team size	4 persons
Contribution	Developed software was successfully integrated for usage. Moreover, we have received additional change request for this simulator to support the same functionality by distributed multi-user application. It was implemented as a part of the second release of this product.
Technology Skills	Ansi-C, WinAPI/pthread

Project Title: Intellect video control system modules

Description	Integration modules for video control system. Video system "Intellect" serves as software part for distributed video control but can manage different equipment such as access control and security equipment. The purpose of modules (plugins) was to integrate access control equipment developed by the company (door controllers with proximity cards readers) to video system and provide base intercommunication between them.
Duration	2005, 2006
Team size	2 persons
Contribution	We have received video-enabled security control system. Modules was tested on distributed object "Chernigov-Kyiv" and approved to distribution
Technology Skills	C++, MFC, Microsoft Access Database, Embedded applications

Project Title: Fingerprint recognition system

Description	Project provides human identity verification based on scanned fingerprint image. Optical, capacitive and piezoelectric
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	fingerprint scanners were approved (+synthetic images). PC-based and embedded applications for specific vector processor (real-time operation) were developed.
Duration	2003, 2004
Team size	3 persons
Contribution	See report at http://itvsystems.com.ua/ru/?soft/afis_mod.htm (Russian)
Technology Skills	C, C++, assembler for specific ARM-based embedded vector architecture

Project Title: Web-based CMS system

Description	BizSite+ is a content management system for business site. Some modules of developed CMS are: base (dictionaries, news, and user registration), voting module, price-lists module, mailing lists.
Duration	2002, 2003
Team size	3 persons
Contribution	Many commercial sites have been released based on BizSite+. For details see http://koresha.org/master/projs.php (Russian)
Technology Skills	DHTML, JavaScript, PHP, MySQL, Apache, CSS

Project Title: Web-pages visits counter

Description	WPTCounter is a visitor's counter for web-pages and supplemental management site. Main targets of counter were speed, completeness of statistics, serviceability.
Duration	2001-2002
Team size	3 persons
Contribution	The system successfully works since 2002 even with huge statistics database. For details see http://cnt.wpt.com.ua/ (Russian)
Technology Skills	DHTML, JavaScript, PHP, MySQL, CGI, CSS