Course code: UNIXAPACHE

The course is intended for administrators of Apache WWW servers on the UNIX platform, who will learn to install, manage, optimize and secure the Apache server, including advanced functions such as dynamic server-side page generation, SSL/TLS, load-balancing and other Apache server functions.

WWW service technology, HTTP protocol
- History of the WWW
- Main features and principles of WWW (URL, HTTP protocol, HTML language)
- Overview of the HTTP protocol series and their properties (HTTP/0.9, HTTP/1.0, HTTP/1.1, HTTP/2)
- Principle of virtual HTTP servers (based on IP addresses, based on domain names)

Apache server
- Basic information about the Apache server, literature, electronic sources of information
- Apache's modular concept (MPM, modules), description of core modules' functions
- Alternatives to Apache Lighthttpd, NGINX, etc.
- Installing Apache, inspecting the installed components
- Server control, basic tests

Apache server configuration
- Apache settings from the point of view of the process system in LINUX - automatic management of descendants, etc.
- Basic Apache server settings - WWW document tree, port configuration, etc.
- HTTP connection error handling
- Advanced server settings - automatic creation of directory contents, inserts inserted by the server, access authentication, restricting access to data provided by the server, language settings and MIME.
- Virtual servers
- Server logging and log processing

Systems for dynamic pages
- CGI scripts, FastCGI, WSGI, etc.
- principles of SSI
- PHP scripting language, deployment options in the Apache server
- PHP interpreter like Apache module, PHP FPM
- PHP configuration, PHP security

SSL/TLS
- Server-Side SSL Basics and Mechanisms
- The mod_ssl module and its configuration

Stress testing and performance tuning
- Stress tests using the ab tool, etc.
- Optimizing the server for performance

Security
- Basic information about Apache security
- Access rights, .htaccess files, etc.

Load balancing
- Load shedding options and technologies
- Built-in support in Apache
- Separate generation of static and dynamic content

Web cluster
- Shared storage
- Network infrastructure

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- PHP sessions in the cluster