iNODE™ v1.9.6 release notes

iNODE™ Release series 1.9,
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What's new in v1.9.6

This release contains several new features, bug fixes and enhancements.
It is available to all existing and new customers with a valid support contract.

For more details you can view the online help or ask your Reseller.

New Features

The most notable features are described below.

- Feature #955 **Storage usage details**
  Detailed reports can be generated regarding the use of the local storage space by the users' private files (Collaboration Suite, file server home directory), the fax server, the file server's sharepoints and the log files generated and maintained by the system. This provides a more complete overview of how the disk space is used

- Feature #2164 **Certificate expiration notifications**
  New events and notifications are generated based on user defined thresholds regarding the expiration of the certificates that are currently in use. When a certificate is about to expire a notification is sent reporting the days remaining until the expiration of all certificates that are currently in use

- Feature #2779 **E-mail queue size monitoring and notifications**
  The size of each of the E-mail queues (the number of messages waiting to be processed) is now monitored and a historical graph view is now available. Moreover, customizable thresholds are defined that dictate when a notification should be sent, in case any of the E-mail queues grows beyond normal numbers.

Enhancements

The most notable enhancements are described below.

- Enhancement #2774 **Collaboration suite upgrade**
  Collaboration Suite is updated to the latest version (21.0.2). A new "Dashboard" app is available. The new app is disabled by default.

- Enhancement #2743 **OpenVPN upgrade**
  OpenVPN has been upgraded to v 2.5.2. OpenVPN clients will not be affected by this change, but it is recommended to update to the latest client versions available and download a fresh configuration file from the users' web interface (port 9237 HTTPS).
  Newly generated client configuration files are specifically designed for the latest versions of OpenVPN clients (2.5). Older clients (2.4) will need to edit the generated configuration file and uncomment the "Ciphers" option line to work.

- Enhancement #2794 **Antispam engine (Spamassasin) update**
  Antispam engine is now updated to the latest version (3.4.6).

- Enhancement #2756 **Mailbox server updated**
  Mailbox server upgraded and recompiled to overcome some memory limitations. Better handling of huge mailboxes, mailbox size is now only limited by filesystem limits

- Enhancement #2802 **LDAP server update**
  LDAP server has been updated to the latest stable version (2.4.58).

- Enhancement #2807 **DNS server updated**
  DNS server updated to the latest LTS version (9.11.31).

- Enhancement #2821 **Proxy server log monitoring and maintenance**
  Proxy server's log is now monitored in real-time and maintained like all other logs. Until now only proxy requests log was available.

- Enhancement #2792 **Remove scheduler from update procedure**
  Update process will now start faster. In previous versions a delay up to one minute was required to start the update process.

Update Notes

- **iNODE™ running as a virtual machine on Xen Hypervisor**
  In case you run your iNODE™ system by hosting it on XEN hypervisors, you should check that you have enabled the extra swap size from the Management UI (Configuration :: System :: General Settings :: Swap Memory :: Extra Size). This is mandatory for live migrations to work properly. The correct extra swap size can be found for any system with the following table:
    For RAM<2GB set Swap Extra Size to double the amount of RAM
    For RAM between 2GB - 8GB set Swap Extra Size equal to the amount of RAM
    For RAM between 8GB - 64GB set Swap Extra Size to half the amount of RAM
  Note: Before changing extra swap size you need to check if your system disk has enough free disk space available.

- **Perform Auth-Backend changes during maintenance window**
  Switching authentication back-ends should be done by the administrator in a proper maintenance window or in non-office hours for the following reasons:
    - It will cause automatic logout of all users logged in Webmail, Collaboration Suite, Admin UI and User Portal.
    - In systems with many users, it will take some minutes to finish, thus various services won't be ready to authenticate users.

Bug fixes

This release includes several bug fixes and patches of previous version 1.9.5.

The most notable bug fixes are described below:

- Bug #2630 **Update may fail with "Problem with ftp" message**
  The message may occur when there is not enough available disk space to process the update file. A proper error message is now displayed in this case.

- Bug #2772 **Unexpected error on print service settings page**
  Print Service settings page would throw an unexpected error when the certificate option is not empty.

- Bug #2778 **Disk Statistics not available for some storage pools**
  Disk Statistics were not available for storage pools containing spaces in name.

- Bug #2781 **Mail content filtering service restart may fail after antispam update**
  Under certain conditions (systems with low processing power) the mail content filtering service could fail to properly restart after the antispam module is updated, causing mails to get suck in mail content filtering queue.

- Bug #2784 **Incomplete Scheduled tasks list**
  Some scheduled tasks may not appear in the "Monitoring :: System :: Scheduled Tasks" page. The list is now complete.

- Bug #2786 **Firewall connection tracking table setting displays "LINUXERROR 10"**
  "Connection tracking table size" setting in Firewall general setting would incorrectly displays "LINUXERROR 10" instead of the current value.

- Bug #2788 **Network statistics not counting properly secure protocols**
  Network traffic for some services over secure ports would not be counted properly and would appear as "Other services" traffic.

- Bug #2789 **Mail replication initialization web interface issues**
  The mail replication settings page had some timing and response issues when initializing the replication. The result was an immediate error the first time of initializing the replication and missing visual feedback after clicking the initialize button again.

- Bug #2791 **Certificate issue from request failure may delete existing certificate**
  In local CA management, when issuing a certificate from a request (CSR), and providing a name for the new certificate that is already used by another certificate would cause the already issued certificate with that name to be overwritten or even deleted if issuing fails (if the certificate's subject (DN) already exists).

- Bug #2796 **Antivirus update issues**
  Antivirus update failure notifications might be triggered in some cases (no DNS or DNS failure), even if no related service is licensed or enabled.

- Bug #2798 **Allow OpenVPN service to be enabled only when the certificate has been set**
  OpenVPN service could be enabled even if no server certificate had been chosen. This would immediately cause a service error status since the certificate is necessary. The setting is now required to be set before activating the service.

- Bug #2803 **OpenDNS dynamic IP client error "Too many requests"**
  OpenDNS client used the "http://myip.dnsomatic.com/" url to determine the internet IP, to update the IP related to the account specified. Due to rate limiting, the request to that url may be denied and that's why the error "Too many requests" appears. The url has now been replaced with https://checkip.amazonaws.com. A custom url also may be used instead (opendns_client.ip_info_url via admin cli).

- Bug #2805 **Let's encrypt certificates not issued when proxy is required**
  Let's encrypt certificate management ignored the proxy server settings, so it fails to issue and update certificates when internet access through a proxy server is required.

- Bug #2806 **Old Webmail (Horde based) contacts migration issues**
  Horde contacts may fail to be migrated when first logging in to new webmail.

- Bug #2809 **Licensed users not cleaned up after deleting**
  When an active user is deleted from authentication backend, his license should be available for use by another user upon first authentication attempt. This would fail and the license remained allocated to the deleted user. This now has been fixed.

- Bug #2814 **Incorrect 'duplicate record' error message when adding new routing in openvpn server**
  In some cases, adding a routing entry in OpenVPN server routing settings would fail with a "Duplicate record" error, if a similar-named entry already exists.

- Bug #2817 **DNS cache contents incomplete report**
  DNS cache contents page would only show a short incomplete report.

- Bug #2818 **Collaboration suite email notifications issue**
  In some cases, where the email notification settings have not been properly configured (From: setting is empty) collaboration suite may fail to send email notifications (for example when sharing a file using email).

- Bug #2819 **DNS issues (cannot resolve some domains)**
  Some domains may temporarily fail to resolve. Problem has only been reported on Microsoft hosted domains.

- Bug #2820 **Web portal including groupware and collaboration suite not responding**
  Access to web portal, groupware and collaboration suite would fail with connections timing out. Restarting groupware or collaboration suite services would not fix the issue and a reboot was required to recover.

- Bug #2822 **OpenVPN client mode connection history not available**
  OpenVPN client's connection history was not available.

- Bug #2823 **Collaboration Suite Calendar app constantly creating "Personal" calendar**
  In some cases, where all the calendars the user has access to, have some access restriction for the user (the user does not have full rights in any of them, even his own "Default" calendar), the calendar app would constantly create a new "personal" calendar, every time the user enters the app's interface. This is now fixed, but in such cases, it is recommended to check the server's ACLs for incorrect entries. Excess calendar can be deleted using the same app.

Known Problems

Known problems in this release are:

- **Co-editing documents on file server using Collabora not available**
It is not possible for multiple users to simultaneously edit a document stored in a sharepoint of the file server which is visible on Collaboration Suite as an external folder (folder icon with an arrow over a frame). Co-editing is only available for documents on users' private folders, shared via Collaboration Suite (all other folders). When multiple users try changing the same document, a warning will notify the user that made the latest changes that the document has already changed on the server.

- **Content Delivery service authentications back-ends**
Content delivery service has no support for back-ends such as LDAP and Active-directory.
Only the local authentication back-end can be used from authentication mechanisms.

- **AVM Fritz!Card PCI Fax reception.**
We've noticed that there are reception only problems in cases where AVM Fritz!Card PCI board is used from the Fax Server. Such problems noticed only from some Fax machines (some Xerox models). These fax machines cannot sent fax to AVM Fritz!Card at all. On these cases the Fax Server will receive the message "Error no fax data was received" on real time log. We recommend using Active ISDN boards or external Fax/modems for production.

- **FAX service document preview problems**
Rarely in some cases may be not possible to preview a fax document. This problem may occur randomly with error "File does not begin with '%PDF-'" (Bug#256).

- **FAX service outgoing jobs with multiple pages**
Outgoing FAX jobs that contain more than one page cannot be previewed properly from the WEB-UI. Only the last page of the job is previewed.

- **Mail Statistics may be incorrect.**
There is a known problem on mail server statistics page where per sender or per recipient statistics may be incorrect. (BUG#268).

- **Some Real-time log lines may not appear.**
Rapid generation of log entries, may prevent some lines from being shown in real-time logs (Bug#303).

- **Shared Printer Drivers are not accessible by SMB Print Clients.**
Client printer drivers are not accessible by SMB clients as defined by iNODE™ v1.8.4 release notes.

- **Dialogic DIVA Server and AVM Fritz!Card PCI Fax conflicts.**
  Do not use Dialogic Diva Server board together with AVM Fritz!Card PCI on the same system. They are conflicting on kernel CAPI stack.

- **Dialogic DIVA Server boards cannot be used for data connections.**
  Due to Dialogic Diva Server boards driver changes you cannot use them for data calls yet.

- **XEN Live migration of virtual machines may fail**
  Under uncertain circumstances, the VM would freeze after being landed in the target node. In that case you need to restart this VM.

- **User Management import/export incompatibilities**
  User export and import files have been implemented using JSON format. Files exported from iNODE™ versions prior to 1.8.0 cannot be imported from iNODE™ versions after 1.8.0.

Hardware Support

iNODE™ is only compatible to run on 64-bit x86 CPU systems since version 1.9.0. Installing a fresh iNODE™ 1.9.x to a 32-bit machine, will fail.

iNODE™ v1.9.6 is supported to run on both BIOS and modern UEFI systems.

iNODE™ v1.9.6 Setup Tool can be run from Installation media and is working on both BIOS and EFI machines.

Hypervisor support

iNODE™ can run optimized and efficiently as a guest under Citrix XenServer, VMware ESXi, Microsoft Hyper-V 2012/2016 and QEMU/KVM hypervisors. Optimized drivers and management agents are automatically run according to discovered hypervisor environment.

In the tables below you can find recommended optimal settings and supported hypervisor Platform and features.

Virtual Machine Optimized Settings

Hypervisor	OS Type	Storage Controller	Network Controller	Optimized Console
RedHat KVM/QEMU	Linux 4.x/3.x	VirtIO SCSI/Virtio Block	VirtIO	UEFI
VMware ESXi 5.5, 6.0,6.5	Other Linux 2.6.x/3.x (64-bit)	Paravirtualized	VMXNET3	UEFI
MS HyperV 2012R2/16/19	-	GEN2/SCSI	GEN2/Network adapter	UEFI
Citrix XenServer 7.x	-	PVHVM	PVHVM	-

Virtual Machine Supported Features

Hypervisor	CPU Hotplug	Memory Balloon	Memory Hotplug	Disk Hotplug	Network Hotplug	Live Migration
RedHat KVM/QEMU	No	Yes	Yes	Yes (SCSI & VIRTIO)	Yes	Yes
VMware ESXi 5.5, 6.0,6.5	Yes (Add Only)	Yes	Yes (Add Only)	Yes	Yes	Yes
MS HyperV 2012R2/16/19	No	Yes	No	Yes	Yes	Yes
Citrix XenServer 7.x	No	Yes (PVHVM)	Yes	Yes	Yes	Yes

Hardware compatibility list

For a complete report of supported hardware please refer to the table below.

Processor Architecture	
CPU Type	X86_64 (Intel64 or AMD64) 64-bit CPU
SMP support	Yes
NUMA support	Yes
CPU technologies	Multi-core & Hyper threading support
Max CPUs	32
Memory	
Maximum RAM	2TB
ACPI	

Power Control	Power Button support
Batteries	Smart Battery System support
CPU/Thermal	CPU, Thermal zone support
Hardware support	
For a complete list of supported hardware including network interfaces, storage controllers and chipset please refer to the tables [here]().	

NOTE 1: Compaq's SMART2 IDA Controllers are not supported anymore.
NOTE 2: CCISS driver is removed but remains as an alias to HPSA for compatibility.
NOTE 3: MPT2SAS driver is removed but remains as an alias to MPT3SAS for compatibility.
NOTE 4: XEN PV mode is deprecated. Switch VMs to HVM mode for maximum performance.

Deprecated hardware

iNODE™ from version 1.9.x does not support the following deprecated hardware:

- o Systems based on 32-bit x86 CPU
- o ELSA Microlink
- o Cyclades PC300
- o Eicon Diva passive adapter
- o Sangoma S514x PCI

Hardware Recommendations

The minimum and recommended hardware requirements to run iNODE™ v1.9.6 is shown on the following matrix.

	Minimum	Recommended
CPU	Single Core	Dual Core
RAM	768MB	4GB
CDROM	SATA/SCSI	SAS, USB
HARDSIDK	IDE/SATA 10GB	SATA 120GB
NIC	One 100BaseT	Two 1000BaseT

As a general guide for memory requirements on your system you can consult the following matrix:

	RAM requirements (MBytes)
Base System	380
DHCP Server	6
DNS Server	2 minimum – user defined cache
VPN Server – PPTP	2
each pptp connection	2,5
VPN Server – IPSec	11,5
VPN Server - L2TP	1,8
each L2TP connection	2
VPN Server - OpenVPN	25
each OpenVPN connection	2
VPN Client – PPTP	6
VPN Client – OpenVPN	4
Fax Server	10
each capi modem	2,8
each legacy modem	5
Email to fax service enabled	2
File Server	47
each CIFS client connection	9
Print Server	8
Publisher	2
each data courier connection	3
Data Courier task	6,5
Web Courier task	5,5
Mail Server	220
Replication process	25
each SMTP connection	3
each POP3 or IMAP4 connection	19
Webmail	78
Content filtering engine	80
SMTP proxy base	2

each SMTP proxy connection	2
POP3 proxy base	4
each POP3 proxy connection	4
each thread (default 3) w/o Antispam	22
each thread (default 3) with Antispam	41
ClamAV Engine	900
Collaboration Suite	512
per active user	25
Collabora Online	900
per active user	50
Proxy Server	25
Proxy RAM	user defined (20 default)
LDAP Server	130
LDAP cache	User defined (50 default)
LDAP replication	100
LDAP Proxy	35

How to install

iNODE™ v1.9.6 installation is a straightforward procedure with minimum skills required. The installation process will start after booting from the Installation media (CD, ISO or USB Boot). There are some questions about correct time/date and about hard disk preparation. The installation process will take about 10 minutes to complete. You can find more information in the iNODE™ Quick start Guide.

iNODE™ installation is bootable from USB storage devices. It currently works only with BIOS. UEFI is not supported. We suggest reading the article [here](#).

Upgrade from previous versions

ATTENTION: BEFORE PROCEEDING TO AN UPGRADE DO NOT FORGET TO TAKE A SYSTEM & DATA BACKUP ON THE RUNNING iNODE™ SYSTEM.

You can find iNODE™ v1.9.6 upgrade package from previous release v1.9.5 on the website. The system requirements are at least 768MB total physical RAM and 8GB free hard disk space. Otherwise proceed to upgrade your system disk or clean-up logs to free up disk space and upgrade RAM if needed before doing the software upgrade. Total upgrade time including reboot is about 5 minutes.

Note1: During update from 1.9.5 to 1.9.6, any patches released, that apply to version 1.9.5 are included in the 1.9.6 update package and are installed automatically. It is not required to manually install any intermediate patches.

DATA ‖ WAYS

Older versions backup files compatibility

ATTENTION: ALL BACKUP FILES ARE DESIGNED FOR DISASTER RECOVERY AND CAN BE USED FOR RESTORE PURPOSES. AFTER A RESTORE YOU WILL RECOVER THE FUNCTIONALITY TO THE LAST STATE JUST BEFORE THE BACKUP OPERATION. AS A GENERAL RULE YOU SHOULD NOT RESTORE ANY BACKUP FROM OLDER iNODE™ VERSIONS!

The Restore operations on iNODE™ v1.9.6 accepts backup files according to the following matrix:

Backup file	Version	Acceptance
System backup	1.9.6	Yes
System backup	1.x.x	No
File Backup[*1]	1.9.x, 1.8.x, 1.7.x, 1.6.x	Yes
File Backup	Other 1.x.x	No
Fax backup	1.9.x, 1.8.x, 1.7.x, 1.6.x, 1.5.x, 1.4.x, 1.3.x	Yes
Fax backup	Other 1.x.x	No
Fax archive	1.9.x, 1.8.x, 1.7.x, 1.6.x	Yes
Mail backup[*2]	1.9.6	Yes
Mail backup[*3]	1.9.x, 1.8.x, 1.7.x, 1.6.x, 1.5.x	Yes
Mail backup	Other 1.x.x	No

[*1] You cannot restore a File backup from release 1.9.1 or later to earlier versions before 1.9.1.

[*2] You cannot restore a GroupWARE backup contained in Mail backup from release 1.9.5 or later to earlier versions before 1.9.5.

[*3] You cannot restore a backup from release 1.8.1 or later to earlier versions before 1.8.1.

FAQ

About Installation

Q: *What are the minimum hardware requirements to install iNODE™?*
A: Please see on Hardware Recommendations section above

Q: *Do I need to have Linux skills to install iNODE™?*
A: Not at all. iNODE™ is a software package for novice administrators. You need to boot from the Installation media. So, you need to set the appropriate PC BIOS booting sequence. After boot up there are only a few simple questions about system clock and hard disk preparation.

Q: *Can I have iNODE™ and another Operating System co-resident on the same Hardware?*
A: No. iNODE™ will use all system resources during normal operation. If you need to host it on the same machine with other OS, you can install both as virtual machines by using known hypervisor environments.

Q: *Can I use Installation media to upgrade from an existing earlier iNODE™ release?*
A: No. By using Installation media, a fresh installation will be applied to the installed system. If you need to retain your previous settings, you need to perform the upgrade via iNODE™ web interface.

Q: *Will my settings remain intact during upgrade from an existing earlier iNODE™ release?*
A: Yes. Your current settings and operating data will be retained.

Q: *Is it possible to install iNODE™ on a RAID system or a SCSI hard disk?*
A: Yes. iNODE™ supports installation on IDE P-ATA, SATA/SATAII or SCSI, SAS, RAID, SAN disk storage. You should check your storage system against the Hardware Support section above. New storage drivers are constantly added. Please contact technical support for assistance on using an unsupported storage driver; such drivers are usually validated and officially included in later software updates. Software RAID Controller (common embedded RAID controllers) is not currently supported.

Q: *Is it possible to make a copy of the iNODE™'s hard disk?*
A: No. iNODE™'s hard disk cannot be copied to another hard disk. The only way is to reinstall it via Installation media. We do not recommend installations via disk cloning. Always use the standard installation procedure.

Q: *I have the installation media. Can I install it and use it for trial purposes?*
A: The iNODE™'s installation media is the same whether you have purchased the iNODE™ system or you are installing it for trial or demo purposes. Once installed and configured through the startup wizard the system will operate for 30 days. If you decide to purchase the system, then you need to purchase a license via your local reseller.

Q: *My network interface has failed. Can I replace it?*
A: Yes. Once the new network interface has been replaced you will have to contact your reseller and ask for an activation key.

Q: *I have installed iNODE™ as a virtual Machine and I need to install Optimized drivers (vmtools, xentools) to run optimized. How can I proceed?*
A: iNODE™ automatically installs optimized drivers during setup. By running iNODE™ it uses optimized drivers and is designed to run optimally on all known hypervisor environments.

Q: Can *I install iNODE™ on ESXi or HyperV or KVM virtualization environments?*
A: Yes. iNODE™ has been tested to run on these environments and you can install it on them as guest by booting from installation media. All appropriate optimized drivers and memory ballooning support will be used without any additional action.

General Questions

Q: *How can I obtain an Installation media?*
A: You can download the ISO image via Download section of the web site (http://www.inode.gr/support_downloads.php).

Q: *What is included in the INODE™ support contract?*
A: It includes all software updates and software support through the reseller that iNODE™ was purchased from.

Q: *I have problems with the installation procedure. Where can I get help?*
A: All support services are offered through the reseller network which is certified from the manufacturer. Through the certified reseller you can get all the assistance you might need. In case there is a major problem the reseller can contact us and together we can give a solution to your problem.

Q: *Am I able to download the sources of OSS used by iNODE™?*
A: Yes. You can download all OSS used on iNODE™ from Download section of http://www.inode.gr.

Further Help

You can find comprehensive help content in each Web UI page with very detailed explanation of settings and options.

You can obtain further help and documentation on iNODE™ website http://www.inode.gr or by contacting to your Reseller directly.

If you have a valid support contract you can contact Dataways at:

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