

uniteme 19.04

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Summary

eZuce is pleased to announce the General Availability of sipXcom 19.04.

There are again two releases for **uniteme** 19.04, one for CentOS 6 and one for CentOS 7. The documentation around Installations and Downloads is being updated now with CentOS 7 as the recommended OS moving forward. We'll also update the video to cover CentOS 7 Minimal installation. While this is a relatively small update, there are a few interesting things to point out.

When a user is deleted from the system, the configuration services will now go through all phones and remove that user from the phones and re-send phone profiles. If that was the only user on the phone, the phone will go back to the auto-provision ID. What we were finding is that administrators were deleting users but not re-sending phone profiles. This would result in traffic floods of SIP traffic with bad subscribes to MWI and invalid registrations to the server.

The new Polycom VVX '50' series phones are now supported for configuration as well as auto-provisioning. Firmware versions 5.9.0 and later are supported.

Also, mongoDB has been updated to 3.6.11. This has had a positive effect in recovery from a node outage. The new mongoddb seems much more resilient.

Please note that this will be the last release for CentOS 6. As of version 19.08 we will only be releasing **uniteme** for CentOS 7! To go from a CentOS 6 based system to a CentOS 7 based system will require a backup and restore to a fresh CentOS 7 installation. As such a parallel install will be recommended.

We've also decided to put the container (Docker) work on hold for now. There were complexities around networking and implementation that we didn't feel warranted the effort involved to work past them. Additionally, there wasn't significant customer demand to warrant the effort at this point. We're pushing ahead with some newer features instead.

Highlights

uniteme New Features:

- Support for Polycom VVX 150, 250, 350 and 450

- Alarm for Certificate Expiration
- Make mongoDB cache size configurable
- Remove user from phones automatically after user deleted from system

uniteme Improvements:

- Sort alarms alphabetically
- Upgrade mongodb to 3.6.9
- Add http provisioning option to DHCP configuration

Notes

1. Full Beta Release Notes with installation information are located here: [19.04 Full Beta Release Notes](#)
2. The regular release of 19.04 will have the ability to upgrade from earlier versions using the upgrade script used in 18.04. For the purposes of this beta release, please only do upgrades from 18.04 if you test systems are on a version earlier than 18.04, upgrade to 18.04 first.

Who Should Install?

This release is recommended for all production installations. If you have a patch installed to your system a new patch may be required. Please contact sa@ezuce.com if think you may have a patch applied as that may be replaced during the update.

eZuce's software products continuously progress through an Agile based development methodology that keeps feature functionality comprehensive and up-to-date in response to evolving market and customer requirements.

New software releases are made at a rate of two to four releases a year. Releases are numbered in the <yy>.<mm>.<uu> format where <yy> and <mm> designate the year and the month, respectively, in which a release is made generally available. Where applicable, <uu> corresponds to an update release relative to a general release on which fixes are made available.

In order to ensure service continuity and stability, customers may keep their production environments unchanged for up to a 6-month period during which release updates or patches are made available. After a release is more than 6-months old, eZuce customers would have to upgrade to the latest generally available release - inclusive of all fixes to date and any new patches.

Questions

If you have questions about updating you can email sa@ezuce.com or if you need assistance with the update contact your account manager or email sales@ezuce.com.

Software Release History

We're currently running on a 4-month release cycle.

- April release for 2018 is 18.04
- August release for 2018 is 18.08
- ...

Release Level History

- 14.04 - April 30, 2014
- 14.04.1 - June 01, 2014
- 14.04.2 - July 11, 2014
- 14.04.3 - October 24, 2014
- 14.10 - February 5, 2015
- 15.04 - April 29, 2015
- 15.05 - May 27, 2015
- 15.06 - June 30, 2015
- 15.08 - August 31, 2015
- 15.10.1 - December 9, 2015
- 15.12 - January 6, 2016
- 16.02 - March 14, 2016
- 16.04 - May 31, 2016
- 16.08 - October 6, 2016
- 16.12 - January 17, 2016
- 17.04 - April 18, 2017
- 17.08 - September 7, 2017
- 17.10 - December 7, 2017
- 18.04 - June 5, 2018
- 18.08 - September 7, 2018
- 18.12 - January 15, 2019

- 19.04 - May 28, 2019

System Requirements

For a reasonably performing system, we recommend the following configuration.

Minimum hardware requirements

- Pentium 4 or Xeon processor @ 2.0 GHz 64bit or higher
- Minimum 4 GB of RAM with sufficient swap space
- 40 GB disk (75 users depending on usage patterns, VoiceMail consumes ~ 1 MB per minute so scale appropriately for your user count and anticipated VM retention policy)
- As with anything server wise, more CPU/RAM/DISK = better.

Notes:

- **uniteme** supports an unlimited number of voicemail boxes, the total number of hours of recorded messages is determined by the size of the hard-disk. As a rule, for every minute of recorded messages, you will need 1 MB of disk space (About 3 hours per 10 GB of disk space).

Operating System

CentOS/RHEL 7 x86_64 minimal with latest updates is required (recommended now).

or

CentOS/RHEL 6 x86_64 minimal with latest updates is required.

Devices

Phones

- **Polycom VVX Devices** with firmware 5.9.1 (split) are recommended for new installations
- **Polycom SoundPoint IP** Devices should run firmware 4.0.14 (split)

Gateways

- **AudioCodes Gateways** are recommended for PSTN connectivity

SBCs

- **Frafos, Sangoma, Acme Packet and Ingate** SBC's are recommended for SIP Trunking and Remote Worker connectivity (commonly referred to as sipXbridge and MediaRelay services respectively).
- **NOTE:** The eZuce uniteme - "Use built-in SIP Trunk SBC" found in Gateway Details for use with Trunking or Remote Worker solutions should be used only for lab purposes. Additionally, sipXbridge does not work in an HA environment.

Documentation

Technical Reference Manuals, User Guides, and other technical and user information can be found under the following link: [Documentation Page](#)

Installation and Upgrade Notes

Special MongoDB note

Please be aware of these MongoDB requirements <http://docs.mongodb.org/manual/reference/ulimit/> **Note:** Both the "hard" and the "soft" ulimit affect MongoDB's performance. The "hard" ulimit refers to the maximum number of processes that a user can have active at any time. This is the ceiling: no non-root process can increase the "hard" ulimit. In contrast, the "soft" ulimit is the limit that is actually enforced for a session or process, but any process can increase it up to "hard" ulimit maximum. Every deployment may have unique requirements and settings; however, the following thresholds and settings are particularly important for mongod and mongos deployments:

```
ulimit -a
-f (file size): unlimited
-t (cpu time): unlimited
-v (virtual memory): unlimited
-n (open files): 64000
-m (memory size): unlimited
-u (processes/threads): 32000
```

Always remember to restart your mongod and mongos instances after changing the ulimit settings to make sure that the settings change takes effect. If you limit virtual or resident memory size on a system running MongoDB the operating system will refuse to honor additional allocation requests. After every install/upgrade please check that "cat /proc/\$pid_of_mongo/limits" have the recommended value of 655350. To make this value permanent you need to create this file `/etc/security/limits.d/99-mongodb-nproc.conf` and add the following lines:

```
mongodb soft nproc 64000
mongodb hard nproc 64000
mongodb soft nofile 64000
mongodb hard nofile 64000
```

Special Patch Note

If you have a patch installed to your system a new patch may be required. Please contact sa@ezuce.com if think you may have a patch applied as that may be replaced during the update.

Installing from Repository

uniteme can be installed using the following procedure

1. Download CentOS 7 64 bit Minimal ISO from CentOS (<https://www.centos.org/download/>)
2. Install CentOS 7. ([Installing#InstallRedHatEnterpriseLinux7.xorCentOS7.x](#))
3. Install **uniteme**. ([Installing#Installuniteme](#))

Upgrade from previous versions

New Procedure

We will be utilizing an upgrade script to ensure upgrades proceed as intended and so that customers have the appropriate warnings and information before upgrading.

Warning!

Make sure you **backup** your system (configuration and voicemail at a minimum) prior to installation. You'll be upgrading mongodb to a new version!

Upgrade to 18.12 or later for CentOS 7

Any upgrade to CentOS 7 will require a fresh installation of CentOS 7 and then a restore of **uniteme**.

Backup your System

Login to the Admin GUI and click on System -> Backup and at a minimum backup configuration and voicemail.

Download the configuration and voicemail backup archives.

Build New CentOS 7 Server

Download CentOS 7 64 bit Minimal ISO from CentOS (<https://www.centos.org/download/>)

Install CentOS 7. ([Installing#InstallRedHatEnterpriseLinux7.xorCentOS7.x](#))

Install **uniteme**. ([Installing#Installuniteme](#))

Restore your System

Restore configuration and voicemail.

Remove any secondary servers restored from the Servers page.

Send Server Profile.

Reboot

Add Secondary Servers

Rebuild and re-add any secondary servers.

Upgrade to 18.12 or later for CentOS 6 Single Server systems for 17.10 and Older

Backup your System

Login to the Admin GUI and click on System -> Backup and at a minimum backup configuration and voicemail.

Do it now... before you go any further.

Download upgrade.sh

Login to the primary server as root.

Execute the following:

```
wget https://download.ezuze.com/unite-upgrade.sh
```

```
chmod +x unite-upgrade.sh
```

Run upgrade.sh

Execute the upgrade script and answer 'Yes' to continue:

```
./unite-upgrade.sh
```

The following will be displayed:

```
Uniteme 18.12 Upgrade Script
```

```
IMPORTANT: If this is a multi-server cluster, all databases except the Primary (which must be on the configuration server) should be removed.
```

```
IMPORTANT: You should run a system backup and copy your config and voicemail backups to another system. If the upgrade fails, you will need to build a new server and restore from backup.
```

```
IMPORTANT: Ensure that you have enough disk space available for a copy of the Mongo databases. (roughly your Config + Voicemail backups).
```

```
IMPORTANT: 18.08 does not have Reachme in it, if you use Reachme on this server or in the cluster, do not continue!
```

This script will do the following:

- Back up mongo config and dbs
- Stop mongo instance and remove old mongo files
- Change 17.10 occurrences in /etc/yum.repos.d with 18.12
- Perform yum update and then reboot the machine

On sipxconfig service startup following steps are taken (in case there is a backup still on the disk):

- Restore mongo config and dbs, then remove from disk
- Reboot machine

For other cluster servers:

- Run same script
- Re-add databases that were removed.

Continue? (you must enter Yes or No as shown and press Enter):

Enter 'Yes' and press Enter to continue. The system will reboot a couple of times as part of the process.

Upgrade to 18.12 or later for CentOS 6 Multi-Server Clusters with Multiple Database Servers for 17.10 and Older

Backup your System

Login to the Admin GUI and click on System -> Backup and at a minimum backup configuration and voicemail.

Do it now... before you go any further.

Remove All Secondary Databases from Cluster Nodes

From the Admin UI remove databases from all nodes **except** for the primary node. Click on System -> Databases do accomplish this.

Proceed as with Single Server for Primary

Proceed as above with the 'Download upgrade.sh' section and then the 'Run upgrade.sh' section.

Secondary Servers in Cluster

After the Primary Server has completed, repeat for each of the Secondary Servers in the cluster until all are completed.

Add Database Nodes

After the secondary nodes are complete and done with their reboots, log in to the Admin UI and add back the database nodes that were removed.

Send Server Profiles

Login to web interface as superadmin.

Navigate to System -> Servers page. Place checkmark next to server names and click 'Send Profiles'.

SEC Service Upgrade Note

When upgrading **uniteme** from openUC 4.6 Update 11 or 14.4.3 to 15.06 follow these steps to ensure the SEC service is correctly running:

- 1. Upgrade from 4.6 Update 11 or 14.4.3 to 15.06.
- 2. After the upgrade is complete, perform the usual restart.
- 3. Once possible, connect via CLI and monitor processes using top. Notice that the SEC process is using a lot of CPU memory.
- 4. Perform another restart OR restart only the Siprologwatcher service.

Modified Files Upgrade Note

If you have manually modified any system related files or some files are not as yum would expect them to be, the yum update process may not overwrite them. It will instead create 'rpmnew' or 'rpmsave' files and not overwrite the files. The administrator may have previously modified the files knowingly or as part of a patch supplied by TAC.

To check your upgrade.log and search for *.rpmnew *.rpmsave on your system check the upgrade log:

You will be responsible for merging any changes from the old file to the new or contacting Technical Support if you require assistance.

Support Tips and Contact Information

Please see the [Getting Support](#) section for support tips and support contact information

Issues Sorted by Issue Number

Jira #	JIRA Name	RN Content	Enhancement/Fix/Known Issue	Keywords
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SI P X- 7 53	Add support for Polycom VVX 150, 250, 350 and 450	Polycom is adding some new VVX phones to their lineup. This is mostly a hardware refresh. Firmware 5.8.x and later supported.	Enhancement	Polycom
SI P X- 7 55	Add alarm for Certificate expiration	Add a system alarm called Certificate_Expiration that generates an alarm at 2 weeks before any system certificate is to expire.	Enhancement	Alarms
SI P X- 7 58	Missing user and password field for Grandstream https conf file authentication	An administrator would like to use an external provisioning server that serves profiles through https using user password authentication, the problem is that in the profiles for the upgrade section there are options for user and password for firmware but not for config which needs to be kept safe more than firmware.	Enhancement	Grandstream
SI P X- 7 63	Alarms should be grouped and in alphabetical order	Alarms in the administration portal should be logically grouped and in alphabetical order, so that related alarms can be displayed adjacent to each other. Now the order seems random and it is hard to find anything except by searching. Alphabetical ordering would put for example CPU_THRESHOLD_EXCEEDED and CPU_THRESHOLD_RECOVERED next to each other, and so on, since the alarm name is hierarchical. Same for MONGO alarms and so on.	Enhancement	Alarms
SI P X- 7 66	Make mongodb cache size configurable	Make mongodb cache size configurable in Admin GUI. System -> Database -> Settings. This is beneficial for systems with small amounts of memory.	Enhancement	MongoDB
SI P X- 7 80	upgrade mongodb to 3.6.9	Upgrade mongodb to version 3.6.9 as resilience is improved. Tests for a customer who wants to upgrade to 3.6 revealed that the upgrade from 3.4 to 3.6 is straightforward and can be done in place. This will also fix, among others, an issue where Mongo could not recover sometimes after the machine was shut down forcibly / powered off and the only solution was to delete the database and database files and replicate again. This was due to an empty storage.bson file: https://jira.mongodb.org/browse/SERVER-30836 The 3.6 version also adds performance improvements. https://docs.mongodb.com/manual/release-notes/3.6-changelog/ "Always-on write availability Retryable writes reduces the error handling you have to implement in your code. The MongoDB drivers will now automatically retry write operations in the event of transient network errors or primary replica elections, while the server enforces exactly-once semantics." Recommended version by Mongo developers is 3.6.9, tested OK, storage.bson bug seems fixed, tested by multiple power offs of nodes, re-elections run smoothly and cluster comes back online with improved speed vs. 3.4 version, even before all services are loaded. RPMS: https://repo.mongodb.org/yum/redhat/6/mongodb-org/3.6/x86_64/RPMS/	Enhancement	MongoDB
SI P X- 7 81	Enable autoprovisioning of new Polycom VVX 150,250,350 and 450 phones	The new Polycom VVX 150,250,350 and 450 phones fail to autoprovision. Investigation has found that the system does not generate configuration files because it does not recognize the user agent. "2018-12-20T12:43:06.694000Z":262::INFO:centos7.juliu.test:SocketListener1-1:00000000:Servlet:"GET /64167f3a750d-sipx-applications.cfg User-Agent: FileTransport PolycomVVX-VVX_450-UA/5.9.0.9373 Type/Application" "2018-12-20T12:43:06.695000Z":263::DEBUG:centos7.juliu.test:SocketListener1-1:00000000:Servlet:"Un-recognized user-agent or path. Redirecting to sipXconfig." With manual generation of configuration files the phones work fine. It seems that the servlet source code should be updated: https://github.com/sipXcom/sipxecs/blob/release-18.12/sipXprovision/src/org/sipfoundry/sipxprovision/auto/Servlet.java also https://github.com/sipXcom/sipxecs/blob/release-18.12/sipXpolycom/src/sipxplugin.beans.xml No. of lines: VVX 150: 2 VVX 250: 4 VVX 350: 6 VVX 450: 12	Enhancement	Polycom
SI P X- 7 82	Clean up and update Polycom config files	Config file templates for Polycom phones are outdated and give out many errors.	Enhancement	Polycom
SI P X- 7 83	CF engine doesn't trigger when Admin Settings are changed in UI	Changing SELinux setting in UI doesn't trigger CF engine to modify /etc/selinux/config file.	Fix	Config
SI P X- 7 84	Wrong title in About window	There is a wrong title in About window.	Fix	Config

SI P X- 7 91	Enhancement: remove user from phone automatically and send profiles upon deletion	As summary describes, enhancement request to automatically remove the user from any assigned phones upon being deleted from sipxconfig. Should also be the case with LDAP if user is set to be deleted or suspended from the system. Should also remove any shared lines or lines with presence subscribed. When the administrator deletes a user, the administrator should be prompted letting them know that the user will be deleted from the system and removed from any system managed phones.	Enhancement	Config
SI P X- 7 92	Populate SIP Domain in the Outbound Proxy field of Shared Lines for HA	In an HA cluster, the Phone->SIP Lines->Outbound proxy field must be provisioned with the SIP domain name (e.g. lvttest.com when server names are pbx.lvttest.com , pbx2.lvttest.com , pbx3.lvttest.com) for shared lines, and not the Phones->MAC Address->SIP Servers-> Servers field. Otherwise failover to the secondary servers for private and shared lines to the secondary servers does not work when the primary server is down. In the Polycom Release 5 system administration panel, follow the setup for the Genband MADN-SCA features. The reg.x.outboundproxy address should be used as the IP address of the SIP server for shared lines.	Fix	Config
SI P X- 8 01	TFTP service not properly configured on CentOS 7	TFTP service is not properly configured on CentOS 7 version. It starts in a wrong root directory and doesn't serve config files.	Fix	Config
U C -4 5 40	zen 7181: voicemail fwd with comment to email	Customer requested an improvement to the voicemail -> email forwarding: "It looks like if you press 5 to forward a copy of a voicemail, and record additional comments, and the destination mailbox has email forwarding enabled, then the email that gets sent out with the voicemail attached doesn't contain the comments. If you check the forwarded message using the phone you hear the comments, but the WAV file attached to the email doesn't have the comments."	Fix	Voice mail
U C -4 6 24	zen 7314 : http provisioning option to dhcp config	An administrator would like to easily configure our dhcp service to add http provisioning options. Customer requested .. : If I check the box "Polycom HTTPS provisioning" in System -> DHCP, there is a new line in /etc/dhcp/dhcpd.conf: option option-160 "https://sipxecs.procaresystems.com/phoneprov"; When I uncheck that box, that line disappears, so the phone appears to use FTP. It would be good to have a 3rd option to use http, and wondering if that should be the default option. Another thing I discovered, when I uncheck User -> Hoteling -> Enable, then try to log in to a phone, the log says hoteling is not enabled for the user, but it the phone still logs them in fine: "2017-11-03T20:08:55.316000Z":40:JAVA:INFO:sipxecs.procaresystems.com:P2-17:0000000:HotelingServlet:"Getting configuration for phone:64167f083e6b; user:1341" "2017-11-03T20:08:55.317000Z":41:JAVA:ERR:sipxecs.procaresystems.com:P2-17:0000000:HotelingServlet:"Hoteling is not enabled for user: 1341" I'm guessing maybe the configuration files don't get deleted. Any suggestions on this, or can we file a JIRA? I was able to get hoteling to work for the users that wouldn't work, I'm not sure how though. It doesn't seem to be related to being a Reach agent or the group it was in, I didn't change those, but there was an old Jitsi phone provisioned that may have interfered (it was named the same as the user).	Enhancement	Config
U C -4 7 41	zen 7856 / 7858 - 18.04 postgresql password change causes issues	Customer upgraded to 18.04 and changed postgresql password in system -> admin. This seems to have broken hotel. Advised customer to remove postgresql password, which fixed hotel, but broke CDR. Dev requested from customer .. "callresolver log says: "2018-07-23T10:59:09.226647Z":2:CDR:ERR:sip01.ipt.prod.int.phx2.redhat.com:main:00000000:cdr:"cse_reader.rb:: Loss of connection to database #<struct DatabaseUri database="SIPXCDR", port=5432, host="sip03.ipt.prod.int.phx2.redhat.com", adapter="postgresql", username="postgres", password=""> - retrying to connect after sleep" "2018-07-23T10:59:09.403025Z":3:CDR:ERR:sip01.ipt.prod.int.phx2.redhat.com:main:00000000:cdr:"cse_reader.rb:: Loss of connection to database #<struct DatabaseUri database="SIPXCDR", port=5432, host="sip01.ipt.prod.int.rdu2.redhat.com", adapter="postgresql", username="postgres", password=""> - retrying to connect after sleep" password used by callresolver is retrieved from: config.fetch('SIP_CALLRESOLVER_DB_PASSWORD', '') so we need also file: /etc/sipxpbx/callresolver-config specifically, field: SIP_CALLRESOLVER_DB_PASSWORD" .. and customer replied : That was the issue, seems password removal was not propagated. On core: SIP_CALLRESOLVER_DB_PASSWORD : but few servers had password = adasdasd sipxagent fixed it.	Fix	Config
U C -4 7 51	CSR has the wrong organization name	When using the Uniteme WebUI to create a CSR it ignores the user input for the organization and inputs the default instead. See attached images for example.	Fix	Config
U C -4 7 78	sipxagent.log does not have timestamps	The cfengine sipxagent.log does not have timestamps, which makes it difficult to troubleshoot. There should be timestamps added to the log, otherwise we are just guessing what happened when. This can be achieved by adding -l (low case L) or --timestamp option	Enhancement	Config
U C -4 7 98	apache rewrites and provisioning files	When attempting to download custom configuration files phones will get a different result depending on the path specified in dhcp option 160. For example, phone will get a different result depending on the path requested from /phoneprov/custom.cfg to /custom.cfg.	Fix	Config