UltraBand™ Version 7.0.0

Release Notes

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Table of Contents

Release Overview

Release Version	UltraBand 7.0.0
Release Date	February 22, 2019
Release Type	General Availability
Deliverables	● ISO image for fresh installations of UltraBand 7.0.0 ● Release Documentation (Release Notes)

Additional Information	Improvements since UltraBand 7.0.0 release:
	    Enhancements - 5
	    Customer Defects - 9
	    Defect fixes - 15

Enhancement(s)

JIRA ID	Zendesk ID	Description
PAUB-17228	None	Moving from CentOS 7.2 to CentOS 7.3/4
PAUB-19278	None	Support more than 128GB of RAM for UltraBand 7.0 Guest OS
PAUB-19326	None	Set New default Passwords for Ultraband
PAUB-19382	None	Required Script for Upgrading system memory in version 6.x
PAUB-19453	None	configuration support for timezone minutes offset

Customer Defect(s)

JIRA ID	Zendesk ID	Description
PAUB-16084	#397083	takes too much time during expiration period remove the reused buffers
PAUB-18102	#178572	Guest VM could not install correctly on dell r730xd
PAUB-19201	None	Version 7.0b59 Application Core
PAUB-19452	#431493	Version 7.0b59 Application Core
PAUB-19568	#435754	Can't start UB service after install
PAUB-19637	None	Version 7.0b59 UBView GUI Internal server error
PAUB-19667	#489116	Ddos attack from PeerApp MGT IPs
PAUB-19678	#507765	CO drop is happening periodically without coredump
PAUB-19764	#517926	6.2.7 asks for license upgrade when installing

Enhancement(s) Analysis Report

1. Moving from CentOS 7.2 to CentOS 7.4

In order to provide support for modern Dell Rx40 servers, we upgraded the whole Operating System used form CentOS 7.2 up to 7.4, providing better hardware support. This also allows us to use more recent versions of programs, which are constantly patched against defects, in order to have a more robust and secure operational base.

New Dell servers certification in lab

The new supported Dell servers have been certified inside the laboratory to certify UltraBand v7.0.0 work seamlessly with them. All server variants were tested and verified for correctness, adding to the stability of the product.

2. Support more than 128GB of RAM for UltraBand 7.0 Guest OS

- PeerApp customers are purchasing new Dell PowerEdge R740/R640 servers, which come with 256+GB of RAM. However, UltraBand product has a hard-coded limitation of supporting max 128GB of RAM for the Guest OS.
- As part of enhancements in 7.0.0 the changes were done to support the use of available resources in PeerApp customer systems.
- This translates to more customers being served per Cache Engine, with more capacity for Live caching as well.

3. Password Changes

Ultraband comes with documented default passwords for brand-new installations. The ideal procedure is to immediately set a new password, and this must not hinder appliance operation, as all network equipment(s) must follow. As part of 7.0.0 the product is shipped with new default passwords for users who can update the credentials at a later stage

4. Configuration support for timezone minutes offset

The configuration of ultraband was only supporting timezone with hour offset now the system was enhanced to support timezone configuration with minutes offset such as GMT+5:30. Before this enhancement was done , installation team used to change the times manually by different methods which non desired side effects as mentioned below.

There are 3 side effects of manual clock settings

1. Ultraband Logs time jumps after power-cycle/ reboot.
2. UBView stops Graph updates after power-cycle/ reboot with below message
   a. **WARNING : System Clock moved back and graphs not updating**
3. After Every power-cycle or power issues; Service needs to be stop & start for 2nd time for clock adjustments which increments the cache downtime/MW.(additional MW in case of a power failure)

With the enhancement the setting is taken care as part of installation .

Fault Analysis Report

Version 7.0b59 Application Core

A customer reported a system crash that was traced back to an unprotected memory access, causing a segmentation fault. The issue was promptly identified and fixed.

Takes too much time during expiration period remove the reused buffers

It was noted by a customer that expiration mechanism in the system had an issue whidue to which there is an effect on the system Cache-out and overall performance. This is related to cleaning of different queues / pools and how they react to stressful spikes. The issue was analyzed and fixed.

CO drop is happening periodically without coredump

It was noted by a customer that when the Webcache feature is enabled on certain high-throughput scenarios, it reduces the system Cache-out and overall performance. This is related to IO queues and how they react to stressful spikes. The issue was analyzed and fixed.

Broken cache operations for Windows Update files

Windows Update files were being broken into pieces instead of a continuous cache block. After research, the fault was identified and promptly corrected

Stability Improvements

PeerApp is constantly improving its testing methods as well as observing customer logs during troubleshooting of other customer defects. There were quite a number of instances where we had seen segmentation fault errors in the logs and these issues sometimes lead to server crashes, which prompted us to proactively scan some modules and identify the root cause of these problems. The issues identified were mainly due to passing null values to the subroutines which are expecting memory addresses, causing segmentation issues and potentially stability issues. The product team is constantly fixing these issues and including them in each release before customers experience them on their premises, making the product more reliable and robust on after every release. As a result of this intense initiative, this release includes over 50 other improvements for overall stability of the product.

As the issues are internal and might not be relevant to all of our customers, we list only an excerpt of the released fixes for this version:

Defect(s)

JIRA ID	Zendesk ID	Description
PAUB-17850	None	Email Alerts shows incorrect product in Subject field
PAUB-18123	None	CLONE - PAUB-14968: Application crash accessing null file pointer: too many open files
PAUB-18578	None	Stability Improvements
PAUB-18579	None	Stability Improvements
PAUB-19630	None	HTTP Service UNKNOWN session close reason for cached Youtube files
PAUB-19631	None	HTTP Service UNKNOWN session close reason for not-cached Youtube files

PAUB-19632	None	HTTP Service Broken cache operations for Windows Update files
PAUB-19639	None	Remove unused files in the stack/ subdir
PAUB-19640	None	Pool packets almost double up after upgrading 6.2.5b473
PAUB-19641	None	8K buffers has not created after upgrading 6.2.5b473
PAUB-19642	None	Number of pushup packets decreased to half of it after upgrading 6.2.5b473
PAUB-19681	None	Performance testing not updating testrail
PAUB-19738	None	Cache-out Port stopped functioning with latest Upgrade on 5.x - To port the fix done for 5.x to 6.x to 7.0
PAUB-19760	None	Upgrade Script for Host & Guest Upgrade from 7.0b59 to 7.0b69
PAUB-19777	None	Too many Errors in UI log after upgrade to 6.2.7b2
PAUB-19657	None	Automatic alerts