

RELEASE NOTES

March 15, 2019

Converge NGS License Boundary Patch

Converge™ Software 2.1 – Secondary and Tertiary Data Analysis Workflow

TABLE OF CONTENTS

- Products Affected
- Software Overview
- Issues Addressed in Converge Hotfix
- Installation/Upgrade
- System Requirements
- Legal Notices and Disclaimer

PRODUCTS AFFECTED

- **Converge Software 2.1**
 - Secondary Analysis Module
 - Tertiary Analysis Module

SOFTWARE OVERVIEW

Converge Software is a multi-phased product suite for Next Generation Software Platform. The software is built on a modular platform offering upstream data storage and workflow capabilities, genotype calling, in addition to downstream post genotype sample analysis tools. It is an extension of existing NGS STR Data analysis and Paternity and Kinship cases to include a commercialized solution (software & reagents) using Mitochondrial and SNP (ancestry & identity) applications on NGS for global HID customers.

ISSUE ADDRESSED IN CONVERGE HOTFIX (cdaf4e6-201902201700)

A modification was made to the NGS license to correct a license boundary issue that affected (a) Converge batch handling as well as (b) secondary and tertiary analysis workflows for single user licenses.

NOTE: This upgrade is required for all Converge 2.1 users.

An example workflow that has been corrected in this patch release follows:

- **Single User License**

Application	Version	Key	Count	In Use*	Start	Expiration	Action
Platform	2.1	987654321	1	0	Mar 15, 2016	Mar 25, 2028	...
ngs	1.1	987654555	1	0	Mar 15, 2017	Mar 25, 2020	...

* You may need to refresh the browser window to see recent changes in the number of licenses in use.

○ Secondary Analysis > Profile Approval

Sample ID: S-1063.1
Profile CQG: [Red]
Sample Concordance: [Green]

Case ID: [Red]
Sample CQG: [Red]
Secondary Analysis Review: ✓ Approved
Created Date: Mar-11-2019 11:07:14 AM

Sample Name: Set-B_IB-0655
Profile Gender: N/A
Concordance Type: N/A
Batch ID: Batch-1003
Last Modified Date: Mar-11-2019 11:09:01 AM

Sample Type: Unknown
Sample Gender: Male Presence
Profile Concordance: [Green]
Status: In Progress
Created By: converge
Modified By: converge

Profile ID(s): [Red Box] Upload [Green Box] Approve [Red Box] Reject [M] Apply Changes [L3] Reset Current Data [C] Set to Default

Locus	Position	Genotype	Coverage	Allele Freq	Coverage%	QC	Excl. Locus	IGV	Analy
rs948028	chr11:120644447	AC	4514	[Green]	[Red]	[Green]	[Green]	[Green]	[Green]
rs4984913	chr16:740466	AG	2913	[Green]	[Red]	[Green]	[Green]	[Green]	[Green]
rs1876482	chr2:17362568	GG	1165	[Green]	[Red]	[Green]	[Green]	[Green]	[Green]
rs3737576	chr1:101709563	TT	2134	[Green]	[Red]	[Green]	[Green]	[Green]	[Green]
rs2070586	chr12:109277720	AA	1076	[Green]	[Red]	[Green]	[Green]	[Green]	[Green]
rs10007810	chr4:41554364	AA	505	[Green]	[Red]	[Green]	[Green]	[Green]	[Green]
rs6451722	chr5:43711378	AA	1156	[Green]	[Red]	[Green]	[Green]	[Green]	[Green]
rs10108270	chr8:4190793	AA	2848	[Green]	[Red]	[Green]	[Green]	[Green]	[Green]
rs4666200	chr2:29538411	GG	2193	[Green]	[Red]	[Green]	[Green]	[Green]	[Green]
rs2416791	chr12:11701488	AG	2400	[Green]	[Red]	[Green]	[Green]	[Green]	[Green]

○ Secondary Analysis > Profile Upload

Choose Profile*: [New Profile--]
[Cancel] [Create]

○ Tertiary Analysis > Profile Approval

Profile-1001

Profile Category: SNP
Locus Type: SNP
Last Comment:

Kit Name: Universal_Kit
Creation Date: Mar-11-2019 11:09:42 AM

Profile External ID: Set-B_IB-0655
Last Modified Date:

Merged Profile: ✗ No
Analysis Results: Result-S-1063.1

[Edit]

+ Genotype
+ Case
+ Subject

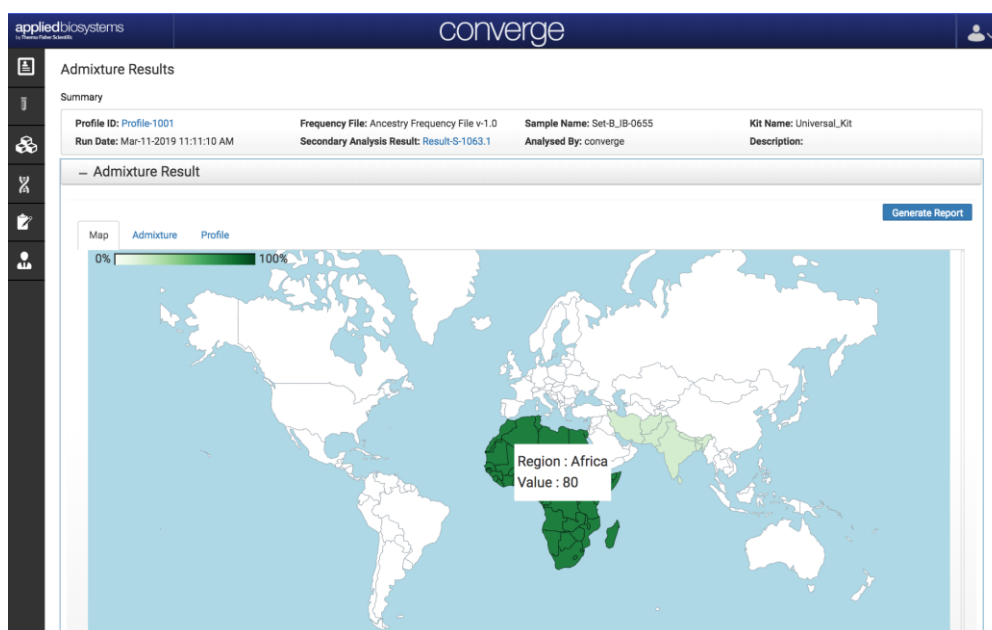
- Analysis

New Analysis [More]
Ancestry-1.0-Admixture Analysis
Ancestry-1.0-Likelihood Analysis
Identity-1.0-Y Haplogroup Analysis
Identity-1.0-RMP Analysis

Application Name Analysis Date Analyzed By Analysis Result Original Report Modified Report Action

No data found

○ Tertiary Analysis Result



INSTALLATION/UPGRADE

To deploy the patch for the Converge software, download the following files from the S3 links or [TF.com](#) Converge SW Downloads page provided:

- ReadMe for deployment – [S3 link](#)
- ConvergeUpgrade-2.1.x86_64.rpm - [S3 link](#) (Serial Number - cdaf4e6-201902201700)
- upgradecvg - [S3 link](#)

README INSTRUCTIONS OF CONVERGE 2.1 HOTFIX

IMPORTANT:

- a. During the Converge data migration process, Converge services will be shut down automatically.**
- b. User should have Converge 2.1 platform, case management and ngs 1.1 licenses installed from licensing portal.**

1. To apply hotfix, downloaded from the links provided below:
 - a. UPGRADECVG - <https://s3.amazonaws.com/converge-latest/Converge2.1-hotfix/upgrade>
 - b. RPM - https://s3.amazonaws.com/converge-latest/Converge2.1-hotfix/Converge-cdaf4e6-201902201700-2-1.x86_64.rpm
2. UPGRADECVG and RPM can be downloaded to a USB and inserted into a readable port on the Converge appliance server for use. For any technical support on upgrade path, contact your local FAS team member.
3. On the Converge Software Server desktop, navigate to the Home folder. Copy the downloaded files to this location /home/converge/Downloads.

For Research Forensic or Paternity Use Only. Not for use in diagnostic procedures. For licensing and limited use restrictions visit thermofisher.com/HIDlicensing

- If a terminal window is not already open on the Converge Software Server desktop, select Applications > Utilities > Terminal.
- In the terminal, navigate to the location where the files are copied by typing the following command:

```
cd /home/converge/Downloads/
```

```
[[converge@converge-appliance ~]$ cd /home/converge/Downloads/
[converge@converge-appliance Downloads]$ █
```

- Provide permission to execute the UPGRADECVG file by typing the following command:

```
chmod u+x upgrade
```

```
[[converge@converge-appliance ~]$ cd /home/converge/Downloads/
[[converge@converge-appliance Downloads]$ chmod u+x upgrade
[converge@converge-appliance Downloads]$ █
```

- Upgrade the Converge Software by typing the following command:

```
./upgrade --installrpm Converge-cdaf4e6-201902201700-2-1.x86_64.rpm --mode
execute
```

```
[[converge@converge-appliance Downloads]$ ./upgrade --installrpm Converge-cdaf4e6-201902201700-2-1.x86_64.rpm --mode execute
Password: Preparing... ##### [100%]
Proceeding with RPM installation....
Updating / installing...
1:Converge-cdaf4e6-201902201700-2-1##### [100%]
█
```

- Do not close the terminal window when this command is being executed. You will be prompted for password, provide your Converge Software Server password.

```
Current version:df78fb-201808231621
Intended version:cdaf4e6-201902201700
..... ADDING/UPGRADING file platform.war completed
Current version:df78fb-201808231621
Intended version:cdaf4e6-201902201700
..... ADDING/UPGRADING file nexus.war completed
Current version:df78fb-201808231621
Intended version:cdaf4e6-201902201700
..... ADDING/UPGRADING file kinship.war completed
Current version:df78fb-201808231621
Intended version:cdaf4e6-201902201700
..... ADDING/UPGRADING file ui.war completed
Current version:df78fb-201808231621
Intended version:cdaf4e6-201902201700
..... ADDING/UPGRADING file ngs-1.1.war completed
Current version:df78fb-201808231621
Intended version:cdaf4e6-201902201700
..... ADDING/UPGRADING directory ancestrypanel-1.0 completed
Current version:df78fb-201808231621
Intended version:cdaf4e6-201902201700
..... ADDING/UPGRADING directory identitypanel-1.0 completed

##### CONVERGE APPLIANCE SERVER UPGRADE FINISHED AS A PART OF HOTFIX REVISION cdaf4e6-201902201700. #####
Updating www directory....
Update steps of www directory completed....
Starting up tomcat server....
.....starting apache-tomcat server.
.....donot close this window or terminate it in any other way until the process is complete and the command prompt is rendered
Tomcat started.
....waiting for the Tomcat to launch the converge application
done

Release Note:

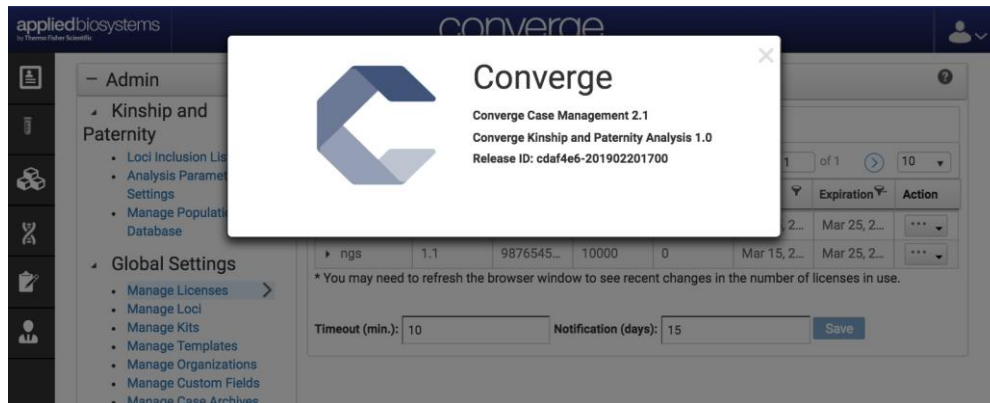
CONVERGE HOTFIX RELEASE (Revision #cdf4e6-201902201700) : 1.Fixed CVO-04003 ERROR related to License Boundary while performing Tertiary Analysis.
SUPPORTED BASE APPLICATION VERSION : 1. CONVERGE 2.1
END USER IMPACT : 1. No impact to existing functionalities & performance of the application.
IN CASE OF ANY ASSISTANCE PLEASE CONTACT : 1. Level 1 & 2 : HID Tech Support , +1 (888) 821-4443 #1 , hidtechsupport@thermofisher.com
rd.jspa?rapidView=521 : 2. Level 3 : Hid-Software-Support@thermofisher.com , Create a Jira ticket at https://jira.amer.thermo.com/secure/RapidBoa
Get assistance from level 1 or Level 2 team to create it.

-END

[converge@converge-appliance Downloads]$ █
```

- Once the hotfix process is complete,
 - Restart Converge services using cutil

- b. Login to the Converge software,
- c. Navigate to the 'About' tab from the pull-down menu on the top right corner and confirm that the Serial No. is "**cdaf4e6-201902201700**". There would not be any change in this version.



- d. Clear browser cache and cookies to remove inconsistencies.

NOTE:

- a) If login to the Converge application fails, user can restart Converge services using cutil.
- b) User should take back-up of Converge server from desktop icon once the hotfix is deployed to the server successfully. Any old backup prior to the hot fix deployment would not be valid anymore and user is advised not to take for consideration anymore.

For technical questions, please contact HIDTechSupport@thermofisher.com.

SYSTEM REQUIREMENTS

- TSS v5.10 / S5 / S5XL™
- Converge Software Server & its components
 - Dell™ PowerEdge™ T110/T130 Tower Server, motherboard v2 or later
 - Red Hat™ Enterprise Linux™ operating system
 - Apache™ Tomcat™ application server that runs on Converge software
 - PostgreSQL database server that stores the data for the server and software
 - Google™ Chrome™ browser
 - Automatic configuration of IP, domain name service (DNS), and Windows internet name service (WINS) settings via dynamic host configuration protocol (DHCP)
- Converge Software Server Specifications
 - Processor - Intel™ Xeon™ Processor E3-1270 v6, 3.8 GHz, 8M cache, 4C/8T,turbo (72 W)
 - Memory - 16 GB of memory (2 × 8 GB), UDIMM, 2400 MT/s, Single Rank, x8 Data Width, DVD ROM, SATA, Internal
 - Hard Drive (2) - 2 TB 7.2 K RPM NLSAS, 12 GB/s, 3.5-in cabled hard drive (RAID1)
 - Data Storage - RAID 1; PERC H330 Integrated Controller for 3.5-inch cabled hard drive
 - Operating System - Red Hat™ Enterprise Linux™ operating system
 - Browser - Google Chrome™ 66 or later

For Research Forensic or Paternity Use Only. Not for use in diagnostic procedures. For licensing and limited use restrictions visit thermofisher.com/HIDlicensing

- Recommended Software (not provided)
 - Adobe™ Acrobat Reader
 - Microsoft Excel
- Verified Converge 2.1™ software workflow on Google Chrome™ and MAC Safari browsers.

LEGAL NOTICES AND DISCLAIMER

For Research, Forensic, or Paternity and Cell Line Authentication. Not for use in Diagnostic and Therapeutic applications. For licensing and limited use restrictions visit thermofisher.com/HIDlicensing.

Information in this document is subject to change without notice.

DISCLAIMER: LIFE TECHNOLOGIES CORPORATION AND/OR ITS AFFILIATE (S) DISCLAIM ALL WARRANTIES WITH RESPECT TO THIS DOCUMENT, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THOSE OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NONINFRINGEMENT. TO THE EXTENT ALLOWED BY LAW, IN NO EVENT SHALL LIFE TECHNOLOGIES AND/OR ITS AFFILIATE(S) BE LIABLE, WHETHER IN CONTRACT, TORT, WARRANTY, OR UNDER ANY STATUTE OR ON ANY OTHER BASIS FOR SPECIAL, INCIDENTAL, INDIRECT, PUNITIVE, MULTIPLE OR CONSEQUENTIAL DAMAGES IN CONNECTION WITH OR ARISING FROM THIS DOCUMENT, INCLUDING BUT NOT LIMITED TO THE USE THEREOF.

TRADEMARKS

© 2019 Thermo Fisher Scientific Inc. All rights reserved. All trademarks are the property of Thermo Fisher Scientific and its subsidiaries unless otherwise specified.