RELEASE NOTES

March 15, 2019

Converge NGS License Boundary Patch
Converge™ Software 2.1 – Secondary and Tertiary Data Analysis Workflow

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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**

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

o **Secondary Analysis > Profile Approval**

o **Secondary Analysis > Profile Upload**

o **Tertiary Analysis > Profile Approval**

o **Tertiary Analysis Result**
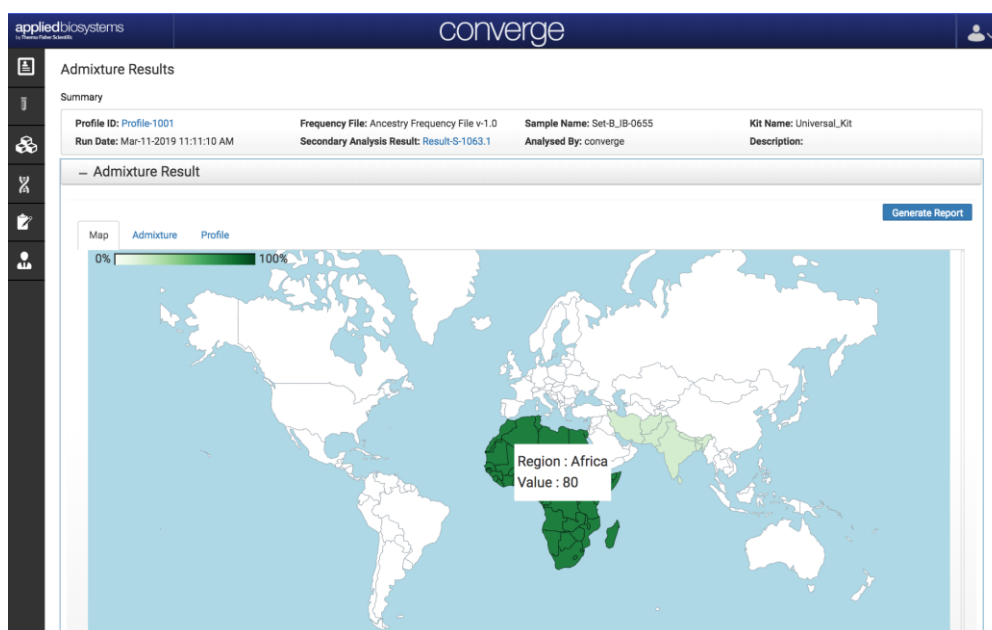
INSTALLATION/UPGRADE

To deploy the patch for the Converge software, download the following files from the S3 links or TF.com Converge SW Downloads page provided:
  o ReadMe for deployment – S3 link
  o ConvergeUpgrade-2.1.x86_64.rpm - S3 link (Serial Number - cdaf4e6-201902201700)
  o 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.

4. If a terminal window is not already open on the Converge Software Server desktop, select Applications > Utilities > Terminal.

5. 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]$ ▯
```

6. 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]$ ▯
```

7. 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%]
▯
```

8. 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:df70f6b-201808231621
Intended version:cdaf4e6-201902201700
..... ADDING/UPGRADING file platform.war completed
Current version:df70f6b-201808231621
Intended version:cdaf4e6-201902201700
..... ADDING/UPGRADING file nexus.war completed
Current version:df70f6b-201808231621
Intended version:cdaf4e6-201902201700
..... ADDING/UPGRADING file kinship.war completed
Current version:df70f6b-201808231621
Intended version:cdaf4e6-201902201700
..... ADDING/UPGRADING file ui.war completed
Current version:df70f6b-201808231621
Intended version:cdaf4e6-201902201700
..... ADDING/UPGRADING file ngs-1.1.war completed
Current version:df70f6b-201808231621
Intended version:cdaf4e6-201902201700
..... ADDING/UPGRADING file ngsmito-1.0.war completed
Current version:df70f6b-201808231621
Intended version:cdaf4e6-201902201700
..... ADDING/UPGRADING directory ancestrypanel-1.0 completed
Current version:df70f6b-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.   ##########
Updaing www directorty.....
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:
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CONVERGE HOTFIX RELEASE (Revision #cdaf4e6-201902201700)  : 1.Fixed CVG-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
                                                2. Level 3 : Hid-Software-Support@thermofisher.com , Create a Jira ticket at https://jira.amer.thermo.com/secure/RapidBoa
rd.jspa?rapidView=521

                                                Get assistance from level 1 or Level 2 team to create it.

-END
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---------------------------
[converge@converge-appliance Downloads]$ ▯
```
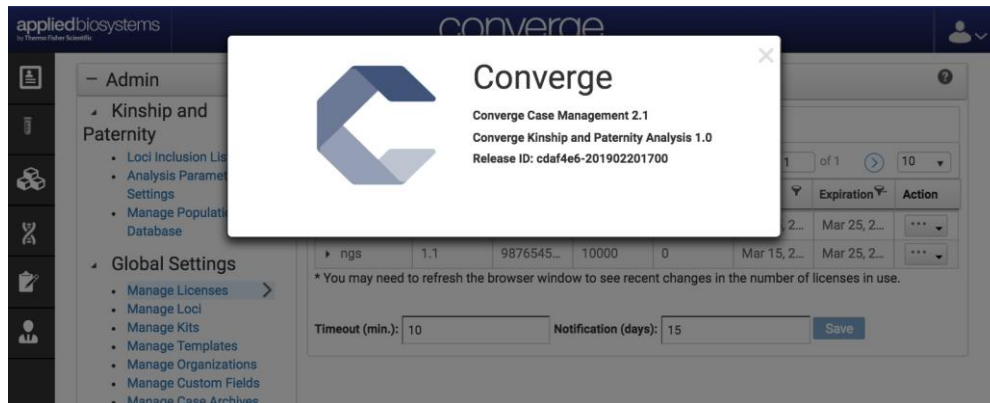
9. Once the hotfix process is complete,
   a. Restart Converge services using cutil

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.](mailto: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

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

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