

ESP Update Instructions from 3.4.x to 3.4.14

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1 Overview

This document covers a standard update from ESP version 3.4.x to 3.4.14
If the branch is less than 3.4, please contact CII for assistance with the upgrade:

esp_support@comoninf.com

ESP Release notes are found here -> <https://gitlab.com/ESP-Project/ESP/-/releases>

2 Instructions

2.1 SSH to the ESP server

ssh to the esp server as esp or other local user

2.2 Switch to the esp user

```
sudo su esp
```

2.3 Change to the primary ESP install directory

```
cd /srv/esp/prod
```

Note: This is the standard ESP installation directory. If the local ESP installation is in a different directory, modify the path to reflect the correct location.

2.4 Update application.ini with never_send_result_strings

NOTE: Skip this step if you are already on 3.4.13

Edit the application.ini file and add the default list of strings that are exempt from sending in case reports. Modify the path as needed for the current installation.

```
vi /srv/esp/prod/etc/application.ini
```

Add the following lines beneath the "fake_patient_mrn = "" line, then save and exit -> :wq in vi

```
# regexp for result strings that should not be sent on any case report
# use caution when modifying or adding to these values
never_send_result_strings = CANCELLED|DECLINED|^DUPLICATE|^ERROR|^INVALID|^INSUFFICIENT|^NA$|^NOT
DONE|^NOT PERFORMED|^NOT TESTED|^NOT VALID|^NP$|^PENDING$|^QNS$|^REPLACED|^RESULTS
BELOW|^SCANNED|^SEE|^STABILITY|^TEST$|^TESTING|^TNP|^SEE TEXT|^NOT AVAIL|^NO RESULT|^UNABLE
TO|^QUANTITY NOT SUFFICIENT|^PATIENT HAS NO SITE|^PATIENT REFUSED
```

2.5 Verify the current git branch

```
git branch
```

Example output:

```
$ git branch
  master
* version3.4.12.2
```

Verify that the branch with the * is greater than or equal to 3.4.

If the branch is less than 3.4, please contact CII for assistance with the upgrade:
esp_support@comoninf.com

2.6 Fetch the latest branches from the repository

```
git fetch
```

2.7 Checkout the 3.4.14 branch

```
git checkout v3.4.14 -b version3.4.14
```

Example with output:

```
$ git checkout v3.4.14 -b version3.4.14  
Switched to a new branch 'version3.4.14'
```

Verify you are on the new branch by running git branch

```
git branch
```

Example Output:

```
$ git branch  
* version3.4.14  
  master  
  release/3.4.14
```

If you have any issues with checking out the latest branch, please contact CII for assistance:
esp_support@commoninf.com

2.8 Apply the database updates

```
/srv/esp/prod/bin/esp migrate
```

2.9 Update all Installed Condition Plugins to their latest versions

Run the /srv/esp/prod/setupPlugins.sh script and update All Installed Plugins to the latest Version.

```
cd /srv/esp/prod/  
./setupPlugins.sh
```

Once you run the script, you will see a character drive interface that displays about 2 dozen conditions in rows. The second column tells you if that plugin is installed.

For each condition that is Installed; First, Uninstall it:

Down Arrow to that row and hit the Enter key

Down Arrow to -> **1. Remove** and Hit Enter

Repeat for all Installed Conditions then Down Arrow to the bottom row,

Perform selected actions and Hit Enter.

Re-run setupPlugins.sh, and select **1. Install** and hit Enter

Repeat for each condition that was previously installed,

Then Down Arrow to the bottom row,

Perform selected actions and Hit Enter.

Re-run `setupPlugins.sh` to confirm the plugin was successfully installed and to the latest version.

NOTE: you can run this script more than once if needed

2.10 Restart Apache/Httpd

Ubuntu: `sudo service apache2 restart`

RHEL: `sudo systemctl restart httpd` (OR `sudo service httpd restart`)

3 Verification Steps

3.1 Release Specific Verification

Verify that Bicillin is in the Drug Synonym table (part of 3.4.13)

Login to the Browser based ESP UI
Navigate to the Administration drop down menu and Select "Site Administration".
Scroll down to the "Static" Section and select the "Drug Synonym" link
Enter `bici` or `Bicillin` in the search and hit Enter or click the Search button

You should see a row for Bicillin

Generic name	Other name
PENICILLIN G	BICILLIN

3.2 Generic Verification Steps – for any release

3.2.1 UI - ESP Admin Interface

Verify you can login to the Browser based UI and that the status page loads properly.

Load the two pages below to verify basic functionality:

1 - Navigate to the Administration drop down menu and Select "Site Administration"

Select "Condition Configs" under the Conf heading near the top of the page
You should see a list of conditions and settings

2 – Next select the "home" breadcrumb link or click the back button and then

Scroll down to the EMR section and select "Provenances"
You should see a list of files loaded, the most recent at the top.

Next verify basic Command line functionality

3.2.2 OS-Command Line – ESP Command Line Interface

ssh to the ESP server as the esp user and execute the following commands, update the directory as needed.

cd /srv/esp/prod**bin/esp nodis -list** # this should produce a list of installed plugins – sample below:

```
anaplasmosis
asthma
chlamydia
depression
gonorrhoea
hepatitis_b
hepatitis_c
hiv
hypertension
syphilis
tuberculosis
```

bin/esp migrate -showmigrations

this will produce a list of migrations - all should be completed (marked X)

```
admin
[X] 0001_initial
auth
[X] 0001_initial
[X] 0002_alter_permission_name_max_length
[X] 0003_alter_user_email_max_length
[X] 0004_alter_user_username_opts
[X] 0005_alter_user_last_login_null
[X] 0006_require_contenttypes_0002
conf
[X] 0001_initial
[X] 0002_load_initial_data
[X] 0003_auto_20160513_1020
[X] 0004_auto_20180619_1326
[X] 0005_auto_20180829_1148
[X] 0006_SynchReportableRXDX
[X] 0007_AnaplasBabesioConfigs
contenttypes
[X] 0001_initial
[X] 0002_remove_content_type_name
emr
[X] 0001_initial
[X] 0002_auto_20151204_1116
[X] 0003_auto_20160513_1020
[X] 0004_load_initial_data
[X] 0005_auto_20160811_0535
[X] 0006_auto_20170925_1308
[X] 0007_auto_20180829_1148
[X] 0009_RiskFactors_04162019
[X] 0010_Facility_ProviderIDs_04162019
[X] 0011_Encounter_fields_renamed
hef
[X] 0001_initial
[X] 0002_auto_20151204_1050
nodis
[X] 0001_initial
[X] 0002_auto_20160513_1020
[X] 0003_auto_20160624_1615
[X] 0004_auto_20170918_1419
[X] 0005_auto_20170918_1515
[X] 0006_auto_20170919_1049
[X] 0007_auto_20171018_1415
[X] 0008_auto_20180305_1123
sessions
[X] 0001_initial
sites
[X] 0001_initial
static
[X] 0001_initial
[X] 0002_auto_20160513_1020
```

0003_load_initial_data
 0004_specimensourcesnomed
 0005_auto_20180829_1151
 0006_drugSynsforAnaplasBabesi

4 For Sites actively reporting to MDPH

You can ignore this section unless you are actively reporting cases to the Massachusetts Department of Public Health

4.1 Update DPH Portal

NOTE: The first set listed below were added in 3.4.13 and the second set in 3.4.14

1. Add new Facility Provider Fields

Login to the Production DPH portal and Navigate to

Mapping -> Organism > **Miscellaneous - Test not related to "Organism"**
 (double click to load the details)

Select the LOINC tab and scroll or search for **NA-1746**

For all the rows below - copy the value from the **LOINC Code** column to the **Local Code**
 (you can leave the Local Description Column empty)

CODE	DESCRIPTION ONLY – do not paste	LOCAL CODE (paste in CODE from Col 1)
NA-1746	ESP_PRESC_PROVIDER_NAME	NA-1746
NA-1747	ESP_PRESC_PROVIDER_NPI	NA-1747
NA-1748	ESP_ENCOUNTER_FAC_TX_NAME	NA-1748
NA-1749	ESP_ENCOUNTER_FAC_TX_ADD	NA-1749
NA-1750	ESP_ENCOUNTER_FAC_TX_CITY	NA-1750
NA-1751	ESP_ENCOUNTER_FAC_TX_STATE	NA-1751
NA-1752	ESP_ENCOUNTER_FAC_TX_NPI	NA-1752
NA-1753	ESP_PRIM_PROVIDER_NAME	NA-1753
NA-1754	ESP_PRIM_PROVIDER_NPI	NA-1754
NA-1755	ESP_ORDER_PROVIDER_NAME	NA-1755
NA-1756	ESP_ORDER_PROVIDER_NPI	NA-1756
NA-1757	ESP_ENCOUNTER_FAC_ORD_NAME	NA-1757
NA-1758	ESP_ENCOUNTER_FAC_ORD_ADD	NA-1758
NA-1759	ESP_ENCOUNTER_FAC_ORD_CITY	NA-1759
NA-1760	ESP_ENCOUNTER_FAC_ORD_STATE	NA-1760
NA-1761	ESP_ENCOUNTER_FAC_ORD_NPI	NA-1761
NA-1762	ESP_MANAG_TX_PROVIDER_NAME	NA-1762
NA-1763	ESP_MANAG_TX_PROVIDER_NPI	NA-1763
NA-1738	ESP_ICD_DATE	NA-1738
NA-1739	ESP_MEDS_DATE	NA-1739
NA-1767	ESP_PREGNANT_STATUS	NA-1767
NA-1779	ESP_PREGNANT_STATUS_EDD	NA-1779
NA-1780	ESP_PREGNANT_STATUS_DATE	NA-1780
NA-1782	ESP_GESTATIONAL_WEEKS	NA-1782

Once you have entered/verified them all - Scroll back to the top and click on the **SAVE** Link under the search area
 Next, click on the SNOMED tab (next to LOINC)



Commonwealth
Informatics

a genpact company

Scroll or Search for NA-1767

And where you see – 373066001 in the SNOMED Code Field, Enter 373066001 in the Local Code Field:

CODE	DESCRIPTION ONLY – do not paste	LOCAL CODE (paste in CODE from Col 1)
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373066001	Yes	373066001
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Again, Scroll back to the top and click on the **SAVE** Link under the search area

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4.2 For Sites actively reporting Syphilis to MDPH

NOTE: The following two steps were a part of 3.4.13, you may skip this step if you are already on 3.4.13

4.2.1 Review site specific Titer results that are mapped to the RPR Abstract Lab

1 - Login to the system as the esp user and start the psql command as shown and paste in the select statement. Save the results, as it will be needed in the step "Updating the DPH Portal".

```
psql -d esp
select count(*), e.result_string from emr_labresult e, conf_labtestmap c where
e.native_code = c.native_code and c.test_name = 'rpr' and e.result_string ilike
'%:%' group by result_string order by result_string;
```

2 - Review non titer results and add them to the excluded positive and negative strings as needed. See Step 3 for details. In the same psql command window, paste in the below select statement to see all non titer results mapped to rpr tests.

```
select count(*), e.result_string, e.native_code from emr_labresult e,
conf_labtestmap c where e.native_code = c.native_code and c.test_name = 'rpr' and
e.result_string not ilike '%:%' group by result_string,e.native_code order by
result_string;
```

Normally all non-titer results should be ignored for tests mapped to RPR Lab. For all local Labs mapped to the ESP "RPR" Lab we need to exclude any results that would match existing Positive Result Strings that by default apply to all Labs. These strings will need to be added to the "Excluded Positive" String configuration for that specific Lab. Otherwise default string processing will turn these into Positive Events, and could cause false positives. The results strings need to be Excluded for each Lab - in the Reporting Section of the Lab Test Map page of the UI, see the next step for details.

3 – Steps to Ignore a Positive or Negative String for a Specific Lab:

Login to the ESP UI and navigate to the Administration drop down menu and Select "Site Administration"

Under the Heading "Conf" Select the "Lab Test Maps" Link

Enter the Native_Code from the SQL Result in step 2 and click Search

Click on the number link in the ID column for the test you want to modify

Click the (Show) link after the "Result Strings" Section to expand that area of the page

Find the strings that you want to add to the Excluded Positive Strings Section

Add the strings(s) by either double clicking it or highlighting one(or more) in the left panel,
and then clicking the > button to make it appear in the panel on the right

Once all the strings are in the right panel, scroll to the top or bottom of the page
and click on the "Save" button

4.2.2 Update the DPH portal to use Titer values vs. Snomed

Map all distinct RPR Titers in the DPH portal, removing the old MDPH- Values.

AFTER updating to 3.4.13 and BEFORE the next daily processing occurs you will need to make changes to the Production DPH Portal Mappings for Syphilis

1 - Login to the Production DPH portal and Navigate to Mapping -> Organism -> "Treponema pallidum – Syphilis" (double click Syphilis to load the details)

Select the SNOMED Tab and find all the LOINCS that have titer results – two common ones are below:

LOINC : Reagin Ab : ACnc : Pt : Ser : Ord : Rapid test

LOINC : Reagin Ab : ACnc : Pt : XXX : Qn : VDRL

For all the LOINCS that have titers

Click on the Add button for each Titer and Add the actual Titer Value in the local code to match the Titer Values in the SNOMED Name Column. See the example below for the 1:1 titer. Add these for every LOINC/Titer mapped.

LOINC :		Reagin Ab : ACnc : Pt : Ser : Ord : Rapid test		
Local Codes for this LOINC:		+ 20507-0		
SNOMED Code	SNOMED Name	Local Code	Local Description	New Entry
MDPH-R260	Reactive titer: 1:1	MDPH-R260		Add
		1:1		

NOTE: At a minimum all of the distinct titer values returned in the result from the query in step 4.2.1

Scroll back to the top when done, and click on the SAVE Link under the search area.

Notify DPH of update so they can monitor future uploads of syphilis cases.

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