



Innovar Channel History Plugin

Introduction

Welcome to the Channel History plugin documentation for Mirth Connect. This plugin is designed to allow you to utilize Git version control automatically with Mirth Connect interface development.

Why channel history?

During the development of healthcare interfaces, the importance of version control can not be overemphasized. As more and more clients are on board with your team, it is challenging to track the progress of programming development on the Mirth Connect engine. Therefore, Innovar built this channel history plugin that not only provides the diff view of commits within the Mirth Connect administrator tool but automatically pushes the commits to your remote repository. With this powerful plugin, you will no longer lose track of your code and will be able to restore to the previous version quickly.

Key Features

History and Rollback: The ability to view the history of changes and roll back to previous versions is crucial. If a new change introduces a bug or an issue, it can be reverted to a stable state quickly.

Branching and Merging: Developers can create branches to work on new features or bug fixes independently. These branches can be merged back into the main codebase once the changes are tested and validated.

Remote Repository: Storing Mirth Connect channels and code templates on GitHub provides a remote backup. This is essential for disaster recovery, ensuring that configurations are not lost due to local hardware failures or other issues.

Getting Started

Before you dive into the documentation, make sure to review the installation prerequisites and check compatibility with your existing Mirth Connect setup. The subsequent sections will guide you through the configuration and how to use the Channel History plugin.

Let's get started!

Installation

If you are using Mirth Connect packaged by Innovar Healthcare from the AWS Marketplace, the extension should be pre-installed on "Advanced with SSL" and "Advanced with SSL Autoscaling" versions.

If, for some reason, you need to reinstall or update the plugin, you can do this from the Mirth Connect Administrator application. While logged into Mirth Connect Administrator, click on “Extensions”, then at the bottom of the screen, click “Browse”. A new window will pop up to allow you to browse for your plugin zip file on your local machine. Browse to the appropriate zip file and click “Open”. Once back on the Extensions screen, your file path should be filled in. Click “Install” to upload the file. Once completed, you will need to restart the Mirth Connect Service on the remote server.

Prerequisites

You will need to create a new repository on a version control tool (like GitHub, Bitbucket, AWS CodeCommit.etc) and attach SSH public key on the remote repository.

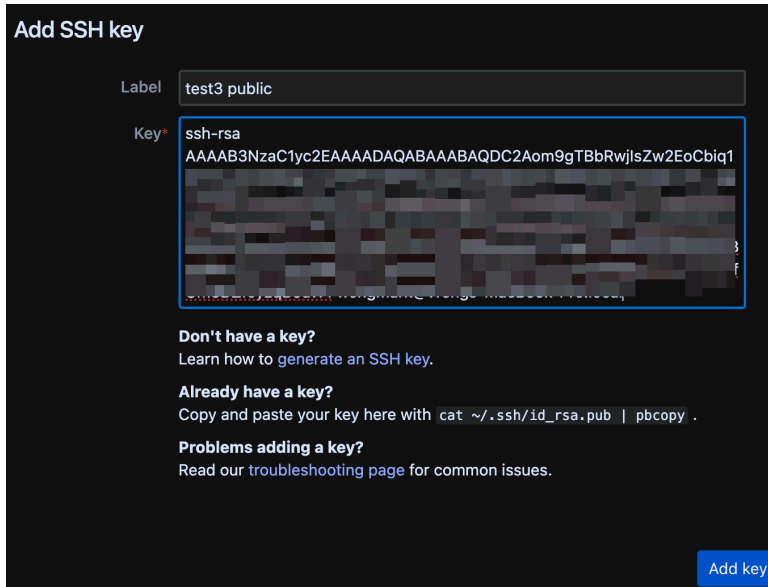
SSH key configuration

Configure ssh key on BitBucket

Step1:Please use the following command to generate the ssh key:It will create a key pair “test3”. The “test3” file is the private key and “test3.pub” file is the public key.

```
ssh-keygen -t rsa -b 2048 -f test3
```

Step2:Go to your version control tool and add the public key on your user or target repo
Example on BitBucket:



Step3: Please run the following command to **convert your ssh private key into PEM format**. Make sure you back up your private key first.

```
cp test3 test3_backup  
ssh-keygen -p -f test3 -m PEM
```

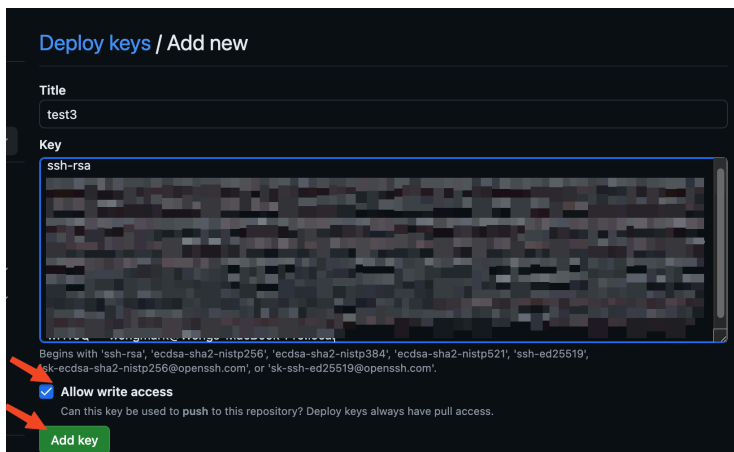
Then you are good to upload the private key PEM file to the channel history plugin setting!

Configure ssh key on GitHub

Step1: Please use the following command to generate the ssh key: It will create a key pair "test3". The "test3" file is the private key and "test3.pub" file is the public key.

```
ssh-keygen -t rsa -b 4096 -E sha256 -m PEM -f test3
```

Step2: Go to your GitHub repository. Select "Settings" > "Deploy keys" > "Add deploy keys". Paste your ssh public key and click "Add key".



Then you are good to upload the private key PEM file to the channel history plugin setting!

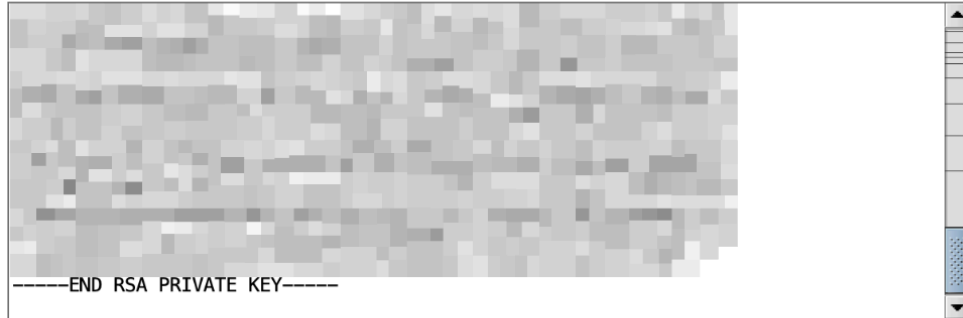
Innovator Version History Plugin

Enable Version Control

Git Remote Url:

Git Remote Branch:

SSH key:



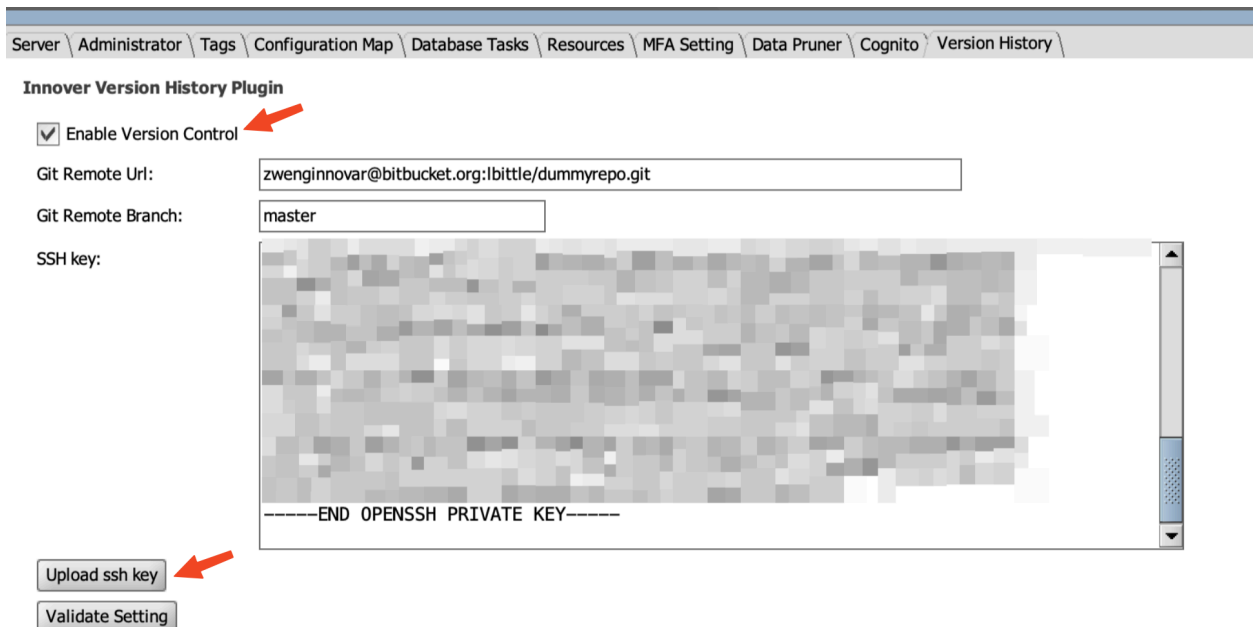
-----END RSA PRIVATE KEY-----

Plugin Configuration

In the Mirth Connect Administrator window, click on Settings. You will see a new tab for “Version History”.

1. Please check the “Enable Version Control” and enter the necessary information like the git remote url, remote branch name and ssh private key to your git repository.

NOTE: Please make sure your key is PEM format and you must use the SSH clone URL. Check the [prerequisites](#)



Server \ Administrator \ Tags \ Configuration Map \ Database Tasks \ Resources \ MFA Setting \ Data Pruner \ Cognito \ Version History

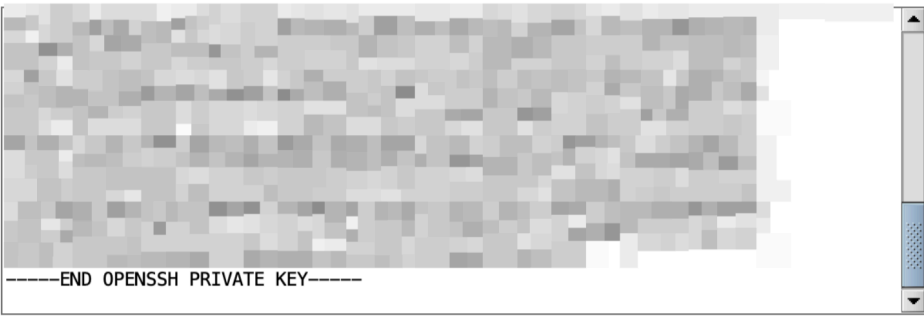
Innovator Version History Plugin

Enable Version Control

Git Remote Url:

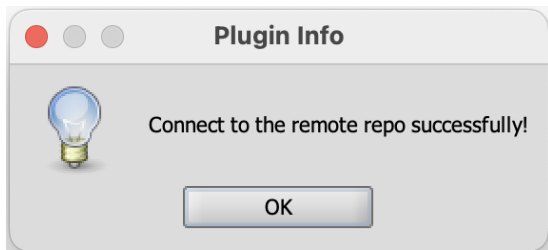
Git Remote Branch:

SSH key:

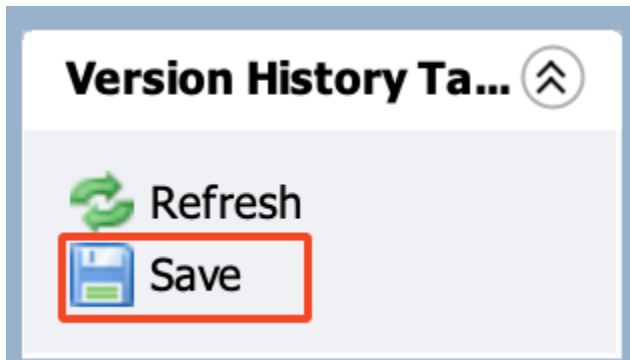


-----END OPENS SH PRIVATE KEY-----

2. Users can click the “Validate Setting” button to validate the values you enter. The server will use the key you provided to connect the git remote url.



3. Please click “save” on the task panel



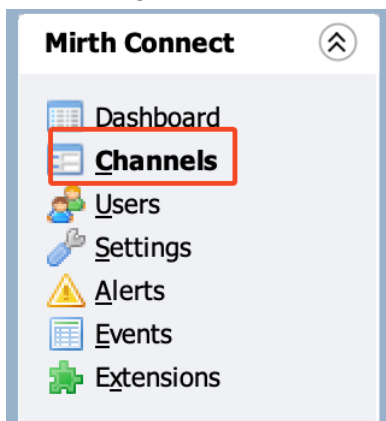
The channel history plugin will clone your remote repo to /opt/mirthconnect/appdata/InnovarHealthcare-version-control folder

View the code history on Mirth

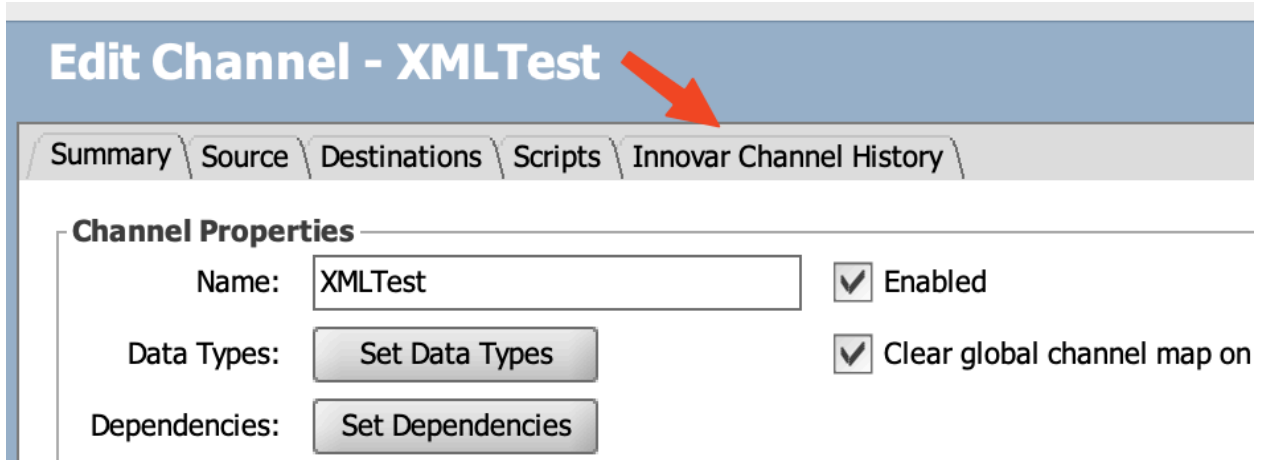
Once you have the settings configured, we can check the code history on channels. First of all, you have to make a change to the target channel and save it.

View history on channels

1. Please go to channels



2. Select the target channel and go to the “Innovar Channel History” tab



Edit Channel - XMLTest

Summary | Source | Destinations | Scripts | **Innovar Channel History**

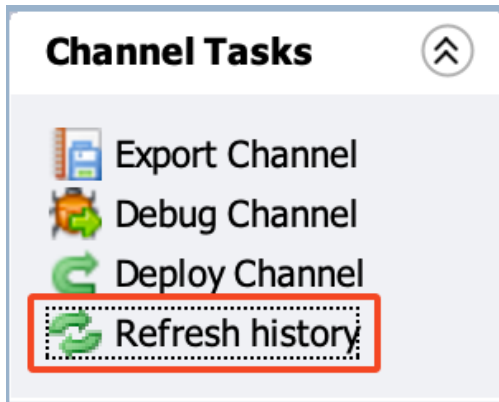
Channel Properties

Name: Enabled

Data Types: Clear global channel map on

Dependencies:

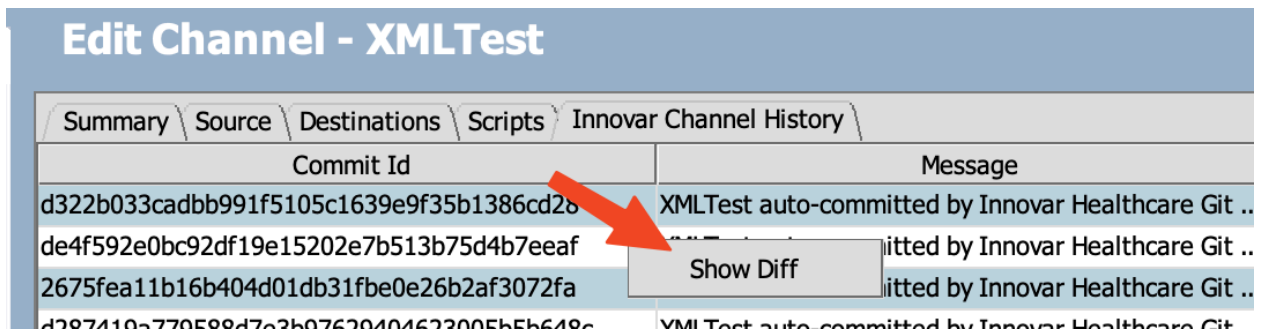
3. Click “Refresh history” to load the latest commits on this channel.



Channel Tasks

- Export Channel
- Debug Channel
- Deploy Channel
- Refresh history**

4. Please press Control and click 2 commits and right-click, click “Show Diff”



Edit Channel - XMLTest

Summary | Source | Destinations | Scripts | **Innovar Channel History**

Commit Id	Message
d322b033cadbb991f5105c1639e9f35b1386cd28	XMLTest auto-committed by Innovar Healthcare Git ..
de4f592e0bc92df19e15202e7b513b75d4b7eeaf	itted by Innovar Healthcare Git ..
2675fea11b16b404d01db31fbe0e26b2af3072fa	itted by Innovar Healthcare Git ..
d287410a770598d7e2b07620404622005b5b48e	XMLTest auto-committed by Innovar Healthcare Git ..

Show Diff

5. The Diff window shows the difference between 2 commits.

```
XML View | Object View
MLTest Time: 05-17-2024 15:46:08 Committed by zweng
XMLTest Time: 06-04-2024 12:08:59 Committed by zweng

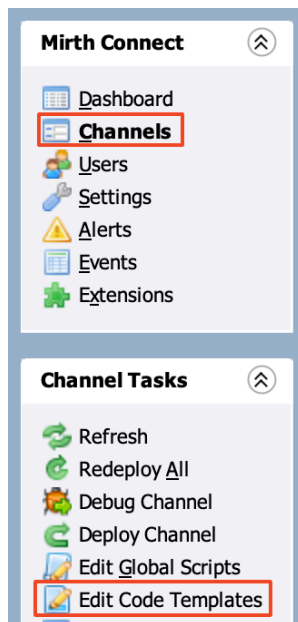
105 */</script>
106 </com.mirth.connect.plugins.javascriptstep.JavaScriptStep>
107 <com.mirth.connect.plugins.javascriptstep.JavaScriptStep version="4.5.0">
108 <sequenceNumber>1</sequenceNumber>
109 <enabled>true</enabled>
110 <script>var a = &apos;this is new step&apos;&#x27;var cc = &quot;asdf&quot;;
111 cc = &quot;as&quot;;
112 cc = &quot;asd&quot;;</script>
113 </com.mirth.connect.plugins.javascriptstep.JavaScriptStep>
114 </com.mirth.connect.plugins.javascriptstep.JavaScriptStep>
115 <com.mirth.connect.plugins.javascriptstep.JavaScriptStep version="4.5.0">
116 <sequenceNumber>2</sequenceNumber>
117 <enabled>true</enabled>
118 <script>var abc = 0;&#x27;var cc = &quot;asdf&quot;;
119 var cc = &quot;test1&quot;;
120 var cc = &quot;test2&quot;;
121 var cc = &quot;test3&quot;;</script>
122 </com.mirth.connect.plugins.javascriptstep.JavaScriptStep>
123 </com.mirth.connect.plugins.javascriptstep.JavaScriptStep>
124 </elements>

99 queryContainer.setEventCodeList(eventCodeList);
100 queryContainer.setConfidentialityCode(confidentialityCode);
101 queryContainer.setAuthorPerson(authorPerson);
102 queryContainer.setType(type);
103 queryContainer.setFormatCode(formatCode);
104 queryContainer.setRepositoryId(repositoryId);
105 */</script>
106 </com.mirth.connect.plugins.javascriptstep.JavaScriptStep>
107 <com.mirth.connect.plugins.javascriptstep.JavaScriptStep version="4.5.0">
108 <sequenceNumber>1</sequenceNumber>
109 <enabled>true</enabled>
110 <script>var a = &apos;this is new step&apos;&#x27;var cc = &quot;asdf&quot;;</script>
111 </com.mirth.connect.plugins.javascriptstep.JavaScriptStep>
112 <com.mirth.connect.plugins.javascriptstep.JavaScriptStep>
113 <sequenceNumber>2</sequenceNumber>
114 <enabled>true</enabled>
115 <script>var abc = 0;&#x27;var cc = &quot;asdf&quot;;</script>
116 </com.mirth.connect.plugins.javascriptstep.JavaScriptStep>
117 </com.mirth.connect.plugins.javascriptstep.JavaScriptStep>
118 </elements>
```

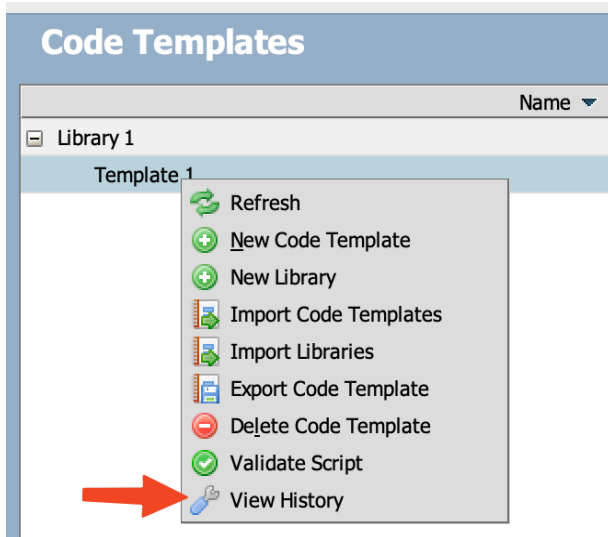
View history on Code templates

We can also check the code template history. First of all, you will need to modify the target code template and save it.

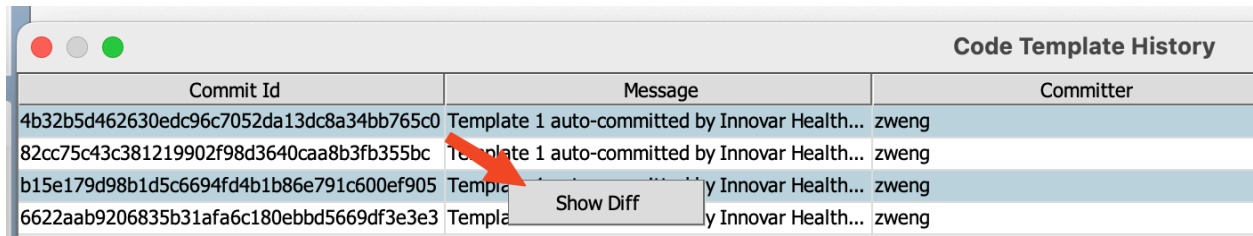
Please click “Channels” and select “Edit Code Templates” in the Channel Tasks



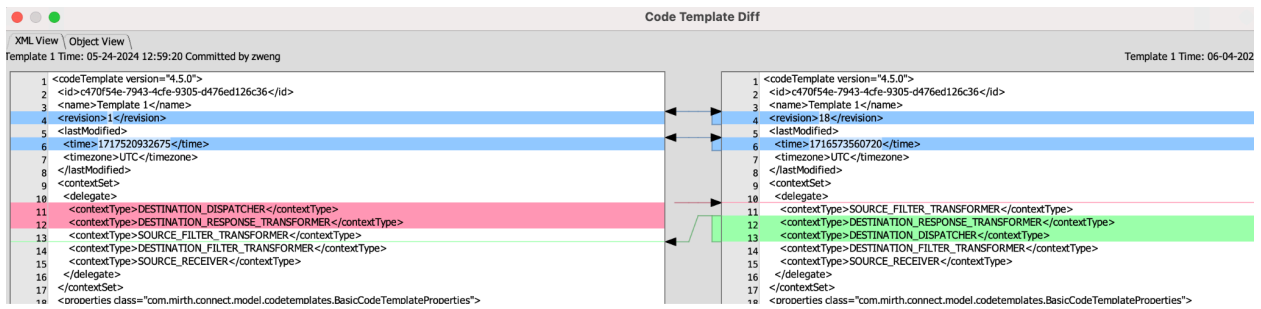
1.Highlight the target code template and right click, select “View History”



2.Please select 2 commits in the Code template History window and right click “Show Diff”



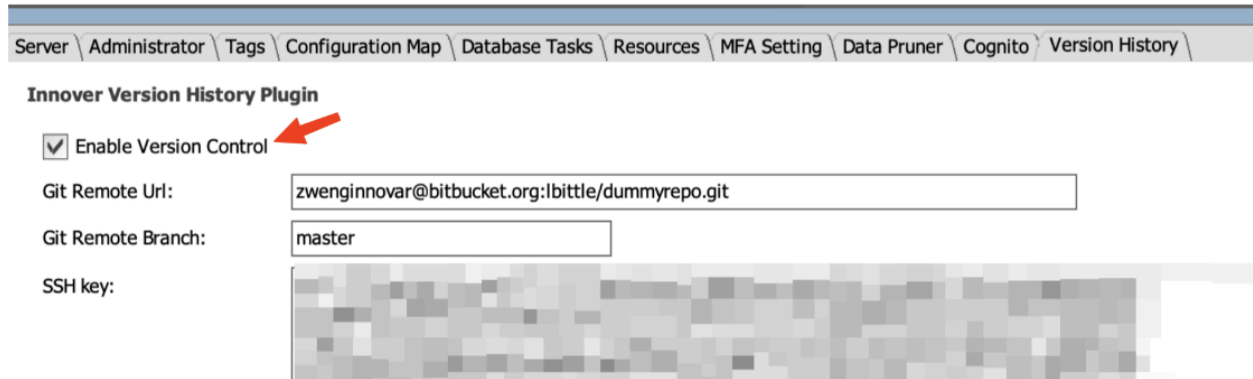
3.The Diff window shows the difference between 2 commits.



Disable the Channel History Plugin on Mirth Connect

Sometimes we probably do not need every changes to commit and push to remote repo. This section will guide you how to disable the Channel History plugin.

1. Please go to the setting and click "Version history" tab



Server \ Administrator \ Tags \ Configuration Map \ Database Tasks \ Resources \ MFA Setting \ Data Pruner \ Cognito \ Version History

Innover Version History Plugin

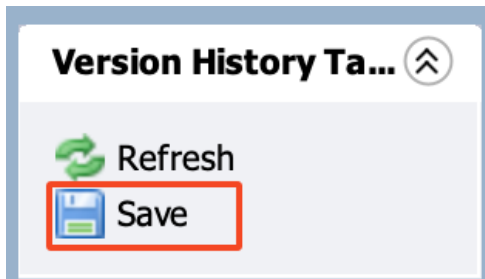
Enable Version Control

Git Remote Url:


Git Remote Branch:


SSH key:

2. Click "Save" on the task panel. Then the plugin is disabled.



Version History Ta... ⤴

 Refresh

 Save

View the code history on remote repository

The channel history plugin will push every new commit to your remote repository. The channels and code templates xml file will under the folder respectively. The xml file name is either the channel id or code templates id.

