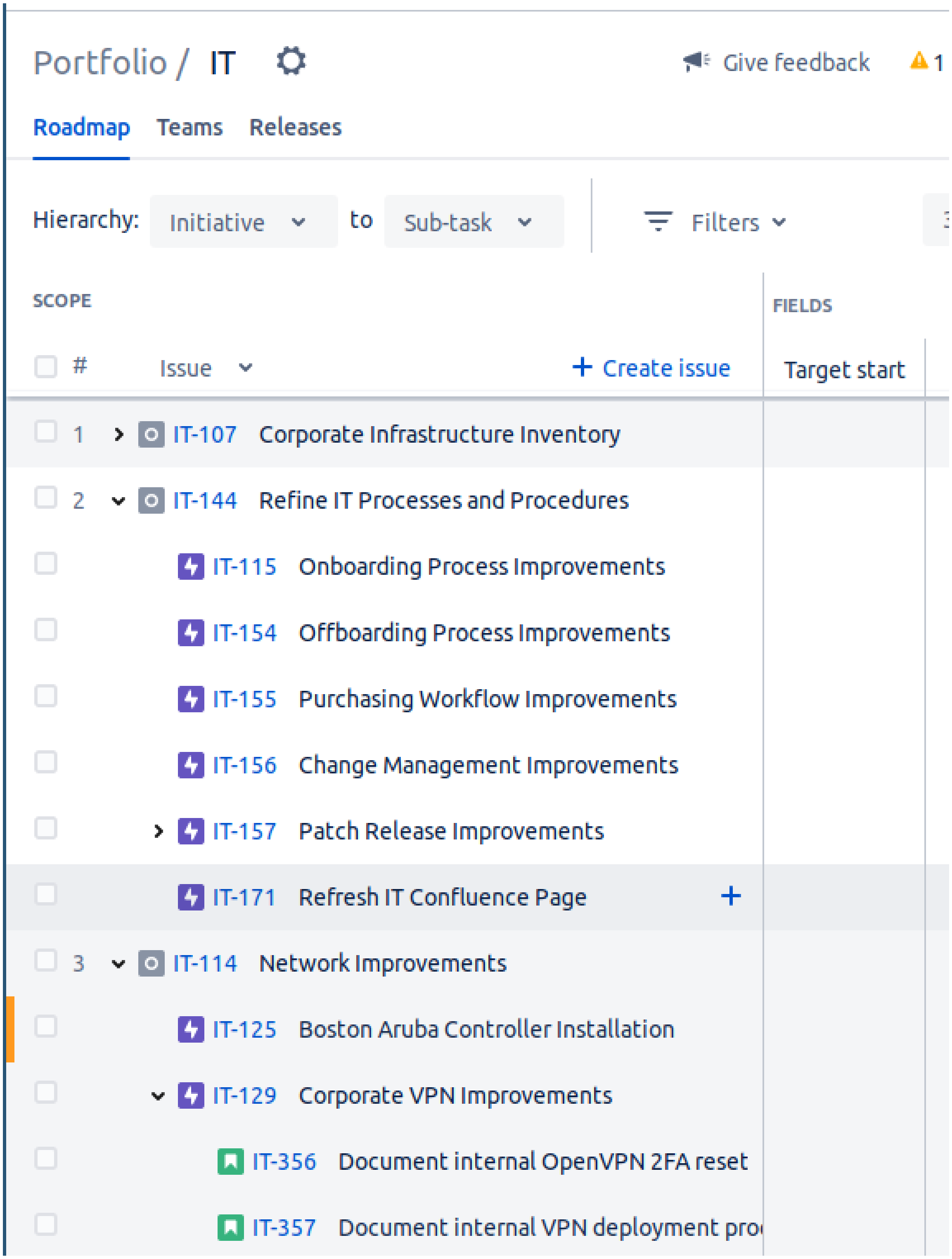
Disabled Jira Portfolio? Get your Initiative 'Child issues' structures back

Jira has a pretty limited support for breaking issues down into smaller components. Rather than support arbitrary hierarchies, if you want more levels of hierarchy, you need to buy plugins:

	Jira Core	Jira Software	Jira Portfolio
Levels of structure	Issues Sub-tasks	Epics Issues (Stories) Sub-tasks	Programs Initiatives Epics Issues Sub-tasks

Scenario: Jira Portfolio comes and goes

Let's imagine that, feeling the need for higher-level structure, your company forked out for Jira Portfolio and grouped Epics into Initiatives. For instance, a bunch of IT-related Epics are grouped into a **Refine IT Processes and Procedures** Initiative:



Portfolio / IT

Give feedback ⚠ 1

Roadmap Teams Releases

Hierarchy: Initiative to Sub-task

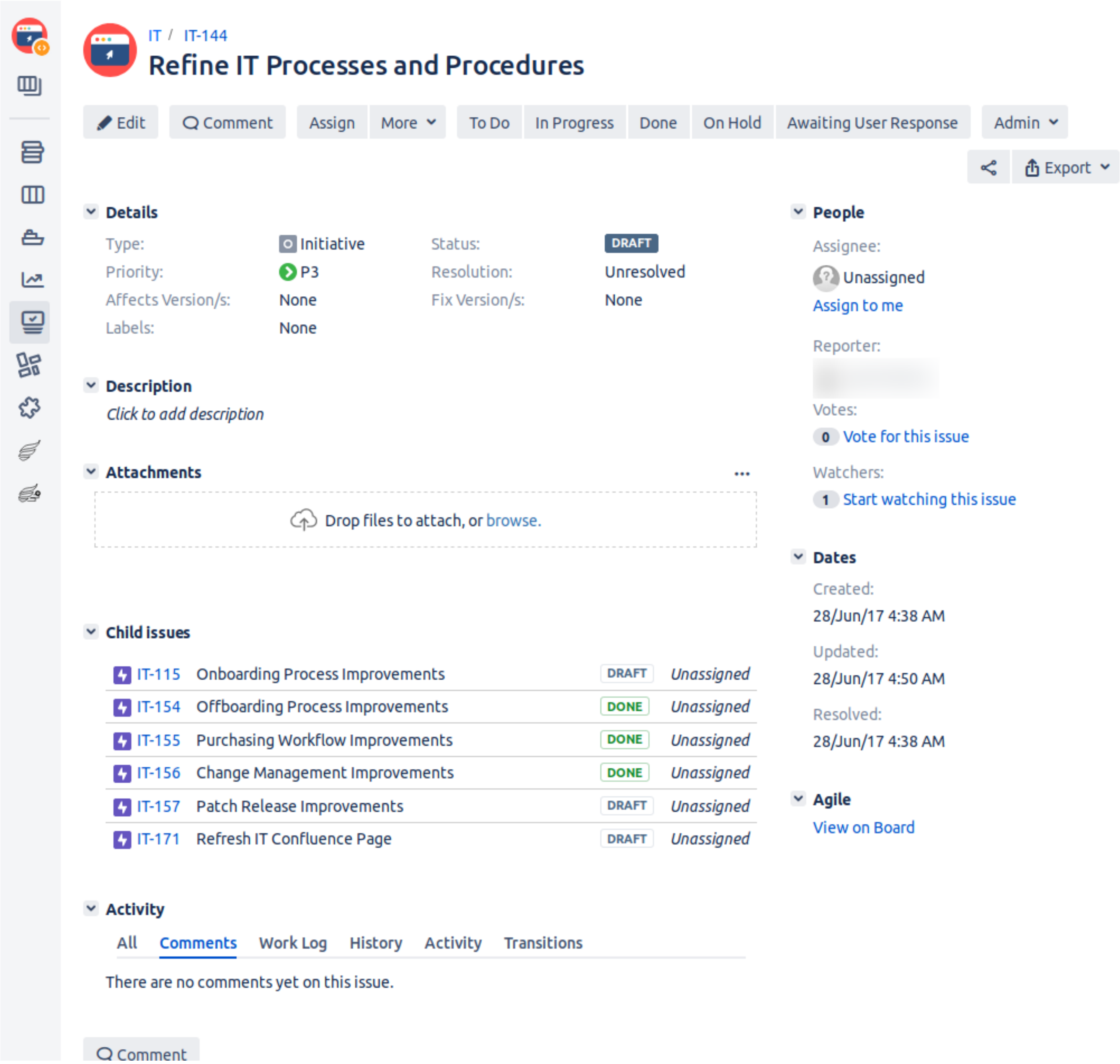
Filters

SCOPE

FIELDS

☐	#	Issue	Target start
☐	1	› IT-107 Corporate Infrastructure Inventory	
☐	2	⌄ IT-144 Refine IT Processes and Procedures	
☐		IT-115 Onboarding Process Improvements	
☐		IT-154 Offboarding Process Improvements	
☐		IT-155 Purchasing Workflow Improvements	
☐		IT-156 Change Management Improvements	
☐		› IT-157 Patch Release Improvements	
☐		IT-171 Refresh IT Confluence Page	
☐	3	⌄ IT-114 Network Improvements	
☐		IT-125 Boston Aruba Controller Installation	
☐		⌄ IT-129 Corporate VPN Improvements	
☐		IT-356 Document internal OpenVPN 2FA reset	
☐		IT-357 Document internal VPN deployment pro	

An 'Initiative' is modelled in Jira as just another issue type, so we can view our Initiative as an issue, and see its child Epics:



IT / IT-144

Refine IT Processes and Procedures

Details

Type:	Initiative	Status:	DRAFT
Priority:	P3	Resolution:	Unresolved
Affects Version/s:	None	Fix Version/s:	None
Labels:	None		

Description

Click to add description

Attachments

Drop files to attach, or browse.

Child issues

IT-115	Onboarding Process Improvements	DRAFT	*Unassigned*
IT-154	Offboarding Process Improvements	DONE	*Unassigned*
IT-155	Purchasing Workflow Improvements	DONE	*Unassigned*
IT-156	Change Management Improvements	DONE	*Unassigned*
IT-157	Patch Release Improvements	DRAFT	*Unassigned*
IT-171	Refresh IT Confluence Page	DRAFT	*Unassigned*

Activity

There are no comments yet on this issue.

People

Assignee:
Unassigned
Assign to me

Reporter:
[redacted]

Votes:
0 Vote for this issue

Watchers:
1 Start watching this issue

Dates

Created:
28/Jun/17 4:38 AM

Updated:
28/Jun/17 4:50 AM

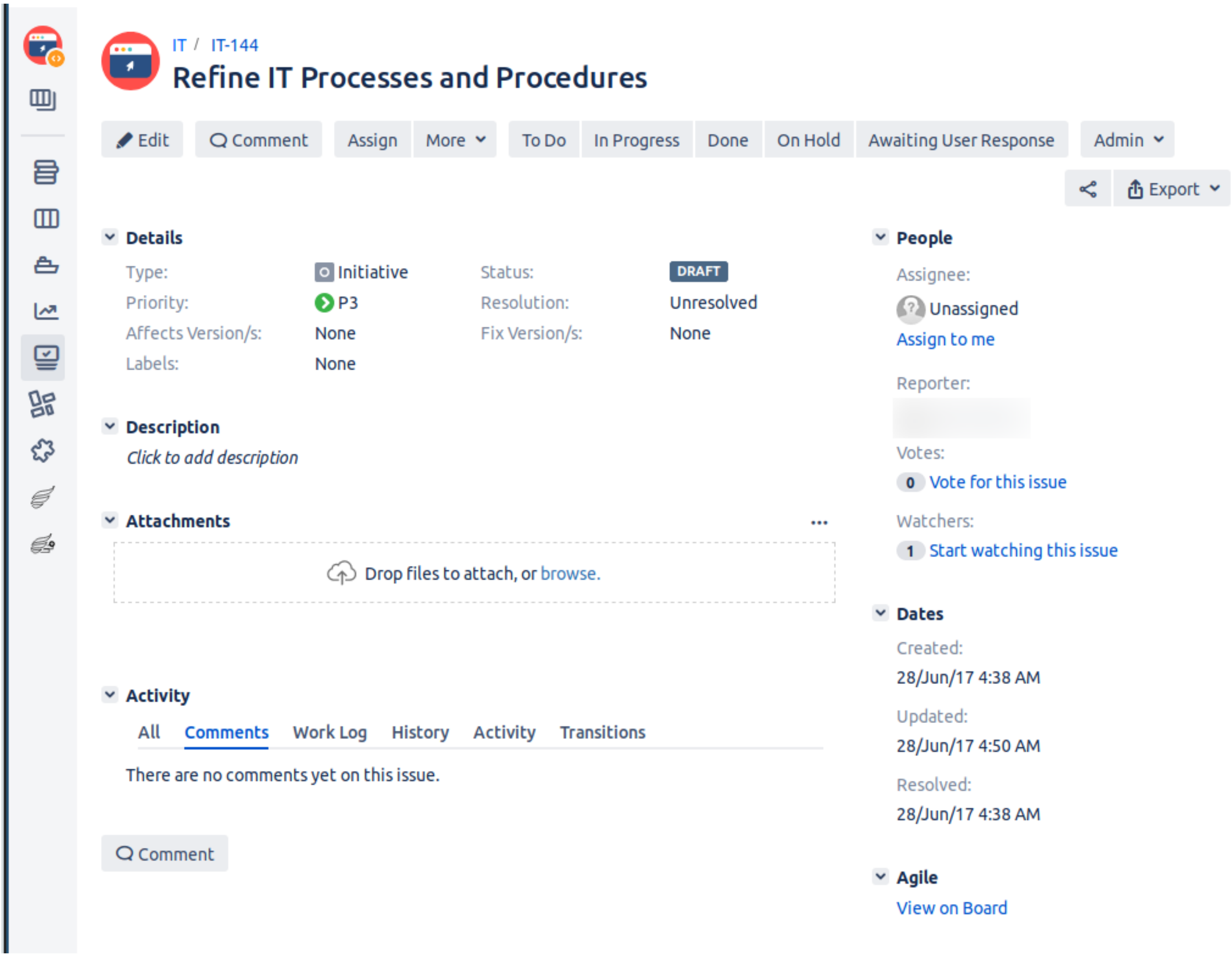
Resolved:
28/Jun/17 4:38 AM

Agile

View on Board

Then corporate sloth reasserts itself, and the elaborate high-level structures fall into disrepair. Eventually the license for Portfolio lapses, or Portfolio is disabled.

But that's okay, because at least we still have our Jira Initiatives with linked Epics, right? After Portfolio's license lapsed, lets look again at our Initiative issue:



IT / IT-144

Refine IT Processes and Procedures

Details

Type: Initiative

Priority: P3

Affects Version/s: None

Labels: None

Status: DRAFT

Resolution: Unresolved

Fix Version/s: None

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Oops. Initiatives lose their **Child issues** section as soon as Portfolio isn't validly licensed.

Where did our Initiative's child links go?

All the initial evidence suggests that the Initiative's Child links *should* have been preserved:

- the 'Child issues' section looks very similar to a standard Issue links section on issues
- there is even a special Portfolio link type in the database

```
jira=> select * From issuelinktype where pstyle ='jira_jpos_parent_child';

  id        linkname         inward       outward             pstyle

 10830  Parent-Child Link  is child of  is parent of  jira_jpos_parent_child

(1 row)
```

- *and* sometimes you will actually see `issuelinks` of this Portfolio link type:

```
jira=> select count(*) from issuelink where linktype in (select id from issuelinktype where
pstyle='jira_jpos_parent_child');

 count

    27

(1 row)
```

..despite all this, the **Child issues** section is not done with the standard `issuelink` table. I suspect that it was at first, but then the developers hit some limitation and moved on.

Querying JSON in the entity_property table

The **Child issues** relations are in fact stored in the `entity_property` table. Specifically, as `entity_property` entries on the child issues, e.g. IT-115:

```
jira=> select * from entity_property where entity_name='IssueProperty' and entity_id=(select jiraissue.id from
jiraissue JOIN project ON project.id=jiraissue.project WHERE project.pkey='IT' and issuenum=115);
[ RECORD 1 ]
 id            26614
 entity_name   IssueProperty
 entity_id     207404
 property_key  jpo-issue-properties
 created       2017-06-27 16:31:25.103+00
 updated       2017-06-27 18:50:42.744+00
 json_value    {"team_id":"26","parent_id":"207453"}
```

To find all parent-child relations, we can use Postgres' JSON support:

```
jira=> select entity_id AS child_id, (json_value::json->>'parent_id')::numeric AS parent_id from
entity_property where entity_name='IssueProperty' and property_key='jpo-issue-properties' limit 10;

 child_id  parent_id

   271643
   271621
   271611
   270022     246074
   270021     270020
   246076     270020
   267996     267715
   267931     261600
   267894     267737
   267807     267731

(10 rows)
```

This information was inferred by the eternally useful technique of using database diffs to see what JIRA is doing.

Restoring the links

So we have found where Portfolio stores the Initiative's links: in `entity_property` . That is nice, but we do actually want issue links back in `issuelink` where they belong. Let's fix this with some SQL.

Database surgery ahead! Make sure you understand what is going on, and take a backup beforehand.

First, we need a link type. Well, we already have one – it's just invisible because of that custom `pstyle` :

```
jira=> select * From issuelinktype where pstyle ='jira_jpos_parent_child';

  id        linkname         inward       outward             pstyle

 10830  Parent-Child Link  is child of  is parent of  jira_jpos_parent_child
```

To make this link type 'normal' just remove the pstyle:

```
jira=> update issuelinktype set pstyle=null where pstyle='jira_jpos_parent_child';
```

Next we need to create a bunch of `issuelink` records, one for each of those parent relations stored in JSON in `entity_property`

The `issuelink` table looks like this:

```
jira=> select * From issuelink limit 5;

   id    linktype  source  destination  sequence

  10050     10010   14415        14414
  10051     10010   14354        11616
  10052     10010   14418        14302
 149751     10230  188337       188267
  10054     10010   14443        14440

(5 rows)
```

So we just need to insert the parent-child IDs we obtained from `entity_property` above.

Now for a few tedious details. You'll note the `id` field - we'll need to create our new records with monotonically increasing values. Furthermore, Jira's crusty database library Ofbiz tracks the maximum ID of each other table's ID in its `sequence_value_item` table, to the nearest 10:

```
jira=> select * from sequence_value_item where seq_name='IssueLink';

 seq_name   seq_id

 IssueLink  244210

(1 row)

jira=> select max(id) from issuelink;

  max

 244178

(1 row)
```

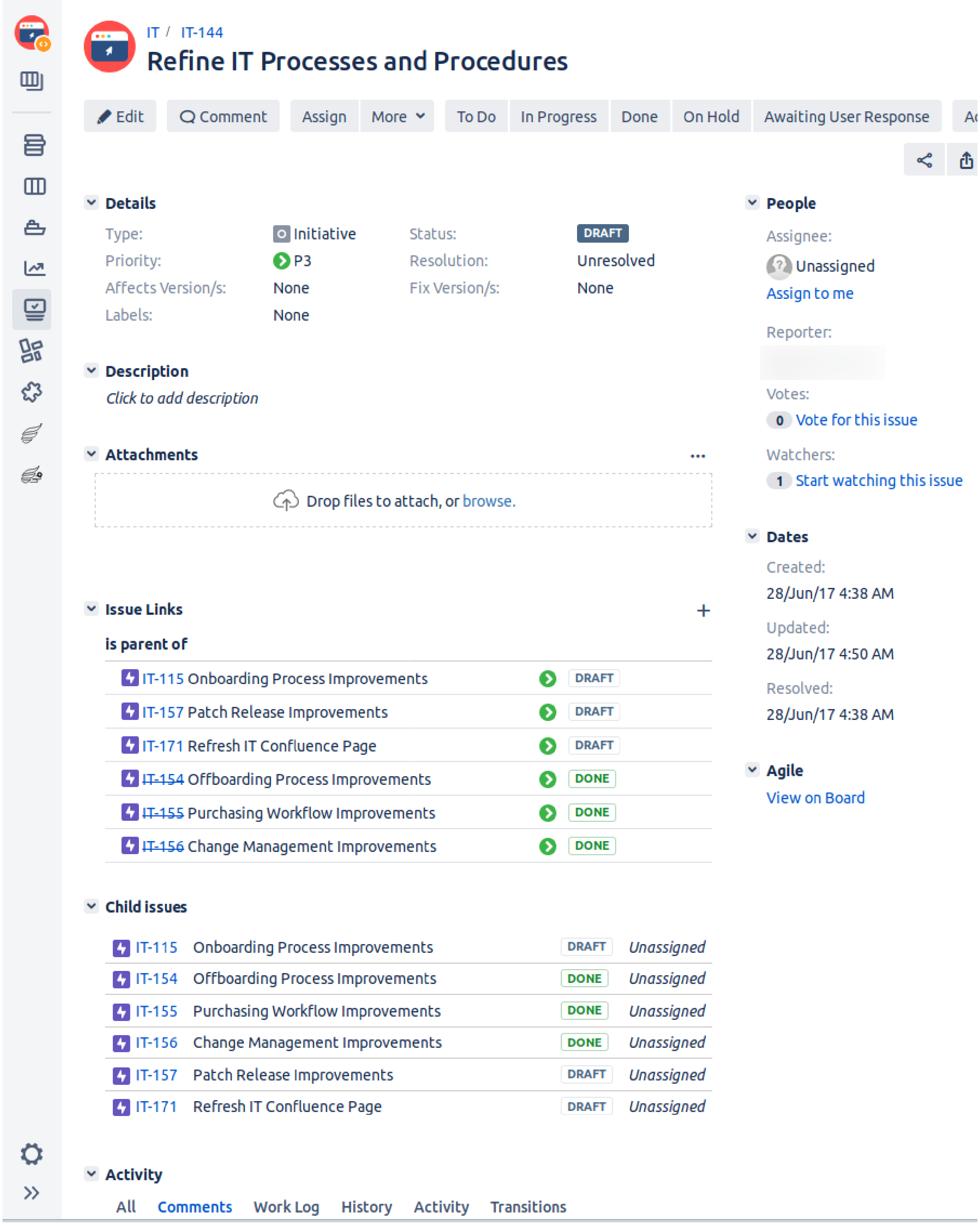
So our job is to calculate new IDs, then update `sequence_value_item` afterwards.

Here is some SQL that does the job, including fixing the `issuelinktype` if you hadn't already done so above.

```
-- https://www.redradishtech.com/pages/viewpage.action?pageId=14483457
begin;
create temp sequence issuelink_seq start with 99999; -- https://stackoverflow.com/questions/37057643/postgresql-
starting-a-sequence-at-maxthe-
column1
select setval('issuelink_seq', (select max(id::bigint)+1 from issuelink));
WITH jpolinks AS (
    select entity_id AS child_id, (json_value::json->>'parent_id')::numeric AS parent_id from entity_property
where entity_name='IssueProperty' and property_key='jpo-issue-
properties')
, newissuelinks AS (
  select nextval('issuelink_seq') AS id
        , jpolinktype.id AS linktype
        , parent_id AS source
        , child_id as destination
        ,  null::numeric AS sequence
  from jpolinks
    CROSS JOIN (select id from issuelinktype where linkname='Parent-Child Link') jpolinktype
  where parent_id is not null -- the parent_id JSON is sometimes empty
    and not exists (select * From issuelink where source=parent_id and destination=child_id and
linktype=jpolinktype.id) -- don't double-
insert
)
insert into issuelink select * from newissuelinks;
update sequence_value_item set seq_id=nextval('issuelink_seq') where seq_name='IssueLink';
update issuelinktype set pstyle=null where pstyle='jira_jpos_parent_child';
commit;
```

After running the above, you will have to restart Jira for the changes to take effect.

After the restart, Initiative issues will have a new **is parent of** link section, duplicating the links seen in the Portfolio-generated **Child issues** section:



IT / IT-144

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Issue Links

is parent of

IT-115 Onboarding Process Improvements		DRAFT
IT-157 Patch Release Improvements		DRAFT
IT-171 Refresh IT Confluence Page		DRAFT
~~IT-154~~ Offboarding Process Improvements		DONE
~~IT-155~~ Purchasing Workflow Improvements		DONE
~~IT-156~~ Change Management Improvements		DONE

Child issues

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Agile

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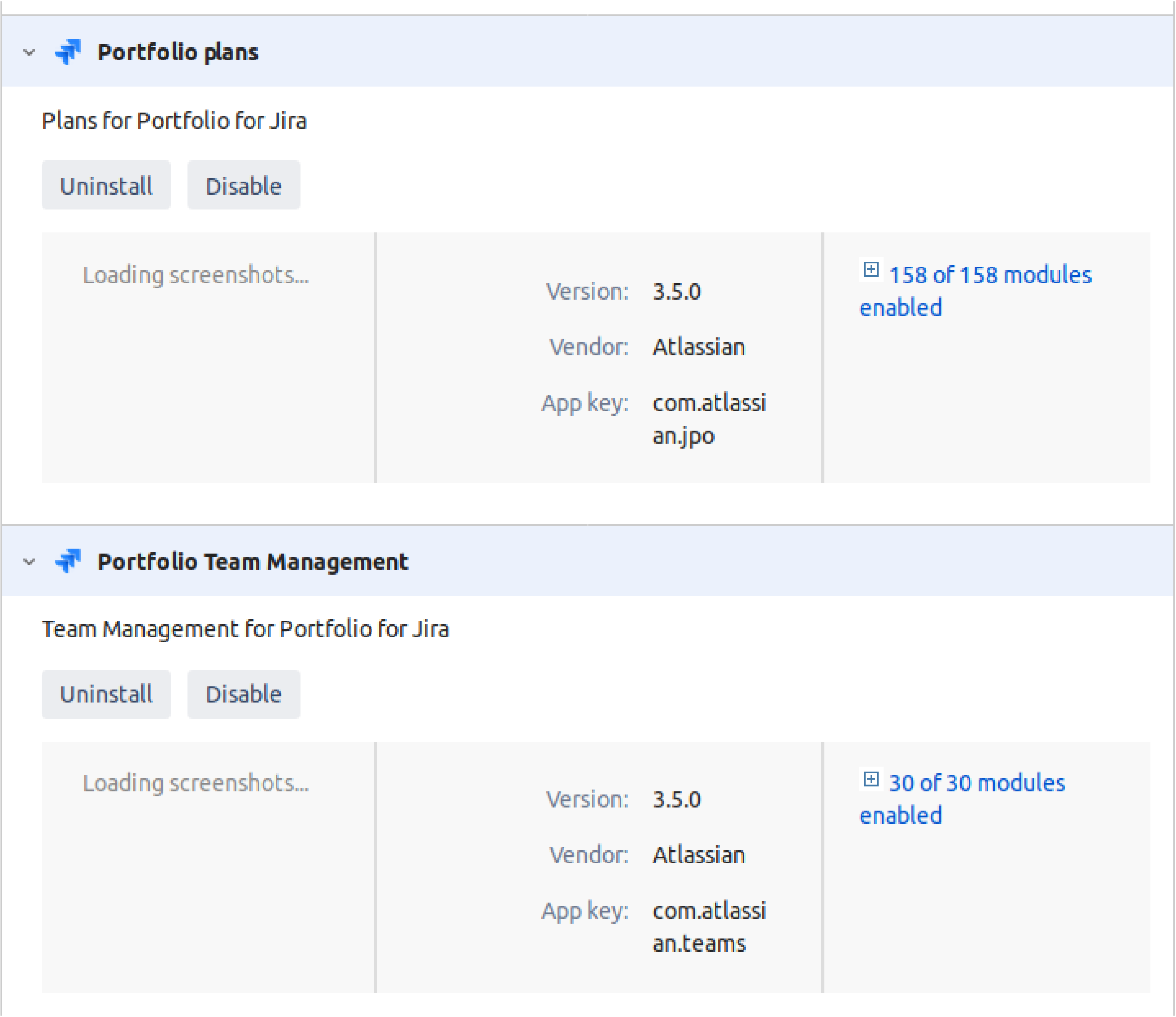
then when you disable Portfolio, the **Child issues** section disappears, and you are where you want to be.

Addendum: post-uninstall log errors

After uninstalling Portfolio, you might find your `atlassian-jira.log` file being filled with errors on each page load:

```
2019-11-11 00:59:59,234 ajp-nio-127.0.0.100-8009-exec-4059 WARN jturner 59x3059696x3 56p7sr 10.36.2.100 /browse
/CC-5353 [c.a.r.j.p.w.children.condition.ChildIssuesPanelVisibilityCondition] Exception when evaluating if
child issues panel should be displayed.
com.atlassian.rm.common.env.EnvironmentPortfolio1NotAvailableException: com.atlassian.rm.common.bridges.api.
plugins.PluginNotAvailableException
        at com.atlassian.rm.common.env.license.JiraLicenseService.getLicenseInformation(JiraLicenseService.java:
36)
        at com.atlassian.rm.common.env.license.JiraLicenseService.isLicensed(JiraLicenseService.java:45)
        at com.atlassian.rm.jpo.plugin.webpanels.children.condition.ChildIssuesPanelVisibilityCondition.
isLicensed(ChildIssuesPanelVisibilityCondition.java:81)
        at com.atlassian.rm.jpo.plugin.webpanels.children.condition.ChildIssuesPanelVisibilityCondition.
shouldChildrenBeVisible(ChildIssuesPanelVisibilityCondition.java:68)        at com.atlassian.rm.jpo.plugin.
webpanels.children.condition.ChildIssuesPanelVisibilityCondition.shouldDisplay
(ChildIssuesPanelVisibilityCondition.java:54)
        at com.atlassian.plugin.web.DefaultWebInterfaceManager.filterFragmentsByCondition
(DefaultWebInterfaceManager.java:154)
        at com.atlassian.plugin.web.DefaultWebInterfaceManager.getDisplayableWebPanelDescriptors
(DefaultWebInterfaceManager.java:117)
        ... 2 filtered
        at java.lang.reflect.Method.invoke(Method.java:498) ...
```

In Jira's **Manage apps** admin page you will find these two vestigial plugins:



Portfolio plans

Plans for Portfolio for Jira

Version: 3.5.0

Vendor: Atlassian

App key: com.atlassian.jpo

158 of 158 modules enabled

Portfolio Team Management

Team Management for Portfolio for Jira

Version: 3.5.0

Vendor: Atlassian

App key: com.atlassian.teams

30 of 30 modules enabled

Uninstall them and your Jira should be back to normal. Jira's plugin system lets plugin authors package reusable parts as separate plugins, but isn't smart enough to uninstall them when the parent plugin is uninstalled.