

The Dutch profiles in a package

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A little about me...

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- **Background:**
 - FHIR consultant
 - Nictiz - MedMij
 - Support - Firely FHIR product suite
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Before we start... FHIR packages 101

- What are FHIR NPM Packages?
- What do they solve?
- What do they look like in FHIR?
- Let's Build!



Don't version the items,
version the set

PACKAGES



FHIR

FHIR Core Resources already work that way.

(by accident)

DSTU1

<http://hl7.org/fhir/StructureDefinition/Patient>

<http://hl7.org/fhir/StructureDefinition/Observation>

DSTU2

<http://hl7.org/fhir/StructureDefinition/Patient>

<http://hl7.org/fhir/StructureDefinition/Observation>

STU3

<http://hl7.org/fhir/StructureDefinition/Patient>

<http://hl7.org/fhir/StructureDefinition/Observation>

R4

<http://hl7.org/fhir/StructureDefinition/Patient>

<http://hl7.org/fhir/StructureDefinition/Observation>

What do FHIR packages solve?

1. Maintenance

- No need to version individual resources
- No cascading profile updates
- No version 'hell'

What do FHIR packages solve?

2. *Distribution*

- Automated **publication**
- Automated **discovery**
- Automated **consumption**
- Automated **updates**

What do FHIR packages solve?

3. *Communication*

- A unique name for the set of resources
- A clear and simple way to communicate updates

What do

PACKAGES

in FHIR

look like?

1. Unique name

Examples:

hl7.fhir.core

hl7.fhir.us.qicore

Names should contain

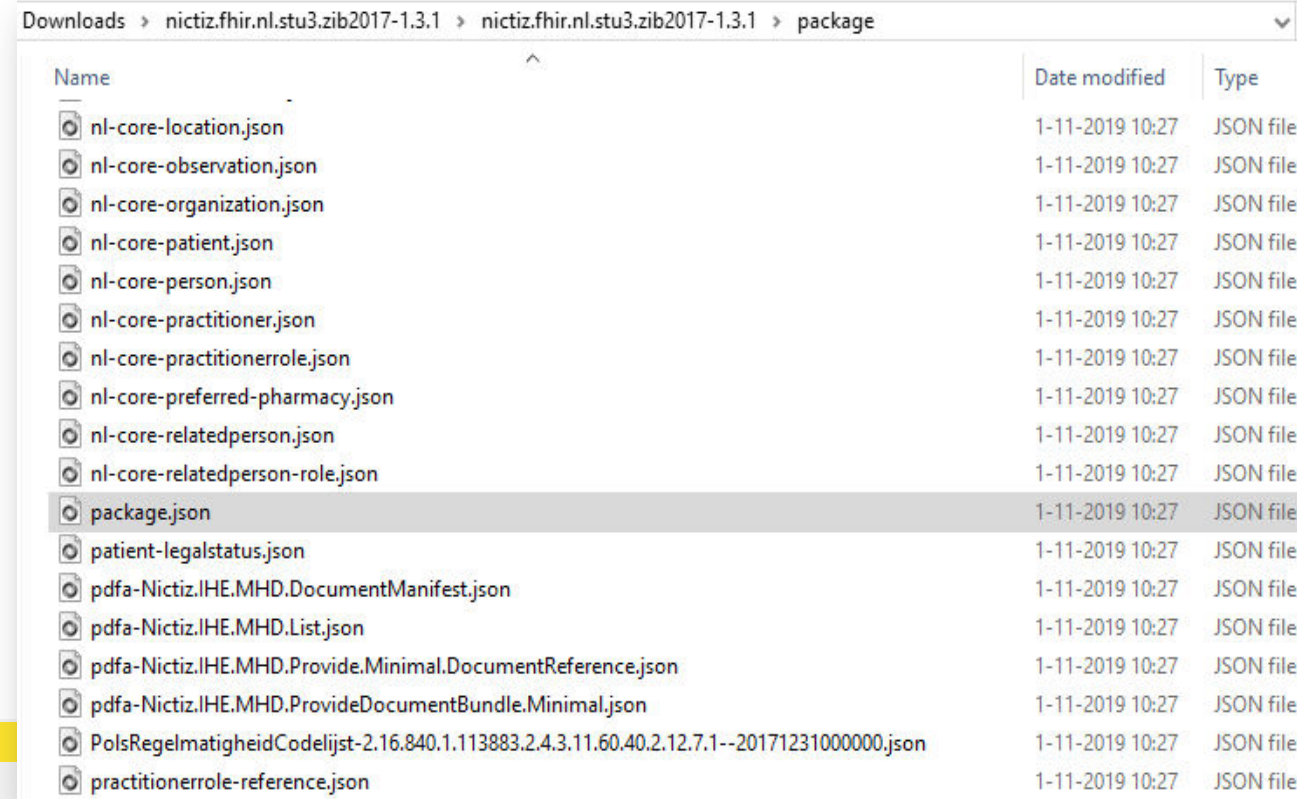
1. Author, the authoring organization or region
2. Functional scope or purpose of package

1. Unique name

2. Content

A FHIR package is a tarball (tar in gzip)

- subfolder named 'package'
 - manifest (package/package.json)
 - index file (package/.index.json)
 - set of resource files
- It MAY contain additional content (examples)



The screenshot shows a file explorer window with the following path: Downloads > nictiz.fhir.nl.stu3.zib2017-1.3.1 > nictiz.fhir.nl.stu3.zib2017-1.3.1 > package. The table below lists the files in this directory.

Name	Date modified	Type
nl-core-location.json	1-11-2019 10:27	JSON file
nl-core-observation.json	1-11-2019 10:27	JSON file
nl-core-organization.json	1-11-2019 10:27	JSON file
nl-core-patient.json	1-11-2019 10:27	JSON file
nl-core-person.json	1-11-2019 10:27	JSON file
nl-core-practitioner.json	1-11-2019 10:27	JSON file
nl-core-practitionerrole.json	1-11-2019 10:27	JSON file
nl-core-preferred-pharmacy.json	1-11-2019 10:27	JSON file
nl-core-relatedperson.json	1-11-2019 10:27	JSON file
nl-core-relatedperson-role.json	1-11-2019 10:27	JSON file
package.json	1-11-2019 10:27	JSON file
patient-legalstatus.json	1-11-2019 10:27	JSON file
pdfa-Nictiz.IHE.MHD.DocumentManifest.json	1-11-2019 10:27	JSON file
pdfa-Nictiz.IHE.MHD.List.json	1-11-2019 10:27	JSON file
pdfa-Nictiz.IHE.MHD.Provide.Minimal.DocumentReference.json	1-11-2019 10:27	JSON file
pdfa-Nictiz.IHE.MHD.ProvideDocumentBundle.Minimal.json	1-11-2019 10:27	JSON file
PolsRegelmatigheidCodelijst-2.16.840.1.113883.2.4.3.11.60.40.2.12.7.1--20171231000000.json	1-11-2019 10:27	JSON file
practitionerrole-reference.json	1-11-2019 10:27	JSON file

1. Unique name
2. Content
3. **Version**

SemVer

Semantic Versioning

1. **3**. **2**-preview1

MAJOR incompatible changes

MINOR backward compatible additions

PATCH backward compatible fixes

LABEL annotations

1. Unique name
2. Content
3. Version

```
nictiz.fhir.nl.stu3.zib2017 1.0.0
nictiz.fhir.nl.stu3.zib2017 1.1.0-beta
nictiz.fhir.nl.stu3.zib2017 1.1.0
nictiz.fhir.nl.stu3.zib2017 1.1.1
nictiz.fhir.nl.stu3.zib2017 1.1.2
nictiz.fhir.nl.stu3.zib2017 1.1.3
nictiz.fhir.nl.stu3.zib2017 1.1.4
nictiz.fhir.nl.stu3.zib2017 1.2.0
nictiz.fhir.nl.stu3.zib2017 1.3.0
nictiz.fhir.nl.stu3.zib2017 1.3.1
```

1. Unique name
2. Content
3. Version
4. Manifest

package.json

```
{
  "name": "nictiz.fhir.nl.stu3.zib2017",
  "version": "1.3.1",
  "canonical": null,
  "web": "https://informatiestandaarden.nictiz.nl/wiki/Landingspagina_MedMij",
  "title": "Nictiz FHIR NL STU3 Zib2017",
  "description": "Nictiz NL package of FHIR STU3 conformance resources for HCIM",
  "keywords": [
    "nl",
    "Nictiz",
    "MedMij"
  ],
  "author": "nictiz",
  "maintainers": [
    {
      "name": "Nictiz",
      "email": "standaarden@medmij.nl"
    }
  ],
  "license": "CC0-1.0",
  "devDependencies": null,
  "canonicals": null,
  "dependencies": {
    "Simplifier.Core.STU3": "3.0.3"
  }
}
```


Let's Build! A FHIR package

1. Consume a package and validate using Torinox
 - *You could skip this if you are afraid of a command line tool ;)*
2. Create a derived profile with Forge based on a profile in the package
3. Create a package using Simplifier containing that profile
4. Validate against your own package

- Links, steps and guidance:

www.devdays.com/amsterdam/exercises/

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