

HOW TO GET THE MOST OUT OF HL7 CONNECTATHONS

HL7 Australia



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What is a FHIR Connectathon?

HL7 FHIR Connectathons are hands-on events for the FHIR community to develop and test HL7 FHIR based specifications. Implementers and developers come together to hold technical discussions that advance the specifications, develop FHIR-based solutions, and exchange data with other FHIR interfaces.

The HL7 FHIR community is open to anyone interested in interoperability standards in healthcare and new members are welcome.

While the FHIR Community thrives on perpetual learning, those attending Connectathons are expected to prepare ahead of time and to participate in technical discussions, code review, and testing of a reference implementation or your own FHIR-based system.

Who runs FHIR Connectathons?

HL7 International have been hosting Connectathons for many years. The first was held in September 2012. HL7 FHIR Connectathons are now large events, critical to advancing the development of FHIR. International Connectathons typically are across at least twenty tracks.

Since 2013 HL7 Australia has supported local Connectathon events. HL7 Australia holds at least three local FHIR Connectathons each year. These are advertised on the HL7 Australia website and on the HL7 Australia Confluence sites. These local events bring focus on Australian standards, content and systems and typically host 2-3 tracks.

Why attend an HL7 Australia Connectathon?

Connectathons offer implementers and developers the opportunity to engage with the FHIR standards community and to work directly with other FHIR developers to:

- Practice interoperability with others
- Test your system out with new FHIR specifications
- Expand professional networks
- Enhance supporting standards implementer relationships

What does participation in a Connectathon involve?

HL7 FHIR Connectathon participants typically come together to work alongside vendor peers, healthcare providers and the individuals and organizations who are involved in writing the HL7 FHIR specifications. Using the HL7 AU Core Inferno Test Framework developers have the capability to test their systems for AU Core requirements, also access to example interactions and test data are made available for developers to rapidly learn to implement the standard, validate their conformance and mature implementation guide content. The HL7 FHIR Community is focused on building specifications for healthcare that are highly reusable. The fact that an implementation guide can be re-used at many deployments drives down time and cost of implementation and drives up the quality of health data for all.

FHIR implementation guides that are early in their maturity are more open for discussion. When multiple stakeholders come together and find that their code does not interoperate, either one of them did not interpret the specification or IG correctly or it could mean that the FHIR

documentation was not complete enough. Thus, FHIR specifications are often improved during Connectathons, this depends on transparency in the work that happens during these events.

What happens at Connectathon stays at Connectathon!

Connectathons are a safe place for everyone to fail forward. Connectathon testing with peer organizations is good for developers and for HL7 FHIR specifications. Connectathons offer developers a better place to fail than at a customer site. Customers expect to use products, not participate in debugging. By allowing product vendors to practice interoperability in a Connectathon setting, vendors can come to resolutions that inform specification evolution so that true interoperability can be enabled.

What is the purpose of the Connectathon?

The overall aim of the Connection is to improve the quality of FHIR specifications by implementing and testing them out by connecting to other people's software. We discover what works and what does not, and specifications are either updated or affirmed. The different Connectathon tracks focus on different areas. Draft standards content needs to be implemented in order to advance its level of maturity and move to being a completed part of published standards. Connectathons that explore, verify and test this standards content are a keyway to move further along in their approval cycle.

The Connectathons are also a great way to network and connect to others in the non-technical sense and are a foundation of the community that makes FHIR so great.

What is the aim for an individual participant?

Participants join tracks and work with others to test out and improve the FHIR specification.

Each track will have certain aims it wants to achieve. For individuals, everyone will judge success themselves. It may be proving your software works against another vendor in a semi-formal manner or adding a new enhancement to your working code. It may be testing new specifications that are relevant to you to help move it along in published maturity - which may be important for your stakeholders. Or it may be the case of showing up as a beginner and getting your very first lines of FHIR based code working.

How should I prepare for the Connectathon?

You will get more out of it the more prepared you are. But you will learn things even if you are almost a complete novice. The learning curve is steeper for beginners, so you may learn a lot, or you may get stuck on things that a bit of self-study would help with. Connectathons are short (compared to all the time in the weeks before), so it's better not to spend them reading the basics or installing the compiler. But some do that, and though it may not be optimal, it's still fun and good to be doing it with some other newcomers (perhaps you never get time in normal work hours).

Make sure to find the Confluence and Zulip (chat.fhir.org) resources for the Connectathon (see "key resources" below).

There is a pre-Connectathon web-based survey that registered participants will be emailed prior to the event. This asks some basic questions that help the organizers and is also where

you can select your Connectathon track. It's preferable to pre-register for a track, but you can always just show up and introduce yourself. If you haven't already done so, complete the [Connectathon pre-event survey](#) now for upcoming events.

Generally, a pre-Connectathon webinar will be hosted, for each track, with some key orientation facts in the days leading up to the event. That session will be recorded in case you cannot get to see it live. [HL7 Australia's Connectathon home-page](#) provides access to all past and upcoming Connectathon events information.

What should I bring?

No hardware or software is provided - just tables, wi-fi and power - so bring everything you need. Bring along any devices or servers that you need or ensure that they can be accessed remotely. Typically, there is no network available to support local connections, so either be cloud based, or be able to make your work available on the internet.

Is there an agenda?

Each day starts with a short group welcome and introductions of Track Leads. Participants immediately move to the assigned rooms / spaces for each Track. Many will stay with those Tracks for the duration of the Connectathon, others may move to or visit other Tracks. Each day is broken up into quarters, with morning tea, lunch and afternoon tea provided in short breaks. At the end of the Connectathon, everyone comes back together to hear reports from each Track on what has been achieved.

What are "tracks"?

These are the subject oriented work streams that divide up the different activities happening during the sessions. Connectathon tracks are the "working groups" that take on specific specifications, or parts of them, and examine it, write code for it and so on. There are Track Leads who facilitate the tracks and set goals for the track, which may be decided on the day or published in advance on the relevant Confluence page track pages. Upcoming Connectathon details are available from the [HL7 Australia's Connectathon home-page](#).

All the work at a Connectathon happens on one of the tracks. At the end of the Connectathon, the tracks do a report back to the group to say what they have achieved. This is part of a shared document which will be posted on the respective Confluence page.

Tracks are quite informal. They usually are held in a dedicated room. You can sit at the table (or nearby) and do your work for it or stop by and see what the track is doing. No one will mind if you don't achieve what you aim for or want to change to another track. However, the group may be planning to achieve certain things, and it's good for people to commit and help those goals be hit.

Do I need to pick a track? In advance? How?

All Connectathon work takes place on a track, so you should choose one to take part in and contribute to. In theory you could just do your own FHIR based work, but the idea is to collaborate and that happens on the tracks.

The list of tracks is published on the HL7 Australia Confluence site in the weeks leading up to the Connectathon, see [HL7 Australia's Connectathon home-page](#) where the link for the upcoming Connectathon can be found. There is also likely to be discussion in the [Australian channel of HL7 Zulip](#) (chat.fhir.org) for each track.

What happens on the day of the event?

Participants arrive and assemble in the Connectathon room(s) to set up their laptops. Each track usually has its own room or a part of a room. The day starts with some short introductory words from the organizers, then it is down to coding under the supervision of your Track Lead - perhaps after some introductions and goal setting. Work progresses and people collaborate face to face or with servers hosted externally and exchange results and feedback.

Towards the end of the event Track Leads supervise making a list of their group's achievements. The session usually closes with an address from the Track Leads and the HL7 Australia board.

Do I have to write code?

The Connectathon is all about testing out FHIR specifications in actual use. That means coding, running and testing FHIR applications. Writing software is key to this and is one of the main activities of the Connectathon. Coding is not mandatory but is usual and is encouraged. Some people bring existing code, and some start from scratch. But, there are also non-coding software integration tasks such as testing and configuration (and to a lesser extent analysis). People also contribute to FHIR at Connectathons by spending time reviewing, learning and commenting on FHIR specifications - this is welcome and appreciated.

How experienced with code should I be (I'm a code beginner / It's been years since I coded, etc.)?

You will want to make progress with coding FHIR at the event and don't want to spend too much time learning foundation skills such as basic coding. However, it is fairly common for "ex-" programmers to return to some recreational coding at a Connectathon or to try a new language or tool set. The Connectathon is all about trying things, learning and expanding your ideas. If you want to code, you should ideally not be a total beginner (but maybe you are a fast learner!). Being a FHIR beginner is fine. It is also OK to not code but to find other ways to contribute to the work.

Do I have to bring code along, or can I start on the day?

Either is fine. People do start from scratch or take a look at a new area for them. Others bring working software that they have been writing for months or years. The most important thing is to set your own goals for your code.

Will I be taught to code?

No. This is not a coding tutorial (and not primarily any sort of tutorial). There is nothing to stop you doing your own learning, but it is not realistic to start with zero coding experience and get far with FHIR in two days (although this is in no way forbidden). Other participants will be happy to help, but it's not a programming lesson.

Will I be taught about FHIR?

In the main, no, though whilst there is ample opportunity to learn this is not a two-day tutorial. It is a working session for all levels of experience.

Ideally, you should have some prior knowledge of FHIR to maximize your Connectathon time, but there are no knowledge prerequisites. The aim of the Connectathon is to test out and improve the use of FHIR based standard, so it is good to have the knowledge to be able to contribute to that. But it is also about learning. Having related domain knowledge (health care informatics) is of course beneficial.

Does it matter what tools, systems, languages I use?

You can use whatever tools and software frameworks you wish. FHIR can be implemented in many ways.

Can I do more than one track?

It is possible to do more than one, but this needs some care. Tracks want to achieve as much as possible in a certain domain area. Usually, there is a lot more work possible than can be done in two days, so it is unlikely that the track will finish all its work, allowing everyone to do something else. Two days goes by very quickly and with some inevitable time for re-work etc., it is hard to truly contribute to more than one track.

Does everyone in my organization need to do the same track?

No, not at all. Divide up your efforts as you wish. We encourage organisations to cover all of the activity relevant to them and increase their corporate knowledge base.

Is there a “beginners” track?

Whilst there is not generally a beginners-only track at Australian Connectathons it is very possible to participate in some of the more general purpose specifications work to get started. The AU Core specification particularly covers the use of the FHIR Patient resource in Australia and includes implementation of local concepts such as Medicare number, IHI and indigenous status. This is a great place to get started on your FHIR implementation story.

What if I don't succeed in finishing my track?

Most tracks have a group goal and individuals can take on a part of it or just try to do as much as they can. The goals are often purposefully not concrete and can be “test out this profile or part of a specification.” So, there is no hard success or fail, just useful work in that area. Some tracks may have a more detailed list of objectives (e.g. read a resource, update, write, and perform a search by two different methods). How much you achieve is up to you. There is no way to fail - other than to get less done than you had hoped - and it's a good learning experience.

What if I get stuck?

Other participants are there to help, informally. It is no one's job to fix other people's problems, but people are usually keen to lend a hand (which is entirely in the spirit of Connectathon). But,

it usually is up to you to fix your issue or work through your problems or switch to some other area. Getting a bit stuck is pretty normal! This is a great opportunity to get information, tips and advice from other experienced and expert FHIR implementers.

Will someone be checking or marking my code?

No one will review your code. But the idea of a Connectathon (and FHIR of course) is interoperability. So, it is expected that you will connect the output of your code to that of others and see what works. That is how we check FHIR specifications and how you can test out your (and their) code. One of your main goals will be to check your code's operation against other systems.

Do I get a certificate?

No, there is no formal certification or accreditation. Some tracks have a way to informally record what you achieved (for example, “connected to at least two other servers and read and stored prescription data”). There is no formal verification.

Can I sell or demo my software?

Please don't directly do this. This is a hacking event and not a sales demo. People may be interested in your product, but that is for outside of the Connectathon. People overtly doing project demonstrations or sale pitches are not welcomed. However, your great product will speak for itself, if it takes part in successful connection tracks! It is a great way to make contact with like minded organisations that may be the supplier, customer or partner for projects and products in the future.

If you want your product to become well known, consider becoming a sponsor for the event. Contact us at events@hl7.com.au or visit our [website](#) for more information.

What happens in the evening? Evening before? Evening after? Days after?

There is generally no special planning for an evening event between the first and second days of the Connectathon but there is usually plenty of opportunity to socialise and network with other developers.

What meals are provided?

Catering for the event makes sure lunch, snacks and coffee breaks keep the day well supplied. Evening food is not provided.

What networks are available?

Typically the network will just be the host venue Wi-Fi. This is still public Wi-Fi, so may be slower or different to back at the office. There is not usually any VPN use or requirement for it.

Participate as a Track Lead:

Anyone is welcome to submit a Track Proposal for an HL7 Australia FHIR Connectathon. HL7 Australia hosts three Connectathons annually typically in March, August and December. Track proposals are generally requested from 12-8 weeks prior and reviewed and confirmed by HL7 Australia events coordinator 8-6 weeks prior to the Connectathon. To find the track proposal deadline and the associated track template, contact events@hl7.com.au.

Next Steps:

Now that you're all clued up on HL7 FHIR Connectathons, here are your next steps for the upcoming connectathon:

1. Complete the pre-connectathon survey
2. Visit the track page you are planning on participating in
3. Attend (or watch the recording of) the pre-event track kick-off

Visit the [HL7 Australia's Connectathon home-page](#) to access the links for the above.

Stay Connected:

- [HL7 Australia Website](#)
- [HL7 Confluence Page](#)
- [HL7 Australia LinkedIn](#)