

The IoT Connectivity Cookbook

The Ingredients, Recipes and Methodology for a
Sumptuous Banquet of IoT-flavored Delights





The Modem Marinade

Here are four tips for what you need to do to get this ingredient just right.

Tip #1: Source your Ingredient Well

Buy your modem from a well-known brand, and from an established reseller that will be able to offer you the support that you need.

Many companies will tell you that you can buy a global modem and plug & play anywhere, but this isn't exactly the case. Pay attention to the baseband vendor of the modem, as they aren't all fully-compliant with the standard. The best tools for the job at hand will have firmware versions that are widely available, supported, and well-documented too.

Tip #2: Don't Forget Your Prep Work

Any Grade A chef gets started on ingredients and cooking long before the customers sit down at the table. Some modems will take a whole lot longer to 'preheat' and be ready for cooking than others. We're talking of course, about the physical layer of connecting to the right bands. When every second counts in terms of lengthening the battery life of your IoT devices, a 30 minute or more connection time can drain your devices of power before they ever start doing their job.

Tip #3: Your Kitchen – Your Rules

Add intelligent rules and policies on how much scanning should be done when the devices attempt to connect. This could include anything from looking for specific bands or choosing preferred or forbidden networks to look out for. This could help you to reduce that prep time down from 30 minutes to the region of 5 seconds.

Tip #4: Think About Your Cuisine of Choice

You may want to choose the modem that will best suit your case to make this even easier. For example, perhaps you're only cooking for a European audience and your palette doesn't need to expand beyond those tastes. In that case, a modem that works in Europe could well be sufficient.

Choosing the Right Tools for the Task a Note from our IoT Chef

Any cook worth their salt knows that you're only as good as your equipment. Your souffle won't rise in an oven that isn't preheated, and even a cast-iron pan needs the right seasoning before you start searing that meat.

For us, in this IoT recipe book, your start-up ingredient is your modem, the first item on your shopping list, long before SIMs, IMSIs, or other connectivity ingredients.



Ingredients:

IMSI from a local carrier

Backup IMSI

Autonomous, multi-IMSI SIM

Management console

Billing system

Critical IoT Casserole

When your guests handle mission-critical use cases, here's a recipe to impress. I always like to whip this one up when I'm thinking about industries that need ultimate coverage. I'm talking about Ultra-reliable Low Latency Communications (URLLC) and unbeatable availability.

I've had guests around my table who work in time-sensitive industrial automation, and others who need this kind of recipe to help with patient management, smart cities, emergency response, autonomous driving, and more. What have they all got in common? They are all working in areas where they can't drop the ball for a second.

The Method

You should already have your IMSI from a local carrier, but by itself this ingredient will be bland to say the least. You may have already experienced this IMSI failing to 'hit the spot' in situations like poor availability, a network failure or an outage, or even scheduled maintenance.

Step 1

Season this IMSI with better coverage, through a back-up IMSI from a different carrier. This could be local in your location of choice, or roaming - both will add the depth of flavor we're looking for here.

Step 2

Take one SIM card from floLIVE, which will hold both IMSIs. The first IMSI is your existing provider, while the second is the roaming provider, but both are packed into a single floSIM, offering the ability to switch autonomously between the two to achieve the coverage your devices need.

Step 3

Manipulating the ingredients is really important here, so take the time to utilize the policies and capabilities of your management console. What do you want to happen when a fault occurs, and again once the issue has been resolved?

Step 4

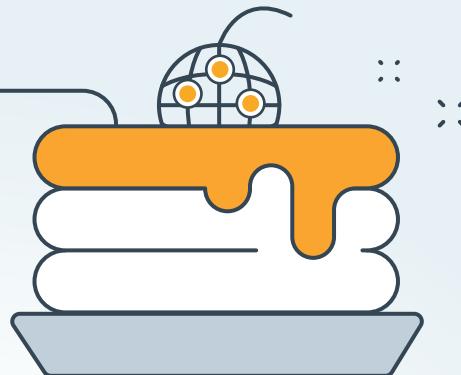
Your creation is ready for the oven, but the connectivity itself isn't the only thing that needs cooking. Use your in-built rating engine to create the exact charging and invoicing to suit your business model, including pre and post-paid billing, bundles, offers, and more.



A Gluttony of Global Connectivity

I like to get this recipe out when I have an unknown group visiting, as it really is a crowd pleaser, it has a little bit of something for everyone! I've seen a lot of enterprises looking to do more with their ingredients, and this one brings it all together with a certain poise and sophistication.

This one is the true global traveller, perfect for enterprises that want to offer the world, and get the tastes and flavors of international cuisine well and truly at their fingertips. Once cooked, this recipe will allow for devices anywhere you could want to do business, all with the same security, availability, compliance, and control.



Ingredients:

8-10 local IMSIs (preferably tier-1)

Multi-IMSI SIMs (as many as the number of dining IoT devices)

2-3 Billing Plans

1 Invoice

1 management console

1 API Suite

The Method

Who doesn't like a shortcut when you're in the kitchen? After all, once upon a time we would all have been cooking over a camp-fire! But if you're currently relying on roaming by itself like some kind of instant custard powder, I have news for you. There's a simpler and smarter way to get the dish you're craving.

Step 1

Unwrap local connectivity in the countries of your choice with a handful of local IMSIs covering almost the entire world, (and counting!) Don't worry if you aren't sure how many you need, these can be added later in the recipe, whenever you need another bite of the action.

Step 2

However many IMSIs you choose, you'll be able to pack them all into a single multi-IMSI SIM. Wherever your device ends up, it will connect automatically to a local network, even autonomously switching in case of poor coverage or availability. The trick is to sprinkle in a generous tbsp of compliance throughout, making sure that the data never leaves the location it comes from. Like your meal with some added spice? Here's a kicker! Pick a SIM solution that's fully compliant with eUICC standard, and so can reside inside any eUICC SIM as another profile!

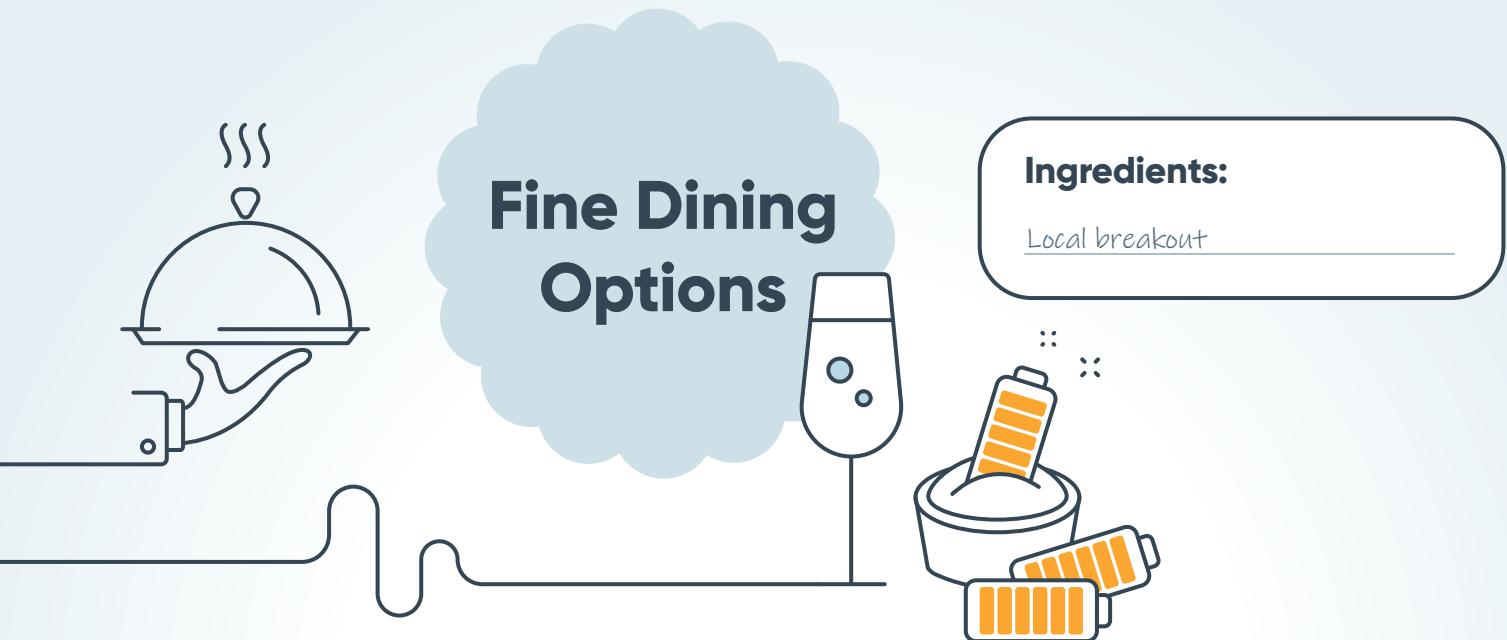
Step 3

New enterprise use cases need a tight grip. Stir in the billing and invoicing requirements you need through an intelligent BSS platform, adding bundles, packaged offerings, and unique price plans, to taste. Choose between pre-paid, post-paid, one-time, pooled, and more. You're ready to roll out your dish to the public.

Step 4

You'll want to watch this feast like a hawk. Luckily, it's kind of a 'one bowl' recipe, and you can visualize (and control) what's happening through a single management console, integrating all the elements through one single API suite, too. Even if your customers take a slice to multiple locations around the world, you'll never miss a positive or negative review.

Today's Special: A Battery Life Banquet



Here's a low-latency dish that's built to impress. It may look deceptively simple with just the one-ingredient, but this is a Michelin-starred experience that people would give anything to taste.

What's the problem with delicious IoT devices? They don't last long enough of course! Just like the finest fresh fruit – the lifespan is what lets them down. So take a sample of a local breakout, served a la carte, and you'll reduce the latency of your IoT devices, shortening the amount of time they have to be awake for to transmit and receive messages. Manage it all from a centralized configuration console, and extend the lifespan of your devices, giving them even more chances to satiate your customer cravings.

After notes include adjacent app servers so that manufacturers can co-host their servers alongside, reducing the latency between the layers, and a unique data exchange technology that stops you over-eating, limiting the amount of time your device needs to be active.

floLIVE offers advanced 5G network solutions and a full suite of global cellular connectivity services for IoT use cases. We're disrupting traditional networks and IoT solutions, and getting IoT up and running faster, more flexibly, and with more control. The platform comprises local core networks that provide local connectivity while being centrally managed and controlled over the cloud. This unique approach enables enterprises to benefit from high performance, secure and regulatory-compliant local connectivity on a global scale with all the flexibility and elasticity of a cloud-native platform.

floLIVE's solutions are offered as-a-service and support a pay-as-you-grow business model.



Let's connect

Get in touch to discuss how we can meet your IoT requirements. We're sure to surprise you.

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