National Resource Hub Application Programming Interface (API) and Data Services Guide

Restricted Access Data Connections

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Overview

The National Resource Hub (NRH) is a collection of mutual aid and resource management component tools that are maintained within the Preparedness Toolkit (PrepToolkit) FEMA System. The NRH includes the Resource Typing Library Tool (RTLT), Resource Inventory System (RIS), and OneResponder. Collectively, these component tools have key data sets that may be useful for sharing with external entities through data connections. The NRH related data is maintained by the organization that collected and entered such data into the respective component tool. Originating Organizations must enable their data to be shared before it is included in any data connections with external systems. Details of data collection, sharing, and usage is provided in the Terms of Use at https://preptoolkit.fema.gov/terms-of-use.

Participating organizations and personnel who maintain vetted and verified accounts in PrepToolkit, including FEMA, will be granted view-only access to data for all organizations who voluntarily elect to use an NRH component tool. This includes the participating organization's name and location as well as their number and type of qualified resources and personnel. This data is still owned by the Originating Organization.

To support data sharing the system makes available certain limited data sets that selected systems can consume. All data provided is a direct one-way communication from a NRH component tool to a receiving system. No data is consumed by the NRH from other systems, nor are options available to push data to the NRH. This document describes the Read Only data that is accessible by external systems that require access to non-publicly available data and require credentialed access.

The following data is currently available to external systems on a restricted basis:

1) Resource and personnel inventory data from the Resource Inventory System (RIS)

2) Personnel qualifications data from OneResponder

Users of both RIS and OneResponder can designate individual resources and/or personnel as viewable to other organizations that are vetted and verified NRH users. Limited data regarding such designated resources and personnel are then available via a RESTful API that allows 3rd party API clients to make HTTP requests after being authenticated using an API key. If consumers are using Esri ArcGIS, AGOL, or other compatible geospatial software, they also have the option to grant the NRH access to their local instance of ArcGIS, AGOL, or other compatible geospatial software. This option provides a process to push data to a consumer's ArcGIS feature service. This requires either an API key or a username and password from the target ArcGIS instance for authentication. This process is a one-way push of data from the NRH environment to a target ArcGIS or geospatial environment.

Note: For guidance on making a connection to and receiving current publicly available data and API reference the separate Resource Typing Library Tool (RTLT) API Guide. The RTLT API Guide is available upon request by contacting NRH@preptoolkit.fema.dhs.gov.

The graphic below illustrates the general architecture of the three primary component tools that comprise the National Resource Hub, as well as the restricted access and public APIs that are available. This guide only pertains to the restricted access API and data services from RIS and OneResponder.
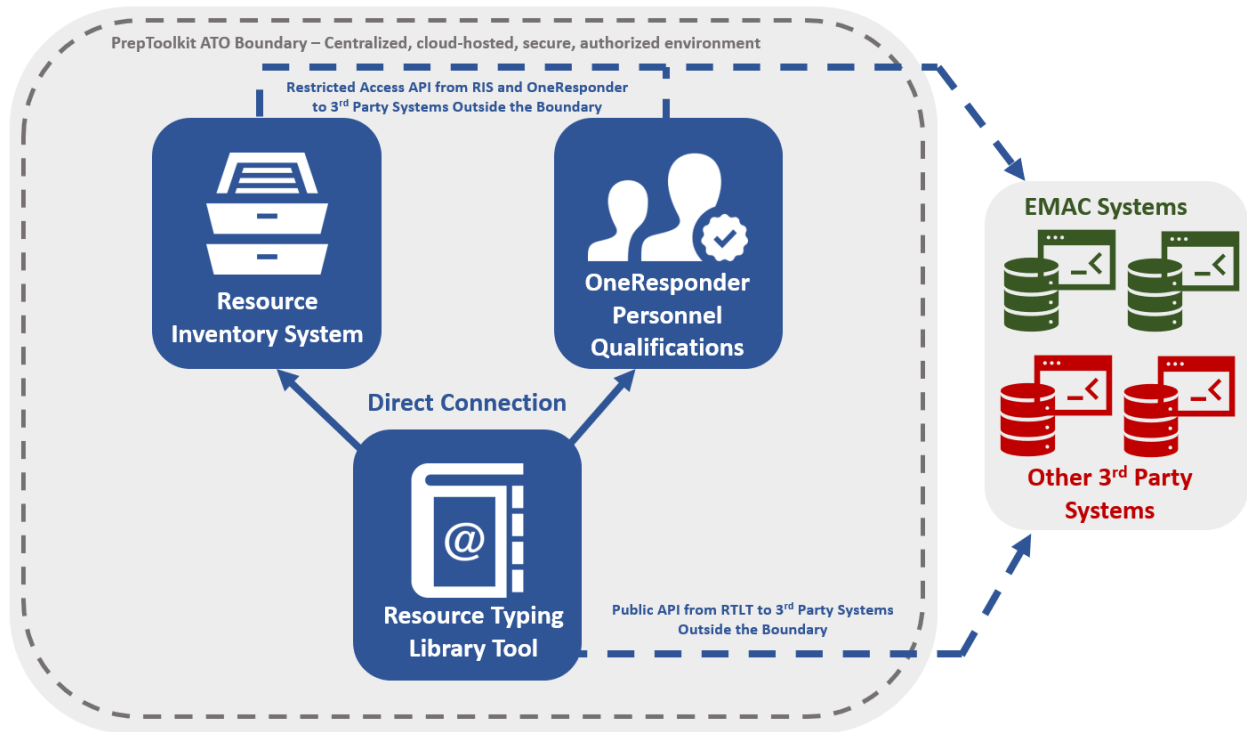

Figure 1: National Resource Hub General Architecture

Process to Access the NRH API

The graphic below illustrates the process for requesting and gaining access to the restricted NRH API and data services. For the purposes of the process below, the term Entity refers to the individual, organization, or agency requesting FEMA grant them access to the restricted NRH API and data services.
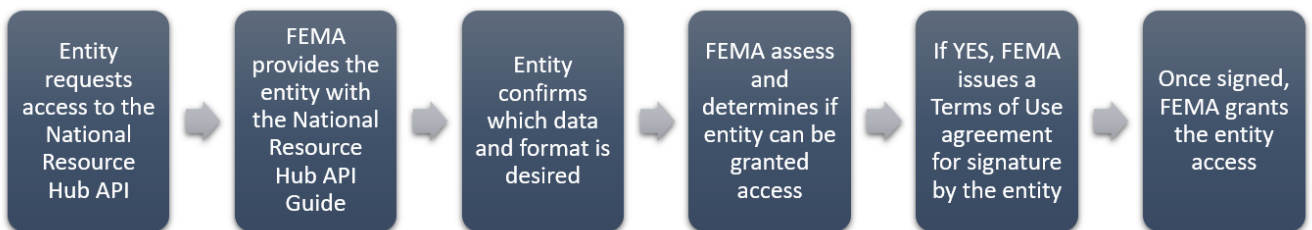

Figure 2: Process to Request and Gain Access to the National Resource Hub API and Data Services

Connection Option 1: RESTful API

Systems that require programmatic access to data available through the API can utilize the RESTful API. Unique API keys are assigned to each system that makes a connection. To obtain an API key and detailed instructions for making data calls to published endpoints contact NRH@preptoolkit.fema.dhs.gov. The NRH will provide documentation and the API Key to aid in connecting to API endpoints. Connection to the RESTful API is intended for software developers who have direct access to the system needing to make a connection and are familiar with standard API calls to retrieve data (or "Pull") and then utilize within their system. Non-development connection options are described in subsequent sections. The same data is available in both connection options. Entities that are determined to be eligible by FEMA to receive certain NRH data will sign a Terms of Use agreement prior to being granted access via the API Key. The Terms of Use agreement specifies the required safeguards for maintaining any copies of NRH data that is consumed.

Connection Option 2: ArcGIS/AGOL Feature Service

Systems that have an embedded ArcGIS instance or other compatible geospatial software/service and wish to receive data directly (as a push from an NRH component tool) to a Feature Service have the option to make a Geo-spatial enabled direct connection. To dynamically provide RIS and OneResponder data feeds to ArcGIS feature services, the NRH can push data to a consumer's ArcGIS feature service. This process will require either an API key or a username and password from the target ArcGIS instance for authentication. This process is a one-way push of data from the NRH to a target ArcGIS environment. Systems that require this connection type can send a request to NRH@preptoolkit.fema.dhs.gov. The requesting system will be required to provide either authentication information to the NRH team. Entities that are determined to be eligible by FEMA to receive certain NRH data will sign a Terms of Use agreement prior to being granted access via the ArcGIS/AGOL Feature Service steps outlined below.

- **Step 1** - Requesting organization needs to create and host a feature service for NRH data within their ArcGIS environment to prepare to receive the NRH data being pushed.
- **Step 2** -
    - **If using AGOL, Enterprise, Portal, or equivalent geospatial software** – requesting organization has an established service account and they would provide a username and password to the NRH team to push the NRH data into a feature service within their ArcGIS environment.
    - **If using ArcGIS Platform or equivalent development geospatial software** – requesting organization would generate an API Key that they would provide to the NRH team to push the NRH data to a feature service within their ArcGIS environment.

Once a connection is established the data and attributes listed in the tables are below. Note: the columns for "Required Field" refers to whether that field is required as part of a single record in the respective system. Not all fields are required, and as such there are gaps in the attributes for certain records.

OneResponder Personnel Qualifications

Geometry type: Point

Coordinate system: Latitude/Longitude (WGS 84/EPGS 4326)

Fields and Attributes:

Name	Display Name	Field Description	Type	Required Field
id	ID	Unique ID of OneResponder personnel	String	Yes
name	Name	Position Title	String	Yes
rtltUrl	RTLT Typing	Link to the corresponding NIMS or NQS Job Title/Position Qualification Sheet	String	No
kind	Kind	Kind as defined for NIMS/NQS resource typing	String	No
organization	Organization	Primary Organization Name	String	No
status	Status	Personnel qualification status as qualified or trainee	String	No
category	Category	Category as defined for NIMS/NQS resource typing	String	No
streetAddress	Street Address	Street address of personnel's primary organization	String	No
city	City	City of personnel's primary organization	String	No
stateOrProvince	State / Province	State / province of personnel's primary organization	String	No
county	County	County of personnel's primary organization	String	No
postalCode	Postal Code	Postal code of personnel's primary organization	String	No
femaRegion	FEMA Region	FEMA region associated with the personnel's primary organization	String	No
pocEmailAddress	POC Email Address	Email address for organization's point of contact in OneResponder	String	No

Name	Display Name	Field Description	Type	Required Field
pocPhoneNumber	POC Phone Number	Phone number for organization's point of contact in OneResponder	String	No
featureGroup	Feature Group	Timestamp grouping all features (records) within a data push	String	Yes

RIS Inventoried Resources and Personnel

Geometry type: Point

Coordinate system: Latitude/Longitude (WGS 84/EPGS 4326)

Fields and Attributes

Name	Display Name	Field Description	Type	Required Field
id	ID	Unique ID of RIS resource or personnel	String	Yes
name	Name	Resource Name or Position Title	String	Yes
rtltUrl	RTLT Typing	Link to the corresponding NIMS or NQS Resource Typing Definition or Job Title/Position Qualification Sheet	String	No
kind	Kind	Kind as defined for NIMS/NQS resource typing	String	No
organization	Organization	Organization Name	String	No
status	Status	Availability status for the specific resource or personnel	String	No
category	Category	Category as defined for NIMS/NQS resource typing	String	No
streetAddress	Street Address	Street address of resource or personnel's organization	String	No
city	City	City of personnel's organization	String	No

Name	Display Name	Field Description	Type	Required Field
stateOrProvince	State / Province	State / province of resource or personnel's organization	String	No
county	County	County of resource or personnel's organization	String	No
postalCode	Postal Code	Postal code of resource or personnel's organization	String	No
femaRegion	FEMA Region	FEMA region of resource or personnel's organization	String	No
pocEmailAddress	POC Email Address	Email address for organization's point of contact, typically 24/7 deployment, for the resource or personnel	String	No
pocPhoneNumber	POC Phone Number	Phone number for organization's point of contact, typically 24/7 deployment, for the resource or personnel	String	No
featureGroup	Feature Group	Timestamp grouping all features (records) within a data push	String	Yes