Unpacking GNAF
Quick Reference Guide

Geoscape

References

- G-NAF Product Description

Tools and Resources

- G-NAF dataset (PSV format)
- Relational database application

Overview

This document is provided as a simple guide to setting up G-NAF data in a database for the first time.

It is assumed you have a developed understanding of relational databases and using structured query language (SQL).

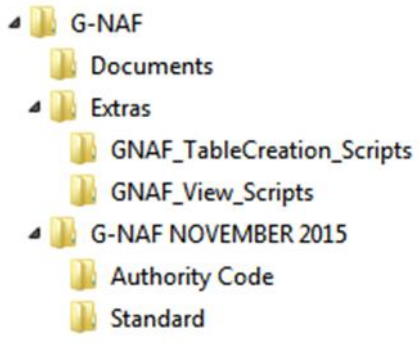
What is G-NAF?

G-NAF (Geocoded National Address File) is a trusted index of Australian address information. It contains the state, suburb, street, number and coordinate reference (or "geocode") for street addresses in Australia. G-NAF does not contain any personal information or details relating to an individual or business.

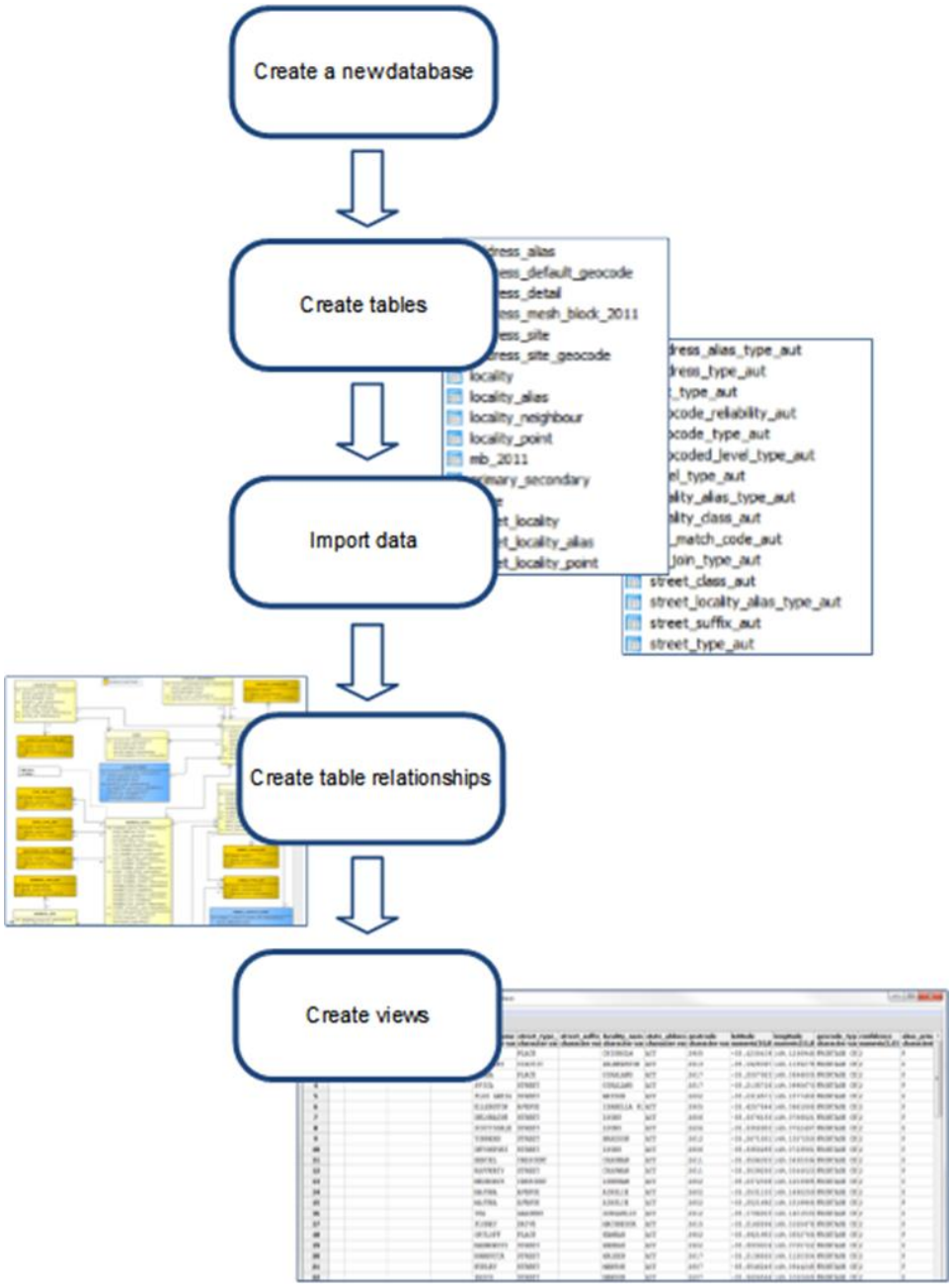
G-NAF is a large dataset. It contains nearly 14 million addresses.

A G-NAF release is provided with the following resources:

- **Documents** folder containing the G-NAF Product Description and current Release Notes.
- **Extras** folder containing example SQL scripts to assist in database creation.
- **Authority Code** folder of tables which contain common lookup values such as street types. There are 15 tables.
- **Standard** folder of tables comprising address data. These tables are grouped by their state/territory jurisdiction. Each of the 9 jurisdiction categories has 16 tables, therefore, a dataset of national coverage would require all 144 tables to be imported.



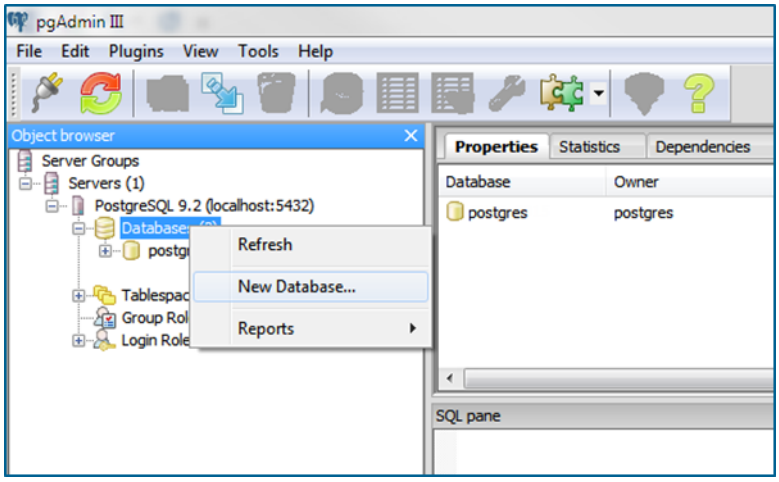
Process Overview



Process

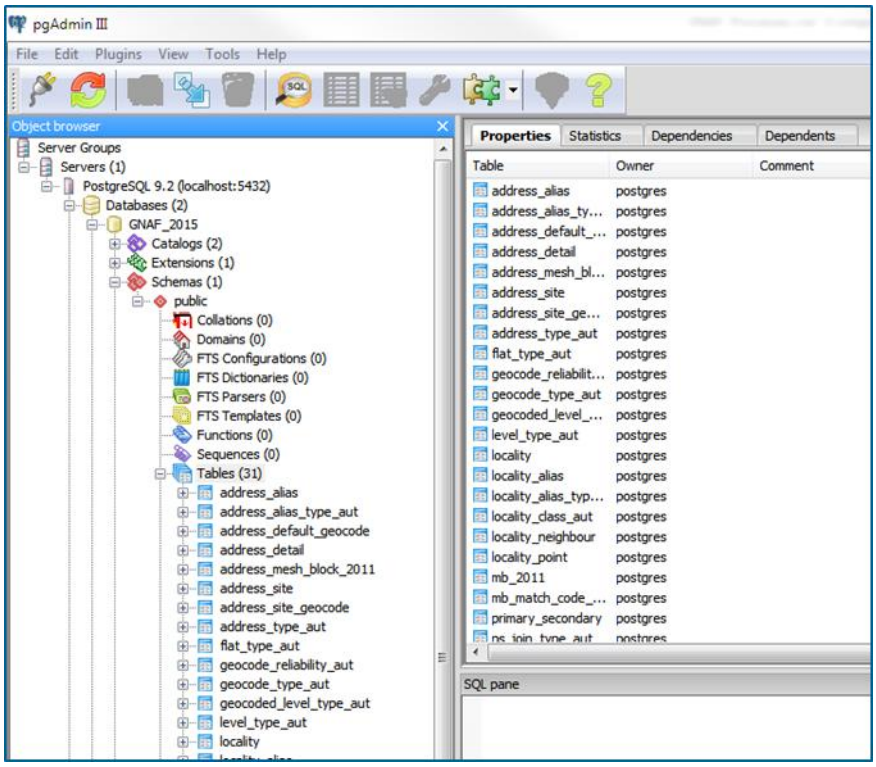
Create a new database

Using your chosen database application, create a new database.



Create Tables

- You will need to create the necessary tables in your database.
- The tables can be created individually using the G-NAF data model provided in Appendix B of the Product Description as a guide.
- Alternatively, in the 'Extras\' folder provided with G-NAF data, an example table creation script is provided: create_tables_ansi.sql
- Running the provided script should create all the necessary tables with their associated properties for you.



Import Data

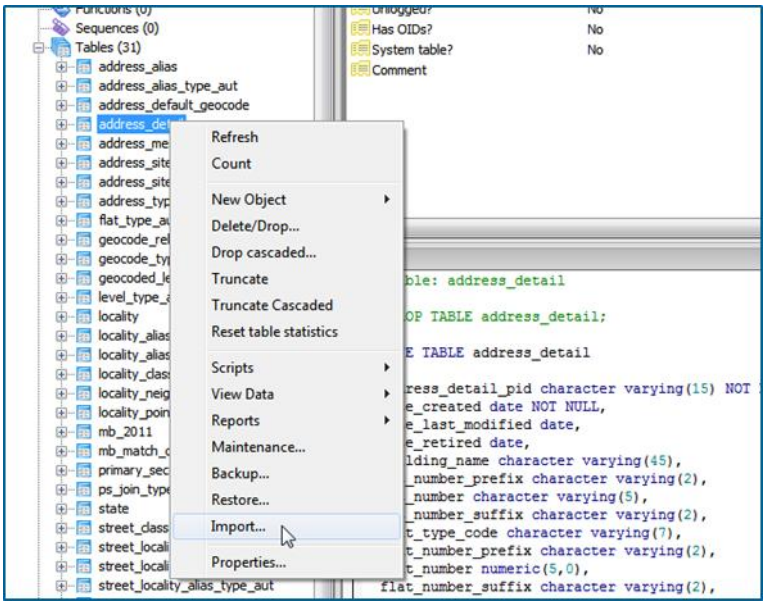
- Using your database import utility, progressively import the G-NAF data into your database tables.
- Ensure you select the correct delimiter for the data ("|")
- Import all the Authority Code data from the 'Authority Code' directory. The following list shows the relationship between the database tables and their respective data file:

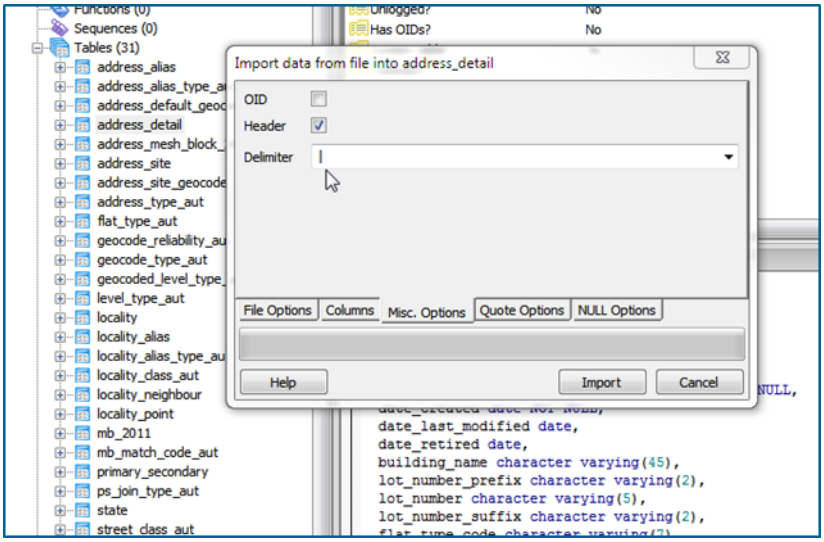
Database Table	Data File
ADDRESS_ALIAS_TYPE_AUT	Authority_Code_ADDRESS_ALIAS_TYPE_AUT_psv.psv
ADDRESS_TYPE_AUT	Authority_Code_ADDRESS_TYPE_AUT_psv.psv
FLAT_TYPE_AUT	Authority_Code_FLAT_TYPE_AUT_psv.psv
GEOCODE_RELIABILITY_AUT	Authority_Code_GEOCODE_RELIABILITY_AUT_psv.psv
GEOCODE_TYPE_AUT	Authority_Code_GEOCODE_TYPE_AUT_psv.psv
GEOCODED_LEVEL_TYPE_AUT	Authority_Code_GEOCODED_LEVEL_TYPE_AUT_psv.psv
LEVEL_TYPE_AUT	Authority_Code_LEVEL_TYPE_AUT_psv.psv
LOCALITY_ALIAS_TYPE_AUT	Authority_Code_LOCALITY_ALIAS_TYPE_AUT_psv.psv
LOCALITY_CLASS_AUT	Authority_Code_LOCALITY_CLASS_AUT_psv.psv
MB_MATCH_CODE_AUT	Authority_Code_MB_MATCH_CODE_AUT_psv.psv
PS_JOIN_TYPE_AUT	Authority_Code_PS_JOIN_TYPE_AUT_psv.psv
STREET_CLASS_AUT	Authority_Code_STREET_CLASS_AUT_psv.psv
STREET_TYPE_AUT	Authority_Code_STREET_TYPE_AUT_psv.psv
STREET_LOCALITY_ALIAS_TYPE_AUT	Authority_Code_STREET_LOCALITY_ALIAS_TYPE_AUT_psv.psv
STREET_SUFFIX_AUT	Authority_Code_STREET_SUFFIX_AUT_psv.psv

- Next, import the address data from the 'Standard' directory. This data is broken up into state/territory jurisdiction categories as indicated by the prefix on the file name. To create a national dataset, you will need to repeat your steps to append additional jurisdiction data to its corresponding table.
- The following shows the relationship of the address table to address data for the ACT:

Database Table	Data File
ADDRESS_ALIAS	ACT_ADDRESS_ALIAS_psv.psv
ADDRESS_DEFAULT_GEOCODE	ACT_ADDRESS_DEFAULT_GEOCODE_psv.psv
ADDRESS_DETAIL	ACT_ADDRESS_DETAIL_psv.psv
ADDRESS_MESH_BLOCK_2011	ACT_ADDRESS_MESH_BLOCK_2011_psv.psv
ADDRESS_SITE_GEOCODE	ACT_ADDRESS_SITE_GEOCODE_psv.psv
ADDRESS_SITE	ACT_ADDRESS_SITE_psv.psv
LOCALITY	ACT_LOCALITY_psv.psv
LOCALITY_ALIAS	ACT_LOCALITY_ALIAS_psv.psv

Database Table	Data File
LOCALITY_NEIGHBOUR	ACT_LOCALITY_NEIGHBOUR_psv.psv
LOCALITY_POINT	ACT_LOCALITY_POINT_psv.psv
MB_2011	ACT_MB_2011_psv.psv
PRIMARY_SECONDARY	ACT_PRIMARY_SECONDARY_psv.psv
STATE	ACT_STATE_psv.psv
STREET_LOCALITY	ACT_STREET_LOCALITY_psv.psv
STREET_LOCALITY_ALIAS	ACT_STREET_LOCALITY_ALIAS_psv.psv
STREET_LOCALITY_POINT	ACT_STREET_LOCALITY_POINT_psv.psv



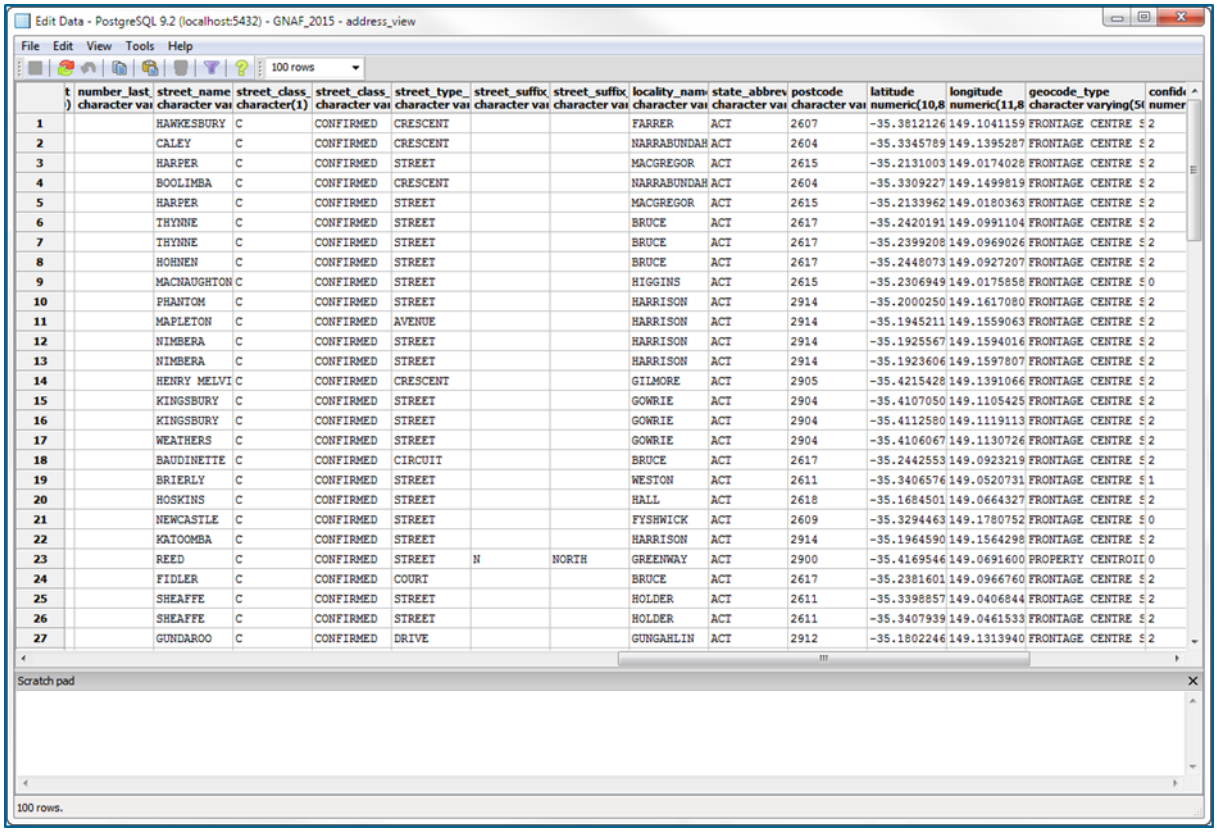


Create Table Relationships

- You will need to create the necessary primary and foreign key relationships and constraints between your database tables.
- A detailed G-NAF data model is provided in Appendix B of the Product Description.
- In the 'Extras\' folder provided with G-NAF data, an example script to create the relationships is provided: add_fk_constraints.sql
- Running the provided script should create all the necessary relationships for you.

Create Views

- You are now ready to create database views to explore the G-NAF data.
- In the 'Extras\' folder provided with G-NAF data, an example view script is provided: address_view.sql
- Running this script should create a view displaying a range of address information.



	t)	number_last character var	street_name character var	street_class character(1)	street_class_ character var	street_type_ character var	street_suffix character var	street_suffix character var	locality_nam character var	state_abbrev character var	postcode character var	latitude numeric(10,8	longitude numeric(11,8	geocode_type character varying(5(	confid numer
1			HAWKESBURY	C	CONFIRMED	CRESCENT			FARRER	ACT	2607	-35.3812126	149.1041159	FRONTAGE CENTRE S	2
2			CALEY	C	CONFIRMED	CRESCENT			NARRABUNDAH	ACT	2604	-35.3345789	149.1395287	FRONTAGE CENTRE S	2
3			HARPER	C	CONFIRMED	STREET			MACGREGOR	ACT	2615	-35.2131003	149.0174028	FRONTAGE CENTRE S	2
4			BOOLIMBA	C	CONFIRMED	CRESCENT			NARRABUNDAH	ACT	2604	-35.3309227	149.1499819	FRONTAGE CENTRE S	2
5			HARPER	C	CONFIRMED	STREET			MACGREGOR	ACT	2615	-35.2133962	149.0180363	FRONTAGE CENTRE S	2
6			THYNNE	C	CONFIRMED	STREET			BRUCE	ACT	2617	-35.2420191	149.0991104	FRONTAGE CENTRE S	2
7			THYNNE	C	CONFIRMED	STREET			BRUCE	ACT	2617	-35.2399208	149.0969026	FRONTAGE CENTRE S	2
8			HOHNEN	C	CONFIRMED	STREET			BRUCE	ACT	2617	-35.2448073	149.0927207	FRONTAGE CENTRE S	2
9			MACNAUGHTON	C	CONFIRMED	STREET			HIGGINS	ACT	2615	-35.2306949	149.0175858	FRONTAGE CENTRE S	0
10			PHANTOM	C	CONFIRMED	STREET			HARRISON	ACT	2914	-35.2000250	149.1617080	FRONTAGE CENTRE S	2
11			MAPLETON	C	CONFIRMED	AVENUE			HARRISON	ACT	2914	-35.1945211	149.1559063	FRONTAGE CENTRE S	2
12			NIMBERA	C	CONFIRMED	STREET			HARRISON	ACT	2914	-35.1925567	149.1594016	FRONTAGE CENTRE S	2
13			NIMBERA	C	CONFIRMED	STREET			HARRISON	ACT	2914	-35.1923606	149.1597807	FRONTAGE CENTRE S	2
14			HENRY MELVI	C	CONFIRMED	CRESCENT			GILMORE	ACT	2905	-35.4215428	149.1391066	FRONTAGE CENTRE S	2
15			KINGSBURY	C	CONFIRMED	STREET			GOWRIE	ACT	2904	-35.4107050	149.1105425	FRONTAGE CENTRE S	2
16			KINGSBURY	C	CONFIRMED	STREET			GOWRIE	ACT	2904	-35.4112580	149.1119113	FRONTAGE CENTRE S	2
17			WEATHERS	C	CONFIRMED	STREET			GOWRIE	ACT	2904	-35.4106067	149.1130726	FRONTAGE CENTRE S	2
18			BAUDINETTE	C	CONFIRMED	CIRCUIT			BRUCE	ACT	2617	-35.2442553	149.0923219	FRONTAGE CENTRE S	2
19			BRIERLY	C	CONFIRMED	STREET			WESTON	ACT	2611	-35.3406576	149.0520731	FRONTAGE CENTRE S	1
20			HOSKINS	C	CONFIRMED	STREET			HALL	ACT	2618	-35.1684501	149.0664327	FRONTAGE CENTRE S	2
21			NEWCASTLE	C	CONFIRMED	STREET			FYSHWICK	ACT	2609	-35.3294463	149.1780752	FRONTAGE CENTRE S	0
22			KATOOMBA	C	CONFIRMED	STREET			HARRISON	ACT	2914	-35.1964590	149.1564298	FRONTAGE CENTRE S	2
23			REED	C	CONFIRMED	STREET	N	NORTH	GREENWAY	ACT	2900	-35.4169546	149.0691600	PROPERTY CENTROII	0
24			FIDLER	C	CONFIRMED	COURT			BRUCE	ACT	2617	-35.2381601	149.0966760	FRONTAGE CENTRE S	2
25			SHEAFFE	C	CONFIRMED	STREET			HOLDER	ACT	2611	-35.3398857	149.0406844	FRONTAGE CENTRE S	2
26			SHEAFFE	C	CONFIRMED	STREET			HOLDER	ACT	2611	-35.3407939	149.0461533	FRONTAGE CENTRE S	2
27			GUNDAROO	C	CONFIRMED	DRIVE			GUNGAHLIN	ACT	2912	-35.1802246	149.1313940	FRONTAGE CENTRE S	2

More Information

- For more information, refer to the G-NAF Product Description (https://docs.geoscape.com.au/projects/gnaf_desc)