migrate sinedon to be compatible with InnoDB sql engine

This will open up the possibility of several features that helps database management.

1. change /etc/my.cnf default_storage_engine to InnoDB
2. restart mysql service
3. modify your working sinedon.cfg to include at global level

engine: InnoDB

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# Related issues:

- Related to Appion - Task #5318: avoid calling MySQLdb directly to connect when sinedon.cfg is read as input kwargs added
- Related to Appion - Feature #5951: Create a MariaDB Galera multi-master Cluster

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# Associated revisions

- Revision 0ca2b250 - 09/20/2017 11:48 AM - Anchi Cheng
  refs #5223 start of InnoDB conversion.
- Revision 36a56ddd - 11/16/2017 01:51 AM - Anchi Cheng
  refs #5223 check table exist separate from create table and mechanism for specifying sql storage engine
- Revision d7b26475 - 11/16/2017 02:02 AM - Anchi Cheng
  refs #5223 resolve extra config entries
- Revision 08ed62c1 - 03/09/2019 11:50 PM - Anchi Cheng
  refs #5223 default sinedon.cfg comment for using other engines

# History

- #1 - 11/16/2017 02:16 AM - Anchi Cheng
  - Related to Task #5318: avoid calling MySQLdb directly to connect when sinedon.cfg is read as input kwargs added

- #2 - 11/16/2017 02:29 AM - Anchi Cheng
  The default is still MyISAM. To switch to create new tables in InnoDB, you need to
  1. change /etc/my.cnf default_storage_engine to InnoDB
  2. restart mysql service
  3. modify your working sinedon.cfg to include at global level

  ```
  engine: InnoDB
  ```

- #3 - 08/16/2018 12:04 PM - Neil Voss
  Anchi, have we done anything to address the FOREIGN_KEY aspect of InnoDB

  ```
  CREATE TABLE Orders ( 
    OrderID int NOT NULL, 
    OrderNumber int NOT NULL, 
    PersonID int, 
    PRIMARY KEY (OrderID), 
    FOREIGN KEY (PersonID) REFERENCES Persons(PersonID) 
  );

  ALTER TABLE AcquisitionImageData
  ```
I am trying to learn the ins and outs of InnoDB vs. MyISAM and what I can tell it looks we'll need to connect the tables using the FOREIGN KEY flag, especially if we want the multi-master setup to work. Otherwise, it wouldn't know how to properly connect the tables together when locking rows.

#4 - 08/16/2018 01:20 PM - Neil Voss
- Related to Feature #5951: Create a MariaDB Galera multi-master Cluster using Docker added

#5 - 08/16/2018 03:09 PM - Anchi Cheng
No, I have not looked at Foreign Key, yet.