**ICAT Logging:**

Database scripts:

**CREATE:**

CREATE TABLE LOGIN

(SESSION\_ID VARCHAR2(255) PRIMARY KEY,

USER\_ID VARCHAR2(50),

LOGIN\_TIME DATE,

LOGOUT\_TIME DATE );

CREATE TABLE SIMPLE\_VIEW

(VIEW\_ID NUMERIC(38, 0) PRIMARY KEY,

SESSION\_ID VARCHAR2(255) REFERENCES LOGIN(SESSION\_ID),

VIEW\_TIME DATE,

USER\_ID VARCHAR2(50),

METHOD VARCHAR2(255) );

CREATE TABLE DATASET\_INCLUDE

(ID NUMERIC(38, 0) PRIMARY KEY,

NAME VARCHAR2(255) );

CREATE TABLE DATASET\_VIEW

(ID NUMERIC(38, 0) PRIMARY KEY,

DATASET\_ID NUMERIC(38, 0),

VIEW\_ID NUMERIC(38, 0) REFERENCES SIMPLE\_VIEW(VIEW\_ID),

PI\_ID NUMERIC(38, 0),

INVESTIGATION\_ID NUMERIC(38, 0),

INSTRUMENT VARCHAR2(255),

INCLUDES NUMERIC(38, 0) REFERENCES DATASET\_INCLUDE(ID) );

CREATE TABLE INV\_INCLUDE

(ID NUMERIC(38, 0) PRIMARY KEY,

NAME VARCHAR2(255) );

CREATE TABLE INVESTIGATION\_VIEW

(ID NUMERIC(38, 0) PRIMARY KEY,

INVESTIGATION\_ID NUMERIC(38, 0),

VIEW\_ID NUMERIC(38, 0) REFERENCES SIMPLE\_VIEW(VIEW\_ID),

PI\_ID NUMERIC(38, 0),

INVESTIGATION\_ID NUMERIC(38, 0),

INSTRUMENT VARCHAR2(255),

START\_INDEX INT,

NO\_RESULTS INT,

INCLUDES NUMERIC(38, 0) REFERENCES INV\_INCLUDE(ID) );

CREATE TABLE DATAFILE\_VIEW

(ID NUMERIC(38, 0) PRIMARY KEY,

DATAFILE\_ID NUMERIC(38, 0),

VIEW\_ID NUMERIC(38, 0) REFERENCES SIMPLE\_VIEW(VIEW\_ID),

FILENAME VARCHAR2(255),

SIZE NUMBER,

FORMAT VARCHAR2(255),

AGE VARCHAR2(255),

DATASET\_ID NUMERIC(38, 0),

PI\_ID NUMERIC(38, 0),

INVESTIGATION\_ID NUMERIC(38, 0),

INSTRUMENT VARCHAR2(255) );

CREATE TABLE DOWNLOAD

(DOWNLOAD\_ID NUMERIC(38, 0) PRIMARY KEY,

SESSION\_ID VARCHAR2(255) REFERENCES LOGIN(SESSION\_ID),

USER\_ID VARCHAR2(50),

NO\_FILES INT,

TOTAL\_SIZE INT,

DOWNLOAD\_TIME DATE,

METHOD VARCHAR2(255) );

CREATE TABLE DATAFILE\_DOWNLOAD

(ID NUMERIC(38, 0) PRIMARY KEY,

DATAFILE\_ID NUMERIC(38, 0),

DOWNLOAD\_ID NUMERIC(38, 0) REFERENCES DOWNLOAD(DOWNLOAD\_ID),

FILENAME VARCHAR2(255),

SIZE NUMBER,

FORMAT VARCHAR2(255),

AGE VARCHAR2(255),

DATASET\_ID NUMERIC(38, 0),

PI\_ID NUMERIC(38, 0),

INVESTIGATION\_ID NUMERIC(38, 0),

INSTRUMENT VARCHAR2(255) );

CREATE TABLE SEARCH

(SEARCH\_ID NUMERIC(38, 0) PRIMARY KEY,

SESSION\_ID VARCHAR2(255) REFERENCES LOGIN(SESSION\_ID),

USER\_ID VARCHAR2(50),

SEARCH\_TIME DATE,

METHOD VARCHAR2(255) );

CREATE TABLE ADVANCED\_SEARCH

(ADV\_ID NUMERIC(38, 0) PRIMARY KEY,

SEARCH\_ID NUMERIC(38, 0) REFERENCES SIMPLE\_SEARCH(SEARCH\_ID),

TITLE VARCHAR2(255),

ABSTRACT VARCHAR2(4000),

SAMPLE\_ID NUMERIC(38, 0),

SAMPLE VARCHAR2(500),

INVESTIGATOR VARCHAR2(255),

DATAFILE VARCHAR2(255),

RB VARCHAR2(255),

GRANT\_ID NUMERIC(38, 0),

FACILITY VARCHAR2(255),

INV\_TYPE VARCHAR2(255),

RUN\_START FLOAT(126),

RUN\_END FLOAT(126),

START\_DATE DATE,

END\_DATE DATE,

START\_INDEX INT,

NO\_RESULTS INT,

CASE\_SENSITIVE VARCHAR2(10),

VISIT\_ID VARCHAR2 (255),

INV\_INCLUDE NUMERIC(38, 0) REFERENCES INV\_INCLUDE(ID) );

CREATE TABLE LOG\_INVESTIGATOR

(ID NUMERIC(38, 0) PRIMARY KEY,

NAME VARCHAR2(255) );

CREATE TABLE ADV\_INVESTIGATOR

(INVESTIGATOR\_ID NUMERIC(38, 0) REFERENCES LOG\_INVESTIGATOR(ID),

ADV\_ID NUMERIC(38, 0) REFERENCES ADVANCED\_SEARCH(ADV\_ID),

PRIMARY KEY (ADV\_ID, INVESTIGATOR\_ID));

CREATE TABLE LOG\_INSTRUMENT

(INSTRUMENT\_ID NUMERIC(38, 0) PRIMARY KEY,

NAME VARCHAR2(255)

TYPE VARCHAR2(255) );

CREATE TABLE ADV\_INSTRUMENT

(INSTRUMENT\_ID NUMERIC(38, 0) REFERENCES LOG\_INSTRUMENT(INSTRUMENT\_ID),

ADV\_ID NUMERIC(38, 0) REFERENCES ADVANCED\_SEARCH(ADV\_ID),

PRIMARY KEY(INSTRUMENT\_ID, ADV\_ID) );

CREATE TABLE LOG\_KEYWORD

(ID NUMERIC(38, 0) PRIMARY KEY,

KEYWORD VARCHAR2(255) );

CREATE TABLE ADV\_KEYWORD

(ADV\_ID NUMERIC(38, 0) REFERENCES ADVANCED\_SEARCH(ADV\_ID),

KEYWORD\_ID NUMERIC(38, 0) REFERENCES LOG\_KEYWORD(ID),

PRIMARY KEY (ADV\_ID, KEYWORD\_ID) );

CREATE TABLE GENERIC

(GENERIC\_ID NUMERIC(38, 0) PRIMARY KEY );

CREATE TABLE TYPE

(ID NUMERIC(38, 0) PRIMARY KEY,

NAME VARCHAR2(255) );

CREATE TABLE SIMPLE\_WHERE

(WHERE\_ID NUMERIC(38, 0) PRIMARY KEY,

GENERIC\_ID NUMERIC(38, 0) REFERENCES GENERIC(GENERIC\_ID) );

CREATE TABLE LOGICAL

(LOGICAL\_ID NUMERIC(38, 0) PRIMARY KEY,

TYPE\_ID NUMERIC(38, 0) REFERENCES TYPE(ID),

RH\_WHERE\_ID NUMERIC(38, 0) REFERENCES SIMPLE\_WHERE(WHERE\_ID),

LH\_WHERE\_ID NUMERIC(38, 0) REFERENCES SIMPLE\_WHERE(WHERE\_ID) );

ALTER TABLE SIMPLE\_WHERE

ADD LOGICAL\_ID NUMERIC(38, 0) REFERENCES LOGICAL(LOGICAL\_ID);

CREATE TABLE PARAM\_SEARCH

(PARAM\_SEARCH\_ID NUMERIC(38, 0) PRIMARY KEY,

SEARCH\_ID NUMERIC(38, 0) REFERENCES SEARCH(SEARCH\_ID),

METHOD VARCHAR2(255),

DATASET\_INC VARCHAR2(255),

DATAFILE\_INC VARCHAR2(255),

SAMPLE\_INC VARCHAR2(255),

INVESTIGATION\_INC VARCHAR2(255),

OFFSET INT,

COUNT INT,

WHERE\_ID NUMERIC(38, 0) REFERENCES SIMPLE\_WHERE(WHERE\_ID) );

CREATE TABLE COMP\_OPERATOR

(ID NUMERIC(38, 0) PRIMARY KEY,

NAME VARCHAR2(255) );

CREATE TABLE COMP\_OBJECT

(OBJECT\_ID NUMERIC(38, 0) PRIMARY KEY,

STRING\_VAL VARCHAR2(255),

NUM\_VAL NUMBER,

BOOL\_VAL VARCHAR2(20) );

CREATE TABLE COMPARISON

(COMP\_ID NUMERIC(38, 0) PRIMARY KEY,

ATTRIBUTE VARCHAR2(255),

GENERIC\_ID NUMERIC(38, 0) REFERENCES GENERIC(GENERIC\_ID),

OPERATOR\_ID NUMERIC(38, 0) REFERENCES COMP\_OPERATOR(ID),

OBJECT\_ID NUMERIC(38, 0) REFERENCES COMP\_OBJECT(OBJECT\_ID) );

CREATE TABLE BETWEEN\_COMPARISON

(BETWEEN\_ID NUMERIC(38, 0) PRIMARY KEY,

ATTRIBUTE VARCHAR2(255),

GENERIC\_ID NUMERIC(38, 0) REFERENCES GENERIC(GENERIC\_ID),

RH\_OBJECT\_ID NUMERIC(38, 0) REFERENCES COMP\_OBJECT(OBJECT\_ID),

LH\_OBJECT\_ID NUMERIC(38, 0) REFERENCES COMP\_OBJECT(OBJECT\_ID) );

**DROP:**

DROP TABLE BETWEEN\_COMPARISON;

DROP TABLE COMPARISON;

DROP TABLE COMP\_OBJECT;

DROP TABLE COMP\_OPERATOR;

DROP TABLE PARAM\_SEARCH;

ALTER TABLE SIMPLE\_WHERE

DROP COLUMN LOGICAL\_ID;

DROP TABLE SIMPLE\_WHERE;

DROP TABLE LOGICAL;

DROP TABLE TYPE;

DROP TABLE GENERIC;

DROP TABLE ADV\_KEYWORD;

DROP TABLE LOG\_KEYWORD;

DROP TABLE ADV\_INSTRUMENT;

DROP TABLE LOG\_INSTRUMENT;

DROP TABLE ADV\_INVESTIGATOR;

DROP TABLE LOG\_INVESTIGATOR;

DROP TABLE ADVANCED\_SEARCH;

DROP TABLE SEARCH;

DROP TABLE DATAFILE\_DOWNLOAD;

DROP TABLE DOWNLOAD;

DROP TABLE DATAFILE\_VIEW;

DROP TABLE INVESTIGATION\_VIEW;

DROP TABLE INV\_INCLUDE;

DROP TABLE DATASET\_VIEW;

DROP TABLE DATASET\_INCLUDE;

DROP TABLE SIMPLE\_VIEW;

DROP TABLE LOGIN;

**INSERT:**

INSERT INTO ID\_SEQUENCE\_TABLE (NAME, VALUE) VALUES ('INVESTIGATOR\_KEY', 1);

INSERT INTO ID\_SEQUENCE\_TABLE (NAME, VALUE) VALUES ('INSTRUMENT\_KEY', 50);

INSERT INTO ID\_SEQUENCE\_TABLE (NAME, VALUE) VALUES ('SEARCH\_KEY', 1);

INSERT INTO ID\_SEQUENCE\_TABLE (NAME, VALUE) VALUES ('ADVANCED\_KEY', 1);

INSERT INTO ID\_SEQUENCE\_TABLE (NAME, VALUE) VALUES ('FILE\_DOWNLOAD\_KEY', 1);

INSERT INTO ID\_SEQUENCE\_TABLE (NAME, VALUE) VALUES ('DOWNLOAD\_KEY', 1);

INSERT INTO ID\_SEQUENCE\_TABLE (NAME, VALUE) VALUES ('SET\_VIEW\_KEY', 1);

INSERT INTO ID\_SEQUENCE\_TABLE (NAME, VALUE) VALUES ('INVESTIGATION\_VIEW\_KEY', 1);

INSERT INTO ID\_SEQUENCE\_TABLE (NAME, VALUE) VALUES ('VIEW\_KEY', 1);

INSERT INTO ID\_SEQUENCE\_TABLE (NAME, VALUE) VALUES ('KEYWORD\_KEY', 1);

INSERT INTO INV\_INCLUDE(ID, NAME) VALUES (1, 'INVESTIGATORS\_ONLY');

INSERT INTO INV\_INCLUDE(ID, NAME) VALUES (2, 'KEYWORDS\_ONLY');

INSERT INTO INV\_INCLUDE(ID, NAME) VALUES (3, 'PUBLICATIONS\_ONLY,');

INSERT INTO INV\_INCLUDE(ID, NAME) VALUES (4, 'INVESTIGATORS\_AND\_KEYWORDS');

INSERT INTO INV\_INCLUDE(ID, NAME) VALUES (5, 'INVESTIGATORS\_AND\_SHIFTS');

INSERT INTO INV\_INCLUDE(ID, NAME) VALUES (6, 'INVESTIGATORS\_SHIFTS\_AND\_SAMPLES');

INSERT INTO INV\_INCLUDE(ID, NAME) VALUES (7, 'INVESTIGATORS\_SHIFTS\_SAMPLES\_AND\_PUBLICATIONS');

INSERT INTO INV\_INCLUDE(ID, NAME) VALUES (8, 'DATASETS\_ONLY');

INSERT INTO INV\_INCLUDE(ID, NAME) VALUES (9, 'DATASETS\_AND\_DATASET\_PARAMETERS\_ONLY');

INSERT INTO INV\_INCLUDE(ID, NAME) VALUES (10, 'DATASETS\_AND\_DATAFILES');

INSERT INTO INV\_INCLUDE(ID, NAME) VALUES (11, 'DATASETS\_DATAFILES\_AND\_PARAMETERS');

INSERT INTO INV\_INCLUDE(ID, NAME) VALUES (12, 'SAMPLES\_ONLY');

INSERT INTO INV\_INCLUDE(ID, NAME) VALUES (13, 'ROLE\_ONLY');

INSERT INTO INV\_INCLUDE(ID, NAME) VALUES (14, 'SHIFT\_ONLY');

INSERT INTO INV\_INCLUDE(ID, NAME) VALUES (15, 'ALL');

INSERT INTO INV\_INCLUDE(ID, NAME) VALUES (16, 'NONE');

INSERT INTO INV\_INCLUDE(ID, NAME) VALUES (17, 'ALL\_EXCEPT\_DATASETS\_AND\_DATAFILES');

INSERT INTO INV\_INCLUDE(ID, NAME) VALUES (18, 'ALL\_EXCEPT\_DATASETS\_DATAFILES\_AND\_ROLES');

INSERT INTO DATASET\_INCLUDE(ID, NAME) VALUES (1, 'DATASET\_AND\_DATAFILES\_ONLY');

INSERT INTO DATASET\_INCLUDE(ID, NAME) VALUES (2, 'DATASET\_PARAMETERS\_ONLY');

INSERT INTO DATASET\_INCLUDE(ID, NAME) VALUES (3, 'DATASET\_DATAFILES\_AND\_PARAMETERS');

INSERT INTO DATASET\_INCLUDE(ID, NAME) VALUES (4, 'NONE');

Scripts for MDB ConnectionFactory, Queues and Destinations:

**Must be run before deploying icat3-logging**

asadmin create-jms-resource --restype javax.jms.QueueConnectionFactory jms/icat/QueueConnectionFactory

asadmin create-jms-resource --restype javax.jms.Queue jms/advanced/Queue

asadmin create-jms-resource --restype javax.jms.Queue jms/login/Queue

asadmin create-jms-resource --restype javax.jms.Queue jms/logout/Queue

asadmin create-jms-resource --restype javax.jms.Queue jms/keywords/Queue

asadmin create-jms-resource --restype javax.jms.Queue jms/runnumber/Queue

asadmin create-jms-resource --restype javax.jms.Queue jms/download/Queue

asadmin create-jms-resource --restype javax.jms.Queue jms/sample/Queue

asadmin create-jms-resource --restype javax.jms.Queue jms/datafile/Queue

asadmin create-jms-resource --restype javax.jms.Queue jms/dataset/Queue

asadmin create-jms-resource --restype javax.jms.Queue jms/investigations/Queue

asadmin create-jms-resource --restype javax.jms.Queue jms/myinvestigations/Queue

asadmin create-jmsdest --desttype queue Login

asadmin create-jmsdest --desttype queue Logout

asadmin create-jmsdest --desttype queue Keywords

asadmin create-jmsdest --desttype queue RunNumber

asadmin create-jmsdest --desttype queue AdvancedSearch

asadmin create-jmsdest --desttype queue Sample

asadmin create-jmsdest --desttype queue ViewDatafiles

asadmin create-jmsdest --desttype queue ViewDatasets

asadmin create-jmsdest --desttype queue ViewMyInvestigations

asadmin create-jmsdest --desttype queue ViewInvestigations

asadmin create-jmsdest --desttype queue Download

Deploying icat3-logging:

icat3-logging should be added as a library to icat3-exposed.

**ICAT Reporting**

Jrxml files:

A jrxml directory can be created anywhere on the server. All jrxml files should be placed here\*.

Properties files:

Reporting.properties- uk.icat3.reporting.client

* numberYears- for setting how many years appear in the list for parameters MONTH\_FROM and MONTH\_UNTIL

Images.properties (draft file is in icat3-reporting > docs)- glassfish > domains > domain1 > config

* logoLeft- path for image appearing in top left and bottom right of reports
* logoRight- path for image appearing in top right of reports
* \*sourceFolder- path for folder containing jrxml files
* dbUsername- username for connecting to the logging database
* dbPassword- password for connecting to the logging database
* dbURL- url for connecting to the logging database

Libraries:

The following jar files should be added to glassfish > domains > domain1 > lib (they should be included with a jasperreports download):

* commons-beanutils
* commons-collections
* commons-digester
* commons-logging
* groovy-all
* iText
* jcommon
* jdt-compiler
* jfreechart
* jpa
* ojdbc

log4j.jar and jasperreports.jar should be added to icat3-reporting as libraries.

Deployment:

icat3-reporting can be deployed separately as a standalone war file.

Report parameters:

|  |  |  |
| --- | --- | --- |
| **Name** | **Parameter** | **Type** |
| LoginBarChartDay  LoginsDay  Downloads  DownloadsByAge  DatafileViewsByInstrument  DatasetViewsByInstrument  InvestigationViewsByInstrument | FROM  UNTIL | Timestamp  Timestamp |
| LoginBarChartMonth  LoginsMonth  DownloadsBySize | MONTH\_FROM  MONTH\_UNTIL | Timestamp  Timestamp |
| DownloadsForUser | FROM  UNTIL  USERID | Timestamp  Timestamp  String |
| DownloadsForInstrument | FROM  UNTIL  INSTRUMENT | Timestamp  Timestamp  String |