Advantage™ Ingres® Standard Catalog Interface

Tables, Indexes and Views

iitables

One row per queryable object (Table, Index, View, Registration). Not all columns apply to all objects. Blue text has meaning only for Tables or Indexes; there will be no meaningful value in those columns for Views.

COLUMN NAME	DATATYPE	COMMENTS
table_name	char(32)	
table_owner	char(32)	
create_date	char(25)	
alter_date	char(25)	
table_type	char(1)	(T)able, (I)ndex, (V)iew
table_subtype	char(1)	(N)ative, (L)ink, (I)mport (see note 8)
table_version	char(5)	
system_use	char(1)	(S)ystem, (U)ser, (G)enerated
table_stats	char(1)	Y/N
table_indexes	char(1)	Y/N
is_readonly	char(1)	Y/N
concurrent_access	char(1)	Y/N
num_rows	integer	
storage_structure	char(16)	HEAP, HASH, BTREE or ISAM
is_compressed	char(1)	(Y)es, (N)o, (H)idata
key_is_compressed	char(1)	Y/N
duplicate_rows	char(1)	(D)uplicate, (U)nique (rows)
unique_rule	char(1)	(D)uplicate, (U)nique (keys)
number_pages	integer	
overflow_pages	integer	
row_width	integer	bytes, uncompressed
expire_date	integer	
modify_date	char(25)	
location_name	char(32)	also see iimulti_locations
table_integrities	char(1)	Y/N (QUEL integrities)
table_permits	char(1)	Y/N (indexes show N)
all_to_all	char(1)	Y/N (ALL to PUBLIC)
ret_to_all	char(1)	Y/N (SELECT to PUBLIC)
is_journalled	char(1)	Y, N, (C)heckpoint
view_base	char(1)	Y/N (see note 3)
multi_locations	char(1)	Y/N
table_ifillpct	smallint	
table_dfillpct	smallint	
table_lfillpct	smallint	
table_minipages	integer	
table_maxpages	integer	
table_relstamp1	integer	
table_relstamp2	integer	
table_reltid	integer	see note 4
table_reltidx	integer	
unique_scope	char(1)	(R)ow, (S)tatement
allocation_size	integer	in pages
extend_size	integer	in pages
allocated_pages	integer	
label_granularity	char(1)	(R)ow, (T)able
row_security_audit	char(1)	Y/N
security_label	short security label	
table_pagesize	integer	bytes
table_relversion	smallint	
table_reltotwid	integer	bytes
table_reltcpri	smallint	priority 0-8
tups_per_page	integer	data page
keys_per_page	integer	BREE or ISAM index page
keys_per_leaf	integer	BTREE

iidb_comments

TABLE level comments; applies to views or indexes as well.

COLUMN NAME	DATATYPE	COMMENTS
object_name	char(32)	
object_owner	char(32)	
object_type	char(1)	(T)able
short_remark	char(60)	
text_sequence	integer	
long_remark	varchar(1600)	

iicolumns

One row per column for every object in iitables.

COLUMN NAME	DATATYPE	COMMENTS
table_name	char(32)	
table_owner	char(32)	
column_name	char(32)	
column_datatype	char(32)	(see note 5)
column_length	integer	User-visible
column_scale	integer	
column_nulls	char(1)	Y/N
column_defaults	char(1)	Y/N
column_sequence	integer	
key_sequence	integer	Zero if not a key column
sort_direction	char(1)	(A)scending or blank
column_ingdatatype	integer	(see note 5)
column_internal_datatype	char(32)	
column_internal_length	integer	
column_internal_ingtype	smallint	
column_system_maintained	char(1)	Y/N
column_updateable	char(1)	Y/N
column_has_default	char(1)	Y, N, U (null), blank (n/a)
column_default_val	varchar(1501) with null	
security_audit_key	char(1)	Y/N

iidb_subcomments

COLUMN level comments; "subobject_name" is the column name.

COLUMN NAME	DATATYPE	COMMENTS
object_name	char(32)	
object_owner	char(32)	
subobject_name	char(32)	
subobject_type	char(1)	(C)olumn
short_remark	char(60)	
text_sequence	integer	
long_remark	varchar(1600)	

iikey_columns

One row for every storage structure key column (columns with a nonzero key_sequence in iicolumns).

COLUMN NAME	DATATYPE	COMMENTS
table_name	char(32)	
table_owner	char(32)	
column_name	char(32)	
key_sequence	smallint	
sort_direction	vchar(1)	(A)scending

Physical Table Storage

iifile_info

One row for every physical disk file that is part of a table; in other words, one entry per Table per location.

COLUMN NAME	DATATYPE	COMMENTS
table_name	char(32)	
owner_name	char(32)	
file_name	char(8)	
file_ext	char(3)	
location	char(32)	
base_id	integer	see table_reltid
index_id	integer	see table_reltidx

iimulti_locations

One entry for every additional location that a Table is stored in; the first location of each Table is listed in iitables.

COLUMN NAME	DATATYPE	COMMENTS
table_name	char(32)	
table_owner	char(32)	
loc_sequence	integer	
location_name	char(32)	

Secondary Indexes

iiindexes

One row for every secondary index.

COLUMN NAME	DATATYPE	COMMENTS
index_name	char(32)	
index_owner	char(32)	
create_date	char(25)	
base_name	char(32)	
base_owner	char(32)	
storage_structure	char(16)	HASH, ISAM, BTREE or RTREE
is_compressed	char(1)	Y/N
key_is_compressed	char(1)	Y/N
unique_rule	char(1)	(D)uplicate, (U)nique
unique_scope	char(1)	(R)ow, (S)tatement
system_use	char(1)	(S)ystem, (U)ser, (G)enerated
persistent	char(1)	Y/N
index_pagesize	integer	bytes

iiindex_columns

One entry for each key column of a secondary index. Secondary indexes may contain non-key columns; a full column list is in iicolumns.

COLUMN NAME	DATATYPE	COMMENTS
index_name	char(32)	
index_owner	char(32)	
column_name	char(32)	
key_sequence	smallint	
sort_direction	char(1)	(A)scending

iirange

One entry for each RTREE index. Currently, RTREE indexes are always 2-dimensional.

COLUMN NAME	DATATYPE	COMMENTS
rng_baseid	integer	see table_reltid
rng_indexid	integer	see table_reltidx
rng_ll1	float8	
rng_ll2	float8	
rng_ll3	float8	not used
rng_ll4	float8	not used
rng_ur1	float8	
rng_ur2	float8	
rng_ur3	float8	not used
rng_ur4	float8	not used
rng_dimension	smallint	Always 2
rng_hilbertsize	smallint	
rng_rangedt	smallint	
rng_rangetype	char(1)	(i)nteger, (f)loat

Registrations, Synonyms and Views

iiindexes

One row for every secondary index.

COLUMN NAME	DATATYPE	COMMENTS
index_name	char(32)	
index_owner	char(32)	
create_date	char(25)	
base_name	char(32)	
base_owner	char(32)	
storage_structure	char(16)	HASH, ISAM, BTREE or RTREE
is_compressed	char(1)	Y/N
key_is_compressed	char(1)	Y/N
unique_rule	char(1)	(D)uplicate, (U)nique
unique_scope	char(1)	(R)ow, (S)tatement
system_use	char(1)	(S)ystem, (U)ser, (G)enerated
persistent	char(1)	Y/N
index_pagesize	integer	bytes

iiindex_columns

One entry for each key column of a secondary index. Secondary indexes may contain non-key columns; a full column list is in iicolumns.

COLUMN NAME	DATATYPE	COMMENTS
index_name	char(32)	
index_owner	char(32)	
column_name	char(32)	
key_sequence	smallint	
sort_direction	char(1)	(A)scending

iirange

One entry for each RTREE index. Currently, RTREE indexes are always 2-dimensional.

COLUMN NAME	DATATYPE	COMMENTS
rng_baseid	integer	see table_reltid
rng_indexid	integer	see table_reltidx
rng_ll1	float8	
rng_ll2	float8	
rng_ll3	float8	not used
rng_ll4	float8	not used
rng_ur1	float8	
rng_ur2	float8	
rng_ur3	float8	not used
rng_ur4	float8	not used
rng_dimension	smallint	Always 2
rng_hilbertsize	smallint	
rng_rangedt	smallint	
rng_rangetype	char(1)	(i)nteger, (f)loat

Optimizer Statistics

iistats

One row for each column for which optimizer statistics exist.

COLUMN NAME	DATATYPE	COMMENTS
table_name	char(32)	
table_owner	char(32)	
column_name	char(32) with null	
create_date	char(25)	
num_unique	float4	
rept_factor	float4	
has_unique	char(1)	Y/N
pct_nulls	float4	
num_cells	smallint	
column_domain	smallint	
is_complete	char(1)	Y/N
stat_version	char(8)	
hist_data_length	smallint	

iihistograms

One or more entries for each column for which optimizer statistics exist. The "text" in this case is binary optimizer histogram data.

COLUMN NAME	DATATYPE	COMMENTS
table_name	char(32)	
table_owner	char(32)	
column_name	char(32) with null	(see note 9)
text_sequence	integer	
text_segment	char(228)	Binary histogram data

Database Procedures and Rules

iiprocedures

Contains definition text for every database procedure (see note 6).

COLUMN NAME	DATATYPE	COMMENTS
procedure_name	char(32)	
procedure_owner	char(32)	
create_date	char(25)	
proc_subtype	varchar(1)	(N)ative
text_sequence	integer	
text_segment	varchar(240)	
system_use	char(1)	(U)ser, (G)enerated
security_label	short security label	

iiproc_params

One entry for each database procedure parameter.

COLUMN NAME	DATATYPE	COMMENTS
procedure_name	char(32)	
procedure_owner	char(32)	
param_name	char(32)	
param_sequence	smallint	
param_datatype	char(32)	(see note 5)
param_datatype_code	smallint	
param_length	integer	User-visible length
param_scale	integer	
param_nulls	char(1)	Y/N
param_defaults	char(1)	Y/N
param_defaults_val	varchar(1501) with null	

iirules

Contains definition text for rules (see note 6).

COLUMN NAME	DATATYPE	COMMENTS
rule_name	char(32)	
rule_owner	char(32)	
table_name	char(32)	
text_sequence	integer with null	
text_segment	varchar(240) with null	
system_use	char(1)	(U)ser, (G)enerated

Integrity Constraints

iiconstraints

Contains definition text for all integrity constraints (except QUEL-type constraints, which are in iiintegrities). See note 6.

COLUMN NAME	DATATYPE	COMMENTS
constraint_name	char(32)	
schema_name	char(32)	
table_name	char(32)	
constraint_type	char(1)	(C)heck, (P)rimary Key, (R)eferences, (U)nique
create_date	char(25)	
text_sequence	integer	
text_segment	varchar(240)	
system_use	char(1)	(U)ser, (G)enerated

iiref_constraints

One entry for each References Constraint, cross-referencing it to the corresponding Unique constraint in the referenced table.

COLUMN NAME	DATATYPE	COMMENTS
ref_constraint_name	char(32)	
ref_schema_name	char(32)	
ref_table_name	char(32)	
unique_constraint_name	char(32)	
unique_schema_name	char(32)	
unique_table_name	char(32)	

iiconstraint_indexes

One entry for each secondary index used by a constraint, whether system generated or user defined.

COLUMN NAME	DATATYPE	COMMENTS
constraint_name	char(32)	
schema_name	char(32)	
index_name	char(32)	

iikeys

One row for every base Table column used by a constraint that is also a storage structure key column for the constraint, whether in the base Table or some secondary index.

COLUMN NAME	DATATYPE	COMMENTS
constraint_name	char(32)	
schema_name	char(32)	
table_name	char(32)	
column_name	char(32)	
key_position	smallint	

iiintegrities

Contains definition text for QUEL integrities (see note 6).

COLUMN NAME	DATATYPE	COMMENTS
table_name	char(32)	
table_owner	char(32)	
create_date	char(25)	
integrity_number	smallint	
text_sequence	integer	
text_segment	varchar(240)	

Access Control and Security

iipermits

Contains definition text for every permit defined on any object (see note 6).

COLUMN NAME	DATATYPE	COMMENTS
object_name	char(32)	
object_owner	char(32)	
permit_grantor	char(32)	
object_type	char(1)	(E) dbevent, (P) db procedure, (T)able, (V)iew
create_date	char(25)	
permit_user	char(32)	
permit_depth	smallint	
permit_number	smallint	
text_sequence	integer	
text_segment	varchar(240)	

iiaccess

Lists GRANT access granted to all tables, views and secondary indexes. (A secondary index has the same grants as its base table.)

COLUMN NAME	DATATYPE	COMMENTS
table_name	char(32)	
table_owner	char(32)	
table_type	char(1)	(T)able, (I)ndex, (V)iew
system_use	char(1)	(S)ystem, (U)ser, (G)enerated
permit_user	char(32)	
permit_type	char(64)	(see note 7)

iiproc_access

Contains the definition text of permits granted to database procedures (see note 6). This table is a subset of iipermits, for database procedures only.

COLUMN NAME	DATATYPE	COMMENTS
object_name	char(32)	
object_owner	char(32)	
permit_grantor	char(32)	
object_type	char(1)	P (database procedure)
create_date	char(25)	
permit_user	char(32)	
permit_depth	smallint	
permit_number	smallint	
text_sequence	integer	
text_segment	varchar(24)	

iiaudittables

A list of the C2-security audit log files which are currently registered for access as tables.

COLUMN NAME	DATATYPE	COMMENTS
table_name	char(32)	
table_owner	char(32)	
audit_log	char(256)	
register_date	char(25)	

iisecurity_alarms

Contains definition text of all security alarms (see note 6).

COLUMN NAME	DATATYPE	COMMENTS
alarm_name	char(32)	
object_name	char(32)	
object_owner	char(32)	
object_type	char(1)	(T)able
create_date	char(25)	
subject_type	char(1)	(U)ser, (G)roup, (R)ole, (P)ublic
security_user	char(32)	
security_number	smallint	
dbevent_name	char(32) with null	
dbevent_owner	char(32) with null	
dbevent_text	char(256)	DbEvent parameter
text_sequence	integer	
text_segment	varchar(240)	

Database Events

iievents

Contains definition text of all database events (see note 6).

COLUMN NAME	DATATYPE	COMMENTS
event_name	char(32)	
event_owner	char(32)	
text_sequence	integer	
text_segment	varchar(240)	
security_label	short security label	

Server and Session Properties

iidbcapabilities

Contains information about the capabilities supplied by the DBMS. For a list of the defined capability names, see the Database Administrator's Guide.

COLUMN NAME	DATATYPE	COMMENTS
cap_capability	char(32)	
cap_value	char(32)	

iidbconstants

Contains one row holding information about the current session.

COLUMN NAME	DATATYPE	COMMENTS
user_name	c32	
dba_name	c32	
system_owner	varchar(32)	

iisession_priviledges

Contains information about the priviledges available to the current session.

COLUMN NAME	DATATYPE	COMMENTS
priv_name	char(32)	
priv_access	char(32)	Y/N

Notes

Notes:

1. Where applicable, unique key columns are highlighted in red.
2. All dates are character strings of the form yyyy_mm_dd hh_mm_ss GMT.
3. iitables.view_base is set to Y when a View is defined on the object, but it is not necessarily set back to N when all views on that object are dropped.
4. Either table_reltid or table_reltidx is a table's unique ID number. For base tables, the unique ID is in table_reltid, and table_reltidx is zero. For secondary indexes, the unique ID is in table_reltidx, and table_reltid is the index's base table ID.
5. Column data type names and their numbers are:

BYTE	23	LONG VARCHAR	22
C	32	MONEY	5
CHAR	20	NCHAR	26
DATE	3	NVARCHAR	27
FLOAT	31	OBJECT_KEY	11
INTEGER	30	TABLE_KEY	12
LONG BYTE	25	TEXT	37
LONG NVARCHAR	28		

Nullable column types use negative type numbers. The TABLE_KEY and OBJECT_KEY types are only seen as "internal" types; they are listed as CHAR in column_datatype.

6. Tables that contain definition text (iiprocedures, iirules, iiviews and others) may contain multiple rows per object defined. The definition text may have white space altered or removed, and the text may be broken in mid-word across rows.
7. Permit types in iiaccess reflect the GRANT statement syntax; for example, SELECT, UPDATE, DELETE WITH GRANT OPTION and so on.
8. A Link indicates an Advantage Ingres Distributed Option Table, an Import indicates a Gateway Table, as specified in the "register table" statement.
9. column_name will be IICOMPOSITE for all but the first column in multi-column histograms.