



ROCKBUSTER STEALTH LLC

2008 MID-YEAR ANALYSIS  
DATA DICTIONARY

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# ENTITY RELATIONSHIP DIAGRAM

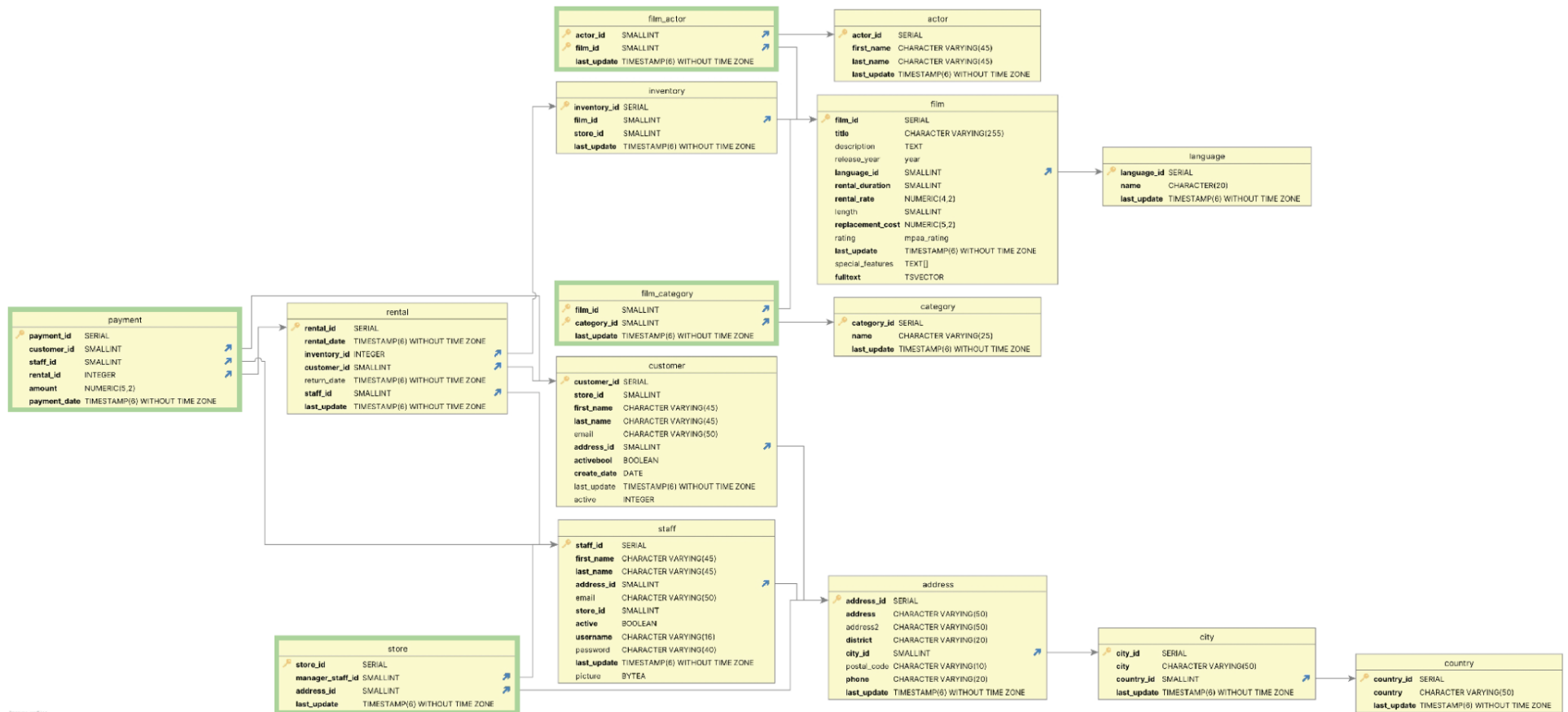






Figure 10.10: ERD

| LEGEND |             |
|--------|-------------|
|        | fact tables |
|        | primary key |
|        | foreign key |





## Columns

| C O L U M N  |   | D A T A   T Y P E          | D E S C R I P T I O N                           |
|--------------|---|----------------------------|---|
| payment_id   |  | serial                     | unique sequential integer given to each payment |
| customer_id  |  | smallint                   | unique small integer given to each customer     |
| staff_id     |  | smallint                   | unique small integer given to each staff        |
| rental_id    |  | integer                    | unique integer given to each rental             |
| amount       |   | numeric(5,2)               | cost amount (xxxxx.xx)                          |
| payment_date |   | timestamp(6) w/o time zone | date of payment (xx/xx/xx)                      |




## Links to

| T A B L E | J O I N                                       | D E S C R I P T I O N                   |
|-----------|---|---|
| customer  | payment.customer_id =<br>customer.customer_id | foreign key referencing <i>customer</i> |
| staff     | payment.staff_id = staff.staff_id             | foreign key referencing <i>staff</i>    |
| rental    | Payment.rental_id =<br>rental.rental_id       | foreign key referencing <i>rental</i>   |

## Unique keys

| C O L U M N |   | D E S C R I P T I O N                          |
|-------------|---|--|
| payment_id  |  | primary key                                    |
| customer_id |  | foreign key used to connect with <i>rental</i> |
| staff_id    |  | foreign key used to connect with <i>staff</i>  |
| rental_id   |  | foreign key used to connect with <i>rental</i> |

## Columns

| C O L U M N      |   | D A T A   T Y P E          | D E S C R I P T I O N                         |
|------------------|---|----------------------------|---|
| store_id         |  | serial                     | unique sequential integer given to each store |
| manager_staff_id |  | smallint                   | unique code given to each manager             |
| address_id       |  | smallint                   | unique code given to each store address       |
| last_update      |   | timestamp(6) w/o time zone | date data was last updated (xx/xx/xx)         |

## Links to





| T A B L E | J O I N                                  | D E S C R I P T I O N                  |
|-----------|--|--|
| staff     | store.store_id = staff.store_id          | foreign key referencing <i>staff</i>   |
| address   | store.address_id =<br>address.address_id | foreign key referencing <i>address</i> |

## Unique keys

| C O L U M N      |   | D E S C R I P T I O N                           |
|------------------|---|---|
| store_id         |  | primary key                                     |
| manager_staff_id |  | foreign key used to connect with <i>staff</i>   |
| address_id       |  | foreign key used to connect with <i>address</i> |

## FACT TABLES: FILM CATEGORY




## Columns

| C O L U M N |   | D A T A   T Y P E          | D E S C R I P T I O N                 |
|-------------|---|----------------------------|---------------------------------------|
| film_id     |    | smallint                   | unique code given to each film        |
| category_id |   | smallint                   | unique code given to each category    |
| last_update |    | timestamp(6) w/o time zone | date data was last updated (xx/xx/xx) |



## Links to

| T A B L E | J O I N   | D E S C R I P T I O N                   |
|-----------|---|---|
| film      | film_category.film_id =<br>film.film_id             | foreign key referencing <i>film</i>     |
| category  | film_category.category_id =<br>category.category_id | foreign key referencing <i>category</i> |

## Unique keys

| C O L U M N |   | D E S C R I P T I O N  |
|-------------|---|--|
| film_id     |    | primary key  |
| category_id |   | primary and foreign key used to connect with <i>category</i> |



## Columns

| C O L U M N |   | D A T A   T Y P E          | D E S C R I P T I O N                 |
|-------------|---|----------------------------|---------------------------------------|
| actor_id    |  | smallint                   | unique code given to each actor       |
| film_id     |  | smallint                   | unique code given to each film        |
| last_update |   | timestamp(6) w/o time zone | date data was last updated (xx/xx/xx) |



## Links to

| T A B L E | J O I N                              | D E S C R I P T I O N                |
|-----------|--------------------------------------|--------------------------------------|
| actor     | film_actor.actor_id = actor.actor_id | foreign key referencing <i>actor</i> |
| film      | film_actor.film_id = film.film_id    | foreign key referencing <i>film</i>  |

## Unique keys

| C O L U M N |   | D E S C R I P T I O N                                     |
|-------------|---|---|
| actor_id    |   | primary and foreign key used to connect with <i>actor</i> |
| film_id     |  | primary and foreign key used to connect with <i>film</i>  |

Columns

| C O L U M N |   | D A T A   T Y P E          | D E S C R I P T I O N                         |
|-------------|---|----------------------------|---|
| staff_id    |  | serial                     | unique sequential integer given to each staff |
| first_name  |   | character varying(45)      | characters + numbers limit 45                 |
| last_name   |   | character varying(45)      | characters + numbers limit 45                 |
| address_id  |  | smallint                   | unique code given to each address             |
| email       |   | character varying(50)      | characters + numbers limit 50                 |
| store_id    |   | smallint                   | unique code given to each store               |
| active      |   | boolean                    | true, false, unknown                          |
| username    |   | character varying(16)      | characters + numbers limit 16                 |
| password    |   | character varying(40)      | characters + numbers limit 40                 |
| last_update |   | timestamp(6) w/o time zone | date data was last updated (xx/xx/xx)         |
| picture     |   | bytea                      | binary strings or RAW                         |



Linked from

| T A B L E | J O I N                           | D E S C R I P T I O N                |
|-----------|-----------------------------------|--------------------------------------|
| payment   | payment.staff_id = staff.staff_id | foreign key referencing <i>staff</i> |
| rental    | rental.staff_id = staff.staff_id  | foreign key referencing <i>staff</i> |
| store     | store.store_id = staff.store_id   | foreign key referencing <i>store</i> |

Links to

| T A B L E | J O I N                               | D E S C R I P T I O N                  |
|-----------|---------------------------------------|--|
| address   | staff.address_id = address.address_id | foreign key referencing <i>address</i> |



Unique keys

| C O L U M N |   | D E S C R I P T I O N                           |
|-------------|---|---|
| staff_id    |  | primary key                                     |
| address_id  |  | foreign key used to connect with <i>address</i> |



## DIMENSION TABLES: CUSTOMER

### Columns

| C O L U M N |   | D A T A   T Y P E          | D E S C R I P T I O N                            |
|-------------|---|----------------------------|--|
| customer_id |  | serial                     | unique sequential integer given to each customer |
| store_id    |   | smallint                   | unique code given to each store                  |
| first_name  |   | character varying(45)      | characters + numbers limit 45                    |
| last_name   |   | character varying(45)      | characters + numbers limit 45                    |
| address_id  |  | smallint                   | unique code given to each address                |
| email       |   | character varying(50)      | characters + numbers limit 50                    |
| activebool  |   | boolean                    | true, false, unknown                             |
| create_date |   | date                       | date (no limit specified)                        |
| last_update |   | timestamp(6) w/o time zone | date data was last updated (xx/xx/xx)            |
| active      |   | integer                    | integer (maybe 1, 0?)                            |



### Linked from

| T A B L E | J O I N                                      | D E S C R I P T I O N                   |
|-----------|--|---|
| payment   | payment.customer_id =<br>customer.staff_id   | foreign key referencing <i>customer</i> |
| rental    | rental.customer_id =<br>customer.customer_id | foreign key referencing <i>customer</i> |





### Links to

| T A B L E | J O I N                                     | D E S C R I P T I O N                  |
|-----------|---|--|
| address   | customer.address_id =<br>address.address_id | foreign key referencing <i>address</i> |

### Unique keys

| C O L U M N |   | D E S C R I P T I O N                           |
|-------------|---|---|
| customer_id |  | primary key                                     |
| address_id  |  | foreign key used to connect with <i>address</i> |

## Columns

| C O L U M N  |   | D A T A   T Y P E          | D E S C R I P T I O N                          |
|--------------|---|----------------------------|--|
| rental_id    |  | serial                     | unique sequential integer given to each rental |
| rental_date  |   | timestamp(6) w/o time zone | date data was last updated (xx/xx/xx)          |
| inventory_id |  | integer                    | unique code given to each inventory            |
| customer_id  |  | smallint                   | unique code given to each customer             |
| return_date  |   | timestamp(6) w/o time zone | date data was last updated (xx/xx/xx)          |
| staff_id     |  | smallint                   | unique code given to each staff                |
| last_update  |   | timestamp(6) w/o time zone | date data was last updated (xx/xx/xx)          |





## Linked from

| T A B L E | J O I N                                 | D E S C R I P T I O N                 |
|-----------|---|---------------------------------------|
| payment   | payment.rental_id =<br>rental.rental_id | foreign key referencing <i>rental</i> |

## Links to



| T A B L E | J O I N   | D E S C R I P T I O N                    |
|-----------|---|--|
| inventory | rental.inventory_id =<br>inventory.inventory_id | foreign key referencing <i>inventory</i> |
| customer  | rental.customer_id =<br>customer.customer_id    | foreign key referencing <i>customer</i>  |
| staff     | rental.staff_id = staff.staff_id                | foreign key referencing <i>staff</i>     |

## Unique keys

| C O L U M N  |   | D E S C R I P T I O N                             |
|--------------|---|---|
| rental_id    |  | primary key                                       |
| inventory_id |  | foreign key used to connect with <i>inventory</i> |
| customer_id  |  | foreign key used to connect with <i>customer</i>  |
| staff_id     |  | foreign key used to connect with <i>staff</i>     |

## DIMENSION TABLES: ADDRESS

### Columns

| C O L U M N |   | D A T A   T Y P E          | D E S C R I P T I O N                            |
|-------------|---|----------------------------|--|
| address_id  |  | serial                     | unique sequential integer for each store address |
| address     |   | character varying(50)      | characters + numbers limit 50                    |
| address2    |   | character varying(50)      | characters + numbers limit 50                    |
| district    |   | character varying(20)      | characters + numbers limit 20                    |
| city_id     |  | smallint                   | unique code given to each store city             |
| postal_code |   | character varying(10)      | characters + numbers limit 10                    |
| phone       |   | character varying(20)      | characters + numbers limit 20                    |
| last_update |   | timestamp(6) w/o time zone | date data was last updated (xx/xx/xx)            |



### Linked from

| T A B L E | J O I N                                     | D E S C R I P T I O N                  |
|-----------|---|--|
| customer  | customer.address_id =<br>address.address_id | foreign key referencing <i>address</i> |
| staff     | staff.address_id =<br>address.address_id    | foreign key referencing <i>address</i> |



### Links to

| T A B L E | J O I N                        | D E S C R I P T I O N               |
|-----------|--------------------------------|-------------------------------------|
| city      | address.city_id = city.city_id | foreign key referencing <i>city</i> |

### Unique keys

| C O L U M N |   | D E S C R I P T I O N                        |
|-------------|---|--|
| address_id  |  | primary key                                  |
| city_id     |  | foreign key used to connect with <i>city</i> |

Columns

| C O L U M N |   | D A T A   T Y P E          | D E S C R I P T I O N                        |
|-------------|---|----------------------------|--|
| city_id     |  | serial                     | unique sequential integer given to each city |
| city        |   | character varying(50)      | characters + numbers limit 50                |
| country_id  |   | smallint                   | unique code given to each store country      |
| last_update |  | timestamp(6) w/o time zone | date data was last updated (xx/xx/xx)        |



Linked from

| T A B L E | J O I N                        | D E S C R I P T I O N               |
|-----------|--------------------------------|-------------------------------------|
| address   | address.city_id = city.city_id | foreign key referencing <i>city</i> |

Links to


| T A B L E | J O I N                              | D E S C R I P T I O N                  |
|-----------|--------------------------------------|--|
| country   | city.country_id = country.country_id | foreign key referencing <i>country</i> |

Unique keys

| C O L U M N |   | D E S C R I P T I O N                           |
|-------------|---|---|
| city_id     |  | primary key                                     |
| country_id  |  | foreign key used to connect with <i>country</i> |

## DIMENSION TABLES: COUNTRY


### Columns

| C O L U M N  | D A T A   T Y P E          | D E S C R I P T I O N                           |
|--|----------------------------|---|
| country_id  | serial                     | unique sequential integer given to each country |
| country  | character varying(50)      | characters + numbers limit 50                   |
| last_update  | timestamp(6) w/o time zone | date data was last updated (xx/xx/xx)           |

### Linked from



| T A B L E | J O I N                                 | D E S C R I P T I O N                  |
|-----------|---|--|
| city      | city.country_id =<br>country.country_id | foreign key referencing <i>country</i> |

### Unique keys

| C O L U M N  | D E S C R I P T I O N |
|--|-----------------------|
| country_id  | primary key           |

## DIMENSION TABLES: INVENTORY

### Columns

| COLUMN       |   | DATA TYPE                  | DESCRIPTION                                       |
|--------------|---|----------------------------|---|
| inventory_id |  | serial                     | unique sequential integer given to each inventory |
| film_id      |  | smallint                   | unique code given to each film                    |
| store_id     |   | smallint                   | unique code given to each store                   |
| last_update  |   | timestamp(6) w/o time zone | date data was last updated (xx/xx/xx)             |


### Linked from

| TABLE  | JOIN  | DESCRIPTION                              |
|--------|---|--|
| rental | rental.inventory_id =<br>inventory.inventory_id | foreign key referencing <i>inventory</i> |

### Links to



| TABLE | JOIN                             | DESCRIPTION                         |
|-------|----------------------------------|-------------------------------------|
| film  | inventory.film_id = film.film_id | foreign key referencing <i>film</i> |

### Unique keys

| COLUMN       |   | DESCRIPTION                                  |
|--------------|---|--|
| inventory_id |  | primary key                                  |
| film_id      |  | foreign key used to connect with <i>film</i> |

## DIMENSION TABLES: FILM

### Columns

| C O L U M N      |   | D A T A   T Y P E          | D E S C R I P T I O N                             |
|------------------|---|----------------------------|---|
| film_id          |  | serial                     | unique sequential integer given to each film      |
| title            |   | character varying(255)     | characters + numbers limit 255                    |
| description      |   | text                       | text description                                  |
| release_year     |   | year                       | year of film release                              |
| language_id      |  | smallint                   | unique code given to each film                    |
| rental_duration  |   | smallint                   | unique code given to each film                    |
| rental_rate      |   | numeric(4,2)               | rental cost amount (xxxx.xx)                      |
| length           |   | smallint                   | unique code given to each film                    |
| replacement_cost |   | numeric(5,2)               | replacement cost amount (xxxxx.xx)                |
| rating           |   | mpaa_rating                | mpaa rating (5 categories)                        |
| last_update      |   | timestamp(6) w/o time zone | date data was last updated (xx/xx/xx)             |
| special_feature  |   | text[]                     | text (limit 1Gb)                                  |
| fulltext         |   | tsvector                   | text film description (optimized for text search) |


### Linked from

| T A B L E     | J O I N                                 | D E S C R I P T I O N               |
|---------------|---|-------------------------------------|
| film_actor    | film_actor.film_id = film.film_id       | foreign key referencing <i>film</i> |
| inventory     | inventory.film_id = film.film_id        | foreign key referencing <i>film</i> |
| film_category | film_category.film_id =<br>film.film_id | foreign key referencing <i>film</i> |

### Links to

| T A B L E | J O I N                                    | D E S C R I P T I O N                   |
|-----------|--|---|
| language  | film.language_id =<br>language.language_id | foreign key referencing <i>language</i> |


## Unique keys

| C O L U M N |   | D E S C R I P T I O N                        |
|-------------|---|--|
| film_id     |  | primary key                                  |
| language_id |  | foreign key used to connect with <i>film</i> |



## DIMENSION TABLES: LANGUAGE


### Columns

| C O L U M N |   | D A T A   T Y P E          | D E S C R I P T I O N                            |
|-------------|---|----------------------------|--|
| language_id |  | serial                     | unique sequential integer given to each language |
| name        |   | character(20)              | character limit 20                               |
| last_update |   | timestamp(6) w/o time zone | date data was last updated (xx/xx/xx)            |

### Linked from


| T A B L E | J O I N                                    | D E S C R I P T I O N                   |
|-----------|--|---|
| film      | film.language_id =<br>language.language_id | foreign key referencing <i>language</i> |

### Unique keys

| C O L U M N |   | D E S C R I P T I O N |
|-------------|---|-----------------------|
| language_id |  | primary key           |

## DIMENSION TABLES: ACTOR


### Columns

| C O L U M N  | D A T A   T Y P E          | D E S C R I P T I O N                         |
|--|----------------------------|---|
| actor_id  | serial                     | unique sequential integer given to each actor |
| first_name   | character varying(45)      | characters + numbers limit 45                 |
| last_name  | character varying(45)      | characters + numbers limit 45                 |
| last_update  | timestamp(6) w/o time zone | date data was last updated (xx/xx/xx)         |

### Linked from


| T A B L E  | J O I N                              | D E S C R I P T I O N                |
|------------|--------------------------------------|--------------------------------------|
| film_actor | film_actor.actor_id = actor.actor_id | foreign key referencing <i>actor</i> |

### Unique keys

| C O L U M N   | D E S C R I P T I O N |
|---|-----------------------|
| actor_id  | primary key           |

## DIMENSION TABLES: CATEGORY


### Columns

| COLUMN  | DATA TYPE                  | DESCRIPTION   |
|---|----------------------------|---|
| category_id  | serial                     | unique sequential integer given to each film category |
| name  | character varying(25)      | characters + numbers limit 45                         |
| last_update   | timestamp(6) w/o time zone | date data was last updated (xx/xx/xx)                 |

### Linked from

| TABLE         | JOIN   | DESCRIPTION                             |
|---------------|--|---|
| film_category | film_category.category_id = category.category_id | foreign key referencing <i>category</i> |

### Unique keys

| COLUMN  | DESCRIPTION |
|---|-------------|
| category_id  | primary key |