API Documentation

API Documentation

April 21, 2007

Contents

C	Contents		
1	Pac 1.1	kage z3c.sqlalchemy Modules	3
2	Mo	dule z3c.sqlalchemy.base	4
	2.1	Class BaseWrapper	4
		2.1.1 Methods	4
		2.1.2 Properties	5
		2.1.3 Class Variables	5
	2.2	Class DataManager	5
		2.2.1 Methods	5
		2.2.2 Properties	7
		2.2.3 Class Variables	7
	2.3	Class ZopeBaseWrapper	7
		2.3.1 Methods	7
		2.3.2 Properties	8
		2.3.3 Class Variables	9
3	Mo	dule z3c.sqlalchemy.interfaces	10
	3.1	Class ISQLAlchemyWrapper	10
		3.1.1 Methods	10
		3.1.2 Class Variables	10
	3.2	Class IModelProvider	11
		3.2.1 Methods	11
		3.2.2 Class Variables	11
4	Mo	dule z3c.sqlalchemy.mapper	12
	4.1	Class MappedClassBase	12
		4.1.1 Methods	12
		4.1.2 Properties	13
	4.2	Class MapperFactory	13
		4.2.1 Methods	13
		4.2.2 Properties	14
	4.3	Class LazyMapperCollection	14
		4.3.1 Methods	14
		4.3.2 Properties	18

CONTENTS

5	Mo	dule z3c.sqlalchemy.model	19
	5.1	Class Model	19
		5.1.1 Methods	19
		5.1.2 Properties	23
6	Mo	dule z3c.sqlalchemy.postgres	24
	6.1	Class PostgresMixin	24
		6.1.1 Methods	24
		6.1.2 Properties	25
		6.1.3 Class Variables	25
	6.2	Class PythonPostgresWrapper	25
		6.2.1 Methods	25
		6.2.2 Properties	27
		6.2.3 Class Variables	27
	6.3	Class ZopePostgresWrapper	27
		6.3.1 Methods	27
		6.3.2 Properties	29
		6.3.3 Class Variables	29
7	Pac	kage z3c.sqlalchemy.tests	30
•	7.1	Modules	30
8	Mo	dule z3c.sqlalchemy.tests.testSQLAlchemy	31
O	8.1	Functions	31
	8.2	Class WrapperTests	31
	0.2	**	31
			35
		8.2.2 Properties	99
9	Mo	dule z3c.sqlalchemy.util	36
	9.1	Functions	36
In	dex		37

1 Package z3c.sqlalchemy

1.1 Modules

- base (Section 2, p. 4)
- interfaces (Section 3, p. 10)
- mapper: Utility methods for SqlAlchemy (Section 4, p. 12)
- model: Optional Model support (Section 5, p. 19)
- postgres (Section 6, p. 24)
- tests (Section 7, p. 30)
 - testSQLAlchemy: Tests, tests, tests......... (Section 8, p. 31)
- util: Some helper methods (Section 9, p. 36)

2 Module z3c.sqlalchemy.base

2.1 Class BaseWrapper

 $_{\mathbf{providedBy}}(...)$

```
\begin{array}{c} \text{object} & \\ \\ \textbf{z3c.sqlalchemy.base.BaseWrapper} \end{array}
```

 $\textbf{Known Subclasses:} \ z3c.sqlalchemy.base.ZopeBaseWrapper, z3c.sqlalchemy.postgres.PythonPostgresWrapper, z3c.sqlalchemy.pythonPostgresWrapper, z3c.sqlalchemy.p$

```
2.1.1 Methods
 _init_(self, dsn, model=None, **kw)
 'dsn' - a RFC-1738-style connection string
 'model' - optional instance of model. Model
'kw' - optional keyword arguments passed to create_engine()
Overrides: object.__init__
registerMapper(self, mapper, name)
 getMapper(self, tablename, schema='public')
getMappers(self, *names)
 _{\mathbf{delattr}_{-}(...)}
x.\_delattr\_('name') <==> del x.name
 \_getattribute\_(...)
x._getattribute_('name') <==> x.name
 _{\mathbf{hash}}(x)
hash(x)
 \underline{\mathbf{new}}(T, S, ...)
Return Value
      a new object with type S, a subtype of T
```

```
Object Specification Descriptor

_reduce_(...)
helper for pickle
```

```
__reduce_ex__(...)
helper for pickle
```

```
\frac{\_\mathbf{repr}\_(x)}{\mathrm{repr}(x)}
```

```
__setattr__(...)
x.__setattr__('name', value) <==> x.name = value
```

```
\frac{\_\mathbf{str}\_(x)}{\mathbf{str}(\mathbf{x})}
```

2.1.2 Properties

Name	Description
metadata	Value: <property 0x2aea05336d20="" at="" object=""></property>
session	Value: <property 0x2aea05336d70="" at="" object=""></property>
engine	Value: <property 0x2aea05336dc0="" at="" object=""></property>
model	Value: <property 0x2aea05336e10="" at="" object=""></property>
class	Value: <attribute 'class'="" 'object'="" objects="" of=""></attribute>

2.1.3 Class Variables

Name	Description
implemented Value: <implementedby< th=""></implementedby<>	
	z3c.sqlalchemy.base.BaseWrapper>
provides	Value: <zope.interface.declarations.classprovides< th=""></zope.interface.declarations.classprovides<>
	object at 0x2a

2.2 Class DataManager

 $\begin{array}{c} \text{object} & \frown \\ \\ \textbf{z3c.sqlalchemy.base.DataManager} \end{array}$

Wraps session into transaction context of Zope

2.2.1 Methods

```
__init__(self, session)
x.__init__(...) initializes x; see x.__class__.__doc__ for signature
Overrides: object.__init__ extit(inherited documentation)
```

tpc_begin(self, trans) abort(self, trans) commit(self, trans) tpc_vote(self, trans) tpc_finish(self, trans) tpc_abort(self, trans) $\mathbf{sortKey}(self)$ $_{\mathbf{delattr}}(...)$ $x._delattr_('name') <==> del x.name$ $_{\mathbf{getattribute}}(...)$ $x._getattribute_('name') <==> x.name$ $_{\mathbf{hash}}(x)$ hash(x)_new_(T, S, ...) Return Value a new object with type S, a subtype of $\ensuremath{\mathsf{T}}$ $_{\mathbf{providedBy}}(...)$ Object Specification Descriptor $_reduce_(...)$ helper for pickle $_{\text{reduce}_ex_(...)}$ helper for pickle $\mathbf{repr}(x)$ repr(x) $_{\mathbf{setattr}}(...)$ x._setattr_('name', value) <==> x.name = value

str(x)		
str(x)		

2.2.2 Properties

Name	Description
class	Value: <attribute 'class'="" 'object'="" objects="" of=""></attribute>

2.2.3 Class Variables

Name	Description
implemented	Value: <implementedby< th=""></implementedby<>
	z3c.sqlalchemy.base.DataManager>
provides	Value: <zope.interface.declarations.classprovides< th=""></zope.interface.declarations.classprovides<>
	object at 0x2a

2.3 Class ZopeBaseWrapper



 ${\bf Known~Subclasses:}~z3c.sqlalchemy.postgres.ZopePostgresWrapper$

A wrapper to be used from within Zope. It connects the session with the transaction management of Zope.

2.3.1 Methods



```
__getattribute_(...)
x.__getattribute__('name') <==> x.name
```

hash(x)		
hash(x)		

 $_{init}(self, dsn, model=None, **kw)$

'dsn' - a RFC-1738-style connection string

'model' - optional instance of model. Model

'kw' - optional keyword arguments passed to create_engine()

Overrides: object.__init__

 $\underline{\mathbf{new}}(T, S, \ldots)$

Return Value

a new object with type S, a subtype of T

 $_providedBy_(...)$

Object Specification Descriptor

 $_{\mathbf{reduce}}(...)$

helper for pickle

 $_{
m reduce_ex_}(...)$

helper for pickle

 $_{\mathbf{repr}}(x)$

repr(x)

setattr(...)

x._setattr_('name', value) <==> x.name = value

 $_{\mathbf{str}}(x)$

str(x)

getMapper(self, tablename, schema='public')

getMappers(self, *names)

registerMapper(self, mapper, name)

2.3.2 Properties

Name	Description
session	Value: <property 0x2aea0544a190="" at="" object=""></property>
class	Value: <attribute 'class'="" 'object'="" objects="" of=""></attribute>
engine	Value: <property 0x2aea05336dc0="" at="" object=""></property>
metadata	Value: <property 0x2aea05336d20="" at="" object=""></property>

continued on next page

Name	Description
model	Value: <property 0x2aea05336e10="" at="" object=""></property>

2.3.3 Class Variables

Name	Description
implemented	Value: <implementedby< th=""></implementedby<>
	z3c.sqlalchemy.base.BaseWrapper>
provides	Value: <zope.interface.declarations.classprovides< th=""></zope.interface.declarations.classprovides<>
	object at 0x2a

3 Module z3c.sqlalchemy.interfaces

3.1 Class ISQLAlchemyWrapper

 $\begin{tabular}{ll} zope. interface. Interface & \\ & z3c. sqlalchemy. interfaces. ISQLAlchemy. Wrapper \\ \end{tabular}$

A SQLAlchemyWrapper wraps sqlalchemy and deals with connection and transaction handling.

3.1.1 Methods

registerMapper(mapper, name)
register your own mapper under a custom name

getMapper(tablename, schema='public')
return a mapper class for a table given by its 'tablename' and an optional 'schema' name

return a sequence of mapper classes for a given list of table names. ATT: Schema support?

3.1.2 Class Variables

Name	Description
dsn	Value: TextLine(title= u'A RFC-1738 style connection string', re
dbname	Value: TextLine(title= u'Database name', required= True)
host	Value: TextLine(title= u'Hostname of database', required= True)
port	Value: Int(title= u'Port of database', required= True)
username	Value: TextLine(title= u'Database user', required= True)
password	Value: TextLine(title= u'Password of database user', required= T
echo	Value: Bool(title= u'Echo all SQL statements to the console', re
bases	Value: (<interfaceclass zope.interface.interface="">)</interfaceclass>
identifier	Value: 'z3c.sqlalchemy.interfaces.ISQLAlchemyWrapper'
iro	Value: (<interfaceclass td="" z3c.sqlalchemy.interfaces.isqlalchemywra<=""></interfaceclass>
name	Value: 'ISQLAlchemyWrapper'
sro	Value: (<interfaceclass< td=""></interfaceclass<>
	z3c.sqlalchemy.interfaces.ISQLAlchemyWra

continued on next page

Name	Description
dependents	Value: <weakkeydictionary 47184597930496="" at=""></weakkeydictionary>

3.2 Class IModelProvider

 $\begin{tabular}{ll} zope. interface. Interface & \\ & z3c. sqlalchemy. interfaces. IModel Provider \\ \end{tabular}$

A model providers provides information about the tables to be used and the mapper classes.

3.2.1 Methods

getModel()

The model is described as an ordered dictionary. The entries are (tablename, some_dict) where 'some_dict' is a dictionary containing a key 'table' referencing a Table() instance and an optional key 'relationships' referencing a sequence of related table names. An optional mapper class can be specified through the 'class' key (otherwise a default mapper class will be autogenerated).

3.2.2 Class Variables

Name	Description
bases	Value: (<interfaceclass zope.interface.interface="">)</interfaceclass>
identifier	Value: 'z3c.sqlalchemy.interfaces.IModelProvider'
_iro	Value: (<interfaceclass< td=""></interfaceclass<>
	z3c.sqlalchemy.interfaces.IModelProvider
name	Value: 'IModelProvider'
sro	Value: (<interfaceclass< th=""></interfaceclass<>
	z3c.sqlalchemy.interfaces.IModelProvider
dependents	Value: <weakkeydictionary 47184597930280="" at=""></weakkeydictionary>

4 Module z3c.sqlalchemy.mapper

Utility methods for SqlAlchemy

4.1 Class MappedClassBase



4.1.1 Methods

```
__init__(self, **kw)
accepts keywords arguments used for initialization of mapped attributes/columns.
Overrides: object.__init__
```

```
__delattr__(...)
x.__delattr__('name') <==> del x.name
```

```
__getattribute__(...)
x.__getattribute__('name') <==> x.name
```

```
\frac{-\mathbf{hash}_{-}(x)}{\mathbf{hash}(\mathbf{x})}
```

```
reduce_(...)
helper for pickle
```

```
__reduce_ex__(...)
helper for pickle
```

```
\frac{-\mathbf{repr}_{-}(x)}{\mathbf{repr}(\mathbf{x})}
```

```
__setattr_(...)
x._setattr_('name', value) <==> x.name = value
```

```
\frac{\_\mathbf{str}\_(x)}{\mathbf{str}(\mathbf{x})}
```

4.1.2 Properties

Name	Description
class	Value: <attribute 'class'="" 'object'="" objects="" of=""></attribute>

4.2 Class MapperFactory

object —

z3c.sqlalchemy.mapper.MapperFactory

a factory for table and mapper objects

4.2.1 Methods

```
__init__(self, metadata)
x.__init__(...) initializes x; see x.__class__.__doc__ for signature
Overrides: object.__init__ extit(inherited documentation)
```

```
_call_(self, table, properties={}, cls=None)
```

Returns a tuple (mapped_class, table_class). 'table' - sqlalchemy. Table to be mapped 'properties' - dict containing additional informations about

'cls' - (optional) class used as base for creating the mapper class (will be autogenerated if not available).

```
__delattr__(...)
x.__delattr__('name') <==> del x.name
```

```
__getattribute__(...)
x.__getattribute__('name') <==> x.name
```

```
\frac{-\mathbf{hash}_{-}(x)}{\mathbf{hash}(\mathbf{x})}
```

$_{reduce}_{_}()$	
helper for pickle	

```
__reduce_ex__(...)
helper for pickle
```

```
\frac{-\text{repr}_{-}(x)}{\text{repr}(x)}
```

```
__setattr__(...)
x.__setattr__('name', value) <==> x.name = value
```

```
\frac{\_\mathbf{str}\_(x)}{\mathbf{str}(\mathbf{x})}
```

4.2.2 Properties

Name	Description
class	Value: <attribute 'class'="" 'object'="" objects="" of=""></attribute>

4.3 Class LazyMapperCollection



Implements a cache for table mappers

4.3.1 Methods

```
__init__(self, wrapper)
x.__init__(...) initializes x; see x.__class__.__doc__ for signature

Return Value
    new empty dictionary

Overrides: dict.__init__ extit(inherited documentation)
```

```
getMapper(self, name, schema='public')
return a (cached) mapper class for a given table 'name'
```

 $\frac{-\mathbf{cmp}_{-}(x, y)}{\mathbf{cmp}(\mathbf{x}, \mathbf{y})}$

__delattr__(...)
x.__delattr__('name') <==> del x.name

 $\frac{-\text{delitem}_{-}(x, y)}{\text{del } x[y]}$

 $\frac{-\mathbf{eq}_{-}(x, y)}{\mathbf{x} == \mathbf{y}}$

 $\frac{\mathbf{ge}(x, y)}{\mathbf{x} = \mathbf{y}}$

__getattribute_(...)
x._getattribute_('name') <==> x.name
Overrides: object.__getattribute_

 $\frac{_\mathbf{getitem}_(x, y)}{\mathbf{x}[\mathbf{y}]}$

 $\frac{-\mathbf{gt}_{-}(x, y)}{\mathbf{x} > \mathbf{y}}$

 $\frac{-\text{hash}_{-}(x)}{\text{hash}(\mathbf{x})}$ Overrides: object.__hash__

 $\frac{\underline{-le}\underline{-}(x, y)}{x < = y}$

Class LazyMapperCollection $_{\mathbf{len}}(x)$ len(x) $_{\mathbf{lt}}(x, y)$ x < y $\mathbf{ne}(x, y)$ x!=y $\underline{\mathbf{new}}(T, S, ...)$ Return Value a new object with type S, a subtype of T Overrides: object._new_ $_reduce_(...)$ helper for pickle _reduce_ex__(...) helper for pickle $\mathbf{repr}(x)$ repr(x) Overrides: object.__repr__ _setattr_(...) x._setattr_('name', value) <==> x.name = value $_{\mathbf{x}, i, y}$ x[i]=y $_{\mathbf{str}}(x)$ str(x) $\mathbf{clear}(D)$ Remove all items from D. Return Value None

$\mathbf{copy}(D)$

Return Value

a shallow copy of ${\tt D}$

fromkeys(dict, S, v = ...)

v defaults to None.

Return Value

New dict with keys from S and values equal to v

 $\mathbf{get}(D, k, d = \dots)$

d defaults to None.

Return Value

D[k] if k in D, else d

 $\mathbf{has}_{\mathbf{key}}(D, k)$

Return Value

True if D has a key k, else False

items(D)

Return Value

list of D's (key, value) pairs, as 2-tuples

iteritems(D)

Return Value

an iterator over the (key, value) items of D

iterkeys(D)

Return Value

an iterator over the keys of ${\tt D}$

itervalues(D)

Return Value

an iterator over the values of $\ensuremath{\mathsf{D}}$

 $\mathbf{keys}(D)$

Return Value

list of D's keys

 $\mathbf{pop}(D, k, d = \dots)$

If key is not found, d is returned if given, otherwise KeyError is raised

Return Value

v, remove specified key and return the corresponding value

popitem(D)

2-tuple; but raise KeyError if D is empty

Return Value

(k, v), remove and return some (key, value) pair as a

setdefault(D, k, d=...)

Return Value

D.get(k,d), also set D[k]=d if k not in D

 $\mathbf{update}(D, E, **F)$

Update D from E and F: for k in E: D[k] = E[k] (if E has keys else: for (k, v) in E: D[k] = v) then: for k in F: D[k] = F[k]

Return Value

None

values(D)

Return Value

list of D's values

4.3.2 Properties

Name	Description
class	Value: <attribute 'class'="" 'object'="" objects="" of=""></attribute>

5 Module z3c.sqlalchemy.model

Optional Model support

5.1 Class Model



The Model is an optional helper class that can be passed to the constructor of a SQLAlchemy wrapper in order to provide hints for the mapper generation.

5.1.1 Methods

$_$ **init** $_$ (self, *args)

The constructor can be called with a series of dict. Each dict represents a single table and its data (see add() method).

Return Value

new empty dictionary

Overrides: dict.__init__

 $\mathbf{add}(self,\ name,\ table = \mathtt{None},\ mapper_class = \mathtt{None},\ relations = \mathtt{None},\ autodetect_relations = \mathtt{False},\ table_name = \mathtt{None})$

'name' – name of table (no schema support so far!)

'table' – a sqlalchemy. Table instance (None, for autoloading)

'mapper_class' – an optional class to be used as mapper class for 'table'

'relations' – an optional list of table names referencing 'table'. This is used for auto-constructing the relation properties of the mapper class.

'autodetect_relations' – try to autodetect the relationships between tables and auto-construct the relation properties of the mapper if 'relations' is omitted (set to None)

'table_name' – optional full name of a table (e.g. 'someschema.sometable') if you want to use 'name' as alias for the table.

items(self)

return items in insertion order

Return Value

list of D's (key, value) pairs, as 2-tuples

Overrides: dict.items

```
\frac{-\mathbf{cmp}_{-}(x, y)}{\mathbf{cmp}(x,y)}
```

len(x)

 $_$ contains $_(D, k)$ Return Value True if D has a key k, else False $_{\mathbf{delattr}}(...)$ $x._delattr_('name') <==> del x.name$ $_$ delitem $_(x, y)$ del x[y] $_{\mathbf{eq}}(x, y)$ x==y $\mathbf{ge}(x, y)$ x>=y $_$ getattribute $_(...)$ x._getattribute_('name') <==> x.name Overrides: object.__getattribute__ $_$ **getitem** $_(x, y)$ x[y] $_{\mathbf{gt}}(x, y)$ x>y $_{\mathbf{hash}}(x)$ hash(x)Overrides: object._hash_ $_$ **iter** $_(x)$ iter(x) $\mathbf{le}(x, y)$ x < =y $_{\mathbf{len}}(x)$

 $\frac{_{\mathbf{lt}_{-}}(x, y)}{x < y}$

 $\underline{\mathbf{ne}}_{(x, y)}$ $\underline{\mathbf{x}!=\mathbf{y}}$

__new__(T, S, ...)
Return Value
 a new object with type S, a subtype of T
Overrides: object.__new__

__reduce_(...)
helper for pickle

__reduce_ex__(...)
helper for pickle

<u>__setattr__(...)</u> x__setattr__('name', value) <==> x.name = value

 $\frac{_\mathbf{setitem}_(x, i, y)}{\mathbf{x}[\mathbf{i}] = \mathbf{y}}$

 $\frac{_\mathbf{str}_(x)}{\mathbf{str}(\mathbf{x})}$

 $\frac{\mathbf{clear}(D)}{\text{Remove all items from D.}}$

Return Value None

 fromkeys(dict, S, v = ...)

v defaults to None.

Return Value

New dict with keys from S and values equal to \boldsymbol{v}

 $\mathbf{get}(D, k, d = \dots)$

d defaults to None.

Return Value

D[k] if k in D, else d

 $\mathbf{has}_{\mathbf{key}}(D, k)$

Return Value

True if D has a key k, else False

iteritems(D)

Return Value

an iterator over the (key, value) items of D

iterkeys(D)

Return Value

an iterator over the keys of ${\tt D}$

itervalues(D)

Return Value

an iterator over the values of ${\tt D}$

 $\mathbf{keys}(D)$

Return Value

list of D's keys

 $\mathbf{pop}(D, k, d = \dots)$

If key is not found, d is returned if given, otherwise KeyError is raised

Return Value

 $\ensuremath{\text{v}}\xspace$, remove specified key and return the corresponding value

 $\mathbf{popitem}(D)$

2-tuple; but raise KeyError if D is empty

Return Value

(k, v), remove and return some (key, value) pair as a

setdefault(D, k, d = ...)

Return Value

D.get(k,d), also set D[k]=d if k not in D

 $\overline{\mathbf{update}(D, E, **F)}$

Update D from E and F: for k in E: D[k] = E[k] (if E has keys else: for (k, v) in E: D[k] = v) then: for k in F: D[k] = F[k]

Return Value

None

 $\mathbf{values}(D)$

Return Value

list of D's values

5.1.2 Properties

Name	Description
class	Value: <attribute 'class'="" 'object'="" objects="" of=""></attribute>

6 Module z3c.sqlalchemy.postgres

6.1 Class PostgresMixin

object	
	z3c.sqlalchemy.postgres.PostgresMixir

Known Subclasses: z3c.sqlalchemy.postgres.PythonPostgresWrapper, z3c.sqlalchemy.postgres.ZopePostgresWrapper Mixin class for Postgres aspects

6.1.1 Methods

```
findDependentTables(self, schema='public', ignoreErrors=False)
```

Returns a mapping tablename -> [list of referencing table(names)]. ATT: this method is specific to Postgres databases! ATT: This method is limited to a particular schema.

```
__delattr__(...)
x.__delattr__('name') <==> del x.name
```

```
__getattribute_(...)
x.__getattribute__('name') <==> x.name
```

```
\frac{-\mathbf{hash}_{-}(x)}{\mathbf{hash}(\mathbf{x})}
```

```
__init__(...)
x.__init__(...) initializes x; see x.__class__.__doc__ for signature
```

```
__providedBy__(...)
Object Specification Descriptor
```

```
reduce_(...)
helper for pickle
```

```
__reduce_ex__(...)
helper for pickle
```

```
\frac{-\operatorname{\mathbf{repr}}_{-}(x)}{\operatorname{repr}(x)}
```

```
__setattr_(...)
x._setattr_('name', value) <==> x.name = value
```

```
\frac{\_\mathbf{str}\_(x)}{\mathbf{str}(\mathbf{x})}
```

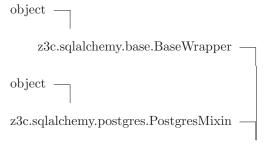
6.1.2 Properties

Name	Description
class	Value: <attribute 'class'="" 'object'="" objects="" of=""></attribute>

6.1.3 Class Variables

Name	Description
implemented	Value: <implementedby< th=""></implementedby<>
	z3c.sqlalchemy.postgres.PostgresMixin>
provides	Value: <zope.interface.declarations.classprovides< th=""></zope.interface.declarations.classprovides<>
	object at 0x2a

6.2 Class PythonPostgresWrapper



z3c. sqlal chemy. postgres. Python Postgres Wrapper

Wrapper to be used with Python with extended Postgres functionality.

6.2.1 Methods

```
__delattr_(...)
x.__delattr_('name') <==> del x.name
```

```
__getattribute__(...)
x.__getattribute__('name') <==> x.name
```

 $_{-\mathbf{hash}_{-}(x)}$ $_{\mathbf{hash}(x)}$

__init__(self, dsn, model=None, **kw)

'dsn' - a RFC-1738-style connection string
'model' - optional instance of model.Model
'kw' - optional keyword arguments passed to create_engine()

Overrides: object.__init__

__providedBy_(...)

Object Specification Descriptor

reduce_(...)
helper for pickle

__reduce_ex__(...)
helper for pickle

 $\frac{-\mathbf{repr}_{-}(x)}{\mathbf{repr}(\mathbf{x})}$

setattr(...)
x._setattr_('name', value) <==> x.name = value

 $\frac{_\mathbf{str}_(x)}{\mathbf{str}(\mathbf{x})}$

Returns a mapping tablename -> [list of referencing table(names)]. ATT: this method is specific to Postgres databases! ATT: This method is limited to a particular schema.

getMapper(self, tablename, schema='public')

getMappers(self, *names)

```
registerMapper(self, mapper, name)
```

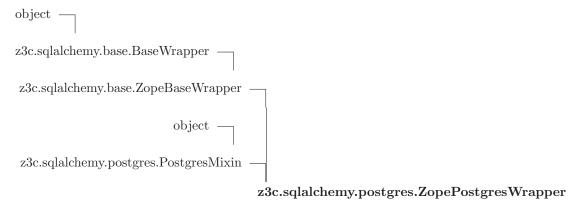
6.2.2 Properties

Name	Description
class	Value: <attribute 'class'="" 'object'="" objects="" of=""></attribute>
engine	Value: <pre><pre><pre></pre></pre></pre>
metadata	Value: <pre><pre></pre></pre>
model	Value: <pre><pre><pre></pre></pre></pre>
session	Value: <pre><pre><pre> Value: <pre></pre></pre></pre></pre>

6.2.3 Class Variables

Name	Description
implemented	Value: <implementedby< th=""></implementedby<>
	z3c.sqlalchemy.base.BaseWrapper>
provides	Value: <zope.interface.declarations.classprovides< th=""></zope.interface.declarations.classprovides<>
	object at 0x2a

6.3 Class ZopePostgresWrapper



A wrapper to be used from within Zope. It connects the session with the transaction management of Zope.

6.3.1 Methods



```
__getattribute_(...)
x.__getattribute__('name') <==> x.name
```

 $_{\mathbf{hash}}(x)$

hash(x)

init(self, dsn, model=None, **kw)

'dsn' - a RFC-1738-style connection string

'model' - optional instance of model. Model

'kw' - optional keyword arguments passed to create_engine()

Overrides: object.__init__

new(T, S, ...)

Return Value

a new object with type S, a subtype of T

 $_{\mathbf{providedBy}}(...)$

Object Specification Descriptor

 $_{\text{reduce}_(...)}$

helper for pickle

 $_{\text{reduce}_ex_(...)}$

helper for pickle

 $_{\mathbf{repr}}(x)$

repr(x)

_setattr__(...)

x._setattr_('name', value) <==> x.name = value

 $_{\mathbf{str}}(x)$

str(x)

findDependentTables(self, schema='public', ignoreErrors=False)

Returns a mapping tablename -> [list of referencing table(names)]. ATT: this method is specific to Postgres databases! ATT: This method is limited to a particular schema.

getMapper(self, tablename, schema='public')

getMappers(self, *names)

 $\mathbf{registerMapper}(\mathit{self}, \mathit{mapper}, \mathit{name})$

6.3.2 Properties

Name	Description
class	Value: <attribute 'class'="" 'object'="" objects="" of=""></attribute>
engine	Value: <property 0x2aea05336dc0="" at="" object=""></property>
metadata	Value: <property 0x2aea05336d20="" at="" object=""></property>
model	Value: <property 0x2aea05336e10="" at="" object=""></property>
session	Value: <property 0x2aea0544a190="" at="" object=""></property>

6.3.3 Class Variables

Name	Description
implemented	Value: <implementedby< th=""></implementedby<>
	z3c.sqlalchemy.base.BaseWrapper>
provides	Value: <zope.interface.declarations.classprovides< th=""></zope.interface.declarations.classprovides<>
	object at 0x2a

7 Package z3c.sqlalchemy.tests

7.1 Modules

• testSQLAlchemy: Tests, tests, tests......... (Section 8, p. 31)

8 Module z3c.sqlalchemy.tests.testSQLAlchemy

Togta	toata	tests
rests,	tests,	tests

8.1 Functions

test_suite()

8.2 Class WrapperTests

```
object —
unittest.TestCase —
z3c.sqlalchemy.tests.testSQLAlchemy.WrapperTests
```

8.2.1 Methods

$\operatorname{set} \operatorname{Up}(self)$
Hook method for setting up the test fixture before exercising it.
Overrides: unittest.TestCase.setUp extit(inherited documentation)
(10)
testIFaceBaseWrapper(self)
testIFacePythonPostgres(self)
${\bf test IFace Zope Postgres}(self)$
testSimplePopulation(self)
$\fbox{ test Mapper With Custom Model} (\textit{self})$
$\boxed{\mathbf{testGetMappers}(\mathit{self})}$
testModelWeirdParameters(self)
$\fbox{ test Model Non Existing Tables} (\textit{self})$
$\fbox{ test Wrapper Registration}(self)$
$\fbox{ test Wrapper Registration Failing} (\textit{self})$
$\boxed{_\mathbf{call}_(\mathit{self}, *\mathit{args}, **kwds)}$

 $_{\mathbf{delattr}}(...)$

 $x._delattr_('name') <==> del x.name$

 $_$ getattribute $_(...)$

x._getattribute_('name') <==> x.name

 $_{\mathbf{hash}}(x)$

hash(x)

__init__(self, methodName='runTest')

Create an instance of the class that will use the named test method when executed. Raises a ValueError if the instance does not have a method with the specified name.

Overrides: object.__init__

 $\underline{\mathbf{new}}(T, S, ...)$

Return Value

a new object with type S, a subtype of T

 $_reduce_(...)$

helper for pickle

 $_{\text{reduce}_ex_(...)}$

helper for pickle

 $_\mathbf{repr}_(\mathit{self})$

repr(x)

Overrides: object._repr_ extit(inherited documentation)

 $_$ setattr $_(...)$

x._setattr_('name', value) <==> x.name = value

 $_{\mathbf{str}}(self)$

str(x)

Overrides: object._str_ extit(inherited documentation)

assertAlmostEqual(self, first, second, places=7, msg=None)

Fail if the two objects are unequal as determined by their difference rounded to the given number of decimal places (default 7) and comparing to zero.

Note that decimal places (from zero) are usually not the same as significant digits (measured from the most significant digit).

assertAlmostEquals(self, first, second, places=7, msg=None)

Fail if the two objects are unequal as determined by their difference rounded to the given number of decimal places (default 7) and comparing to zero.

Note that decimal places (from zero) are usually not the same as significant digits (measured from the most significant digit).

assertEqual(self, first, second, msg=None)

Fail if the two objects are unequal as determined by the '==' operator.

assertEquals(self, first, second, msg=None)

Fail if the two objects are unequal as determined by the '==' operator.

assertFalse(self, expr, msg=None)

Fail the test if the expression is true.

assertNotAlmostEqual(self, first, second, places=7, msg=None)

Fail if the two objects are equal as determined by their difference rounded to the given number of decimal places (default 7) and comparing to zero.

Note that decimal places (from zero) are usually not the same as significant digits (measured from the most significant digit).

assertNotAlmostEquals(self, first, second, places=7, msg=None)

Fail if the two objects are equal as determined by their difference rounded to the given number of decimal places (default 7) and comparing to zero.

Note that decimal places (from zero) are usually not the same as significant digits (measured from the most significant digit).

assertNotEqual(self, first, second, msg=None)

Fail if the two objects are equal as determined by the '==' operator.

assertNotEquals(self, first, second, msg=None)

Fail if the two objects are equal as determined by the '==' operator.

assertRaises(self, excClass, callableObj, *args, **kwargs)

Fail unless an exception of class excClass is thrown by callableObj when invoked with arguments args and keyword arguments kwargs. If a different type of exception is thrown, it will not be caught, and the test case will be deemed to have suffered an error, exactly as for an unexpected exception.

assertTrue(self, expr, msq=None)

Fail the test unless the expression is true.

assert_(self, expr, msg=None)

Fail the test unless the expression is true.

countTestCases(self)

$\mathbf{debug}(self)$

Run the test without collecting errors in a TestResult

defaultTestResult(self)

fail(self, msg=None)

Fail immediately, with the given message.

failIf(self, expr, msg=None)

Fail the test if the expression is true.

failIfAlmostEqual(self, first, second, places=7, msq=None)

Fail if the two objects are equal as determined by their difference rounded to the given number of decimal places (default 7) and comparing to zero.

Note that decimal places (from zero) are usually not the same as significant digits (measured from the most significant digit).

failIfEqual(self, first, second, msg=None)

Fail if the two objects are equal as determined by the '==' operator.

failUnless(self, expr, msg=None)

Fail the test unless the expression is true.

failUnlessAlmostEqual(self, first, second, places=7, msg=None)

Fail if the two objects are unequal as determined by their difference rounded to the given number of decimal places (default 7) and comparing to zero.

Note that decimal places (from zero) are usually not the same as significant digits (measured from the most significant digit).

failUnlessEqual(self, first, second, msg=None)

Fail if the two objects are unequal as determined by the '==' operator.

failUnlessRaises(self, excClass, callableObj, *args, **kwargs)

Fail unless an exception of class excClass is thrown by callableObj when invoked with arguments args and keyword arguments kwargs. If a different type of exception is thrown, it will not be caught, and the test case will be deemed to have suffered an error, exactly as for an unexpected exception.

id(self)

run(self, result=None)

${\bf shortDescription}(\mathit{self})$

Returns a one-line description of the test, or None if no description has been provided. The default implementation of this method returns the first line of the specified test method's docstring.

tearDown(self)

Hook method for deconstructing the test fixture after testing it.

8.2.2 Properties

Name	Description
class	Value: <attribute 'class'="" 'object'="" objects="" of=""></attribute>

9 Module z3c.sqlalchemy.util

Some helper methods

9.1 Functions

createSQLAlchemyWrapper(dsn, model=None, forZope=False, **kw)

Convenience method to generate a wrapper for a DSN and a model. This method hides all database related magic from the user. Set 'forZope' to True for a Zope related wrapper.

 ${\bf register SQLAlchemyWrapper}(\textit{wrapper}, \textit{name})$

deferred registration of the wrapper as named utility

 ${\bf getSQLAlchemyWrapper}(name)$

 ${\bf allRegistered SQLAlchemy Wrappers}()$

return a dict containing information for all registered wrappers.

Index

```
dict._cmp__ (function), 14, 19
                                                      unittest. Test Case. debug (function), 34
dict._contains_ (function), 15, 19
                                                      unittest.TestCase.defaultTestResult (function), 34
dict._delitem_ (function), 15, 20
                                                      unittest.TestCase.fail (function), 34
                                                      unittest.TestCase.failIf (function), 33, 34
dict.\_eq\_ (function), 15, 20
dict.__ge__ (function), 15, 20
                                                      unittest. Test Case. fail If Almost Equal (function), 33,
dict.__getitem__ (function), 15, 20
dict.__gt__ (function), 15, 20
                                                      unittest. Test Case. fail If Equal (function), 33, 34
dict._iter_ (function), 15, 20
                                                      unittest.TestCase.failUnless (function), 33, 34
                                                      unittest.TestCase.failUnlessAlmostEqual (function),
dict.__le__ (function), 15, 20
dict.__len__ (function), 15, 20
                                                                32, 34
dict.__lt__ (function), 16, 20
                                                      unittest.TestCase.failUnlessEqual (function), 33, 34
dict.__ne__ (function), 16, 21
                                                      unittest.TestCase.failUnlessRaises (function), 33, 34
dict._setitem_ (function), 16, 21
                                                      unittest. Test Case. id (function), 34
dict.clear (function), 16, 21
                                                      unittest.TestCase.run (function), 35
dict.copy (function), 16, 21
                                                      unittest.TestCase.shortDescription (function), 35
dict.fromkeys (function), 16, 21
                                                      unittest.TestCase.tearDown (function), 35
dict.get (function), 17, 22
                                                      z3c (package)
dict.has_key (function), 17, 22
                                                           z3c.sqlalchemy (package), 3
dict.items (function), 17
                                                             z3c.sqlalchemy.base (module), 4–9
dict.iteritems (function), 17, 22
                                                             z3c.sqlalchemy.interfaces (module), 10–11
dict.iterkeys (function), 17, 22
                                                             z3c.sqlalchemv.mapper (module), 12–18
dict.itervalues (function), 17, 22
                                                             z3c.sqlalchemy.model (module), 19–23
dict.keys (function), 17, 22
                                                             z3c.sqlalchemy.postgres (module), 24–29
dict.pop (function), 17, 22
                                                             z3c.sqlalchemy.tests (package), 30
dict.popitem (function), 17, 22
                                                             z3c.sqlalchemy.util (module), 36
dict.setdefault (function), 17, 22
dict.update (function), 18, 22
dict.values (function), 18, 23
object.__delattr__ (function), 4, 6, 7, 12, 13, 15, 20,
         24, 25, 27, 31
object.__getattribute__ (function), 4, 6, 7, 12, 13,
         24, 25, 27, 32
object._hash_ (function), 4, 6, 7, 12, 13, 24, 26,
         27, 32
object.__init__ (function), 24
object._new_ (function), 4, 6, 8, 12, 13, 24, 26,
         28, 32
object._reduce_ (function), 4, 6, 8, 12, 13, 16, 21,
         24, 26, 28, 32
object.__reduce_ex__ (function), 4, 6, 8, 12, 14, 16,
         21, 24, 26, 28, 32
object._repr_ (function), 5, 6, 8, 12, 14, 24, 26,
         28
object._setattr_ (function), 5, 6, 8, 12, 14, 16, 21,
         25, 26, 28, 32
object._str_ (function), 5, 6, 8, 12, 14, 16, 21, 25,
         26, 28
unittest.TestCase.__call__ (function), 31
unittest.TestCase.countTestCases (function), 34
```