Subject: Missing calculated field in relationship
Posted by gpatti on Mon, 10 Aug 2009 16:19:13 GMT
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I seem to have introduced a bug into my application with some recent code changes, but can't figure out where.

I have a relationship using a calculated field that returns several values. However, since I have made some changes, only the first of these values is being returned (I can see that in the generated SQL). I haven't actually made any changes to this particular relationship itself.

Are there any circumstances you could advise me of where the generated SQL might not return all the calculated fields? Alternatively, can you point me to the place to focus my debugging?

Thanks,

Graham

Subject: Re: Missing calculated field in relationship
Posted by AJM on Mon, 10 Aug 2009 17:18:48 GMT
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Can you tell me what your '<table>.dict.inc' file contains for that relationship?

Can you give me a sample of the SQL query which is produced? To log the generated SQL please refer to FAQ51 item #2.

Subject: Re: Missing calculated field in relationship
Posted by gpatti on Mon, 10 Aug 2009 21:07:55 GMT
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The table.dict.inc relationship is:

```
    $this->parent_relations[]              = array('parent' => 'candidate',
                                          'parent_field' => 'concat(first_name, \' \', last_name) as
person_name, age_group_id, dob_date, first_name, last_name, gender, candidate_pin,
student_ind, addr_line_1, addr_line_2, addr_line_3, town, county, postcode, email_addr,
home_telephone, mobile_telephone',
                                          'fields' => array('candidate_id' => 'candidate_id',
                                                'rdcaccount_id' => 'rdcaccount_id'));
```

The generated SQL is:

```
SELECT SQL_CALC_FOUND_ROWS exam.*, branch.branch_id, branch.branch_desc,
branch.branch_abbrev, branch.syllabus_type_id, branch.student_branch_abbrev,
branch.crf_type_id, branch.session_type_id as branch_session_type_id,
  concat(candidate.first_name,' ',candidate.last_name) AS person_name,
```

```
  d1.dance_code AS dance1_code, d2.dance_code AS dance2_code, d3.dance_code AS
dance3_code, d4.dance_code AS dance4_code,
  grade.grade_code, grade.grade_desc, school.school_name, school.principal_name,
school.principal_mem_num, school.school_addr_line_1, school.school_addr_line_2,
school.school_addr_line_3, school.school_town, school.school_county, school.school_postcode,
school.school_email_addr, school.school_web_addr, school.school_telephone,
  session.session_desc, session.session_date, session.examiner, session.session_type_id,
amount
FROM exam
LEFT JOIN branch ON (branch.branch_id=exam.branch_id)
LEFT JOIN candidate ON (candidate.candidate_id=exam.candidate_id AND
candidate.rdcaccount_id=exam.rdcaccount_id)
LEFT JOIN dance AS d1 ON (d1.dance_id=exam.dance1_id)
LEFT JOIN dance AS d2 ON (d2.dance_id=exam.dance2_id)
LEFT JOIN dance AS d3 ON (d3.dance_id=exam.dance3_id)
LEFT JOIN dance AS d4 ON (d4.dance_id=exam.dance4_id)
LEFT JOIN grade ON (grade.grade_id=exam.grade_id)
LEFT JOIN school ON (school.school_id=exam.rdcaccount_id)
LEFT JOIN session ON (session.rdcaccount_id=exam.rdcaccount_id AND
session.session_id=exam.session_id)
LEFT JOIN cost_group_charge ON (grade.cost_group_id=cost_group_charge.cost_group_id AND
session.session_date >= cost_group_charge.start_date AND session.session_date <=
cost_group_charge.end_date AND exam.rdcaccount_id = cost_group_charge.rdcaccount_id AND
exam.banner_req = cost_group_charge.banner_req AND cost_group_charge.age_group_id IN
(SELECT candidate.age_group_id from candidate where exam.candidate_id =
candidate.candidate_id UNION SELECT age_group.age_group_id from age_group where
age_group_id = 'X'))
WHERE exam.rdcaccount_id='7' AND exam.session_id='1'
ORDER BY exam.exam_seq_nbr asc
LIMIT 10 OFFSET 0 =>Count=8
```

You can see that the items following person_name are not included in the SQL.

Graham

Subject: Re: Missing calculated field in relationship
Posted by AJM on Mon, 10 Aug 2009 22:10:48 GMT
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I have run a test using the XAMPLE subsystem which is contained in the Radicore download. I changed the relationship between X_PERSON and X_PERSON_ADDR so that it reads as follows:

```
$this->parent_relations[]     = array('parent' => 'x_person',
                                'parent_field' => 'CONCAT(first_name, \' \', last_name) AS person_name,
value1, value2',
                                'fields' => array('person_id' => 'person_id'));
```

When I ran the task it gebnerate the following SQL query:
SELECT SQL_CALC_FOUND_ROWS x_person_addr.*, CONCAT(x_person.first_name,' ',x_person.last_name) AS person_name, x_person.value1, x_person.value2
FROM x_person_addr
LEFT JOIN x_person ON (x_person.person_id=x_person_addr.person_id)
WHERE x_person_addr.person_id='PA'
ORDER BY x_person_addr.person_id, x_person_addr.address_no
LIMIT 10 OFFSET 0
As you can see it successfully retrieves multiple fields from the parent table. Can you step through with your debugger to see how the problem relationship is prcessed in the _sqlForeignJoin() method within 'std.table.class.inc'?

Subject: Re: Missing calculated field in relationship
Posted by gpatti on Mon, 10 Aug 2009 22:58:14 GMT
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Thanks for the pointer where to look... I've found it, and it is a bug after all.

As part of my code changes I had added an alias to the relationship immediately prior to the one that is failing. I haven't located the exact point in your code (it's a bit complicated for this time of night!), but while processing the second relationship, the fact that an alias already exists is causing it to skip the full processing of the current relationship.

Hope this is enough for you to take over. Let me know if you need further information.

Graham

Subject: Re: Missing calculated field in relationship
Posted by AJM on Mon, 10 Aug 2009 23:29:52 GMT
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Can you give me the full contents of your '<table>.dic.inc' file so I can see all the relationships that are being processed?

Subject: Re: Missing calculated field in relationship
Posted by gpatti on Tue, 11 Aug 2009 09:34:09 GMT
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I did a quick test by removing the alias on the previous relationship and it did indeed fix the issue with the problem relationship. The full set of relationships is below. The alias causing the problem is 'session_type_id as branch_session_type_id' in the relationship with the branch table, immediately before the relationship with the candidate table.

```
$this->child_relations              = array();
```

```
    // parent relationship details
    $this->parent_relations[]           = array('parent' => 'branch',
                                        'parent_field' => 'branch_id, branch_desc, branch_abbrev,
syllabus_type_id, student_branch_abbrev, crf_type_id, session_type_id as
branch_session_type_id',
                                        'fields' => array('branch_id' => 'branch_id'));

    $this->parent_relations[]           = array('parent' => 'candidate',
                                        'parent_field' => 'concat(first_name, \' \', last_name) as
person_name, age_group_id, dob_date, first_name, last_name, gender, candidate_pin,
student_ind, addr_line_1, addr_line_2, addr_line_3, town, county, postcode, email_addr,
home_telephone, mobile_telephone',
                                        'fields' => array('candidate_id' => 'candidate_id',
                                                'rdcaccount_id' => 'rdcaccount_id'));

    $this->parent_relations[]           = array('parent' => 'dance',
                                        'alias' => 'd1',
                                        'parent_field' => 'dance_code as dance1_code',
                                        'fields' => array('dance1_id' => 'dance_id'));

    $this->parent_relations[]           = array('parent' => 'dance',
                                        'alias' => 'd2',
                                        'parent_field' => 'dance_code as dance2_code',
                                        'fields' => array('dance2_id' => 'dance_id'));

    $this->parent_relations[]           = array('parent' => 'dance',
                                        'alias' => 'd3',
                                        'parent_field' => 'dance_code as dance3_code',
                                        'fields' => array('dance3_id' => 'dance_id'));

    $this->parent_relations[]           = array('parent' => 'dance',
                                        'alias' => 'd4',
                                        'parent_field' => 'dance_code as dance4_code',
                                        'fields' => array('dance4_id' => 'dance_id'));

    $this->parent_relations[]           = array('parent' => 'grade',
                                        'parent_field' => 'grade_code, grade_desc',
                                        'fields' => array('grade_id' => 'grade_id'));

    $this->parent_relations[]           = array('parent' => 'school',
                                        'parent_field' => 'school_name, principal_name,
principal_mem_num, school_addr_line_1, school_addr_line_2, school_addr_line_3, school_town,
school_county, school_postcode, school_email_addr, school_web_addr, school_telephone',
                                        'fields' => array('rdcaccount_id' => 'rdcaccount_id',
                                                'rdcaccount_id' => 'school_id'));

    $this->parent_relations[]           = array('parent' => 'session',
```

'parent_field' => 'session_desc, session_date, examiner, session_type_id',

'fields' => array('rdcaccount_id' => 'rdcaccount_id',
'session_id' => 'session_id'));

Subject: Re: Missing calculated field in relationship
Posted by AJM on Tue, 11 Aug 2009 10:23:21 GMT
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So the generated SQL query is correct when you remove that alias. Just as an experiment what happens if you put that alias back?

Subject: Re: Missing calculated field in relationship
Posted by gpatti on Tue, 11 Aug 2009 10:32:40 GMT
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Tried that already and it fails again.

Subject: Re: Missing calculated field in relationship
Posted by AJM on Tue, 11 Aug 2009 13:10:49 GMT
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Problem fixed (I hope! see attached file).

It was indeed the previous alias name which caused the problem - it caused my code to treat $parent_fields as having only a single field name instead of several. I now convert it into an array so that I can iterate over each entry without losing anything.

File Attachments
1) std.table.class.zip, downloaded 1729 times

Subject: Re: Missing calculated field in relationship
Posted by gpatti on Tue, 11 Aug 2009 14:30:21 GMT
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Thanks. That does indeed appear to solve the problem.
I'll let you know if I uncover any side effects as I continue my current testing.
