knowledge17

WORK at LIGHTSPEED™

Expedia's Self-Healing CMDB

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SENIOR IT SERVICE MANAGEMENT LEAD
Expedia, Inc.

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Agenda

- Introductions
- The problem
- Solution – Auto Groups!
- The lightbulb
- Solution – Auto Remediation!
- Demo
- Q&A - #Know17 #SelfHealingCMDB

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Speaker Introduction



NAME: Stephen Phayre

TITLE: Senior IT Service Management Lead

FUNCTION: IT Service Management

COMPANY: Expedia, Inc.

EXPERIENCE: 17 yrs in IT, 12 yrs in global outsourcing, 5 yrs at Expedia, Inc.

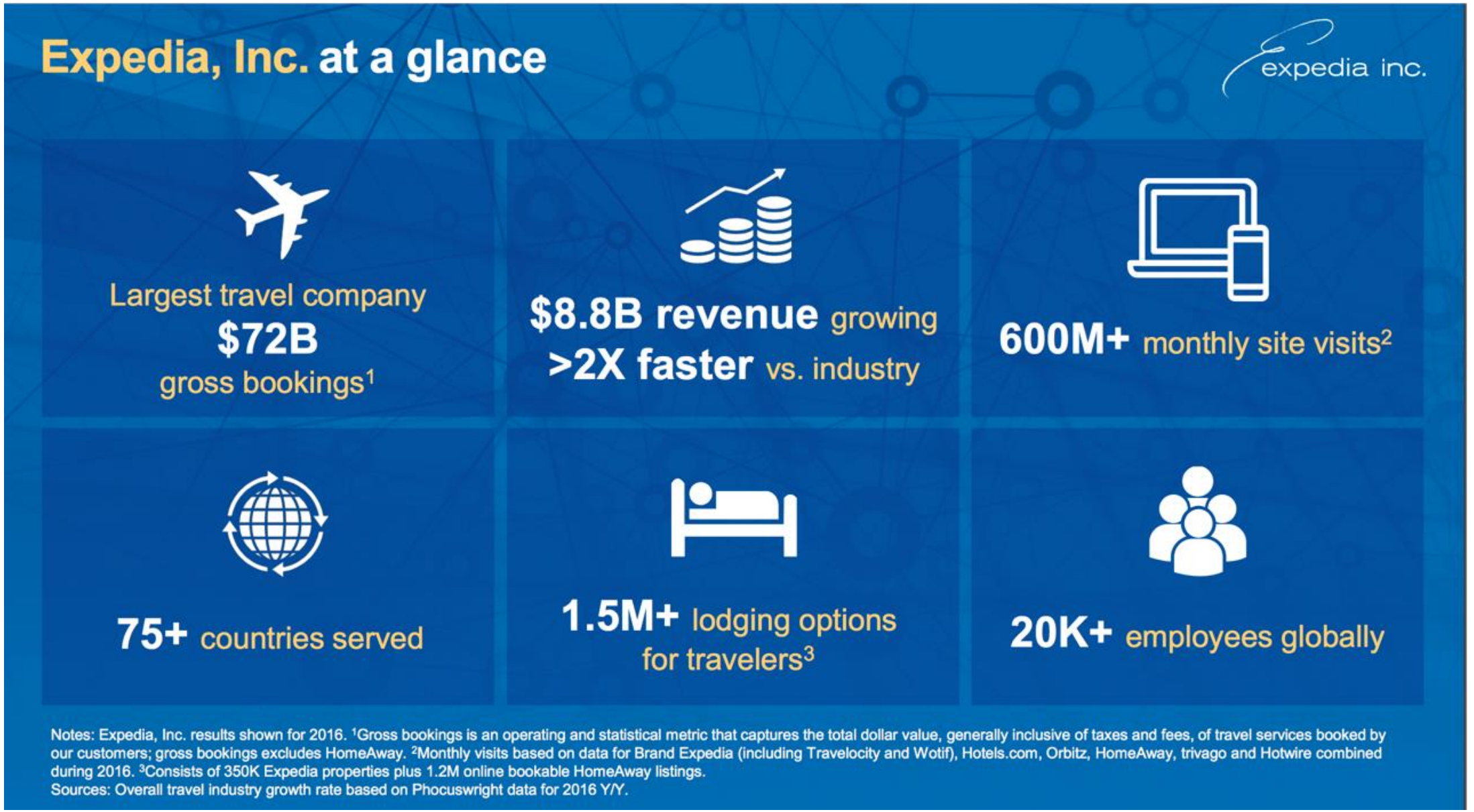
EXPERTISE: Configuration Management, Asset Management, Discovery, Report Automation, Database Design, Application Life Cycle, Functional Design, Defect Identification, Technical Communication

ACHIEVEMENTS: Developed Service Asset and Configuration Management Program for Expedia, rolled out ServiceNow CMDB and Discovery, and matured it into the foundation of ITSM functions and beyond!

C**URRENT PROJECTS:** Leveraging ServiceNow platform to identify cross-team efficiency

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Expedia, Inc. at a glance



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Session Overview



Objectives

- Learn about how Expedia developed self-healing “if this; then that” type functionality in their CMDB.



What You Will Learn

- Our challenges of aging/stale data in CMDB
- Our approach to identifying defects in the CMDB
- How we saw an opportunity to auto-remediate gaps
- See the simple solution that we built
- Hear about what we’re planning on doing next

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The problem

- Aging Data
  - Old data presented alongside fresh data as “trusted”
  - No clear way to look at a CI record and determine usability of data
  - Missing fields that could be derived or implied by other data within the CI
- Need for Logical Groupings
  - Needed a way to group records with common attributes
  - Enable business processes to be applied to CI records within the group
  - Easily see group membership on CI Record
- Defect Catalog
  - No clear way to see all of the known defects within the CMDB
  - Manual tracking to report to the business users

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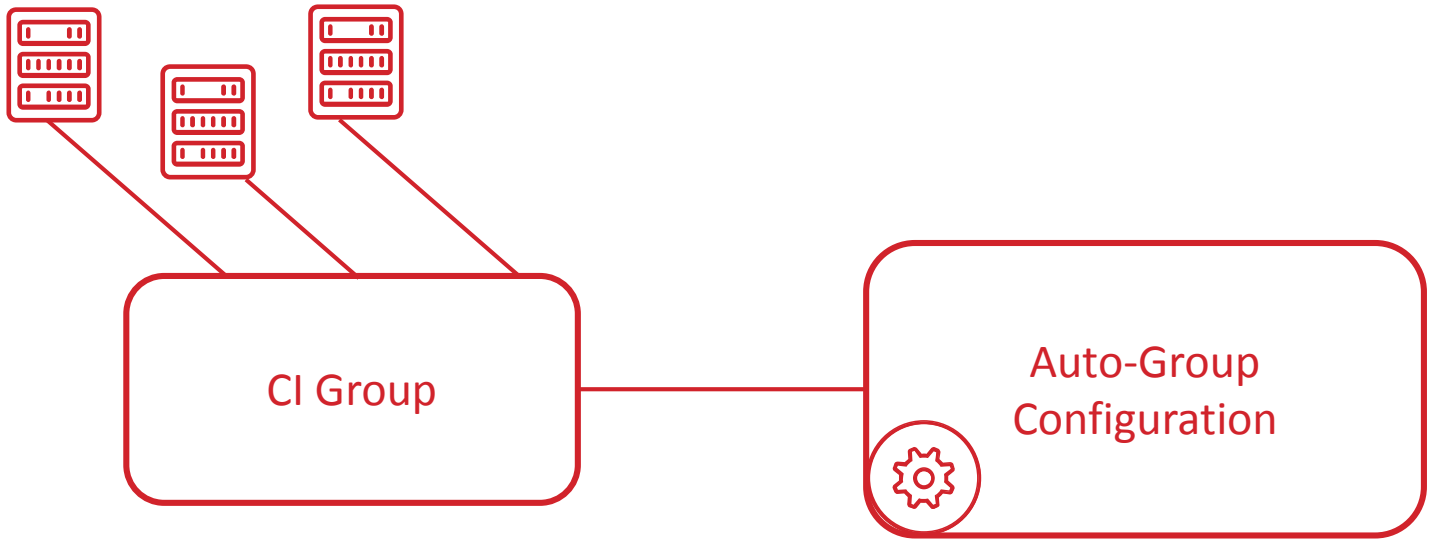
Solution at a Glance

Build Configurable “Groups” in CMDB and programmatically control membership

- Leverage out of the box Configuration Item Groups
- Build interface to enable automatic group membership
- Enable criteria to include attributes beyond just CI Record fields
- Create Performance Analytics dashboard for all “Defect” type groups
- Expose relationships in CI record through CI Relationships

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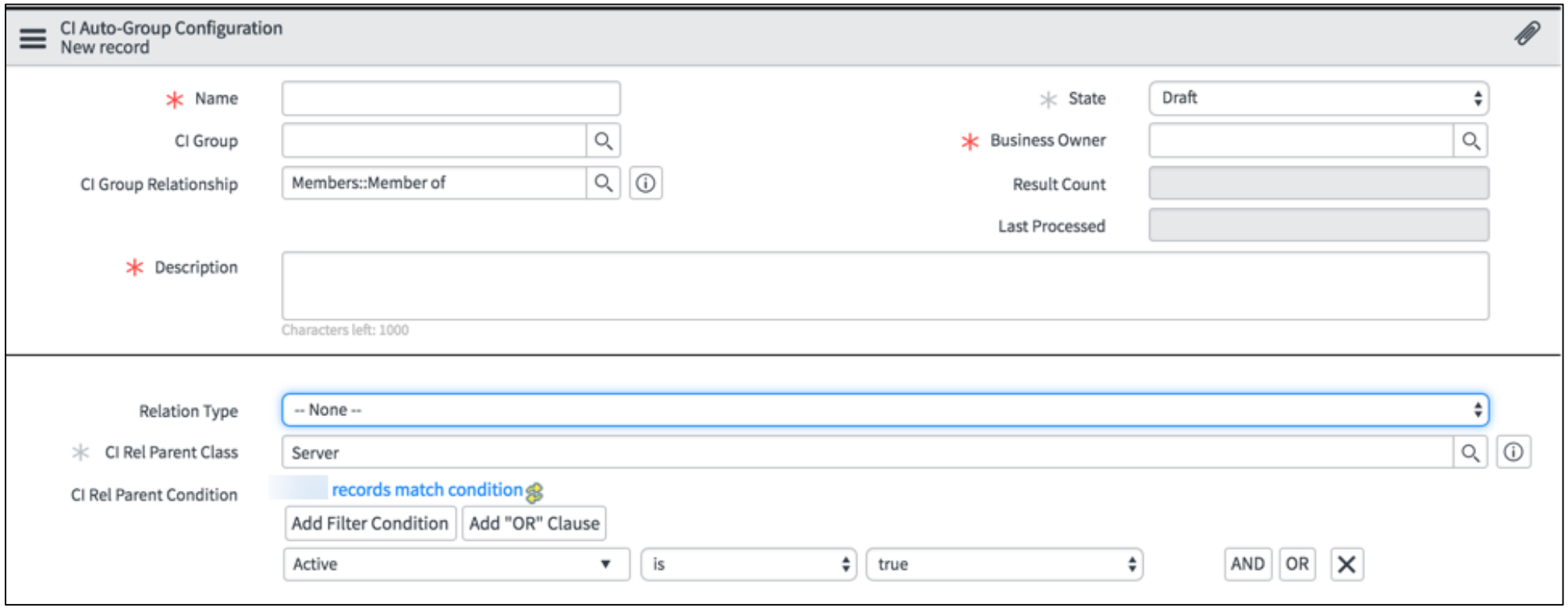
Solution – Relevant Data



Sounds a bit like “CMDB Query Builder”…

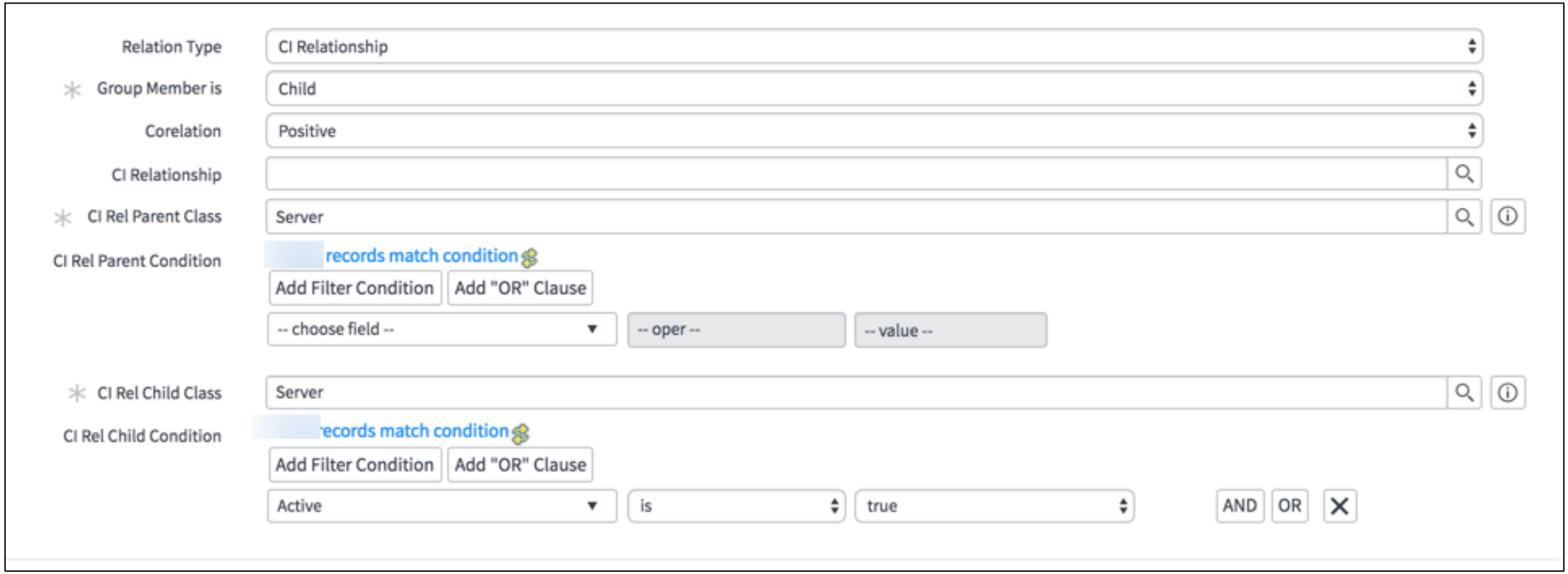
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Solution – Relevant Data



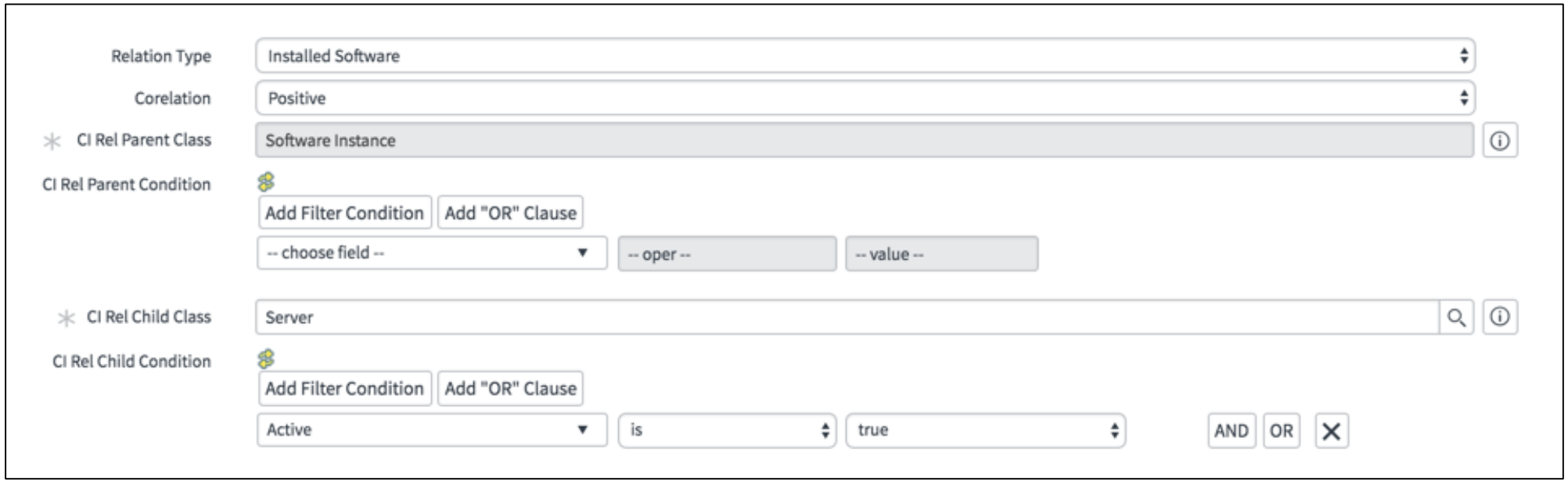
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Solution – Relevant Data



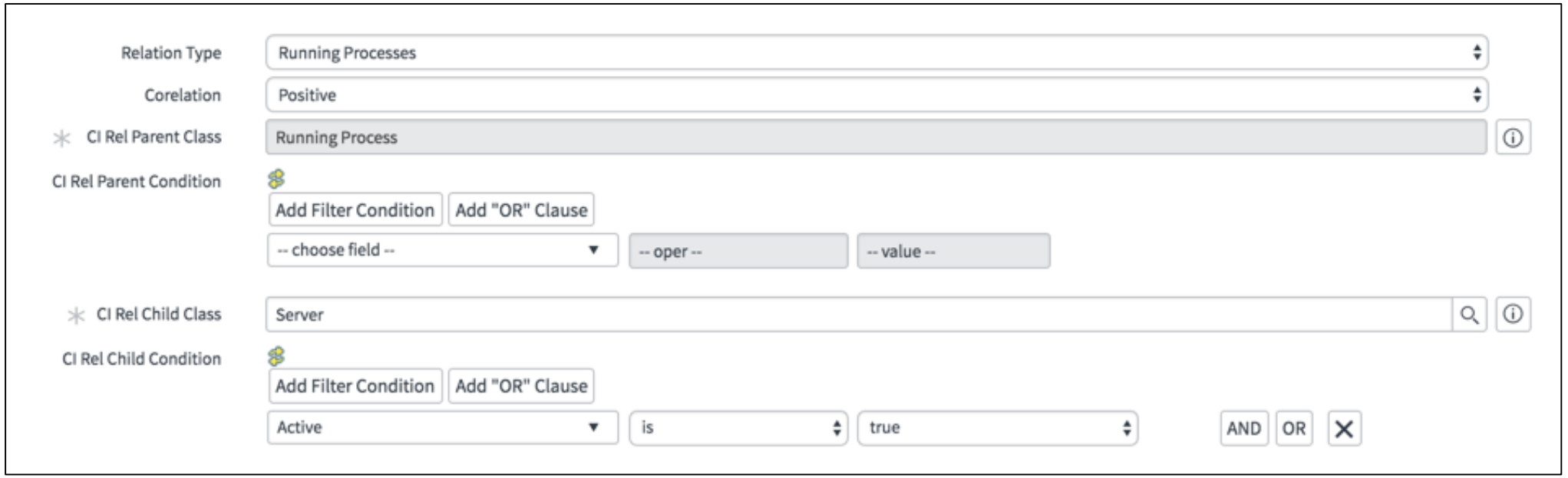
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Solution – Relevant Data



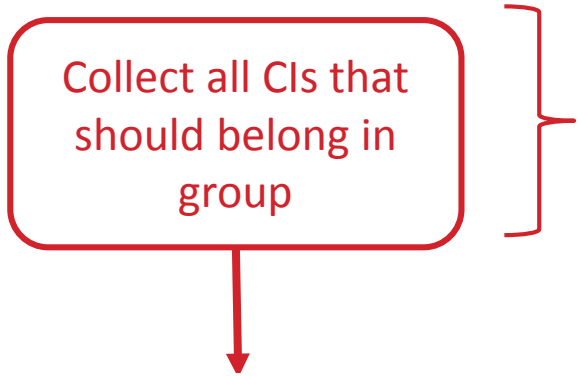
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Solution – Relevant Data



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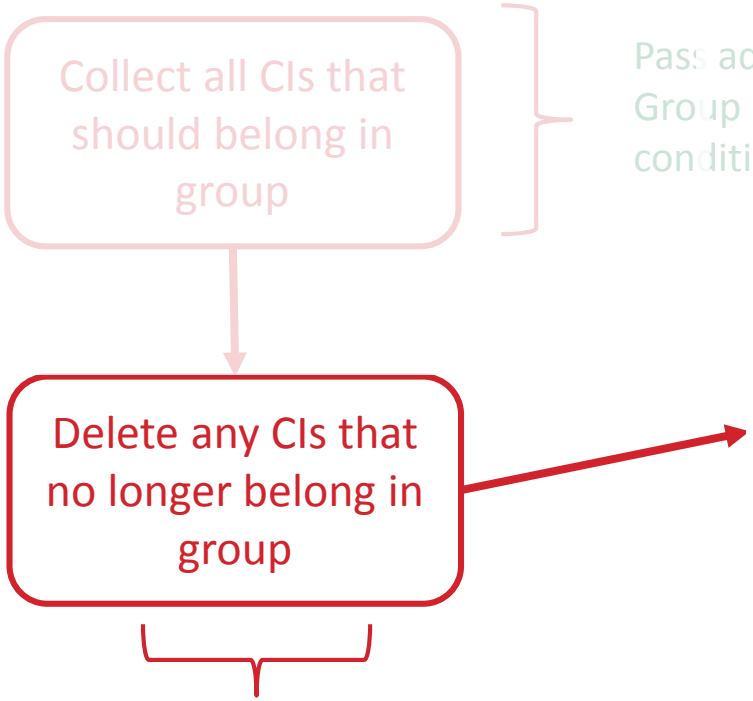
Solution – Behind the Scenes



Pass addEncodedQuery from Auto-Group Configuration Parent and Child conditions.

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Solution – Behind the Scenes




```
var CIDelRel = new GlideRecord('cmdb_rel_ci'
CIDelRel.addQuery('type', relationship);
CIDelRel.addQuery('parent', group);
CIDelRel.addQuery('child', "NOT IN", CIList);
CIDelRel.deleteMultiple();
```


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Solution – Behind the Scenes

Collect all CIs that should belong in group

Pass addEncodedQuery from Auto-Group Configuration Parent and Child conditions.

Delete any CIs that no longer belong in group

```
var CIDelRel = new GlideRecord('cmdb_rel_ci');
CIDelRel.addQuery('type', relationship);
CIDelRel.addQuery('parent', group);
CIDelRel.addQuery('child', "NOT IN", CIList);
CIDelRel.deleteMultiple();
```

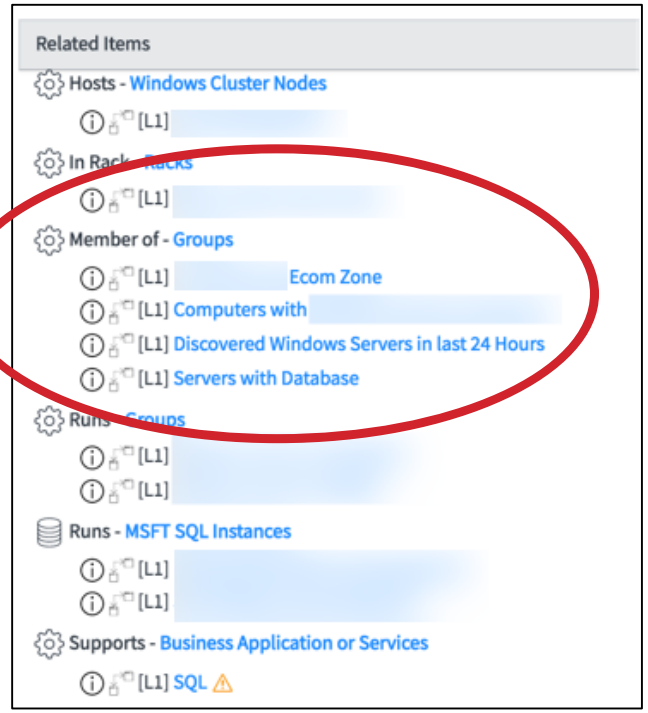
Add into group any CIs that are not already there.

```
for (var m=0; m < CIList.length; m++){
    var CIRel = new GlideRecord('cmdb_rel_ci');
    CIRel.addQuery('type', relationship);
    CIRel.addQuery('parent', group);
    CIRel.addQuery('child', CIList[m]);
    CIRel.query();
    if (!CIRel.hasNext()){
        var CIRelNew = new GlideRecord('cmdb_rel_ci');
        CIRelNew.initialize();
        CIRelNew.type = relationship;
        CIRelNew.parent = group;
        CIRelNew.child = CIList[m];
        CIRelNew.insert();
```


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Defect Catalog in Performance Analytics

- Created Indicator Sources
- Pull Counts of Groups nightly
- Publish Scorecards and Dashboards
- Group membership on CI records





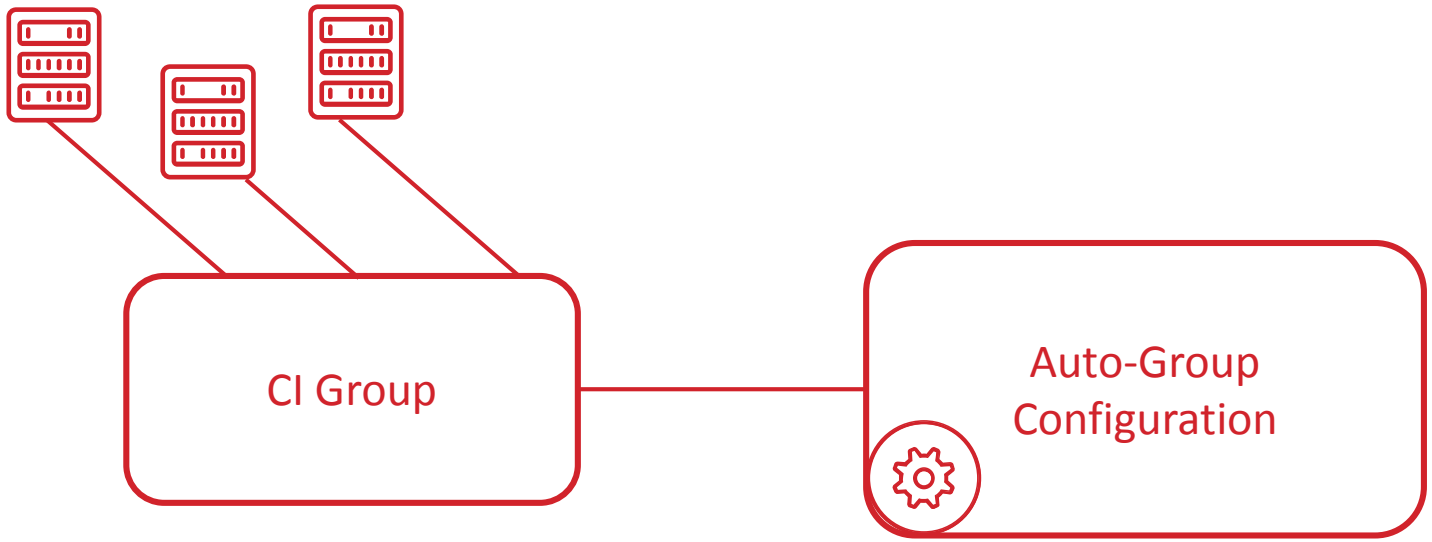
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Aha Moment

- Went Live – Users loved it
- But we want more… ☺
- What if these groups knew what to do with the CMDB record to make it right?
- Build Auto Remediation Recipes which execute Auto Remediation Actions
- Apply “action” to CMDB CIs as they are related (“added in”) to the group

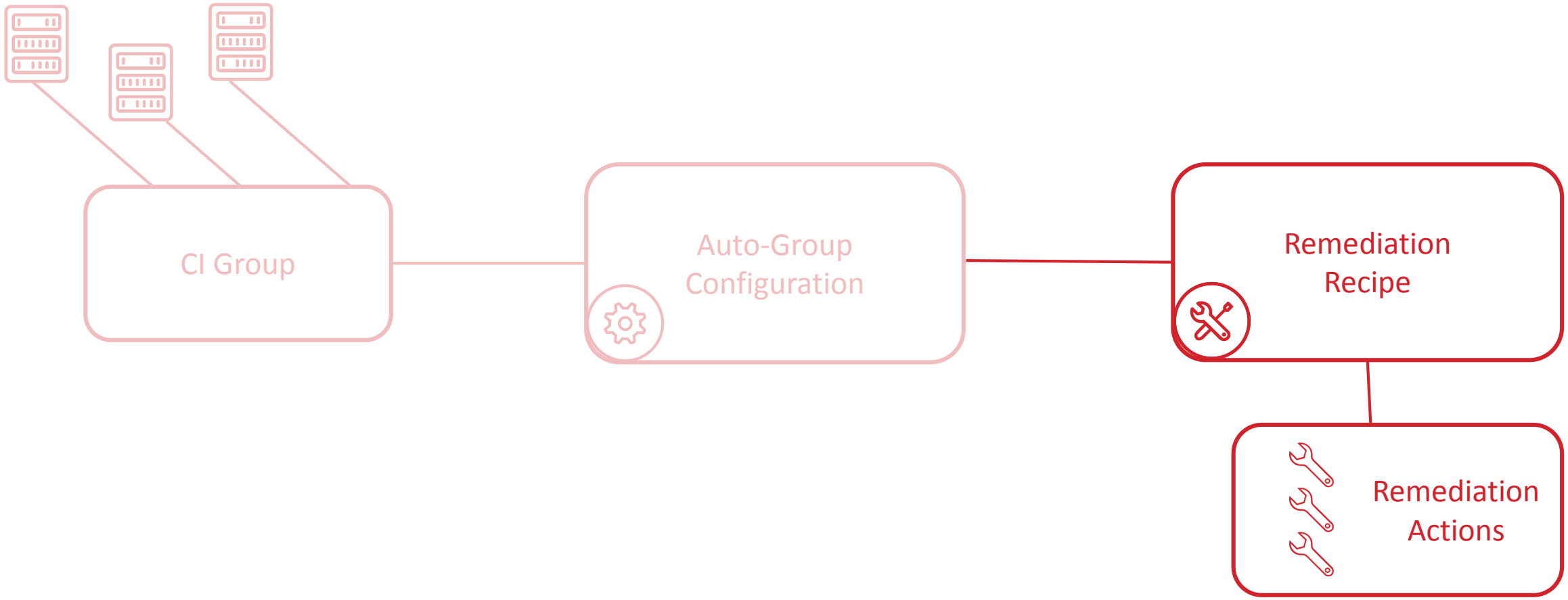
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Solution – Relevant Data



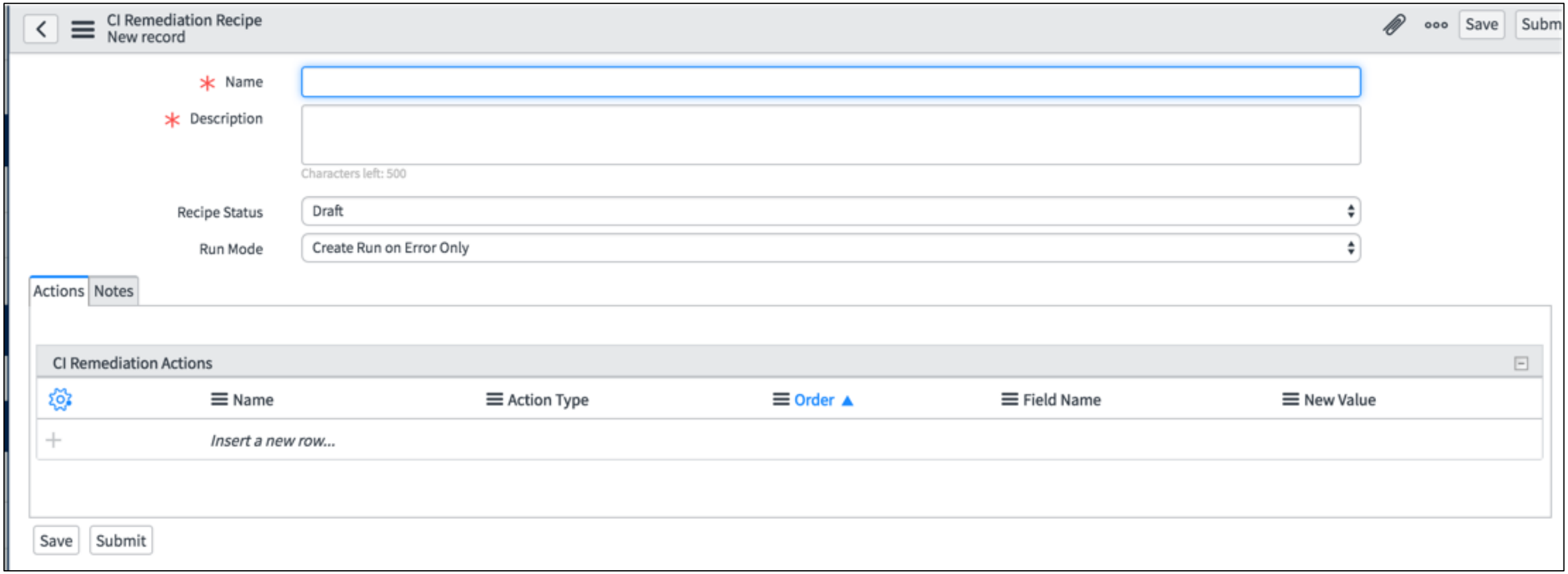
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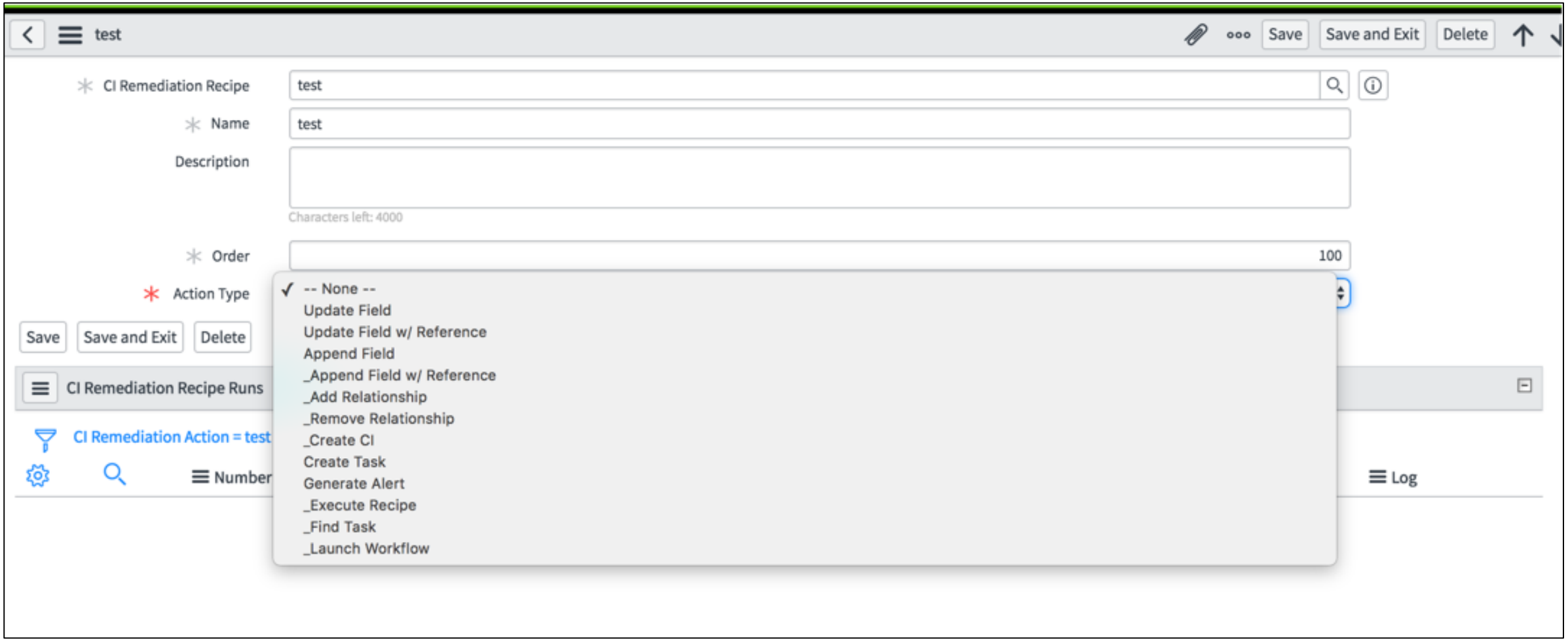
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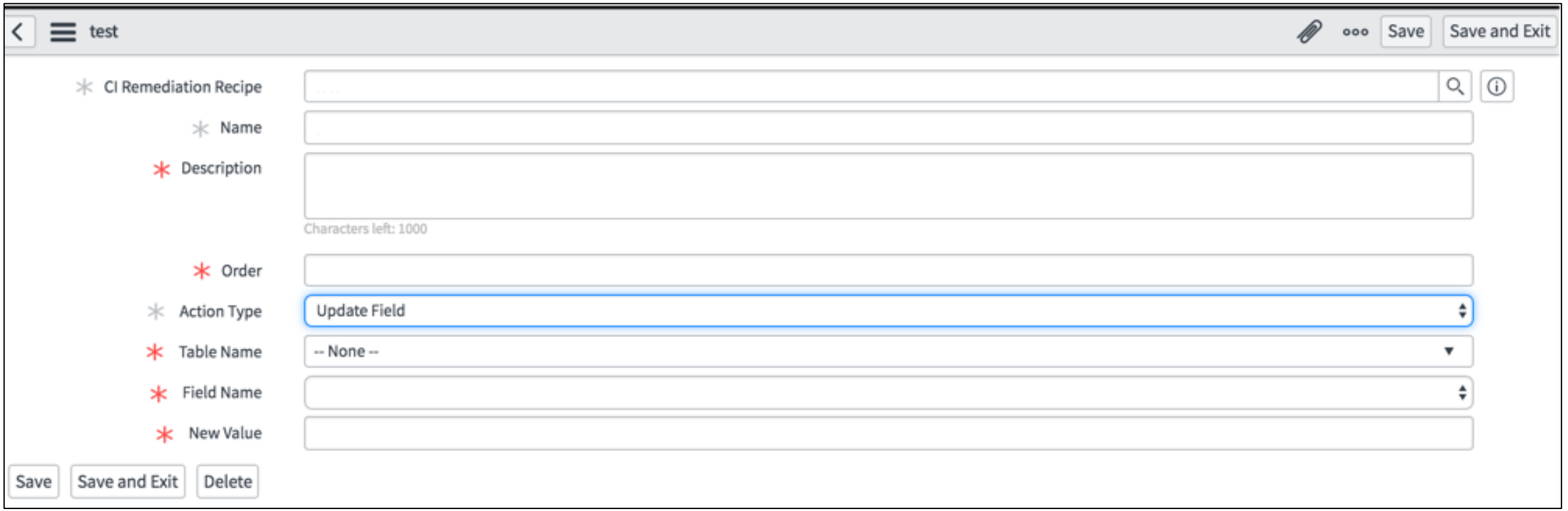
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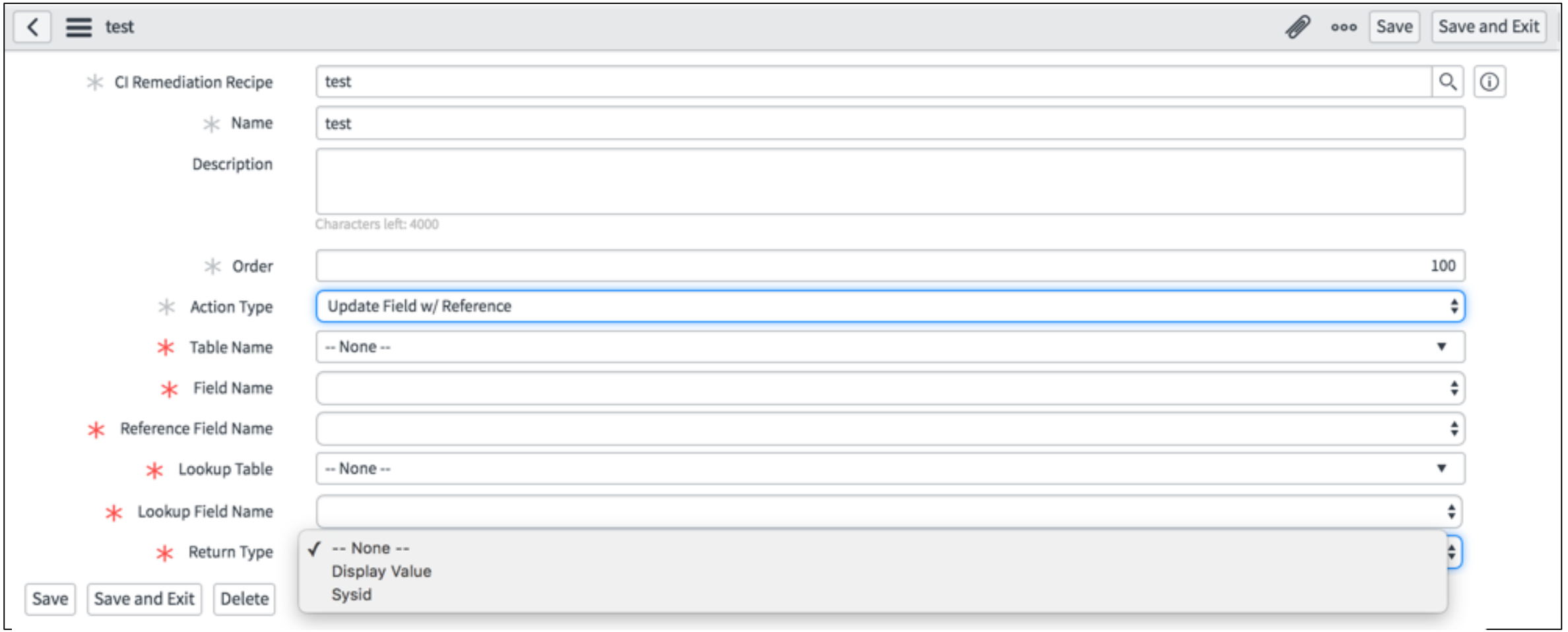
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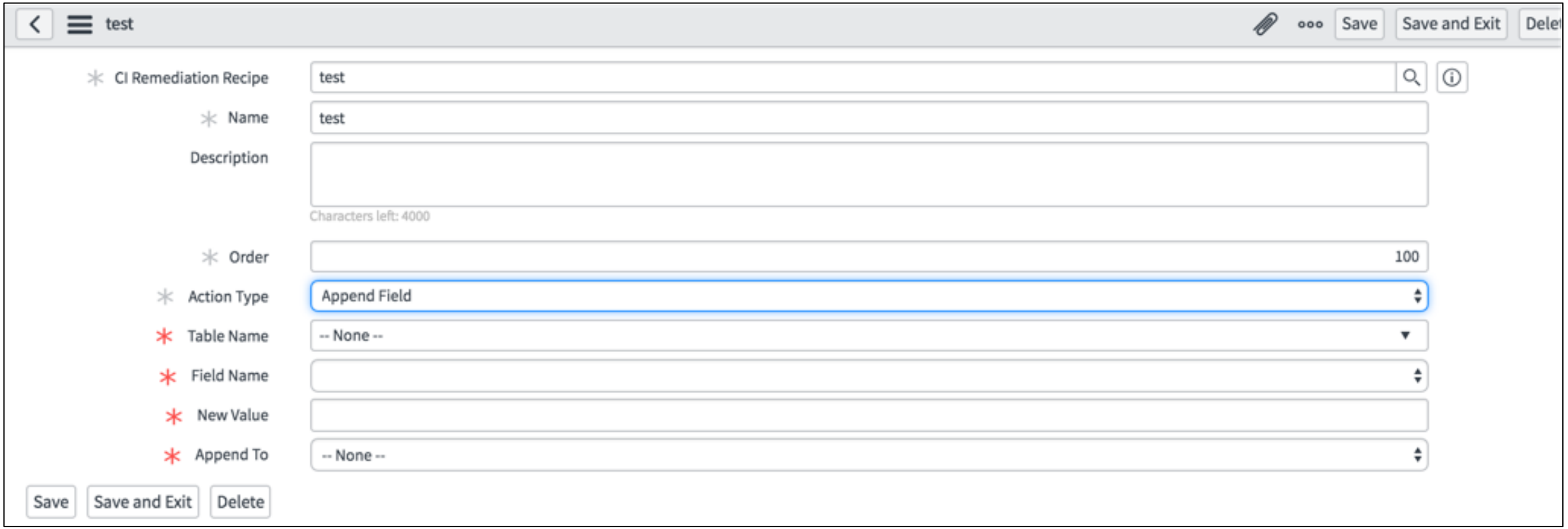
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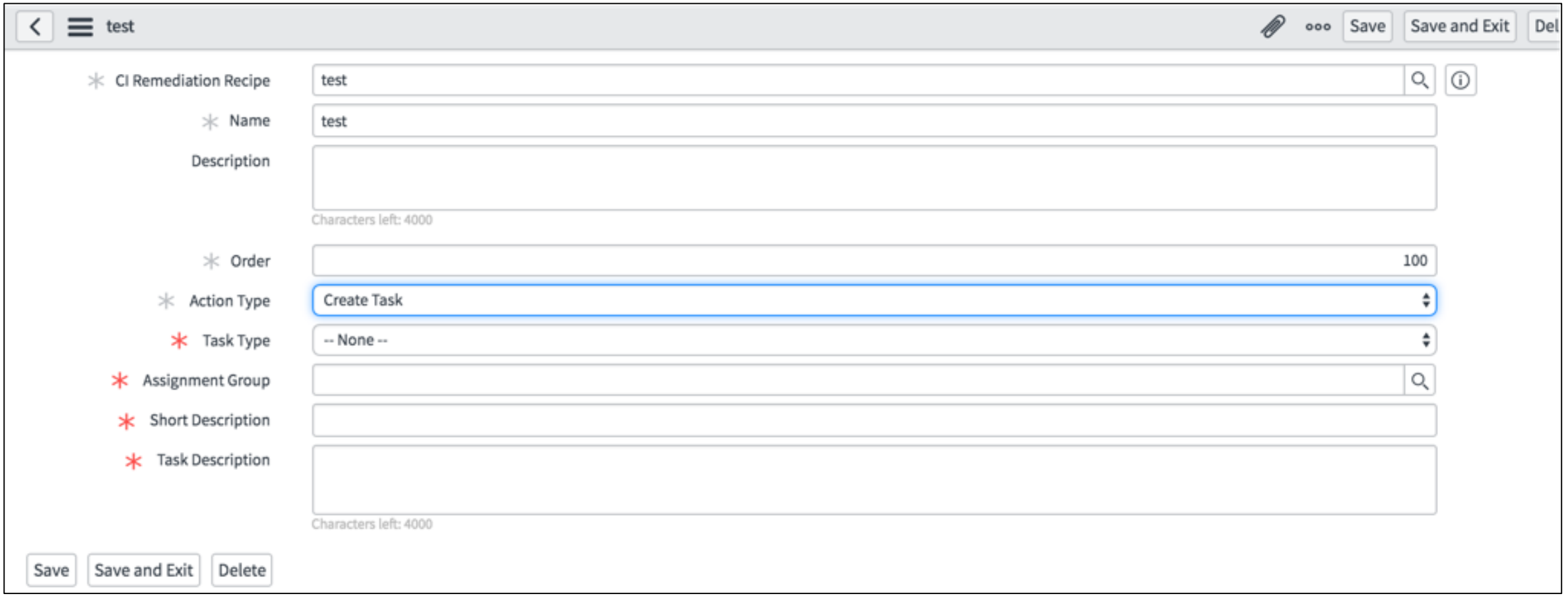
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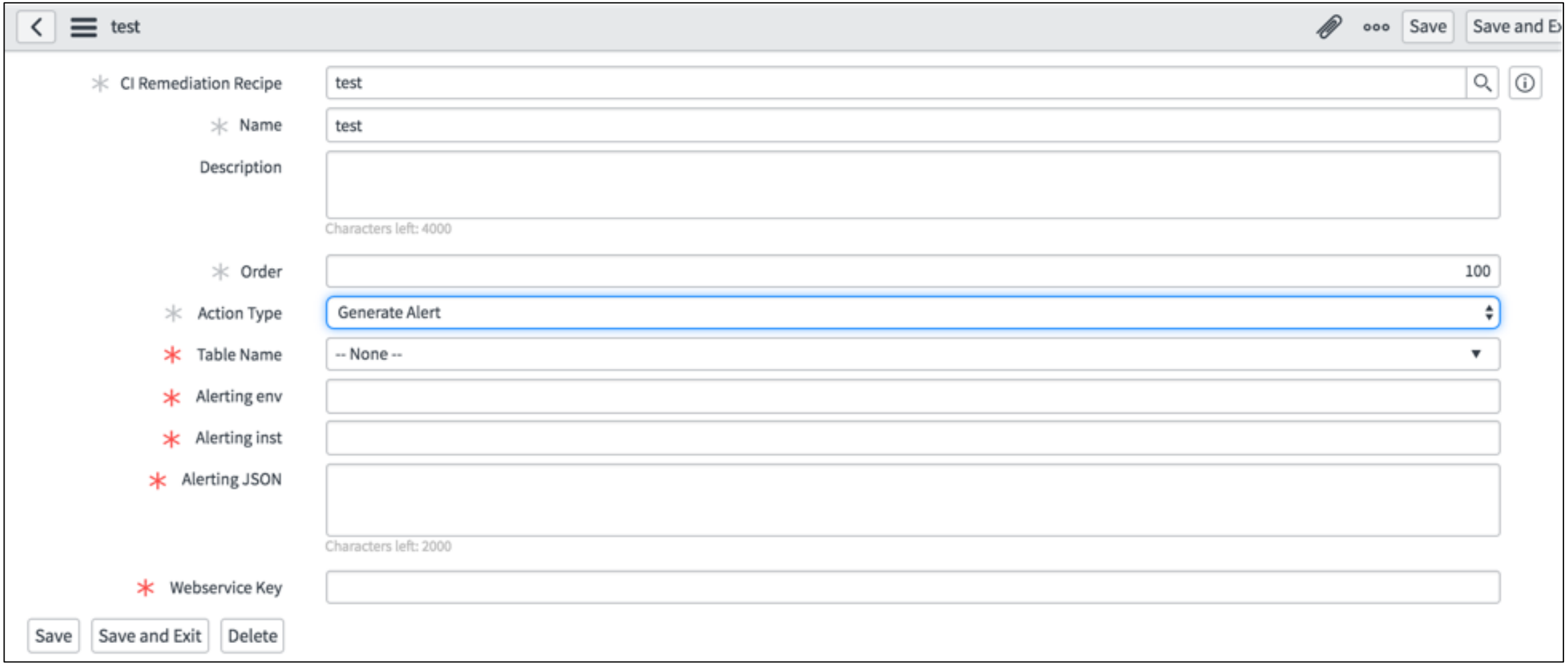
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Solution – Relevant Data



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Solution – Relevant Data



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Solution – Demo

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Value Outcomes



More being added regularly



Weekly Hours Saved



Than Going Through Dev Cycle

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Lessons Learned

1. When solving one problem, you might find inspiration to solve more!
2. Enabling non-developers to code “If this; then that” can save significant dev time.
3. ServiceNow makes it easy to use Out of the Box features to group CIs.
4. Understanding and publishing defects improves your credibility.
5. Automate remediation of CMDB data to reduce manual data manipulation.

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Our Next Steps

- What other action types we are going to build

Action	Description
Add Relationship	Add a relationship of type x between CIs
Remove Relationship	Delete all relationships of x type where CI is parent/child
Create CI	Create a CI Record of x Class with y fields populated
Create Task	Create a task of x type, add CI as Configuration Item, assign to y Group
Execute Recipe	Execute another CI Remediation Recipe
Find Task	Search for existing Task of x type, update/relate to CI
Launch Workflow	Launch a ServiceNow workflow from within the recipe

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Top Takeaways

1

Leverage out of the box concepts like CI Groups to group CMDB records

2

Test and Learn when developing solutions for maximum value for your development.

3

Make automation available in the UI for non-developers to use.

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Thank You

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Q & A

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