knowledge17

http://clabs.link/lab132013

WORK at LIGHTSPEED

Visualizing Hierarchical Data – Analytics 301

ROBERT NINNESS
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ServiceNow

ADAM STOUT
CUSTOMER SUCCESS MANAGER
ServiceNow

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servicenow

Goals of Lab

- It’s not enough to just report the numbers
  - Emphasis on correlation
  - Push for prediction
  - Help the data tell its story
- The numbers need to answer questions
  - How to provide context?
  - How are my KPIs related?
  - Causality
- Consider the next step
  - What do I do if the numbers are good? Bad?
  - What supporting information will the user want look at next?

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Instance Information

Reservation URL http://clabs.link/lab132013

Password 132013W331#K17

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Agenda

- Breakdown Rollup
- Breakdown Relations
- A Short PSA on the Breakdown Matrix
- The Workbench Widget
- Report Drilldowns
- Interactive Filters

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Speaker Introduction



Name: Robert Ninness

Title: Sr. Software Engineer

Function: Development

Company: ServiceNow

Experience: 6 years working with the ServiceNow platform in various roles: ITIL user = > System Admin => Implementation Consultant => Developer

Expertise: Analytics, Application Development, Domain Separation

Achievements: E, F, G, H, I, J

Current Projects: Kingston man! Working on delivering Intelligent Automation and Insights through the ServiceNow Platform and Performance Analytics

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Speaker Introduction



Name: Adam Stout

Title: Customer Success Manager

Function: Development

Company: ServiceNow

Experience: 4 Year of Experience with ServiceNow, 15 Years of Experience in Business Intelligence and Analytics

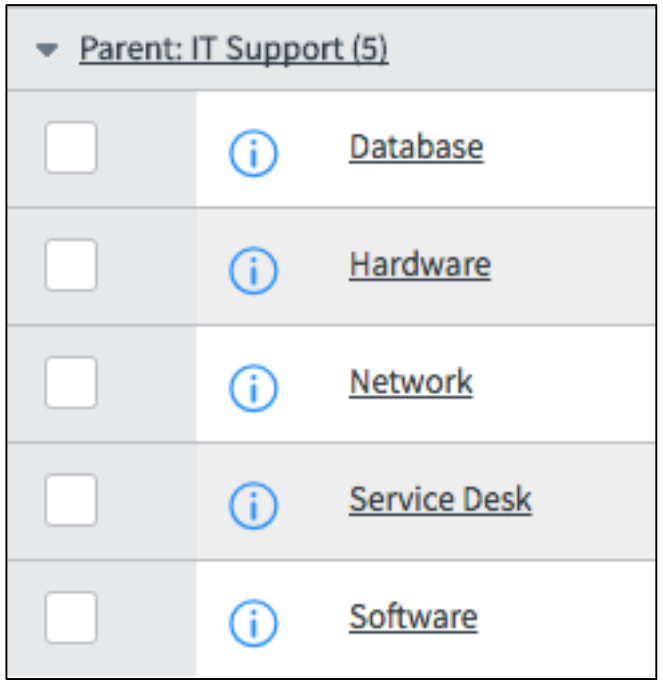
Expertise: Analytics, Application Development

Current Project: Support Now on Now initiative within ServiceNow to leverage everything we build at ServiceNow at ServiceNow

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Breakdown Rollup

- Rollup scores from child elements to parent elements
- Flexible configuration to support the following hierarchies:
  - One to one
  - One to many
  - Many to many
- Assign the lowest possible element in the hierarchy
  - Improves accuracy
- Can be any CSV list of breakdown elements



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Lab 1.1

Breakdown Rollup

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Breakdown Relations

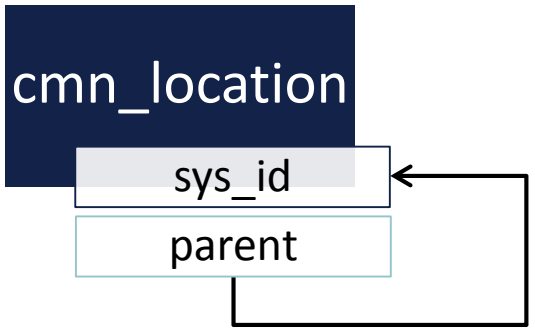
- Link two breakdown elements together
- Uses existing relationships defined in ServiceNow tables
- Between elements of the same breakdown
  - E.G. Location <--> location (parent/child)
- Between elements of the same breakdown with a common attribute
  - E.G. Group <--> Groups (sibling groups)
- Between elements of different breakdowns
  - E.G. Assignment group <--> Assignment Group members

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Breakdown Relations

Example: Locations

- Link elements of the same breakdown



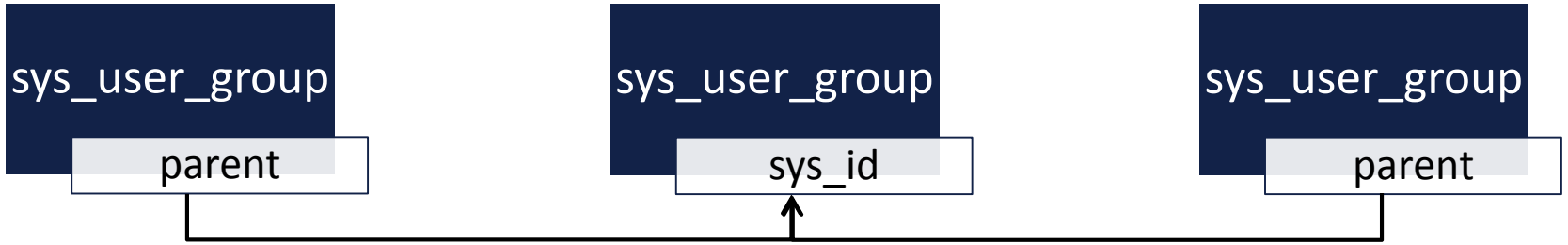
- The relation table is the same as the breakdown source
- The parent field holds the relationship between two breakdown elements

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Breakdown Relations

Example: Sibling groups

- Link elements using a common relation



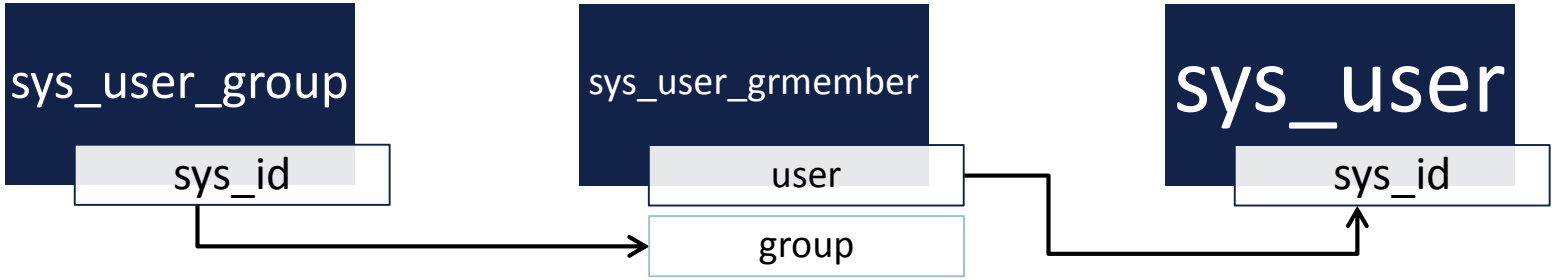
- The relation table is the same as the breakdown source
- A common field [parent] is used to find elements which are related

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Breakdown Relations

Example: Group members

- Link elements of two different breakdowns

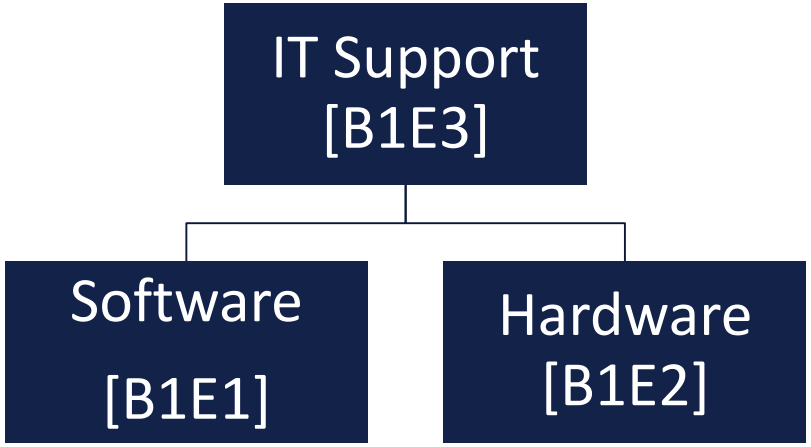


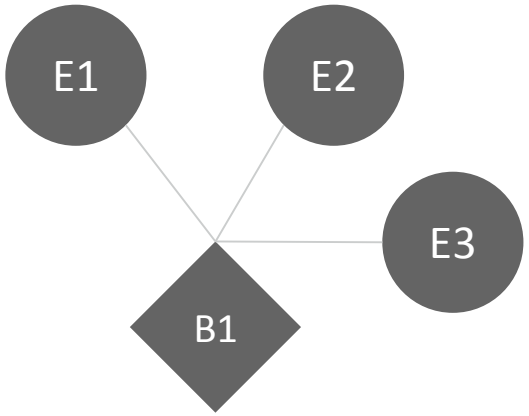
- An m2m table [sys_user_grmember] holds the relationship information

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Breakdown Relations

Navigation: Siblings

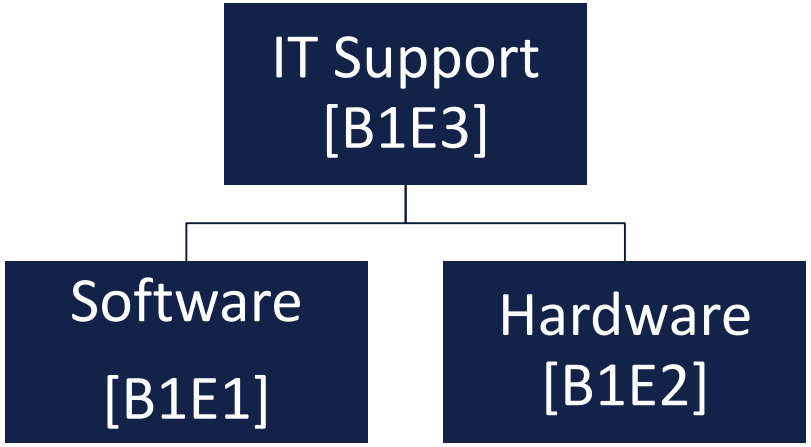


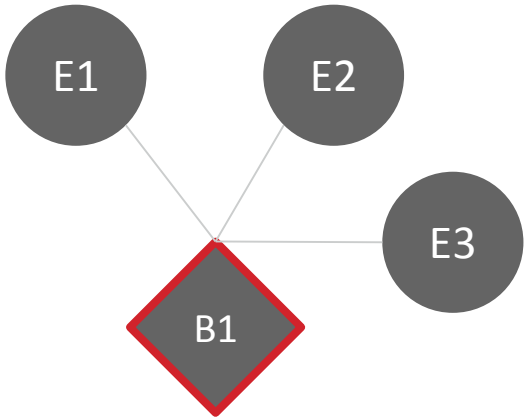


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Breakdown Relations

Navigation: Siblings

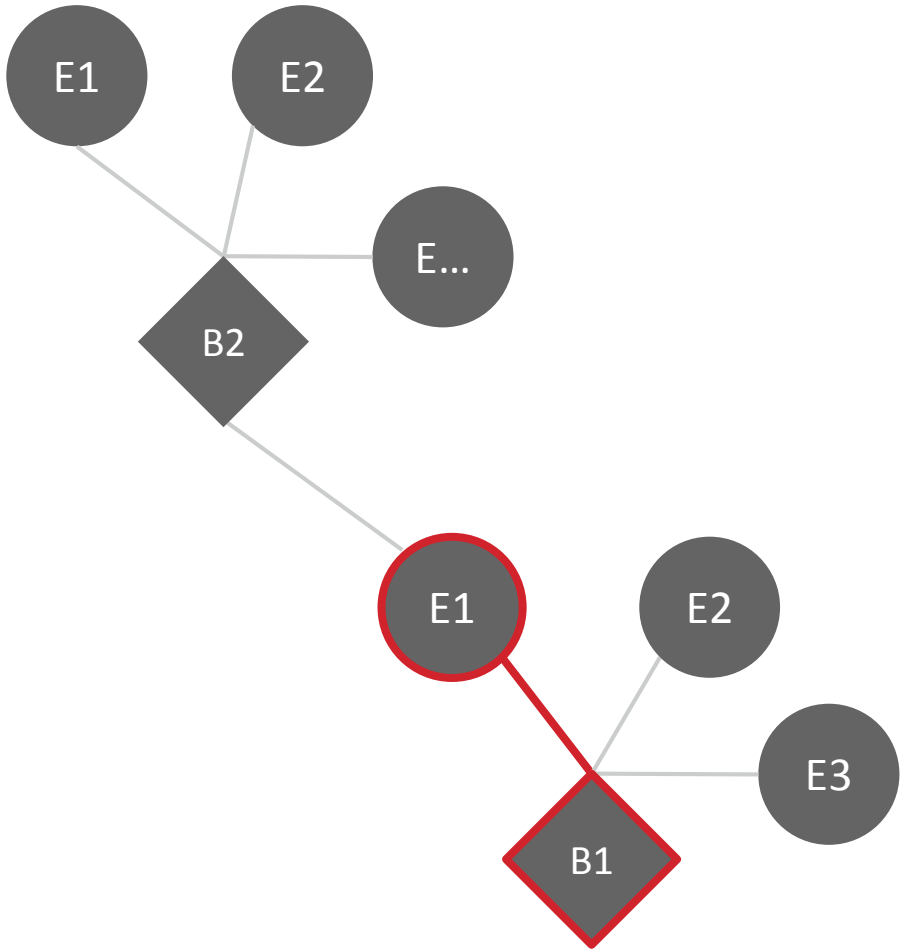


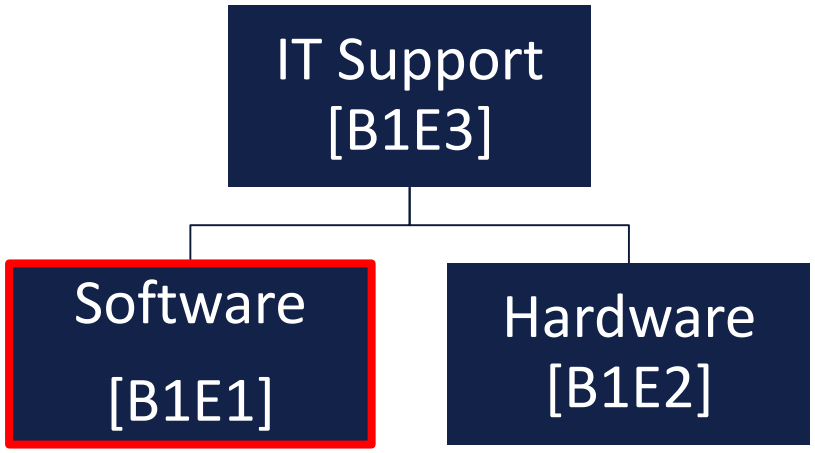


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Breakdown Relations

Navigation: Siblings

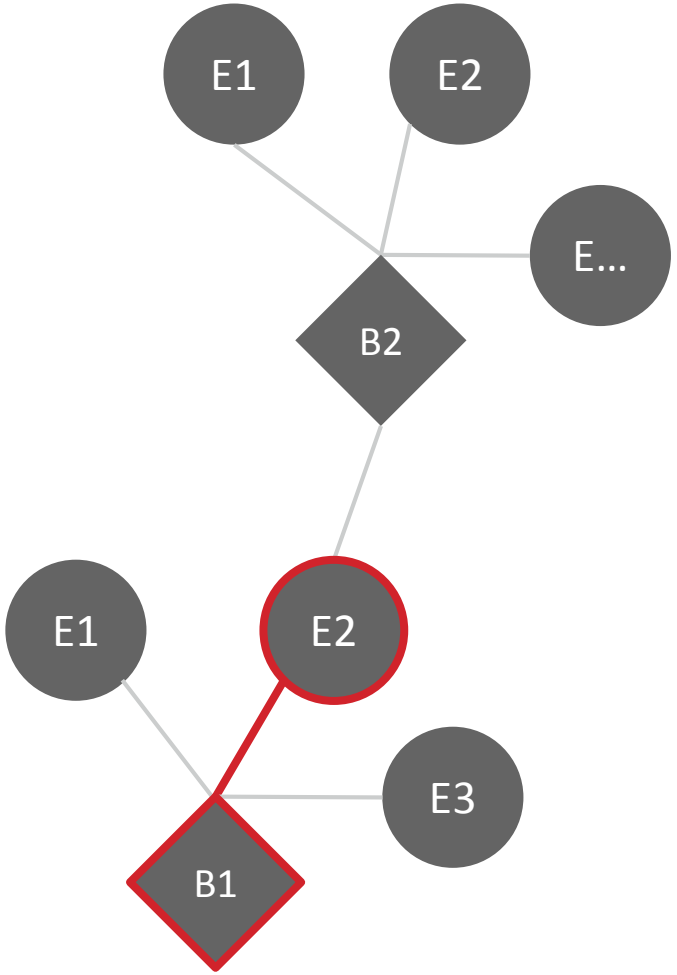


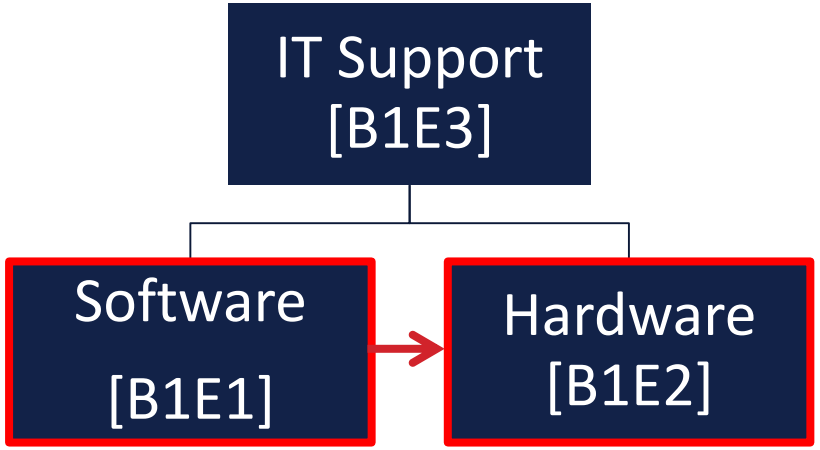


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Breakdown Relations

Navigation: Siblings

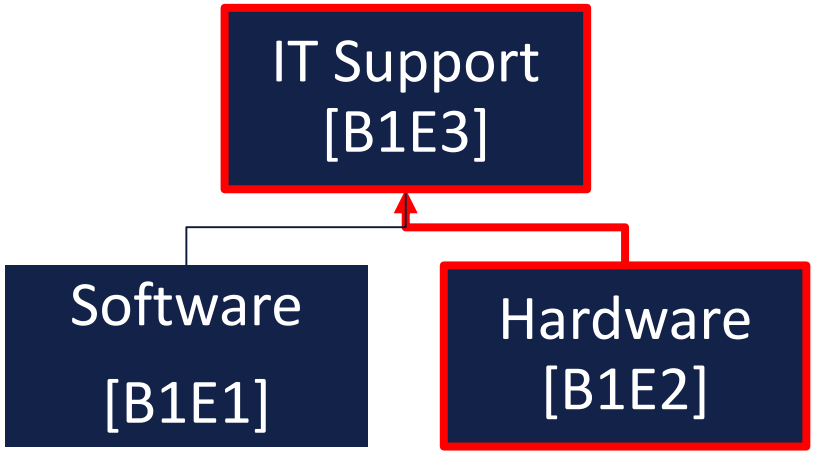


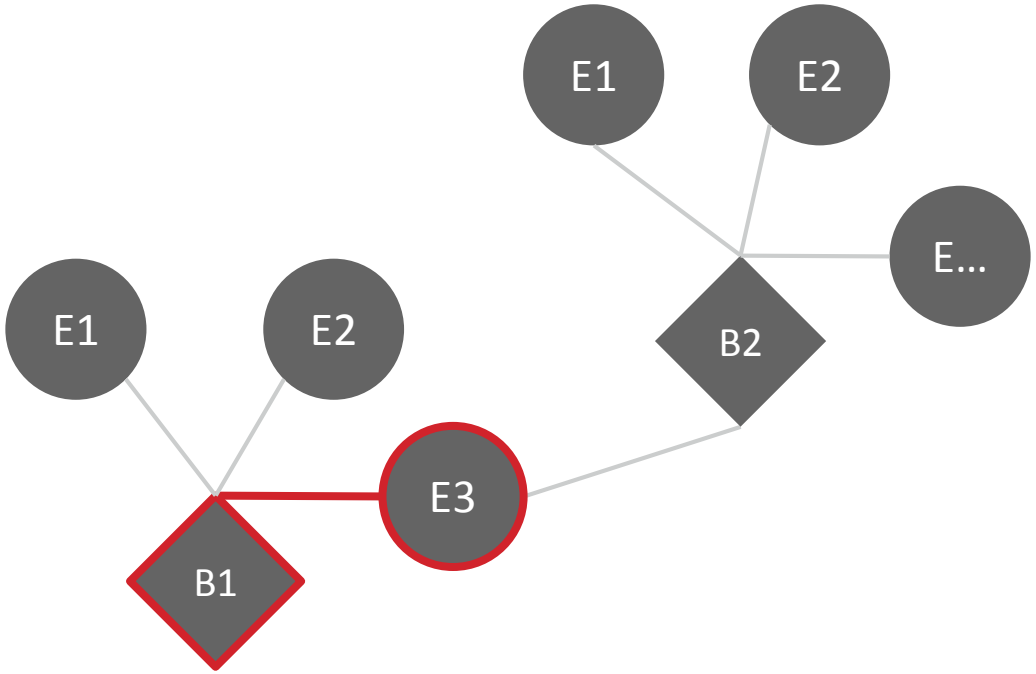


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Breakdown Relations

Navigation: Parent / Child





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Breakdown Relations

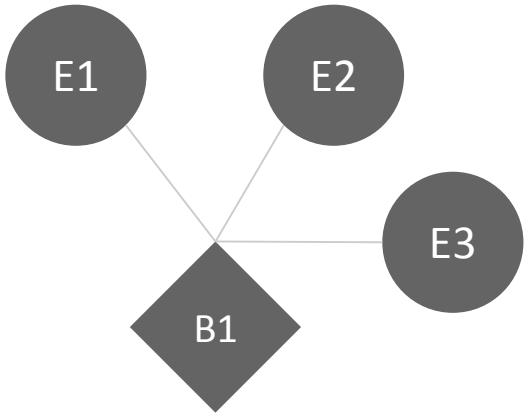
Notes

- IT Support is the superset of the elements:
  - Software
  - Hardware
- Score value and snapshots will be a combination of these elements

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Breakdown Relations

Navigation: Two different breakdowns



SAP Payroll
[Business Service] B1E2

Software
[Group] B2E1

Hardware
[Group] B3E2

Beth Anglin
[Assigned To]
B3E1

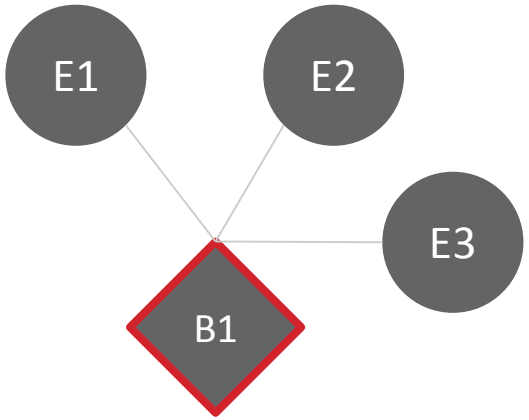
Fred Luddy
[Assigned To]
B3E2

David Dan
[Assigned To]
B3E1

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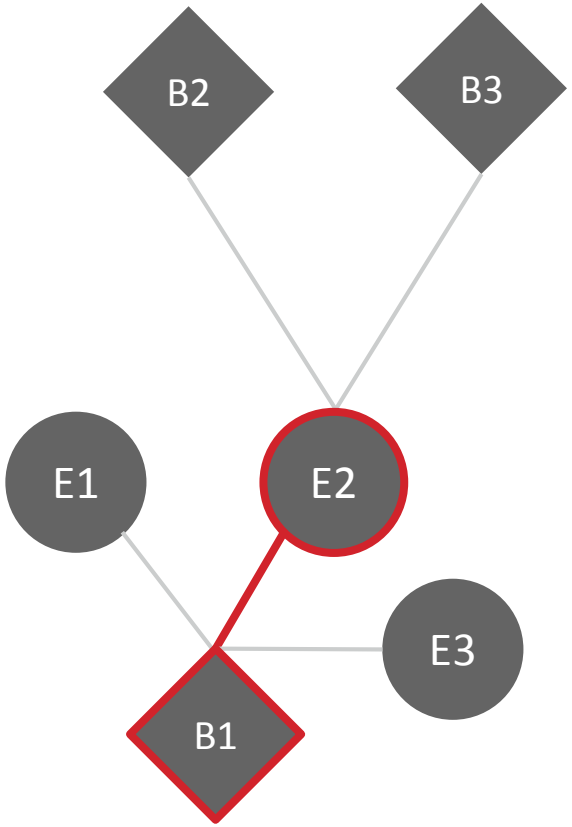
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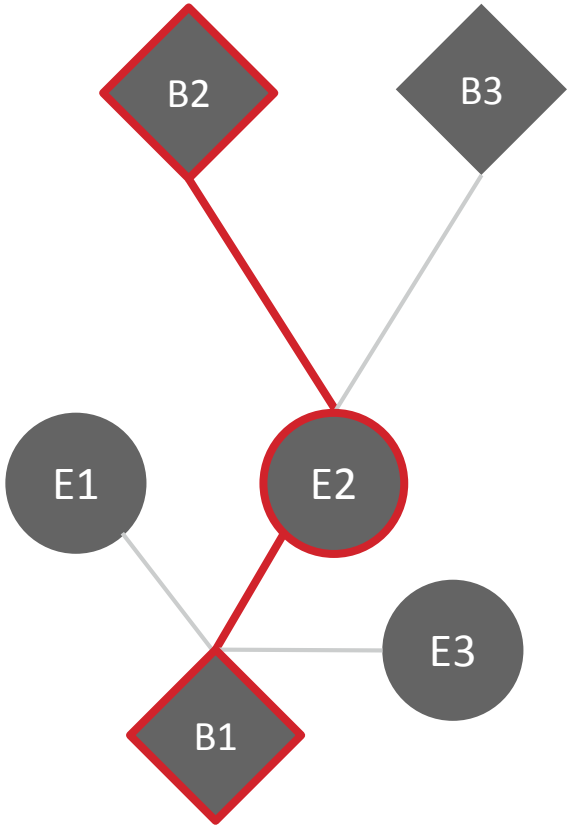
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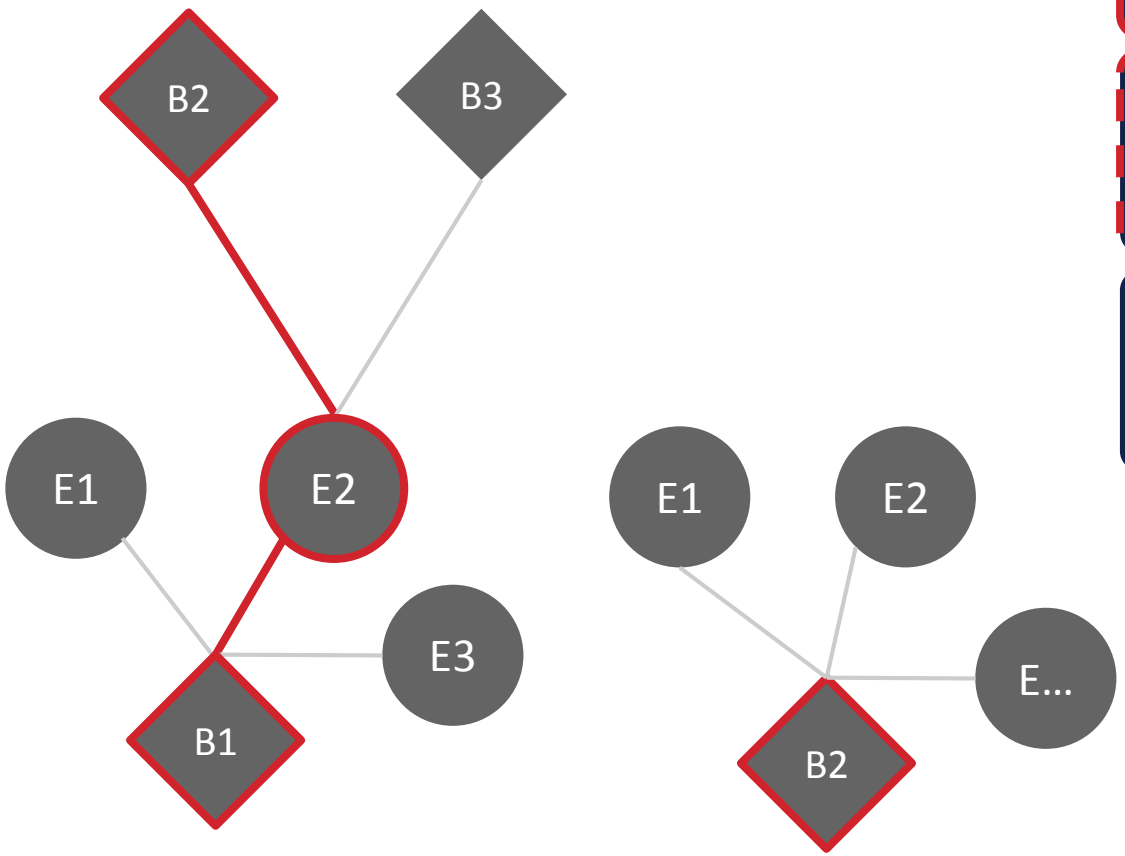
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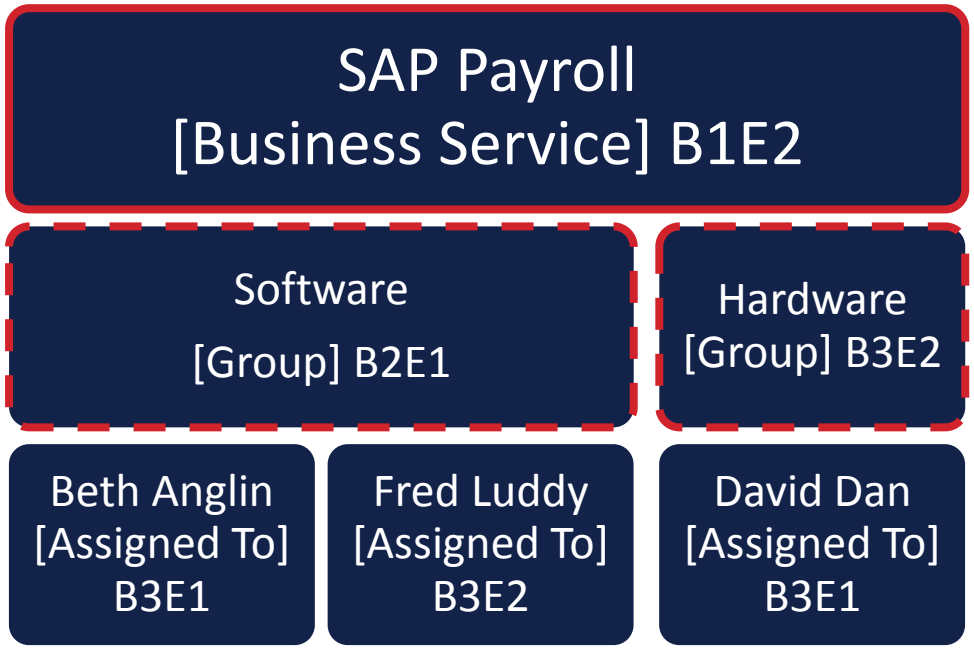
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B3E2

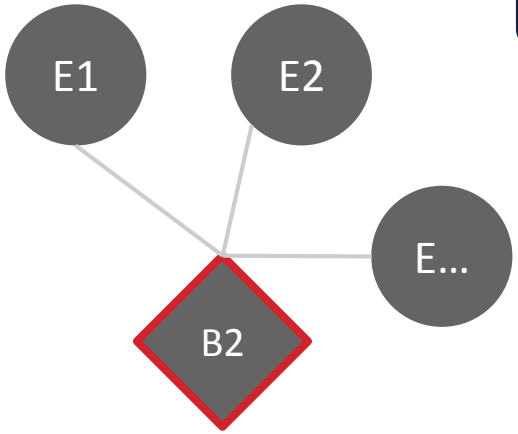
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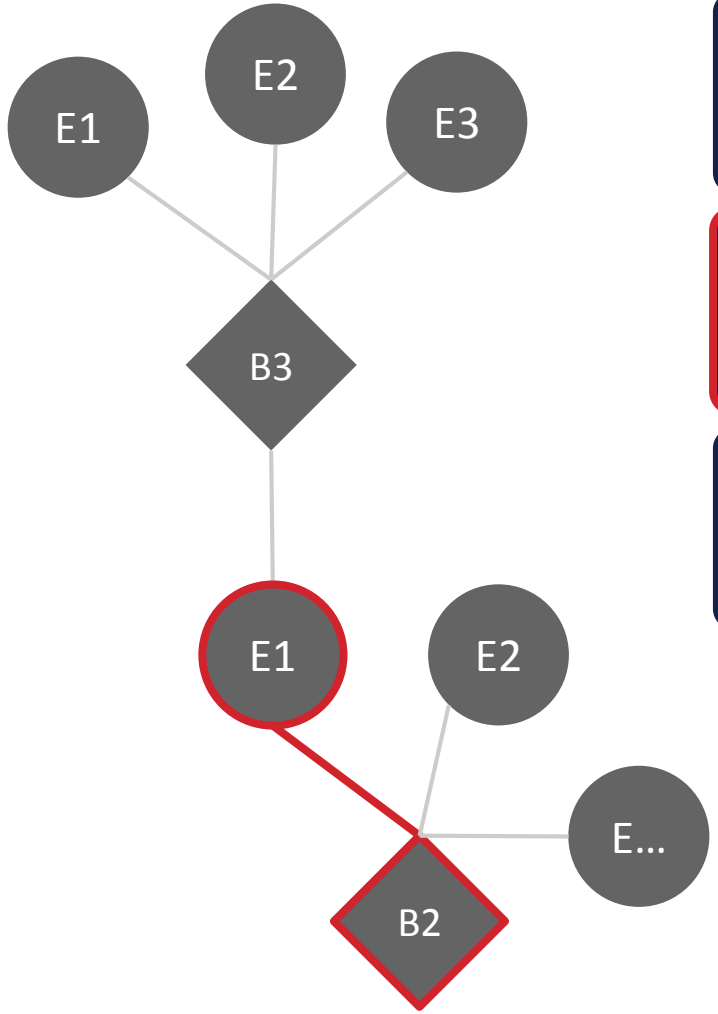




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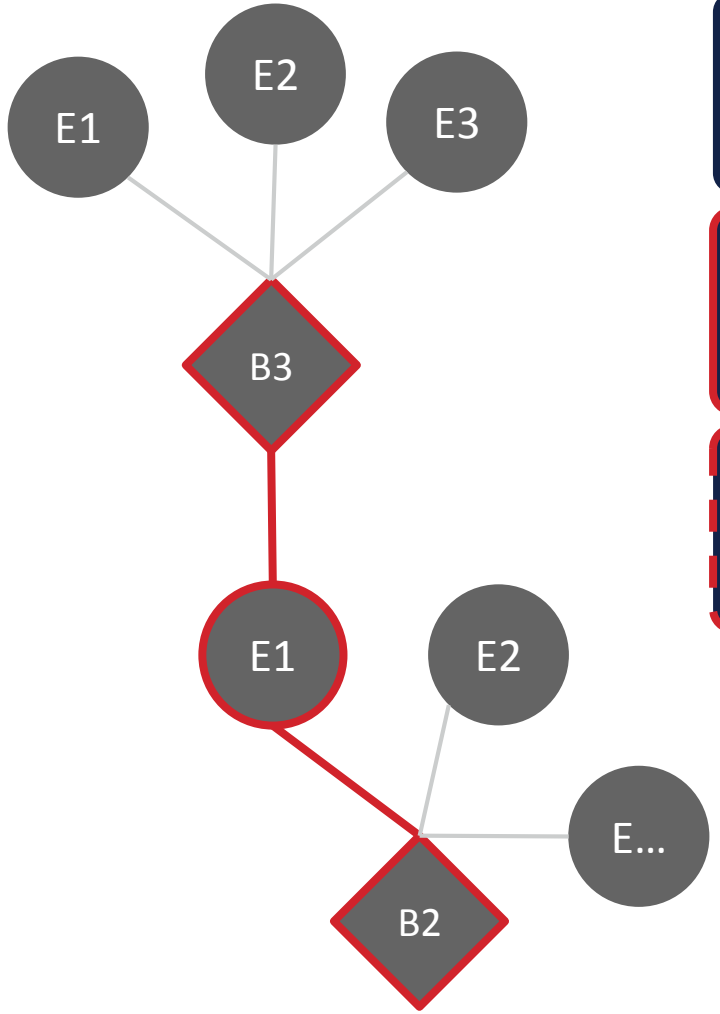
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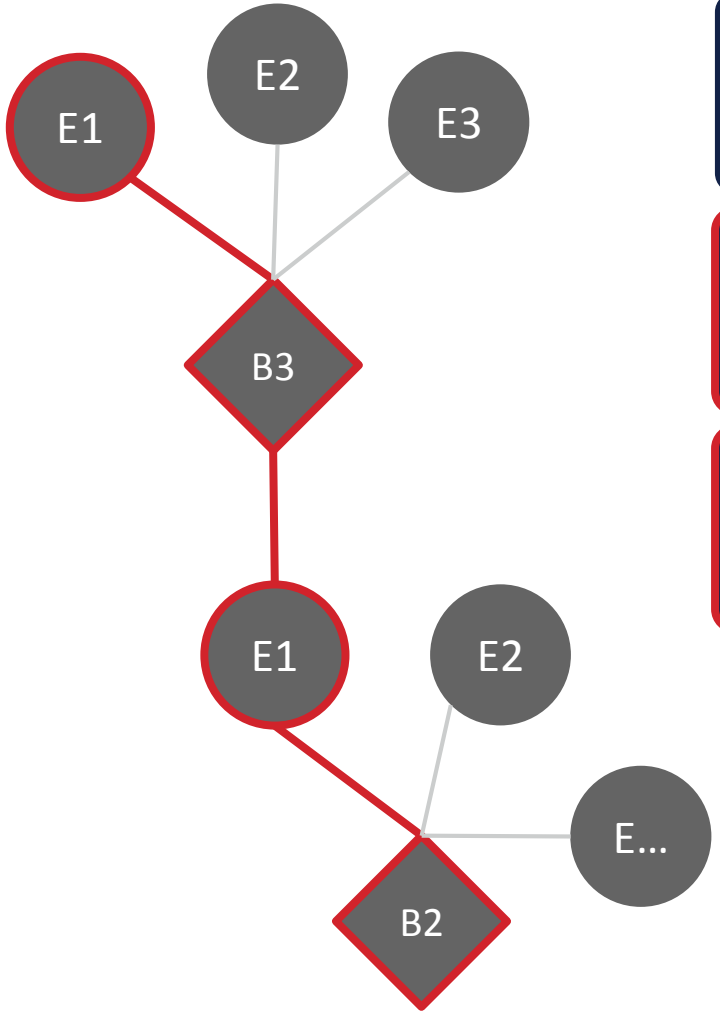
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B3E2

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B3E1

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Breakdown Relations

Notes

- Consider breakdowns as sets and subsets of data
  - Is it possible that a given element will be contained in another set of data?
  - Is it possible that a given matrix of elements will never occur?
- Zero scores are not stored, this helps with table size but not the UI

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Lab 2.1

Breakdown Relations

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Agenda

- Breakdown Rollup
- Breakdown Relations
- A Short PSA on the Breakdown Matrix
- The Workbench Widget
- Report Drilldowns
- Interactive Filters

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The Breakdown Matrix

- Think before you add a breakdown to the matrix
- For each breakdown added to a matrix, the number of scores stored increases by:
  - The number of existing elements in the matrix, multiplied by the number of elements of the new breakdown
  - This number of rows is added to the collection for each collection frequency e.g., per day!
- Size matters!
  - Dashboard load time
  - Detailed scorecard load time
  - Collection time

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Lab 3.1

Breakdown Exclusions

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Lab 4.1

Data Collection

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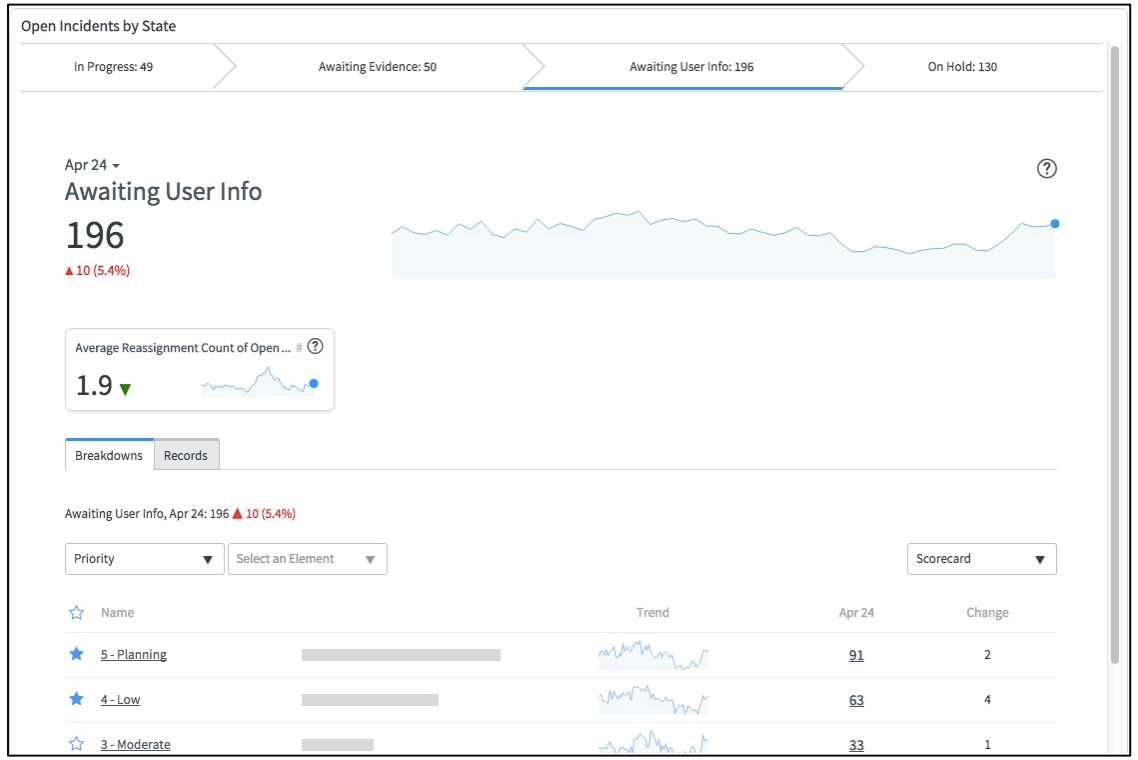
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The Workbench Widget

- Visualize Indicator hierarchies on a single dashboard
- Supporting Indicators provide context to the main Indicator
- Explore the causality between leading and lagging Indicators
- Source Records are only a click away to give users the ability to get where they need very quickly



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Lab 5.1

Workbench Widgets

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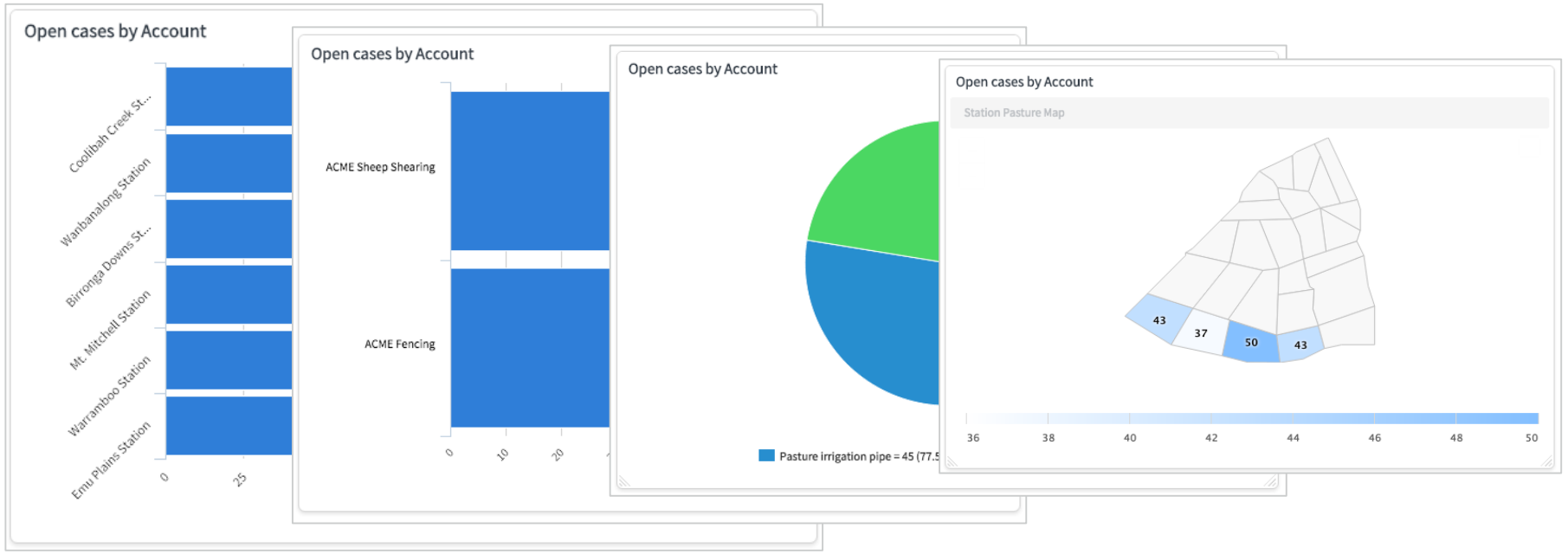
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Report Drilldowns

- Show hierarchies by creating a report narrative
- Each drilldown filters your data by an additional dimension
- Simplifies report administration by reducing the number of reports required



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Lab 6.1

Report Drilldowns

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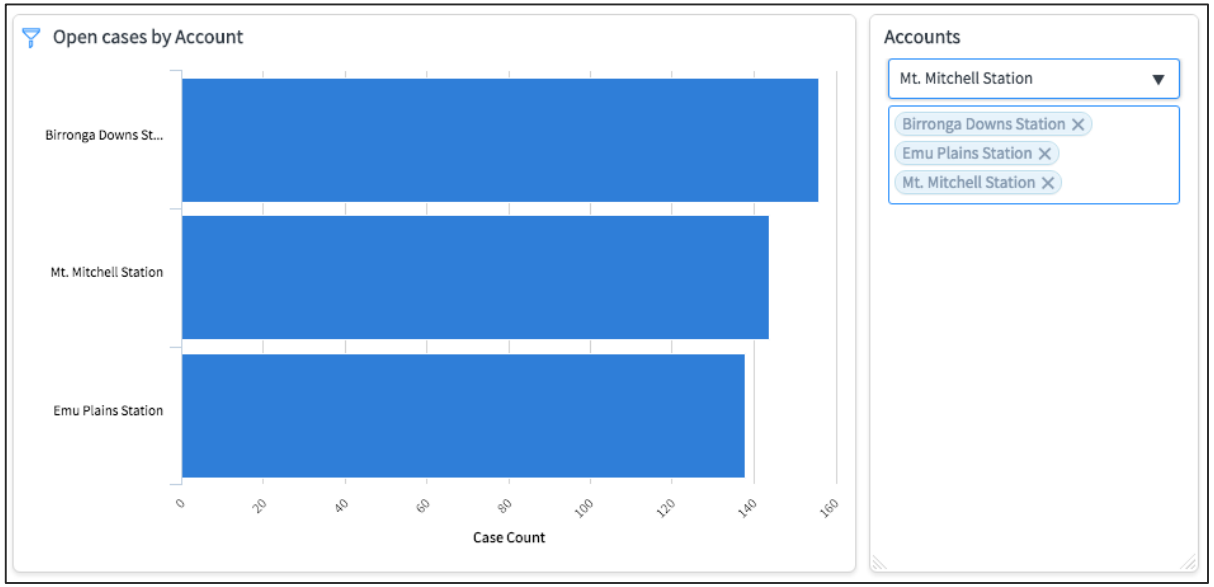
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Interactive Filters

- Predefine a set of dimensions to pivot your reports on the fly
- Create a single base report with filters instead of multiple canned reports



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Interactive Filters – Things to Remember

- Leverage Dynamic Filters to provide only relevant choices to the user
  - e.g., “My Assignment Groups”, “My Team”
- You can use a Breakdown as a Filter but not a Filter as a Breakdown
  - Use Dashboard Breakdown Source to “Act as Filter”
  - Interactive Filters only filter reports and not PA widgets
- Documented API to create your own Custom Interactive Filters

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Lab 7.1

Interactive Filters

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Top Takeaways

1

Focus on the story you are are telling and design your dashboards, widgets, and reports to guide your users

2

Use Rollups and Breakdowns relations for a bigger picture and to provide context

3

Workbench widgets provide context to large amounts of data including both leading and lagging indicators

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Take the Survey

Please take a moment to complete a session survey in the Knowledge17 app.

Thank You

Robert Ninness

Senior Software Engineer

ServiceNow

Adam Stout

Customer Success Manager

ServiceNow

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