



USA Staffing

USA Staffing Reporting & Analytics

Hiring Data Warehouse – Data Relationships Job Aid

V1 – December 16, 2020

V2 – March 24, 2021

V3 – May 19, 2021

V4 – August 11, 2021

V5 – September 23, 2021

V6 – April 20, 2022

Created by the OPM Federal Staffing Center

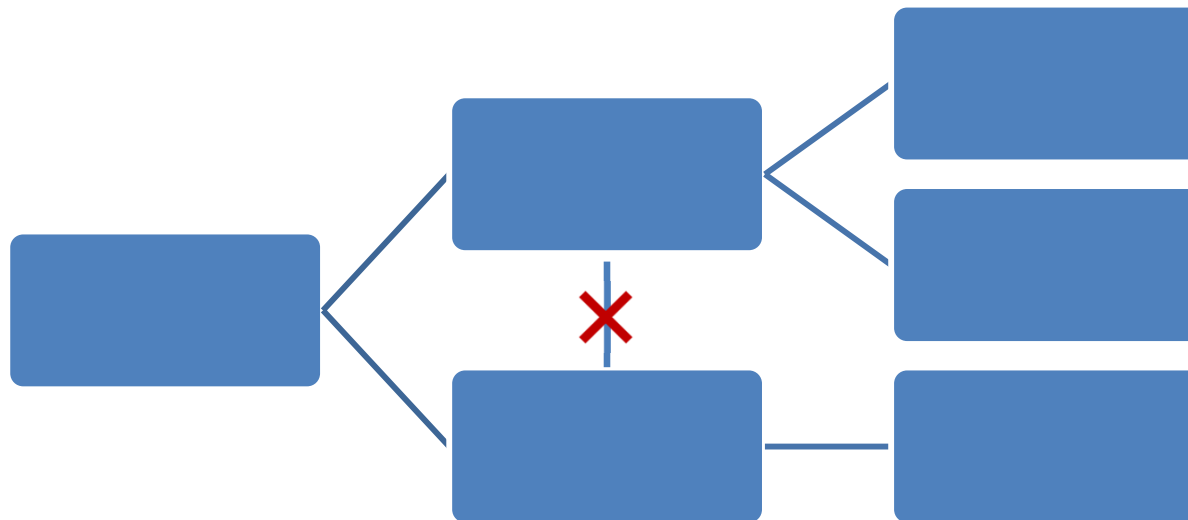
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HDW Goal: Ease of Use for Report Builders

All data contained within the HDW is structured within a single namespace, **however certain query subjects cannot or should not be used together.**

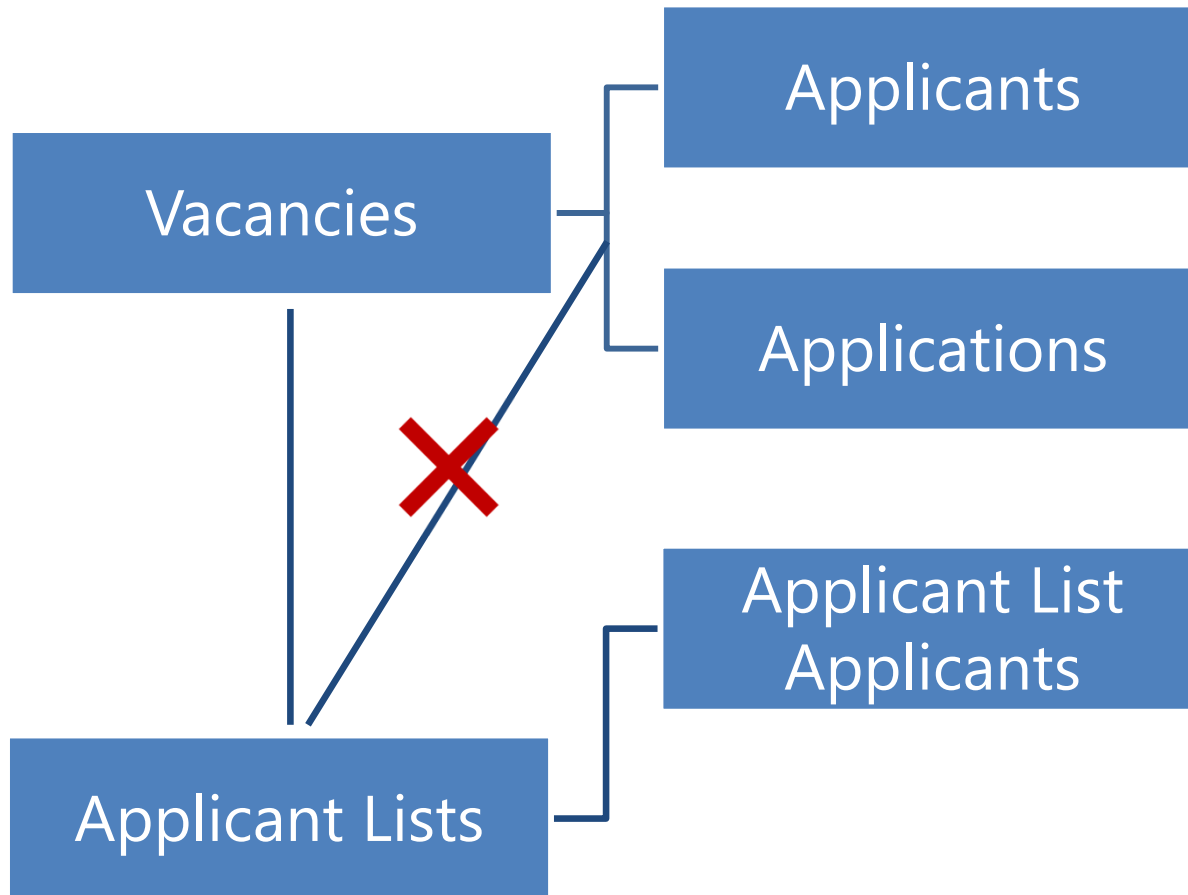
- Due to certain features or flexibilities of the USA Staffing system, it is not always possible to establish relationships between all query subjects.



This job aid will **identify the query subjects that cannot be used in the same report query** and will discuss possible alternatives or solutions should data from these non-compatible query subjects be needed in a single report.



Applicant List + Applicant and Application Query Subjects



The Applicant and Application areas provide data about all applicants and applications

The Applicant List area is designed to only provide data about applicants and applications on applicant lists.

The Applicant List area includes a query subject to provide the name and application number of applicants and applications on Saved and Stored Lists; use these query items instead of data from the Applicant and Application areas.



Applicant List + Applicant and Application Query Subjects

- If you need to create a report that includes more data about applicants and applications than is included in the Applicant List Applicants query subject:
 - Create a query with data from the Applicant List area
 - Create a query with data from the Applicants and/or Applications area
 - Join the two queries using a common identifier (e.g., Application Number) and identifying the nature of the relationship between the areas (all applicants in the Applicant List area have Application data; not all Applications have data in the Applicant List area)

Join relationships

Cardinality: 0..n Operator: = Cardinality: 1..n

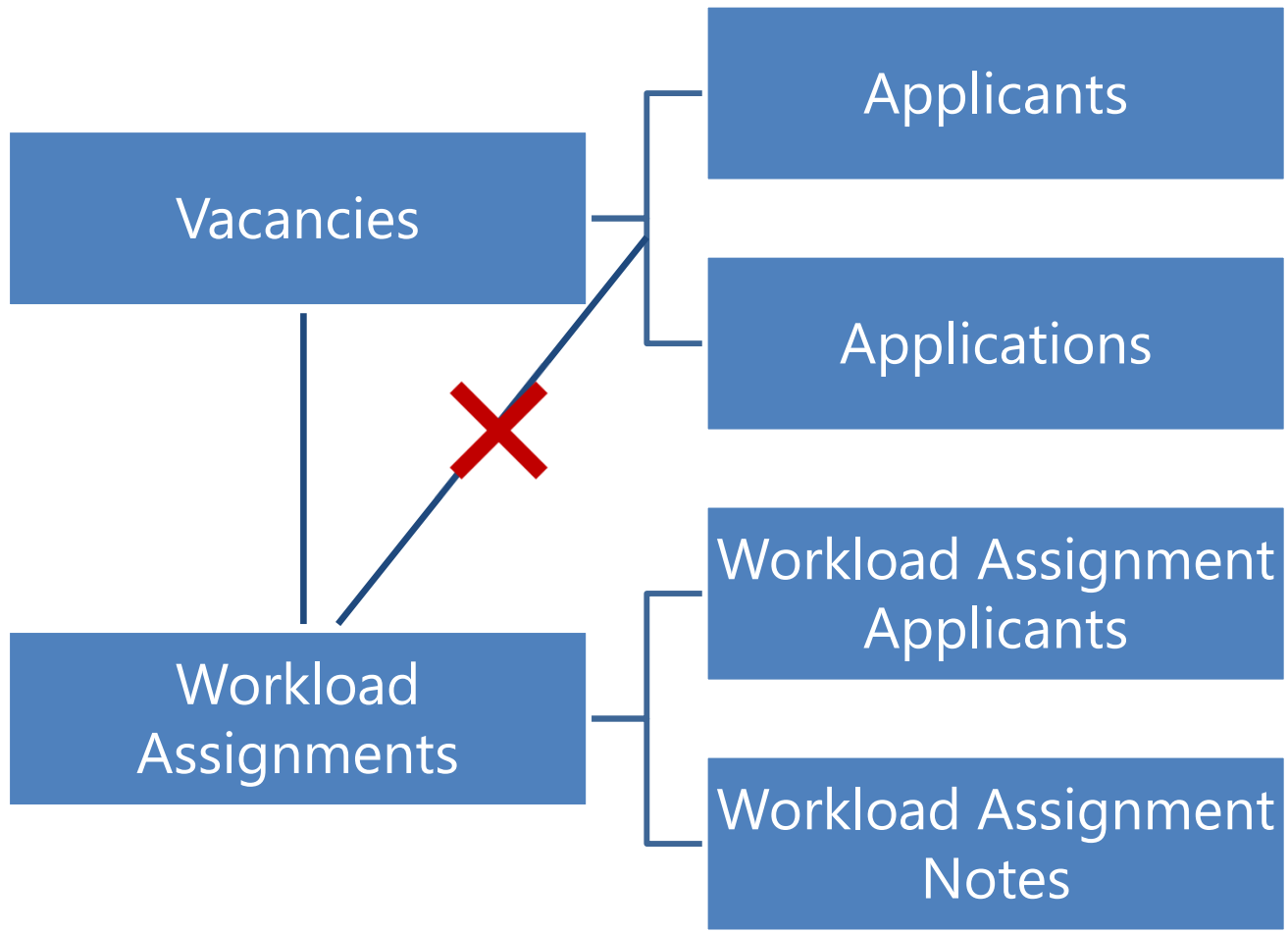
Relationship impact: Each "Applicants and Applications" has zero or more "Applicant List" (outer join). Each "Applicant List" has one or more "Applicants and Applications".

Applicant List Name	Applicant List Applicant Name	Applicant List Application Number	USAJOBS Profile ID
Applicant List 12	Atrick, Jerry	AC8BB-MI41	200148759
Applicant List 12	Booke, Rhoda	AUW3G-KU7Y	200148440
Applicant List 12	Cade, Barry	A8LOH-OOZL	200148757
Applicant List 12	Doohan, Howie	ATGL5-8D6Y	200148433
Applicant List 12	Dover, Eileen	A9EMY-QCQO	200148432
Applicant List 12	Ford, Iona	ASIQO-TV4U	200148435
Applicant List 12	Hale, Justin	A11U8-HBGF	200148760
Applicant List 12	Hammer, Armand	ANVNH-HUFZ	200148427
Applicant List 12	Koch, Brandy A	APOAE-74U7	200148428
Applicant List 12	Lynn, Amanda	AVE8E-KICZ	200148754

Applicants not included on a Saved or Stored List will not have data in Applicant List Applicants.



Workload Assignments + Applicant and Application Query Subjects



The Applicant and Application areas provide data about all applicants and applications

The Workload Assignments area is designed to only provide data about applicants and applications on workload assignments.

The Workload Assignment area includes a query subject to provide the name and application number of applicants and applications on workload assignments; use these query items instead of data from the Applicant and Application areas.



Workload Assignments + Applicant and Application Query Subjects

- If you need to create a report that includes more data about applicants and applications than is included in the Workload Assignment Applicants query subject:
 - Create a query with data from the Workload Assignment area
 - Create a query with data from the Applicants and/or Applications area
 - Join the two queries using a common identifier (e.g., Application Number) and identifying the nature of the relationship between the areas (all applicants in the Workload Assignment area have Application data; not all Applications have data in the Workload Assignment area)

Join relationships

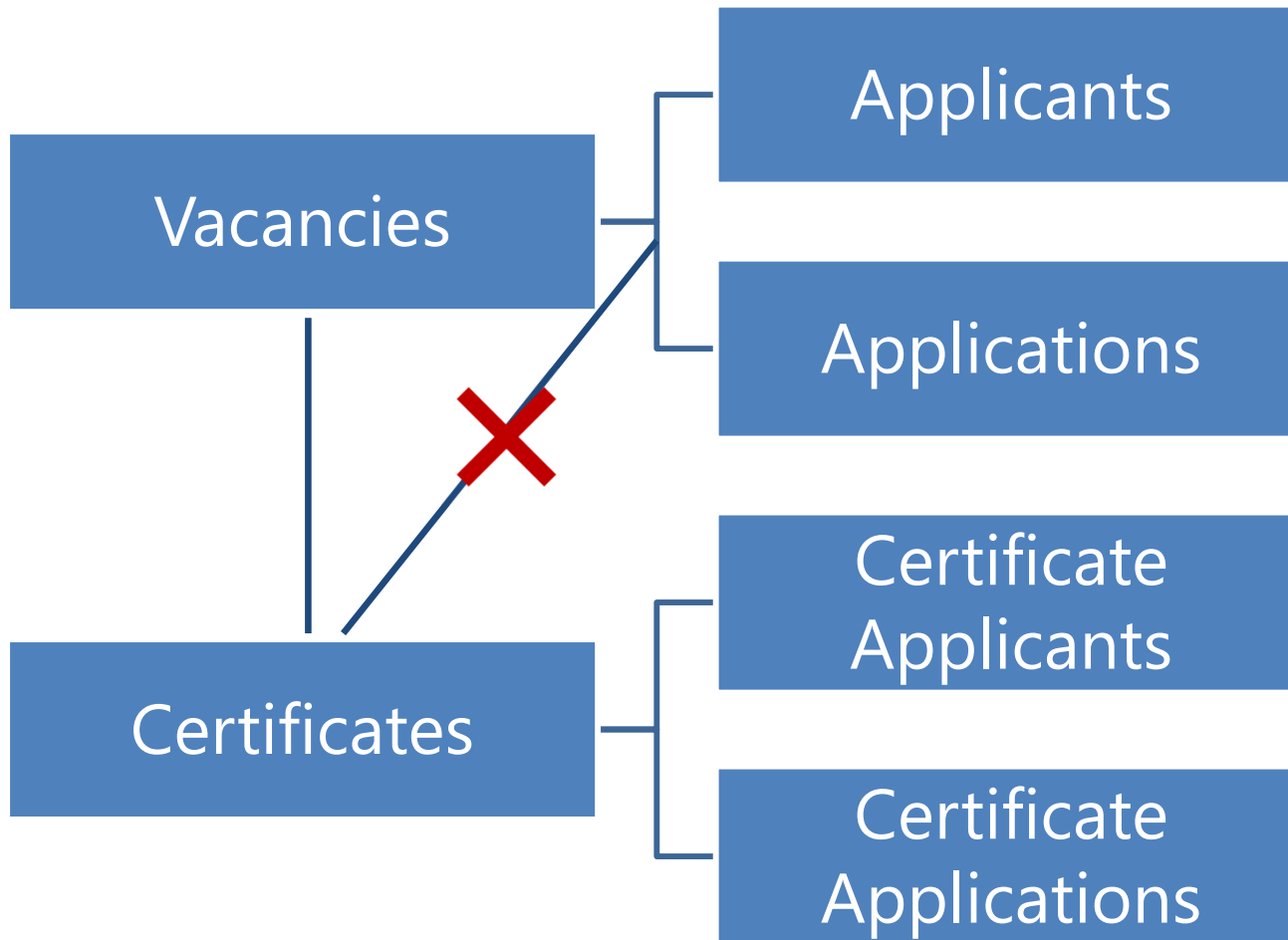
Relationship impact: Each "Qry_ApplicantsandApplications" has zero or more "Qry_WorkloadAssignments" (outer join). Each "Qry_WorkloadAssignments" has one or more "Qry_ApplicantsandApplications".

Workload Assignment Name	Workload Assignment Applicant Name	Workload Assignment Application Number	Application Last Submitted Date/Time	Record Status Code
Assignment	Christopher, Helmsworth	A7ELI-Y228	07/17/2017 02:36:57.087 PM	AA
Assignment	Howell, Carl	A4RAQ-2ZZ9	06/08/2017 04:40:57.777 PM	AC
Assignment 1	Alesha, Margarette	ALIW2-HJ6U	09/06/2018 12:03:42.783 PM	AC
Assignment 1	Anderson, Cassie	ANLDD-FSGO	09/06/2018 12:06:45.233 PM	AC
Assignment 1	Benitez, Landin	ADWPW-N3CZ	09/06/2018 12:09:59.260 PM	AC
Assignment 1	Bishop, Krista	ANEGK-3HYF	09/06/2018 12:17:10.523 PM	AC
Assignment 1	Christian, Adelaide	ACXYK-7SDH	09/06/2018 12:08:12.683 PM	AC
Assignment 1	Cisneros, Amelie	ALE52-QLGU	09/06/2018 12:10:37.463 PM	AC
Assignment 1	Cole, Larissa	A2R9I-OE9X	09/06/2018 12:06:11.233 PM	AC
Assignment 1	Cortez, Kenley	APDHT-6BCT	09/06/2018 12:09:07.200 PM	AC
Assignment 1	Damon, Toby	AIFSJ-FJ37	09/06/2018 12:19:51.273 PM	AC

Applicants not included on a Workload Assignment will not have data in Workload Assignment Applicants.



Applicant and Application Query Subjects + Certificate Query Subjects



The Applicant and Application areas provide data about all applicants and applications

The Certificate area is designed to only provide data about referred applicants and applications.

The Certificate area includes query subjects to provide data about referred applicants and applications; use these instead of data from the Applicant and Application areas.



Applicant and Application Query Subjects + Certificate Query Subjects

- If you need to create a report that includes data about all applicants AND referred applicants:
 - Create a query with data from the Applicant and/or Application area
 - Create a query with data from the Certificate area
 - Join the two queries using a common identifier (e.g., Vacancy Number, Applicant ID, Application Number) and identifying the nature of the relationship between the areas (all Certificate Applications have Application data; not all Applications have Certificate data)

Join relationships

[New Link](#)

Application Data

- Vacancy Number
- Application Number
- Applicant Name

Certificate Data

- Vacancy Number
- Certificate Number
- Certificate Application Number

Cardinality: Operator: Cardinality:

1.n = 0..n

Relationship impact: Each "Certificate Data" has one or more "Application Data".
Each "Application Data" has zero or more "Certificate Data" (outer join).

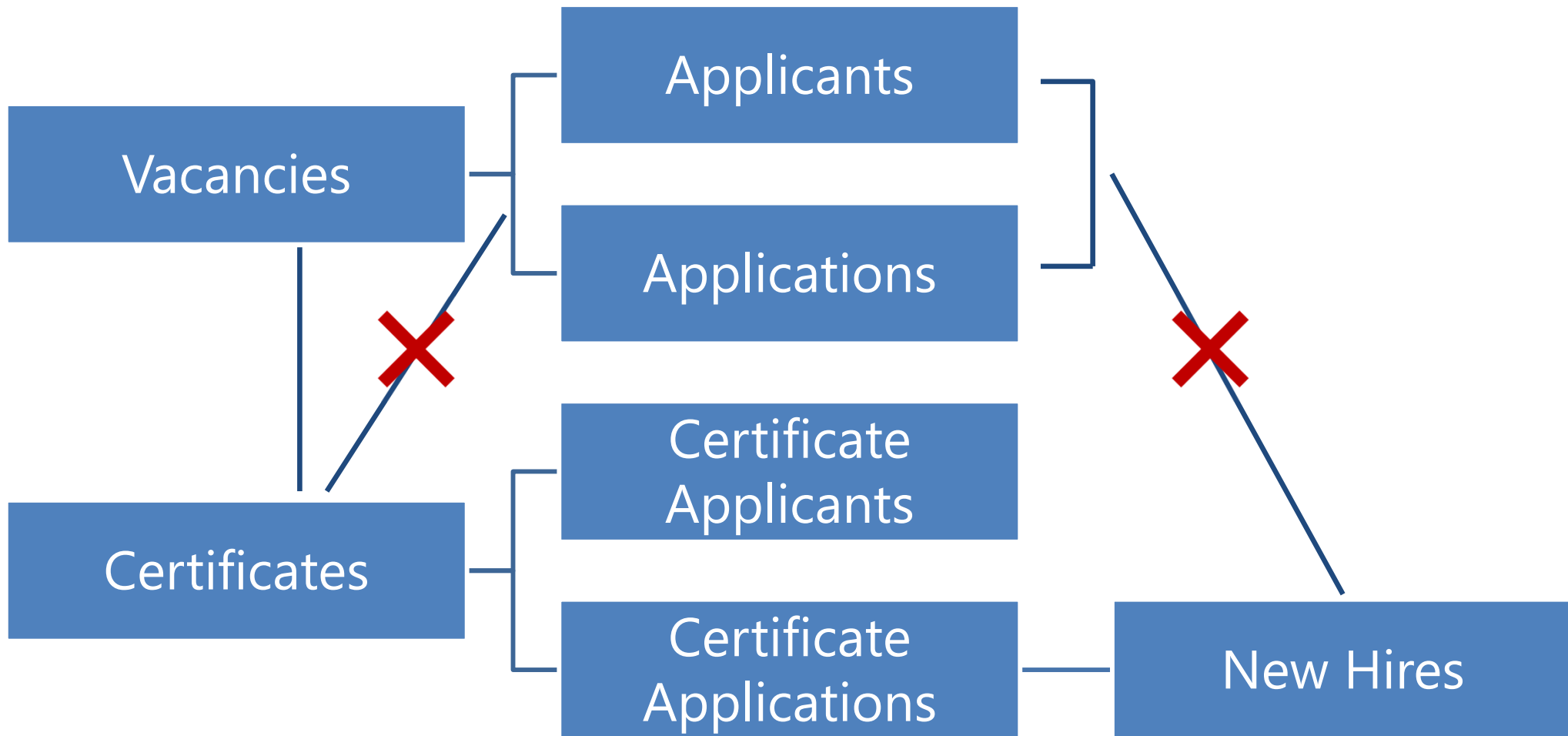
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Vacancy Number	Application Number	Applicant Name	Certificate Number	Certificate Application Number
10000055	A20XW-PEYU	Evers, Mary		
10000055	A3124-8242	Krause, Jonah		
10000055	A9374-9907	Timmons, Clare		
10000055	A9632-9301	Glatt, David	20151027-NW-001	A9632-9301
10000055	AQLT5-SP76	Holmes, Paul	20151027-NW-001	AQLT5-SP76
10000055	A5280-0949	Pruett, Aria	20151027-NW-001	A5280-0949
10000055	A9632-9301	Glatt, David	20160825-NW-001	A9632-9301
10000055	AQLT5-SP76	Holmes, Paul	20160825-NW-001	AQLT5-SP76
10000055	A5280-0949	Pruett, Aria	20160825-NW-001	A5280-0949

Non-referred applicants/applications will not have an associated Certificate Number or Certificate Application Number.



Applicant and Application Query Subjects + New Hire Query Subjects



The New Hire area is designed to only provide data about selected applications and **can** be used with data from the Certificate area, so if data about referred applicants/applications is needed, use Certificate Applicants and/or Certificate Applications.



Applicant and Application Query Subjects + New Hire Query Subjects

If data about all applicants/applications is needed, follow the same steps as you would to join the Applicant and/or Application area with the Certificate area, including New Hire data in the same query as Certificate data.

Join relationships

New Link

Application Data

- Vacancy Number
- Application Number
- Applicant Name

Certificate and New Hire Data

- Vacancy Number
- Certificate Number
- Certificate Application Number
- New Hire Number
- New Hire Name

Cardinality: 1..n Operator: = Cardinality: 0..n

Relationship impact: Each "Certificate and New Hire Data" has one or more "Application Data". Each "Application Data" has zero or more "Certificate and New Hire Data" (outer join).

Convert to expression... OK Cancel

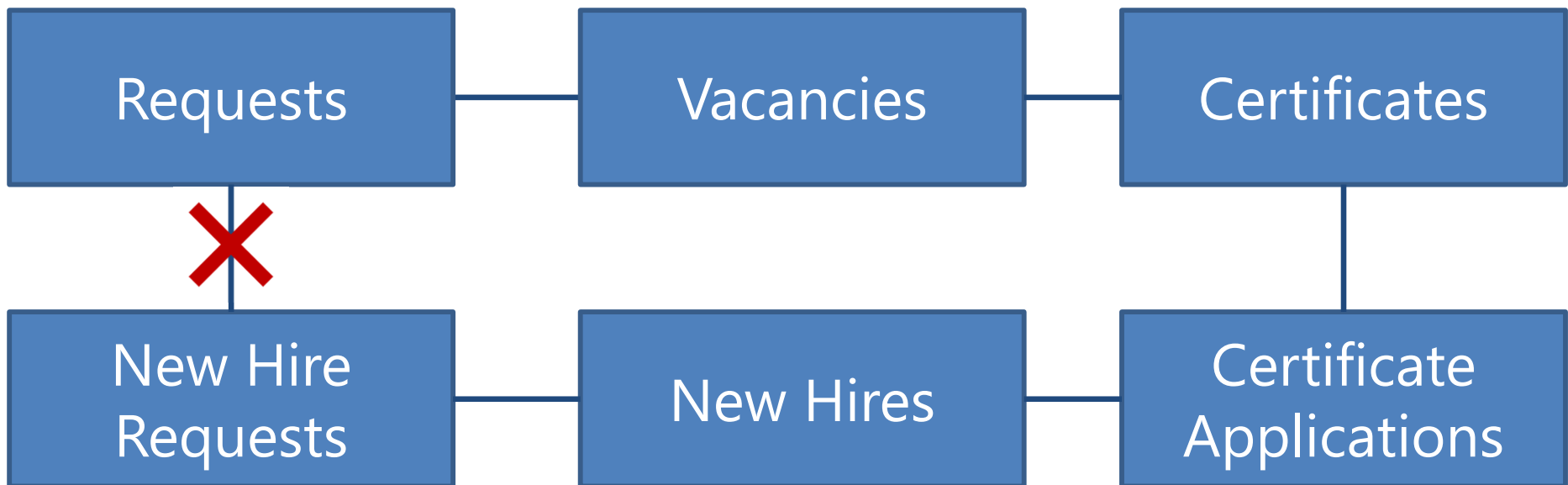
Vacancy Number	Application Number	Applicant Name	Certificate Number	Certificate Application Number	New Hire Number
10000087	ALARB-E3VS	Aarone, Aubrey D	20141107-NW-001	ALARB-E3VS	
10000087	ANIX-2W2L	Adamsway, Adam	20141107-NW-001	ANIX-2W2L	
10000087	A3HV8-9J9S	Birdy, Kevin	20141107-NW-001	A3HV8-9J9S	
10000087	AROYE-EBPA	Dayle, Christopher	20141107-NW-001	AROYE-EBPA	
10000087	AOVAL-VYCP	Eastly, Michael	20141107-NW-001	AOVAL-VYCP	
10000087	AD51X-OSLR	Gator, Gaylin	20141107-NW-001	AD51X-OSLR	
10000087	AKFRX-O1PV	Mason, Duke	20141107-NW-001	AKFRX-O1PV	
10000087	ARIJY-2EHX	Satterly, Jacob	20141107-NW-001	ARIJY-2EHX	
10000087	A9DXE-QGOF	Thornton, Lily	20141107-NW-001	A9DXE-QGOF	
10000087	AICUV-5M4K	Watson, Catilynn	20141107-NW-001	AICUV-5M4K	
10000087	AI4DX-1XG8	Ziglar, Zachary A	20141107-NW-001	AI4DX-1XG8	
10000087	ALARB-E3VS	Aarone, Aubrey D	20150415-NW-001	ALARB-E3VS	HS1KO-LTOL
10000087	A3HV8-9J9S	Birdy, Kevin	20150415-NW-001	A3HV8-9J9S	
10000087	AROYE-EBPA	Dayle, Christopher	20150415-NW-001	AROYE-EBPA	H9D1P-WMSL
10000087	AOVAL-VYCP	Eastly, Michael	20150415-NW-001	AOVAL-VYCP	
10000087	A3HV8-9J9S	Birdy, Kevin	20150423-NW-001	A3HV8-9J9S	HOCL4-CXEF
10000087	AROYE-EBPA	Dayle, Christopher	20150423-NW-001	AROYE-EBPA	

- Non-referred applicants/applications will not have an associated Certificate Number or Certificate Application Number.
- Non-selected applicants/applications will not have a New Hire Number.



Request Query Subjects + New Hire Query Subjects

The query subjects from the Requests and New Hires areas **can be used** together, however **only New Vacancy and Additional Selection request types** will appear, and **only new hires with an assigned request number** will return.



Use the **New Hire Requests query subject** in the New Hires area to include **all request types** as well as **new hires with and without an assigned a request number**.



Request Query Subjects + New Hire Query Subjects

The New Hire Request Information currently only contains the New Hire Request query subject. If additional data is needed about requests (e.g., Request Locations, Request Position Descriptions), a join can be created with the Request area.

- Create a query with data from the New Hire area (including New Hire Request data)
- Create a query with data from the Request area
- Join the two queries using a common identifier (i.e., Request Number) and identifying the nature of the relationship between the areas (not all Requests have New Hire data; not all New Hires have Request data)

Join relationships

New Link

New Hire Data

- New Hire Request Number
- New Hire Number
- New Hire Name

Request Data

- Request Number
- Request Location Description
- Request Position Description Nu
- Request Position Description Tit

Cardinality: Operator: Cardinality:

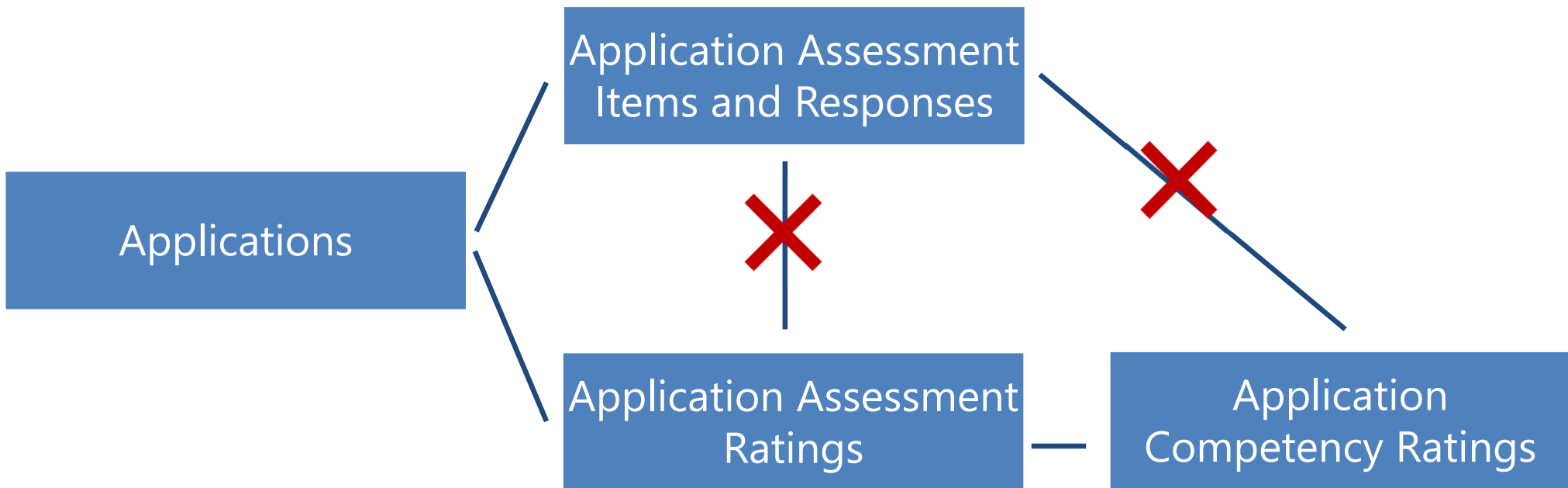
Relationship impact: Each "Request Data" has zero or more "New Hire Data" (outer join).
Each "New Hire Data" has zero or more "Request Data" (outer join).

- New Hires without an assigned request will not have request data from either area
- Requests not assigned to a new hire will not have New Hire or New Hire Request data

New Hire Request Number	New Hire Request Type	New Hire Number	New Hire Name	Request Number	Request Location Description	Request Position Description Number	Request Position Description Title
BKC-20160506-81025	New Vacancy	HHGR2-PGNQ	Mike Lyons	BKC-20160506-81025	Albany, NY United States	9SOH111	Safety and Occupational Health Manager
BKC-20160506-81025	New Vacancy	HHGR2-PGNQ	Mike Lyons	BKC-20160506-81025	Boston, MA United States	9SOH111	Safety and Occupational Health Manager
BKC-20160506-81025	New Vacancy	HHGR2-PGNQ	Mike Lyons	BKC-20160506-81025	Cleveland, OH United States	9SOH111	Safety and Occupational Health Manager
BKC-20160506-81025	New Vacancy	HHGR2-PGNQ	Mike Lyons	BKC-20160506-81025	South Bend, IN United States	9SOH111	Safety and Occupational Health Manager
BKC-20170217-93362-0001	Additional Selection	H4N5S-T46B	David Keetton	BKC-20170217-93362-0001	Wright-Patterson AFB, OH United States	9PA111	Public Affairs Officer
BLM00PMEXAMPLE	Onboard New Hire	HTU06-PGLP	BLM One	BLM00PMEXAMPLE	Alexandria, VA United States	12345 PD	Example BLM Position



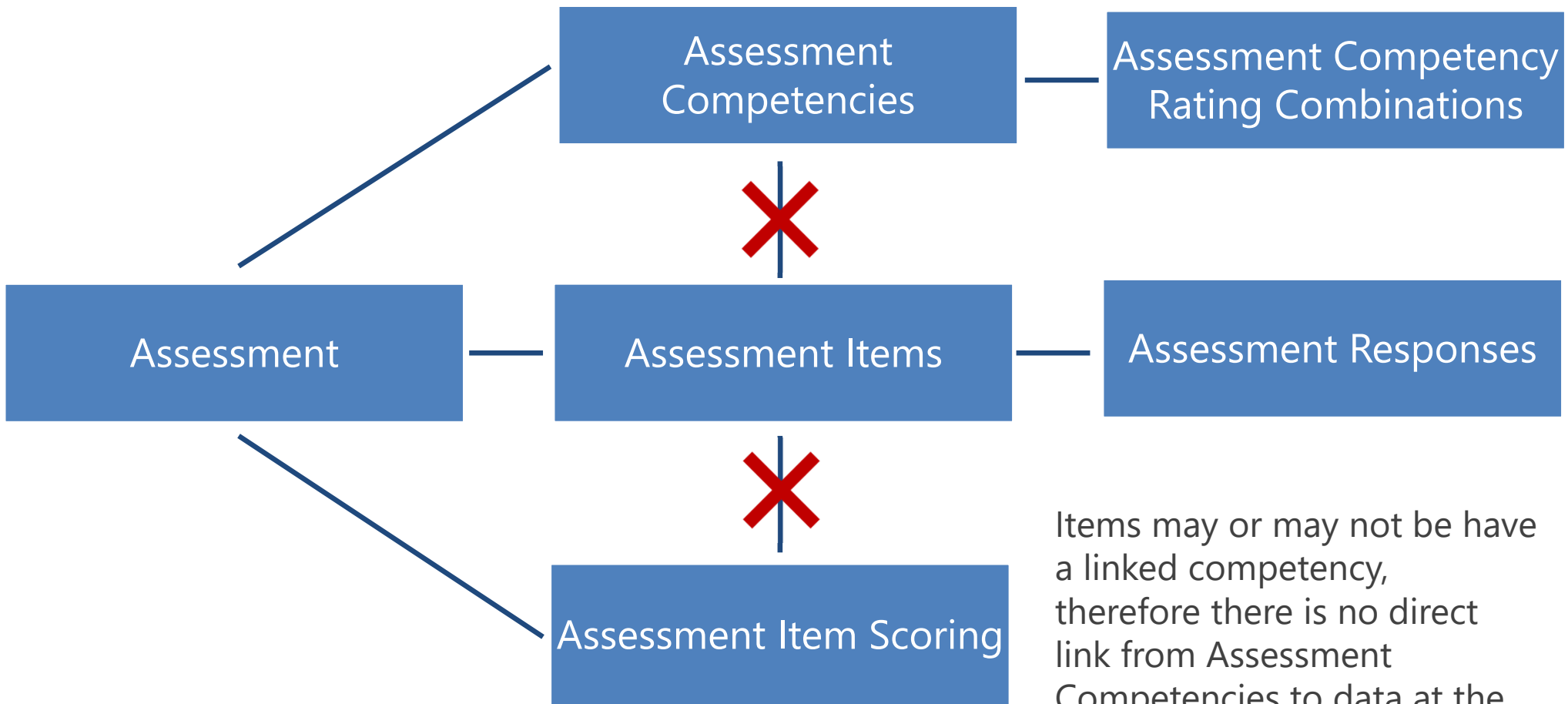
Application Assessment Items and Responses Query Subject + Application Assessment Ratings and Application Competency Ratings Query Subjects



An assessment can be used to evaluate any number of competencies for one or rating combinations, however no matter the competency (or lack thereof) or rating combination, an applicant/application only responds to items on a single occasion (i.e., no variance between rating combinations and/or competencies). For this reason, there is a direct relationship between the Application Assessment Item and Responses query subject and the Application Assessment Ratings and Application Competency Ratings query subjects.



Assessment Competencies Query Subject + Assessment Items, Assessment Responses, and Assessment Item Scoring Query Subjects



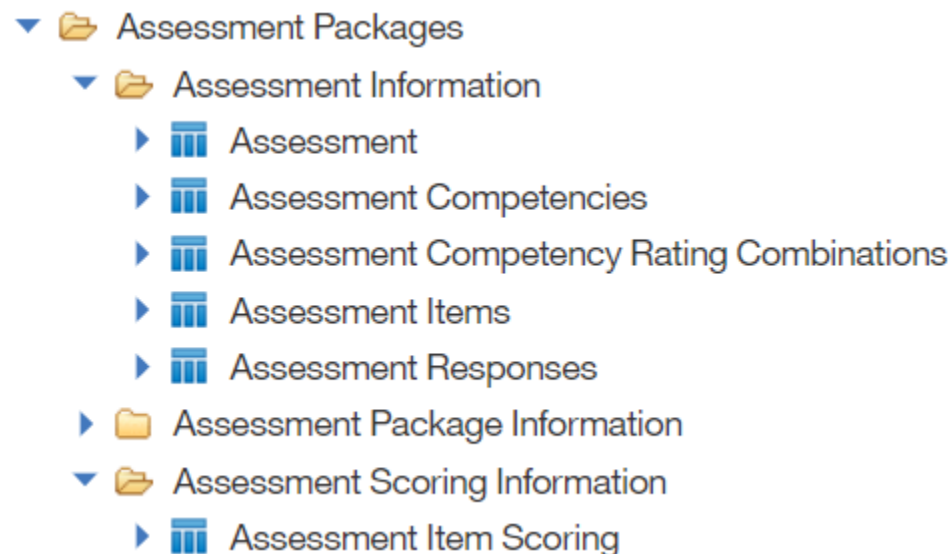
Items may or may not have a linked competency, therefore there is no direct link from Assessment Competencies to data at the item-level and below.



Assessment Competencies Query Subject + Assessment Items, Assessment Responses, and Assessment Item Scoring Query Subjects

The Assessment Items, Assessment Responses, and Assessment Item Scoring query subjects do not have direct relationships with Assessment Competencies because items may or may not be linked to a competency.

- The Assessment Items and Assessment Item Scoring query subjects include a query item to identify the linked competency (if it exists)
 - Assessment Items -> Linked Competency
 - Assessment Item Scoring -> Item Linked Competency





Assessment Competencies Query Subject + Assessment Items, Assessment Responses, and Assessment Item Scoring Query Subjects

- If you need to create a report that includes more data about competencies than is included in the Assessment Items or Assessment Item Scoring query subjects:
 - Create a query with data from the Assessment Competencies query subject
 - Create a query with data from the Assessment Items or Assessment Item Scoring query subjects
 - Join the two queries using a common identifier (e.g., Competency Title/Linked Competency) and identifying the nature of the relationship between the areas (all competencies in the Assessment Competencies area have titles in the item/item scoring area; not all items have data in the Assessment Competencies area)

Join relationships

Assessment Competencies

- Assessment Competency ID
- Assessment Competency Title
- Assessment Competency Definition
- Assessment Competency Type
- Assessment Competency Source

Assessment Items

- Assessment Item ID
- Assessment Item Number
- Assessment Item Text
- Linked Competency

Cardinality: 0..n Operator: = Cardinality: 1..n

Relationship impact: Each "Assessment Items" has zero or more "Assessment Competencies" (outer join). Each "Assessment Competencies" has one or more "Assessment Items".

Assessment Item Number	Assessment Item Text	Linked Competency	Assessment Competency Definition
1	Select the one response which best describes your education or experience that meets the Basic Qualification Requirement for the Contract Specialist GS-1102 series.		
10	Draft written documentation to support contract actions.	Writing	Recognizes or uses correct English grammar, punctuation, and spelling; communicates information (for example, facts, ideas, or messages) in a succinct and organized manner; produces written information, which may include technical material that is appropriate for the intended audience.
11	Prepare documents to support the scope of a project.	Writing	Recognizes or uses correct English grammar, punctuation, and spelling; communicates information (for example, facts, ideas, or messages) in a succinct and organized manner; produces written information, which may include technical material that is appropriate for the intended audience.
12	Prepare technical reports for review.	Writing	Recognizes or uses correct English grammar, punctuation, and spelling; communicates information (for example, facts, ideas, or messages) in a succinct and organized manner; produces written information, which may include technical material that is appropriate for the intended audience.



Resources and Contacts

IBM Cognos Analytics User Guide

The official IBM user guide for Reporting via Cognos Analytics:

https://www.ibm.com/support/knowledgecenter/SSEP7J_11.0.0/com.ibm.swg.ba.cognos.ug_cr_rptstd.doc/ug_cr_rptstd.pdf?view=kc

USA Staffing Resource Center

Under the Reports and Analytics section, you'll find presentations from previous workgroup sessions and other resources:

https://help.usastaffing.gov/ResourceCenter/index.php?title=USA_Staffing_Resource_Center

Need Help?

If you are experiencing issues accessing Cognos or need help to create or troubleshoot a report, submit a HelpDesk ticket through USA Staffing. If you are unable to submit a HelpDesk ticket, please contact us at

USASTaffingData@opm.gov