Relations

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# Introduction

This document tries to describe how relations are stored in each Source System. Currently there is a section for ESL, Assetcenter and OVSD.

# ESL Parent Relations

## Introduction

This section attempts to describe the how the ESL Relations are used in the ALU environment. The document collects the information from reading through the ESL Relations and deducing the logic behind the data in the Relations File.

This document focuses on relations between Systems in ESL. Relations between Instances and Solutions are threaded in another way and are not in the scope of the document.

Apparantly ESL always uses Parent-Child Relationships. A relation is always from one system to another system. So the Parent Relationship report in ESL provides the same data as the Child Relationship report, except that the Full Node Name and the Parent System / Child System are switched. Investigating the Parent Relationship Report provides all data, investigating the Child Relationship report does not provide any additional data.

Note that Relations between Systems go across sub-business boundaries. As a consequence a Relation Report needs to go across all sub-systems.

Query:

SELECT x.`Parent System`, e.`Sub Business Name`, x.`Sub Business Name`

FROM `esl\_relations` x, `esl\_cs\_techn\_gen` e

WHERE (x.`Parent System` = e.`Full Nodename`)

and not (e.`Sub Business Name` = x.`Sub Business Name`)

and not (x.`Parent System` = ".")

Result:

|  | | |
| --- | --- | --- |
| [**Parent System**](http://localhost/phpMyAdmin-3.2.0.1-english/sql.php?db=alu_cmdb&table=esl_relations&sql_query=select+x.%60Parent+System%60%2C+e.%60Sub+Business+Name%60%2C+x.%60Sub+Business+Name%60+FROM+%60esl_relations%60+x%2C+%60esl_cs_techn_gen%60+e+%0A%0Awhere+%28x.%60Parent+System%60+%3D+e.%60Full+Nodename%60%29%0Aand+not+%28e.%60Sub+Business+Name%60+%3D+x.%60Sub+Business+Name%60%29%0Aand+not+%28x.%60Parent+System%60+%3D+%22.%22%29+ORDER+BY+%60x%60.%60Parent+System%60+ASC&token=886363bc8a0498c7a1126a61c6299198) | [**Sub Business Name**](http://localhost/phpMyAdmin-3.2.0.1-english/sql.php?db=alu_cmdb&table=esl_relations&sql_query=select+x.%60Parent+System%60%2C+e.%60Sub+Business+Name%60%2C+x.%60Sub+Business+Name%60+FROM+%60esl_relations%60+x%2C+%60esl_cs_techn_gen%60+e+%0A%0Awhere+%28x.%60Parent+System%60+%3D+e.%60Full+Nodename%60%29%0Aand+not+%28e.%60Sub+Business+Name%60+%3D+x.%60Sub+Business+Name%60%29%0Aand+not+%28x.%60Parent+System%60+%3D+%22.%22%29+ORDER+BY+%60e%60.%60Sub+Business+Name%60+ASC&token=886363bc8a0498c7a1126a61c6299198) | [**Sub Business Name**](http://localhost/phpMyAdmin-3.2.0.1-english/sql.php?db=alu_cmdb&table=esl_relations&sql_query=select+x.%60Parent+System%60%2C+e.%60Sub+Business+Name%60%2C+x.%60Sub+Business+Name%60+FROM+%60esl_relations%60+x%2C+%60esl_cs_techn_gen%60+e+%0A%0Awhere+%28x.%60Parent+System%60+%3D+e.%60Full+Nodename%60%29%0Aand+not+%28e.%60Sub+Business+Name%60+%3D+x.%60Sub+Business+Name%60%29%0Aand+not+%28x.%60Parent+System%60+%3D+%22.%22%29+ORDER+BY+%60x%60.%60Sub+Business+Name%60+ASC&token=886363bc8a0498c7a1126a61c6299198) |
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| fr70wwvcn001.zeu.alcatel-lucent.com | ALU-EMEA | ALU-Transformation |
| fr70wwvcn001.zeu.alcatel-lucent.com | ALU-EMEA | ALU-Transformation |
| sg70xasxp001.zap.alcatel-lucent.com | ALU-APJ | ALU-EMEA |
| sg70xhnod003.zap.alcatel-lucent.com | ALU-APJ | ALU-EMEA |
| sg70xhnod004.zap.alcatel-lucent.com | ALU-APJ | ALU-EMEA |
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| sg70yvvmc002.zap.alcatel-lucent.com | ALU-APJ | ALU-EMEA |
| us70tvvmc002.zam.alcatel-lucent.com | ALU-AMS | CMO Martinique |
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## Cluster Type Relations

### Cluster Node Primary / Alternate

According to the ESL Guidelines in Presentation “esl\_cluster\_virtual.ppt” Cluster Nodes are Parents for the Cluster Package, using relationship type “Cluster Node Primary” or “Cluster Node Alternate”.

Query: “SELECT `Full Nodename`, `Parent System` FROM `esl\_relations` WHERE `Parent Relation Type` = "Cluster Node Primary"

Extract from the Result

|  | | | [**Full Nodename**](http://localhost/phpMyAdmin-3.2.0.1-english/sql.php?db=alu_cmdb&table=esl_relations&sql_query=SELECT+%60Full+Nodename%60%2C+%60Parent+System%60+FROM+%60esl_relations%60+WHERE+%60Parent+Relation+Type%60+%3D+%22Cluster+Node+Primary%22+ORDER+BY+%60esl_relations%60.%60Full+Nodename%60+ASC&token=886363bc8a0498c7a1126a61c6299198)  **should be: Cluster Package** | [**Parent System**](http://localhost/phpMyAdmin-3.2.0.1-english/sql.php?db=alu_cmdb&table=esl_relations&sql_query=SELECT+%60Full+Nodename%60%2C+%60Parent+System%60+FROM+%60esl_relations%60+WHERE+%60Parent+Relation+Type%60+%3D+%22Cluster+Node+Primary%22+ORDER+BY+%60esl_relations%60.%60Parent+System%60+ASC&token=886363bc8a0498c7a1126a61c6299198)  **should be: Cluster Node** |
| --- | --- | --- | --- | --- |
|  | [Edit](http://localhost/phpMyAdmin-3.2.0.1-english/tbl_change.php?db=alu_cmdb&table=esl_relations&primary_key=%60esl_relations%60.%60Full+Nodename%60+=+'fr70whnod004.zeu.alcatel-lucent.com'+AND+%60esl_relations%60.%60Parent+System%60+=+'fr70whnod002.zeu.alcatel-lucent.com'&sql_query=SELECT+%60Full+Nodename%60,+%60Parent+System%60+FROM+%60esl_relations%60+WHERE+%60Parent+Relation+Type%60+=+%22Cluster+Node+Primary%22&goto=sql.php&token=886363bc8a0498c7a1126a61c6299198) | [Delete](http://localhost/phpMyAdmin-3.2.0.1-english/sql.php?db=alu_cmdb&table=esl_relations&sql_query=DELETE+FROM+%60alu_cmdb%60.%60esl_relations%60+WHERE+%60esl_relations%60.%60Full+Nodename%60+=+'fr70whnod004.zeu.alcatel-lucent.com'+AND+%60esl_relations%60.%60Parent+System%60+=+'fr70whnod002.zeu.alcatel-lucent.com'+LIMIT+1&zero_rows=The+row+has+been+deleted&goto=sql.php?db=alu_cmdb&table=esl_relations&sql_query=SELECT+%60Full+Nodename%60,+%60Parent+System%60+FROM+%60esl_relations%60+WHERE+%60Parent+Relation+Type%60+=+%22Cluster+Node+Primary%22&zero_rows=The+row+has+been+deleted&goto=tbl_sql.php&token=886363bc8a0498c7a1126a61c6299198&token=886363bc8a0498c7a1126a61c6299198) | fr70whnod004.zeu.alcatel-lucent.com  *Name nod004 as expected??* | fr70whnod002.zeu.alcatel-lucent.com |
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|  | [Edit](http://localhost/phpMyAdmin-3.2.0.1-english/tbl_change.php?db=alu_cmdb&table=esl_relations&primary_key=%60esl_relations%60.%60Full+Nodename%60+=+'fr70wwnod004.zeu.alcatel-lucent.com'+AND+%60esl_relations%60.%60Parent+System%60+=+'fr70wwnod003.zeu.alcatel-lucent.com'&sql_query=SELECT+%60Full+Nodename%60,+%60Parent+System%60+FROM+%60esl_relations%60+WHERE+%60Parent+Relation+Type%60+=+%22Cluster+Node+Primary%22&goto=sql.php&token=886363bc8a0498c7a1126a61c6299198) | [Delete](http://localhost/phpMyAdmin-3.2.0.1-english/sql.php?db=alu_cmdb&table=esl_relations&sql_query=DELETE+FROM+%60alu_cmdb%60.%60esl_relations%60+WHERE+%60esl_relations%60.%60Full+Nodename%60+=+'fr70wwnod004.zeu.alcatel-lucent.com'+AND+%60esl_relations%60.%60Parent+System%60+=+'fr70wwnod003.zeu.alcatel-lucent.com'+LIMIT+1&zero_rows=The+row+has+been+deleted&goto=sql.php?db=alu_cmdb&table=esl_relations&sql_query=SELECT+%60Full+Nodename%60,+%60Parent+System%60+FROM+%60esl_relations%60+WHERE+%60Parent+Relation+Type%60+=+%22Cluster+Node+Primary%22&zero_rows=The+row+has+been+deleted&goto=tbl_sql.php&token=886363bc8a0498c7a1126a61c6299198&token=886363bc8a0498c7a1126a61c6299198) | fr70wwnod004.zeu.alcatel-lucent.com | fr70wwnod003.zeu.alcatel-lucent.com |
|  | [Edit](http://localhost/phpMyAdmin-3.2.0.1-english/tbl_change.php?db=alu_cmdb&table=esl_relations&primary_key=%60esl_relations%60.%60Full+Nodename%60+=+'fr70wwnod006.zeu.alcatel-lucent.com'+AND+%60esl_relations%60.%60Parent+System%60+=+'fr70wwnod005.zeu.alcatel-lucent.com'&sql_query=SELECT+%60Full+Nodename%60,+%60Parent+System%60+FROM+%60esl_relations%60+WHERE+%60Parent+Relation+Type%60+=+%22Cluster+Node+Primary%22&goto=sql.php&token=886363bc8a0498c7a1126a61c6299198) | [Delete](http://localhost/phpMyAdmin-3.2.0.1-english/sql.php?db=alu_cmdb&table=esl_relations&sql_query=DELETE+FROM+%60alu_cmdb%60.%60esl_relations%60+WHERE+%60esl_relations%60.%60Full+Nodename%60+=+'fr70wwnod006.zeu.alcatel-lucent.com'+AND+%60esl_relations%60.%60Parent+System%60+=+'fr70wwnod005.zeu.alcatel-lucent.com'+LIMIT+1&zero_rows=The+row+has+been+deleted&goto=sql.php?db=alu_cmdb&table=esl_relations&sql_query=SELECT+%60Full+Nodename%60,+%60Parent+System%60+FROM+%60esl_relations%60+WHERE+%60Parent+Relation+Type%60+=+%22Cluster+Node+Primary%22&zero_rows=The+row+has+been+deleted&goto=tbl_sql.php&token=886363bc8a0498c7a1126a61c6299198&token=886363bc8a0498c7a1126a61c6299198) | fr70wwnod006.zeu.alcatel-lucent.com | fr70wwnod005.zeu.alcatel-lucent.com |
|  | [Edit](http://localhost/phpMyAdmin-3.2.0.1-english/tbl_change.php?db=alu_cmdb&table=esl_relations&primary_key=%60esl_relations%60.%60Full+Nodename%60+=+'fr70wwnod999.zeu.alcatel-lucent.com'+AND+%60esl_relations%60.%60Parent+System%60+=+'fr70wwnod998.zeu.alcatel-lucent.com'&sql_query=SELECT+%60Full+Nodename%60,+%60Parent+System%60+FROM+%60esl_relations%60+WHERE+%60Parent+Relation+Type%60+=+%22Cluster+Node+Primary%22&goto=sql.php&token=886363bc8a0498c7a1126a61c6299198) | [Delete](http://localhost/phpMyAdmin-3.2.0.1-english/sql.php?db=alu_cmdb&table=esl_relations&sql_query=DELETE+FROM+%60alu_cmdb%60.%60esl_relations%60+WHERE+%60esl_relations%60.%60Full+Nodename%60+=+'fr70wwnod999.zeu.alcatel-lucent.com'+AND+%60esl_relations%60.%60Parent+System%60+=+'fr70wwnod998.zeu.alcatel-lucent.com'+LIMIT+1&zero_rows=The+row+has+been+deleted&goto=sql.php?db=alu_cmdb&table=esl_relations&sql_query=SELECT+%60Full+Nodename%60,+%60Parent+System%60+FROM+%60esl_relations%60+WHERE+%60Parent+Relation+Type%60+=+%22Cluster+Node+Primary%22&zero_rows=The+row+has+been+deleted&goto=tbl_sql.php&token=886363bc8a0498c7a1126a61c6299198&token=886363bc8a0498c7a1126a61c6299198) | fr70wwnod999.zeu.alcatel-lucent.com | fr70wwnod998.zeu.alcatel-lucent.com |
|  | [Edit](http://localhost/phpMyAdmin-3.2.0.1-english/tbl_change.php?db=alu_cmdb&table=esl_relations&primary_key=%60esl_relations%60.%60Full+Nodename%60+=+'sg70xhdpc002.zap.alcatel-lucent.com'+AND+%60esl_relations%60.%60Parent+System%60+=+'sg70xhnod003.zap.alcatel-lucent.com'&sql_query=SELECT+%60Full+Nodename%60,+%60Parent+System%60+FROM+%60esl_relations%60+WHERE+%60Parent+Relation+Type%60+=+%22Cluster+Node+Primary%22&goto=sql.php&token=886363bc8a0498c7a1126a61c6299198) | [Delete](http://localhost/phpMyAdmin-3.2.0.1-english/sql.php?db=alu_cmdb&table=esl_relations&sql_query=DELETE+FROM+%60alu_cmdb%60.%60esl_relations%60+WHERE+%60esl_relations%60.%60Full+Nodename%60+=+'sg70xhdpc002.zap.alcatel-lucent.com'+AND+%60esl_relations%60.%60Parent+System%60+=+'sg70xhnod003.zap.alcatel-lucent.com'+LIMIT+1&zero_rows=The+row+has+been+deleted&goto=sql.php?db=alu_cmdb&table=esl_relations&sql_query=SELECT+%60Full+Nodename%60,+%60Parent+System%60+FROM+%60esl_relations%60+WHERE+%60Parent+Relation+Type%60+=+%22Cluster+Node+Primary%22&zero_rows=The+row+has+been+deleted&goto=tbl_sql.php&token=886363bc8a0498c7a1126a61c6299198&token=886363bc8a0498c7a1126a61c6299198) | sg70xhdpc002.zap.alcatel-lucent.com | sg70xhnod003.zap.alcatel-lucent.com |
|  | [Edit](http://localhost/phpMyAdmin-3.2.0.1-english/tbl_change.php?db=alu_cmdb&table=esl_relations&primary_key=%60esl_relations%60.%60Full+Nodename%60+=+'sg70xwnod009.zap.alcatel-lucent.com'+AND+%60esl_relations%60.%60Parent+System%60+=+'sg70xwclu003.zap.alcatel-lucent.com'&sql_query=SELECT+%60Full+Nodename%60,+%60Parent+System%60+FROM+%60esl_relations%60+WHERE+%60Parent+Relation+Type%60+=+%22Cluster+Node+Primary%22&goto=sql.php&token=886363bc8a0498c7a1126a61c6299198) | [Delete](http://localhost/phpMyAdmin-3.2.0.1-english/sql.php?db=alu_cmdb&table=esl_relations&sql_query=DELETE+FROM+%60alu_cmdb%60.%60esl_relations%60+WHERE+%60esl_relations%60.%60Full+Nodename%60+=+'sg70xwnod009.zap.alcatel-lucent.com'+AND+%60esl_relations%60.%60Parent+System%60+=+'sg70xwclu003.zap.alcatel-lucent.com'+LIMIT+1&zero_rows=The+row+has+been+deleted&goto=sql.php?db=alu_cmdb&table=esl_relations&sql_query=SELECT+%60Full+Nodename%60,+%60Parent+System%60+FROM+%60esl_relations%60+WHERE+%60Parent+Relation+Type%60+=+%22Cluster+Node+Primary%22&zero_rows=The+row+has+been+deleted&goto=tbl_sql.php&token=886363bc8a0498c7a1126a61c6299198&token=886363bc8a0498c7a1126a61c6299198) | sg70xwnod009.zap.alcatel-lucent.com | sg70xwclu003.zap.alcatel-lucent.com  *Suspiscious Name!* |
|  | [Edit](http://localhost/phpMyAdmin-3.2.0.1-english/tbl_change.php?db=alu_cmdb&table=esl_relations&primary_key=%60esl_relations%60.%60Full+Nodename%60+=+'sg70xwsql001.zap.alcatel-lucent.com'+AND+%60esl_relations%60.%60Parent+System%60+=+'sg70xwnod009.zap.alcatel-lucent.com'&sql_query=SELECT+%60Full+Nodename%60,+%60Parent+System%60+FROM+%60esl_relations%60+WHERE+%60Parent+Relation+Type%60+=+%22Cluster+Node+Primary%22&goto=sql.php&token=886363bc8a0498c7a1126a61c6299198) | [Delete](http://localhost/phpMyAdmin-3.2.0.1-english/sql.php?db=alu_cmdb&table=esl_relations&sql_query=DELETE+FROM+%60alu_cmdb%60.%60esl_relations%60+WHERE+%60esl_relations%60.%60Full+Nodename%60+=+'sg70xwsql001.zap.alcatel-lucent.com'+AND+%60esl_relations%60.%60Parent+System%60+=+'sg70xwnod009.zap.alcatel-lucent.com'+LIMIT+1&zero_rows=The+row+has+been+deleted&goto=sql.php?db=alu_cmdb&table=esl_relations&sql_query=SELECT+%60Full+Nodename%60,+%60Parent+System%60+FROM+%60esl_relations%60+WHERE+%60Parent+Relation+Type%60+=+%22Cluster+Node+Primary%22&zero_rows=The+row+has+been+deleted&goto=tbl_sql.php&token=886363bc8a0498c7a1126a61c6299198&token=886363bc8a0498c7a1126a61c6299198) | sg70xwsql001.zap.alcatel-lucent.com | sg70xwnod009.zap.alcatel-lucent.com |

### Cluster

A Cluster Relation is between cluster node (child) and Cluster CI, and between Cluster Package (child) and Cluster CI.

This is to be verified!

## Virtual Environment Type Relations

### Introduction

There are 5 types of relations that can be related to virtual environments:

Query:

**SELECT** COUNT( \* ) **AS** `Rows` , `Parent Relation Type`   
**FROM** `esl\_relations`   
**WHERE** `Parent Relation Type` **LIKE** '%Farm%'  
**OR** `Parent Relation Type` **LIKE** '%Virtual%'  
**GROUP** **BY** `Parent Relation Type`   
**ORDER** **BY** `Parent Relation Type`

Result:

|  | |
| --- | --- |
| [**Rows**](http://localhost/phpMyAdmin-3.2.0.1-english/sql.php?db=alu_cmdb&table=esl_relations&sql_query=SELECT+COUNT%28%2A%29+AS+%60Rows%60%2C+%60Parent+Relation+Type%60+FROM+%60esl_relations%60+%0AWHERE+%60Parent+Relation+Type%60+like+%27%25Farm%25%27+%0AOR+%60Parent+Relation+Type%60+like+%27%25Virtual%25%27%0AGROUP+BY+%60Parent+Relation+Type%60+ORDER+BY+%60Rows%60+ASC&token=886363bc8a0498c7a1126a61c6299198) | [**Parent Relation Type [Ascending](http://localhost/phpMyAdmin-3.2.0.1-english/sql.php?db=alu_cmdb&table=esl_relations&sql_query=SELECT+COUNT(*)+AS+%60Rows%60,+%60Parent+Relation+Type%60+FROM+%60esl_relations%60+%0aWHERE+%60Parent+Relation+Type%60+like+'%Farm%25'+%0aOR+%60Parent+Relation+Type%60+like+'%25Virtual%25'%0aGROUP+BY+%60Parent+Relation+Type%60+ORDER+BY+%60esl_relations%60.%60Parent+Relation+Type%60++DESC&token=886363bc8a0498c7a1126a61c6299198)**](http://localhost/phpMyAdmin-3.2.0.1-english/sql.php?db=alu_cmdb&table=esl_relations&sql_query=SELECT+COUNT%28%2A%29+AS+%60Rows%60%2C+%60Parent+Relation+Type%60+FROM+%60esl_relations%60+%0AWHERE+%60Parent+Relation+Type%60+like+%27%25Farm%25%27+%0AOR+%60Parent+Relation+Type%60+like+%27%25Virtual%25%27%0AGROUP+BY+%60Parent+Relation+Type%60+ORDER+BY+%60esl_relations%60.%60Parent+Relation+Type%60++DESC&token=886363bc8a0498c7a1126a61c6299198) |
| 1444 | Farm |
| 122 | Farm for Virtual Guest |
| 391 | Server for Virtual Guest |
| 222 | Virtual Center Manager |
| 246 | Virtual Host |

### Farm

A Farm relation should be there between a Farm (Parent) and a Server for Virtual Guest (Child) or between a Farm (Parent) and a Virtual Guest (Child).

### Farm for Virtual Guest

This relation should not be used anymore. The assumption is that the behaviour is the same as for a Farm.

### Server for Virtual Guest

In type 1 (No farm, 1 physical server running multiple virtual servers): relation between Physical Server (Parent) and the Virtual Guests (Child).

In type 2 (Farm, some physical servers running many virtual servers): relation between Physical Server (**Child!**) and Farm (Parent).

### Virtual Center Manager

This relation should go from a (Physical / Virtual) Computersystem (Parent) and a Farm (Child).

It has been seen to go from a Computersystem to the elements that make up the farm (‘Server for Virtual Guests’ and ‘Virtual guests’).

### Virtual Host

This relation should not be used anymore. The assumption is that the behaviour is the same as for a ‘Server for Virtual Guest’.

# AssetCenter

## Introduction

Assetcenter relations are described in the document “Logical-virtual servers in the CMDB”.

A Logical Server is a service / application running on a machine with a dedicated hostname / ip address.

In ESL terminology, a Logical Server is a Cluster or a Cluster Package. ESL Farm (Virtual environment) is also represented by a Logical Server.

A Virtual Server is a second or additional OS Instance on a server platform.

In ESL terminology, a Virtual Server is a Virtual Guest.

A Logical Server Relation links a Logical Server to a physical machine.

A Virtual Server Relation links a Virtual Server to a physical machine OR to a Logical Server.

Note that in Assetcenter Solaris Zones are represented by Logical Servers, while in ESL these are represented by Virtual Servers.

## Relations from Global\_EMEA\_Mapping\_SOL\_LOG

### Introduction

This section is the documentation from the initial review of the relations in Assetcenter. Although it may help to review many relations, it the mean time the ALL\_RELATIONS data extract has been used to show all possible data relations.

This section should be absorbed by other sections if possible.

### Description

Assetcenter relations are extracted from the report Global\_EMEA\_Mapping\_SOL\_LOG\_VIRTUAL to physical SRV\_1310.xlsx.

In fact the Relation is the Logical CI Type of the Target Server:

SELECT `TargetName`, `Target` FROM `a7\_glob\_rel` g, a7\_servers s WHERE `Relation` like "%Server"

and g.`TargetName` = s.`\*° Hostname / inst`

and not (g.`Relation` = s.`\* Logical CI type`)

| [**count(\*)**](http://localhost/phpMyAdmin-3.2.0.1-english/sql.php?db=alu_cmdb&table=a7_glob_rel&sql_query=SELECT+count%28%2A%29%2C%60Source%60%2C+%60Target%60%2C+%60Relation%60+FROM+%60a7_glob_rel%60+group+by+%60Source%60%2C+%60Target%60%2C+%60Relation%60+ORDER+BY+count%28%2A%29+ASC&token=dc9edbf71e939f8c8d874617243a1fcc) | [**Source**](http://localhost/phpMyAdmin-3.2.0.1-english/sql.php?db=alu_cmdb&table=a7_glob_rel&sql_query=SELECT+count%28%2A%29%2C%60Source%60%2C+%60Target%60%2C+%60Relation%60+FROM+%60a7_glob_rel%60+group+by+%60Source%60%2C+%60Target%60%2C+%60Relation%60+ORDER+BY+%60a7_glob_rel%60.%60Source%60+ASC&token=dc9edbf71e939f8c8d874617243a1fcc) | [**Target**](http://localhost/phpMyAdmin-3.2.0.1-english/sql.php?db=alu_cmdb&table=a7_glob_rel&sql_query=SELECT+count%28%2A%29%2C%60Source%60%2C+%60Target%60%2C+%60Relation%60+FROM+%60a7_glob_rel%60+group+by+%60Source%60%2C+%60Target%60%2C+%60Relation%60+ORDER+BY+%60a7_glob_rel%60.%60Target%60+ASC&token=dc9edbf71e939f8c8d874617243a1fcc) | [**Relation**](http://localhost/phpMyAdmin-3.2.0.1-english/sql.php?db=alu_cmdb&table=a7_glob_rel&sql_query=SELECT+count%28%2A%29%2C%60Source%60%2C+%60Target%60%2C+%60Relation%60+FROM+%60a7_glob_rel%60+group+by+%60Source%60%2C+%60Target%60%2C+%60Relation%60+ORDER+BY+%60a7_glob_rel%60.%60Relation%60+ASC&token=dc9edbf71e939f8c8d874617243a1fcc) |  |
| --- | --- | --- | --- | --- |
| 722 | Log/Virt | Log/Virt | Logical Server | Cluster Package on Virtual Cluster Node |
| 15 | Log/Virt | Log/Virt | Virtual Server | ? |
| 743 | Log/Virt | Sol1 | Running On |  |
| 404 | Log/Virt 2 | Sol1 | Running On |  |
| 887 | PhysServer | Log/Virt | Logical Server | Cluster Package on Physical Cluster Node |
| 3080 | PhysServer | Log/Virt | Virtual Server | Virtual System on Physical Node |
| 2943 | PhysServer | Sol1 | Running On |  |
| 610 | Sol1 | Sol2 | Dependency |  |

15 Relations are indicated for further investigation.

Not sure if this file shoul be used, or the extraxt with all relations “HP\_ALU\_SLM\_2011\_09\_22\_ALL\_RELATIONS\_V1.xlsx”.

### Cluster Resource Group Relations (use All\_Relations instead)

As a temporary placeholder, please review next section instead.

Query:

SELECT count(\*), `\*° Impact direction`, `\*° Relation type` FROM `a7\_all\_relations` WHERE `\*° Hostname / inst (\*° Distant CI)` in (select `\*° Hostname / inst` from a7\_servers where `\* Logical CI type` = "Logical Server") and `Reason (\*° Distant CI)` is null

group by `\*° Impact direction`,`\*° Relation type`

Result:

| [**count(\*)**](http://localhost/phpMyAdmin-3.2.0.1-english/sql.php?db=alu_cmdb&table=a7_all_relations&sql_query=SELECT+count%28%2A%29%2C+%60%2A%C2%B0+Impact+direction%60%2C+%60%2A%C2%B0+Relation+type%60+FROM+%60a7_all_relations%60+WHERE+%60%2A%C2%B0+Hostname+%2F+inst+%28%2A%C2%B0+Distant+CI%29%60+in+%28select+%60%2A%C2%B0+Hostname+%2F+inst%60+from+a7_servers+where+%60%2A+Logical+CI+type%60+%3D+%22Logical+Server%22%29+and+%60Reason+%28%2A%C2%B0+Distant+CI%29%60+is+null%0Agroup+by+%60%2A%C2%B0+Impact+direction%60%2C%60%2A%C2%B0+Relation+type%60+ORDER+BY+count%28%2A%29+ASC&token=17eed01d65ca2007300b86741430233b) | [**\*° Impact direction**](http://localhost/phpMyAdmin-3.2.0.1-english/sql.php?db=alu_cmdb&table=a7_all_relations&sql_query=SELECT+count%28%2A%29%2C+%60%2A%C2%B0+Impact+direction%60%2C+%60%2A%C2%B0+Relation+type%60+FROM+%60a7_all_relations%60+WHERE+%60%2A%C2%B0+Hostname+%2F+inst+%28%2A%C2%B0+Distant+CI%29%60+in+%28select+%60%2A%C2%B0+Hostname+%2F+inst%60+from+a7_servers+where+%60%2A+Logical+CI+type%60+%3D+%22Logical+Server%22%29+and+%60Reason+%28%2A%C2%B0+Distant+CI%29%60+is+null%0Agroup+by+%60%2A%C2%B0+Impact+direction%60%2C%60%2A%C2%B0+Relation+type%60+ORDER+BY+%60a7_all_relations%60.%60%2A%C2%B0+Impact+direction%60+ASC&token=17eed01d65ca2007300b86741430233b) | [**\*° Relation type**](http://localhost/phpMyAdmin-3.2.0.1-english/sql.php?db=alu_cmdb&table=a7_all_relations&sql_query=SELECT+count%28%2A%29%2C+%60%2A%C2%B0+Impact+direction%60%2C+%60%2A%C2%B0+Relation+type%60+FROM+%60a7_all_relations%60+WHERE+%60%2A%C2%B0+Hostname+%2F+inst+%28%2A%C2%B0+Distant+CI%29%60+in+%28select+%60%2A%C2%B0+Hostname+%2F+inst%60+from+a7_servers+where+%60%2A+Logical+CI+type%60+%3D+%22Logical+Server%22%29+and+%60Reason+%28%2A%C2%B0+Distant+CI%29%60+is+null%0Agroup+by+%60%2A%C2%B0+Impact+direction%60%2C%60%2A%C2%B0+Relation+type%60+ORDER+BY+%60a7_all_relations%60.%60%2A%C2%B0+Relation+type%60+ASC&token=17eed01d65ca2007300b86741430233b) |  |
| --- | --- | --- | --- |
| 88 | *NULL* | *NULL* |  |
| 5 | *NULL* | Backup |  |
| 44 | *NULL* | Logical Server |  |
| 2 | *NULL* | Solution |  |
| 35 | *NULL* | Virtual Server |  |
| 7 | Both directions | *NULL* |  |
| 3 | Both directions | Backup |  |
| 40 | Both directions | Logical Server |  |
| 11 | Both directions | Primary-failover cluster nodes |  |
| 3 | Both directions | Solution | Application – CRG both directions |
| 16 | Both directions | Virtual Server |  |
| 1 | Local impacted by Distant | *NULL* |  |
| 42 | Local impacted by Distant | Backup |  |
| 1 | Local impacted by Distant | Cus\_Sol\_Relation |  |
| 18 | Local impacted by Distant | Cus\_Srv\_Relation |  |
| 233 | Local impacted by Distant | Logical Server |  |
| 1 | Local impacted by Distant | Monitoring |  |
| 46 | Local impacted by Distant | OVSD\_Dependency |  |
| 6 | Local impacted by Distant | Scheduling |  |
| 584 | Local impacted by Distant | Solution |  |
| 240 | Local impacted by Distant | Virtual Server |  |
| 1 | Local impacts Distant | *NULL* |  |
| 15 | Local impacts Distant | Backup |  |
| 558 | Local impacts Distant | Logical Server |  |
| 128 | Local impacts Distant | Solution |  |
| 5 | Local impacts Distant | Storage |  |
| 269 | Local impacts Distant | Virtual Server |  |

## All Assetcenter Relations

### Introduction – Preparation of the Data

Source: HP\_ALU\_SLM\_2011\_09\_22\_ALL\_RELATIONS\_V1.xlsx

Target: a7\_all\_relations

Run script a7\_all\_relations.pl to convert target table into a7\_all\_relations\_work. The work file will:

* remove all relations with a reason (reason or reason2) – these relations are no longer in use.
* Maintain only Distant CI Classes SOL%, SRV% and STO%. No relations with End-User equipment or Network equipment to be maintained.
* Maintain only Local Categories /SOLUTIONS, /INFRASTRUCTURE/SERVER%, /INFRASTRUCTURE/STORAGE, /SOLUTIONS%. No relations with End-User equipment or Network equipment to be maintained.
* Relation Type is NOT like “OVSD%”

### Get Server to Server Relations – Overview

Query:

SELECT count(\*),`\*° CI class (\*° Distant CI)`, `Full name (\*° Local CI\*° Category)`, `\*° Impact direction`, `\*° Relation type` FROM `a7\_all\_relations\_work` WHERE `\*° CI class (\*° Distant CI)` like 'SRV\\_%' AND `Full name (\*° Local CI\*° Category)` = '/INFRASTRUCTURE/SERVER/' group by `\*° CI class (\*° Distant CI)`, `Full name (\*° Local CI\*° Category)`, `\*° Impact direction`, `\*° Relation type`

Get the different Relationship Types with Query:

SELECT count(\*),`\*° Impact direction`, `\*° Relation type` FROM `a7\_all\_relations\_work` WHERE `\*° CI class (\*° Distant CI)` like 'SRV\\_%' AND `Full name (\*° Local CI\*° Category)` = '/INFRASTRUCTURE/SERVER/' group by `\*° Impact direction`, `\*° Relation type` order by `\*° Relation type`

Result:

| [**count(\*)**](http://localhost/phpMyAdmin-3.2.0.1-english/sql.php?db=alu_cmdb&table=a7_all_relations_work&sql_query=SELECT+count%28%2A%29%2C%60%2A%C2%B0+Impact+direction%60%2C+%60%2A%C2%B0+Relation+type%60+FROM+%60a7_all_relations_work%60+WHERE+%60%2A%C2%B0+CI+class+%28%2A%C2%B0+Distant+CI%29%60+like+%27SRV%5C_%25%27+AND+%60Full+name+%28%2A%C2%B0+Local+CI%2A%C2%B0+Category%29%60+%3D+%27%2FINFRASTRUCTURE%2FSERVER%2F%27+group+by+%60%2A%C2%B0+Impact+direction%60%2C+%60%2A%C2%B0+Relation+type%60+ORDER+BY+count%28%2A%29+ASC&token=8d775456c83003c36fa90c85f60d318d) | [**\*° Impact direction**](http://localhost/phpMyAdmin-3.2.0.1-english/sql.php?db=alu_cmdb&table=a7_all_relations_work&sql_query=SELECT+count%28%2A%29%2C%60%2A%C2%B0+Impact+direction%60%2C+%60%2A%C2%B0+Relation+type%60+FROM+%60a7_all_relations_work%60+WHERE+%60%2A%C2%B0+CI+class+%28%2A%C2%B0+Distant+CI%29%60+like+%27SRV%5C_%25%27+AND+%60Full+name+%28%2A%C2%B0+Local+CI%2A%C2%B0+Category%29%60+%3D+%27%2FINFRASTRUCTURE%2FSERVER%2F%27+group+by+%60%2A%C2%B0+Impact+direction%60%2C+%60%2A%C2%B0+Relation+type%60+ORDER+BY+%60a7_all_relations_work%60.%60%2A%C2%B0+Impact+direction%60+ASC&token=8d775456c83003c36fa90c85f60d318d) | [**\*° Relation type [Ascending](http://localhost/phpMyAdmin-3.2.0.1-english/sql.php?db=alu_cmdb&table=a7_all_relations_work&sql_query=SELECT+count(*),%60*%C2%B0+Impact+direction%60,+%60*%C2%B0+Relation+type%60+FROM+%60a7_all_relations_work%60+WHERE+%60*%C2%B0+CI+class+(*%C2%B0+Distant+CI)%60+like+'SRV\_%25'+AND+%60Full+name+(*%C2%B0+Local+CI*%C2%B0+Category)%60+=+'/INFRASTRUCTURE/SERVER/'+group+by+%60*%C2%B0+Impact+direction%60,+%60*%C2%B0+Relation+type%60+ORDER+BY+%60a7_all_relations_work%60.%60*%C2%B0+Relation+type%60++DESC&token=8d775456c83003c36fa90c85f60d318d)**](http://localhost/phpMyAdmin-3.2.0.1-english/sql.php?db=alu_cmdb&table=a7_all_relations_work&sql_query=SELECT+count%28%2A%29%2C%60%2A%C2%B0+Impact+direction%60%2C+%60%2A%C2%B0+Relation+type%60+FROM+%60a7_all_relations_work%60+WHERE+%60%2A%C2%B0+CI+class+%28%2A%C2%B0+Distant+CI%29%60+like+%27SRV%5C_%25%27+AND+%60Full+name+%28%2A%C2%B0+Local+CI%2A%C2%B0+Category%29%60+%3D+%27%2FINFRASTRUCTURE%2FSERVER%2F%27+group+by+%60%2A%C2%B0+Impact+direction%60%2C+%60%2A%C2%B0+Relation+type%60+ORDER+BY+%60a7_all_relations_work%60.%60%2A%C2%B0+Relation+type%60++DESC&token=8d775456c83003c36fa90c85f60d318d) |  |
| --- | --- | --- | --- |
| 716 | Local impacts Distant | Logical Server | Cluster Resource Group on Physical / Virtual Server |
| 762 | Local impacted by Distant | Logical Server | Cluster Resource Group on Physical / Virtual Server |
| 72 | *NULL* | Logical Server | Cluster Resource Group on Physical / Virtual Server |
| 75 | Both directions | Logical Server | Cluster Resource Group on Physical / Virtual Server |
| 260 | Both directions | Primary-failover cluster nodes | Cluster / Cluster Nodes |
| 2 | Local impacts Distant | Primary-failover cluster nodes | Cluster / Cluster Nodes |
| 2 | Local impacted by Distant | Primary-failover cluster nodes | Cluster / Cluster Nodes |
| 8 | *NULL* | Primary-failover cluster nodes | Cluster / Cluster Nodes |
| 1 | Local impacted by Distant | Solution | Should not be here |
| 1013 | Local impacts Distant | Virtual Server | Virtual Server on Physical Server |
| 1032 | Local impacted by Distant | Virtual Server | Virtual Server on Physical Server |
| 100 | *NULL* | Virtual Server | Virtual Server on Physical Server |
| 41 | Both directions | Virtual Server | Virtual Server on Physical Server |

### Primary-failover cluster nodes Relations

Example 4 from document “Logical-virtual servers in the CMDB”. This relation exist between the nodes of a cluster. All nodes in the cluster can be linked with this relation, so all relations can appear twice (not sure they do appear twice).

Query:

SELECT `\*° Hostname / inst (\*° Distant CI)`, `\*° Hostname / inst (\*° Local CI)`, `\*° Impact direction`, `\* Logical CI type (\*° Local CI)`, `\* Logical CI type (\*° Distant CI)` FROM `x\_a7\_srv\_rels` WHERE `\*° Relation type` = "Primary-failover cluster nodes"

### Virtual Servers Relations

Example 1 from document “Logical-virtual servers in the CMDB” is the default case. This links the Virtual Servers to the Physical box on which the virtual servers are installed. This is the first case for virtualization.

Example 4 from document “Logical-virtual servers in the CMDB”. This relation links a Virtual server with its logical server. In this case the Logical Server is supposed to be a Farm in the Virtual Environment.

In case of a link with a logical server, the logical server is supposed to be the Farm for the Virtual Server environment.

Query:

SELECT count(\*), `\* Logical CI type (\*° Distant CI)`, `\* Logical CI type (\*° Local CI)`

FROM `a7\_all\_relations\_work`

WHERE `\*° Relation type` = "Virtual Server"

group by `\* Logical CI type (\*° Distant CI)`, `\* Logical CI type (\*° Local CI)`Result:

| [**count(\*)**](http://localhost/phpMyAdmin-3.2.0.1-english/sql.php?db=alu_cmdb&table=a7_all_relations_work&sql_query=SELECT+count%28%2A%29%2C+%60%2A+Logical+CI+type+%28%2A%C2%B0+Distant+CI%29%60%2C+%60%2A+Logical+CI+type+%28%2A%C2%B0+Local+CI%29%60+FROM+%60a7_all_relations_work%60+group+by+%60%2A+Logical+CI+type+%28%2A%C2%B0+Distant+CI%29%60%2C+%60%2A+Logical+CI+type+%28%2A%C2%B0+Local+CI%29%60+ORDER+BY+count%28%2A%29+ASC&token=b203180d89fd752e77e41be588bf75f9) | [**\* Logical CI type (\*° Distant CI)**](http://localhost/phpMyAdmin-3.2.0.1-english/sql.php?db=alu_cmdb&table=a7_all_relations_work&sql_query=SELECT+count%28%2A%29%2C+%60%2A+Logical+CI+type+%28%2A%C2%B0+Distant+CI%29%60%2C+%60%2A+Logical+CI+type+%28%2A%C2%B0+Local+CI%29%60+FROM+%60a7_all_relations_work%60+group+by+%60%2A+Logical+CI+type+%28%2A%C2%B0+Distant+CI%29%60%2C+%60%2A+Logical+CI+type+%28%2A%C2%B0+Local+CI%29%60+ORDER+BY+%2A+Logical+CI+type+%28%2A%C2%B0+Distant+CI%29+ASC&token=b203180d89fd752e77e41be588bf75f9) | [**\* Logical CI type (\*° Local CI)**](http://localhost/phpMyAdmin-3.2.0.1-english/sql.php?db=alu_cmdb&table=a7_all_relations_work&sql_query=SELECT+count%28%2A%29%2C+%60%2A+Logical+CI+type+%28%2A%C2%B0+Distant+CI%29%60%2C+%60%2A+Logical+CI+type+%28%2A%C2%B0+Local+CI%29%60+FROM+%60a7_all_relations_work%60+group+by+%60%2A+Logical+CI+type+%28%2A%C2%B0+Distant+CI%29%60%2C+%60%2A+Logical+CI+type+%28%2A%C2%B0+Local+CI%29%60+ORDER+BY+%2A+Logical+CI+type+%28%2A%C2%B0+Local+CI%29+ASC&token=b203180d89fd752e77e41be588bf75f9) |  |
| --- | --- | --- | --- |
| 4 | *NULL* | *NULL* | *Logical CI Type ‘Virtual Server’ missing.Relation is added in no specific order.* |
| 12 | *NULL* | Logical Server | *SUN Solaris zones on physical server. Add ‘Server for virtual Guest’ on Physical server.* |
| 582 | *NULL* | Virtual Server | *Virtual Guest on Physical Server. Add ‘Server for Virtual Guest’ on Physical Server.* |
| 13 | Logical Server | *NULL* | *See Null / Logical Server* |
| 128 | Logical Server | Logical Server | *Cluster Package on cluster (not cluster node!). But unsure how to know who is the cluster and who is the cluster package, no further action.* |
| 433 | Logical Server | Virtual Server | *Virtual Guest on Cluster / Virtual Farm – but unsure how to handle Logical Server, no further action.* |
| 578 | Virtual Server | *NULL* | *See Null / Virtual Server.* |
| 419 | Virtual Server | Logical Server | *See Logical Server / Virtual Server* |
| 14 | Virtual Server | Virtual Server | *One of both should not be this type ‘Virtual Server’. Add relation only in no specific order.* |

### Logical Server Relations

A Logical Server Relation links the logical Server to the Physical Machine. A Logical Server can be a cluster package, a virtual farm (represented as a cluster?) and a Solaris Zone running on a Solaris Server.

|  |  |  |
| --- | --- | --- |
| Logical Server node type | Other Server type | Characteristics |
| Cluster Package | Cluster Nodes (Ex. 3) | Logical Server has multiple ‘Right’ relations to Cluster Nodes. No ‘Left’ relation to Virtual Server (left-relation). |
| Virtual Farm | Cluster Nodes (Ex. 4) | Logical Server has multiple ‘Right’ relation to Cluster node, one or more ‘Left’ relation to Virtual Server. |
| Solaris Zone | NULL – Phyisical Box, SUN OS (Ex. 2) | Logical Server has single ‘Right’ relation (to SUN Physical Box), no ‘Left’ relations. |

Query:

SELECT count(\*), `\* Logical CI type (\*° Distant CI)`, `\* Logical CI type (\*° Local CI)` FROM `a7\_all\_relations\_work` WHERE `\*° Relation type` = "Logical Server" group by `\* Logical CI type (\*° Distant CI)`, `\* Logical CI type (\*° Local CI)`

Result:

| [**count(\*)**](http://localhost/phpMyAdmin-3.2.0.1-english/sql.php?db=alu_cmdb&table=a7_all_relations_work&sql_query=SELECT+count%28%2A%29%2C+%60%2A+Logical+CI+type+%28%2A%C2%B0+Distant+CI%29%60%2C+%60%2A+Logical+CI+type+%28%2A%C2%B0+Local+CI%29%60+FROM+%60a7_all_relations_work%60+WHERE+%60%2A%C2%B0+Relation+type%60+%3D+%22Logical+Server%22+group+by+%60%2A+Logical+CI+type+%28%2A%C2%B0+Distant+CI%29%60%2C+%60%2A+Logical+CI+type+%28%2A%C2%B0+Local+CI%29%60+ORDER+BY+count%28%2A%29+ASC&token=b203180d89fd752e77e41be588bf75f9) | [**\* Logical CI type (\*° Distant CI)**](http://localhost/phpMyAdmin-3.2.0.1-english/sql.php?db=alu_cmdb&table=a7_all_relations_work&sql_query=SELECT+count%28%2A%29%2C+%60%2A+Logical+CI+type+%28%2A%C2%B0+Distant+CI%29%60%2C+%60%2A+Logical+CI+type+%28%2A%C2%B0+Local+CI%29%60+FROM+%60a7_all_relations_work%60+WHERE+%60%2A%C2%B0+Relation+type%60+%3D+%22Logical+Server%22+group+by+%60%2A+Logical+CI+type+%28%2A%C2%B0+Distant+CI%29%60%2C+%60%2A+Logical+CI+type+%28%2A%C2%B0+Local+CI%29%60+ORDER+BY+%2A+Logical+CI+type+%28%2A%C2%B0+Distant+CI%29+ASC&token=b203180d89fd752e77e41be588bf75f9) | [**\* Logical CI type (\*° Local CI)**](http://localhost/phpMyAdmin-3.2.0.1-english/sql.php?db=alu_cmdb&table=a7_all_relations_work&sql_query=SELECT+count%28%2A%29%2C+%60%2A+Logical+CI+type+%28%2A%C2%B0+Distant+CI%29%60%2C+%60%2A+Logical+CI+type+%28%2A%C2%B0+Local+CI%29%60+FROM+%60a7_all_relations_work%60+WHERE+%60%2A%C2%B0+Relation+type%60+%3D+%22Logical+Server%22+group+by+%60%2A+Logical+CI+type+%28%2A%C2%B0+Distant+CI%29%60%2C+%60%2A+Logical+CI+type+%28%2A%C2%B0+Local+CI%29%60+ORDER+BY+%2A+Logical+CI+type+%28%2A%C2%B0+Local+CI%29+ASC&token=b203180d89fd752e77e41be588bf75f9) |  |
| --- | --- | --- | --- |
| 1 | *NULL* | *NULL* | *Unexpected Situation* |
| 646 | *NULL* | Logical Server | Expected situation (Situation 2) |
| 35 | *NULL* | Virtual Server | Unexpected Situation |
| 652 | Logical Server | *NULL* | Expected situation (Situation 2). |
| 185 | Logical Server | Logical Server | Unexpected Situation. |
| 35 | Logical Server | Virtual Server | Virtual Servers on a Server Farm (Situation 1) |
| 35 | Virtual Server | *NULL* | *Unexpected Situation* |
| 35 | Virtual Server | Logical Server | Virtual Servers on a Server Farm (Situation 1). |
| 4 | Virtual Server | Virtual Server | Unexpected Situation |

Processing:

1. Get Situation 1 – Virtual Servers on Server Farm. Mark the Logical Servers as “Virtual Farm”.
2. Now handle Situation 2.
   1. First check if Logical Server is “Virtual Farm”. If so, find the cluster nodes. Modify the cluster nodes from “Cluster Node” to “Server for Virtual Guest”. Establish Relation from “Server for Virtual Guest” to “Virtual Farm”.
   2. If not, check if Other Server Type is Cluster Node.
      1. If so, Logical Server is “Cluster Package”.
      2. If not, mark Logical Server as “Virtual Guest” – this server is a Solaris Zone. The Other Server should be marked as “Server for Virtual Guest” (to be done in transformation model?)

HOWEVER:

Situation 1 does not work:

Query:

SELECT `Asset tag (\*° Distant CI)`, `\*° Hostname / inst (\*° Distant CI)`, `\* Logical CI type (\*° Distant CI)`, `Asset tag (\*° Local CI)`, `\*° Hostname / inst (\*° Local CI)`, `\* Logical CI type (\*° Local CI)` FROM `a7\_all\_relations\_work` WHERE `\*° Relation type` = 'Logical Server' AND ((`\* Logical CI type (\*° Distant CI)` = 'Virtual Server') AND (`\* Logical CI type (\*° Local CI)` = 'Logical Server')) order by `\*° Hostname / inst (\*° Local CI)`

ORDER BY clause will order Logical Servers (server farms). The expectation is that one Logical Server will be connected to many Virtual Servers. This is the case for only one server.

As Situation 1 is not working, no further effort will be done on any of the other servers.

# Data Extract Relations component\_dependency\_interface\_template

|  |  |  |  |
| --- | --- | --- | --- |
| cd\_PrdInstalledOnCS | Product on ComputerSystem | Technical Product installed on Computersystem. Business product is never included, since this only has a dependency relation with ComputerSystem  TechnicalProduct only. | OVSD: DB on ComputerSystem  A7: SOL\_SOLUTION / SOL\_INSTANCE on ComputerSystem  ESL: Technical Applications ESL Instance on ComputerSystem |
| cd\_PrdInstalledPrd | Installation of a Product | Link between Technical product installed and the Technical Product  Technical Product only. | OVSD: DB  A7: SOL\_SOLUTION / SOL\_INSTANCE  ESL: Technical Application ESL Solution to ESL Instance |
| cd\_prdInstOfInstalledPrd | Instance of an installed product | Links a technical installed product to one or more instances, running on the Computersystem where the installed products is.  TechnicalProduct only. | All: generate link for all non-BusinessProducts. |
| cd\_productProductBOM | Components that make up a Product. | Not used | Not used. |
| cd\_prdInstRelationships | Instance to Instance Relationships | Instance to Instance Runtime dependency.  In CMO Source systems, this type of information is not available. | Not in use today. |
| cd\_busPrdComposition | Business Product to Business Product Instance Relationship | Links a Portfolio Application to the instances of the application in the different environments.  BusinessProduct Only | All, for Business Products Only. |
| cd\_busPrdInstComposition | Business Product Instance Composition | Links BusinessProductInstance to Technical or Business Product Instances | A7: Links Business Applications to Infrastructure Application instances, or other Business Application Instances.  OVSD: Links Business Application Instances to DB Instances, or other Business Application instances (if any).  ESL: Double usage:  1. Business Application Instance (ESL Solution) to ESL Solution or ESL Instance Dependency  Note: this report is not yet available.  2. Businss Application Instance (ESL Solution) to BusAppl2Server Instance (ESL Instance). |
| cd\_bpiDependsUponCS | BusinessProductInstance depends on ComputerSystem | Links Business Product Instances to ComputerSystem. This should have been a relation with attributes. However attributes are requested as interface attributes. Two relations will be provided: BusinessProductInstance to BusAppl2Server relation and BusAppl2Server to ComputerSystem. | ESL Only |