

# User Stories for MS CRM APIs - Solution

## /Solution/ByOrganisation/{organisationId}

### User Story

As an API user, I want to retrieve all solutions for an organisation in a paged list, given the organisation's CRM identifier

### Acceptance Criteria

- a user should be able to retrieve all solutions for an organisation records in CRM in a paged list
- if there are no solution records, then an empty list should be returned
- a user should be able to specify how many records (page size) are returned at a time
- a user should be able to specify an offset (index) into the total records
- if a user specifies an invalid value for how many records (page size), it should use a default value (20)
- if a user specifies an invalid value for an offset (index), it should use a default value (1)
- if the organisation does not exist, then an error code should be returned

### Test Cases

The one where...	Test Case
I retrieve all solutions in one page	<p><b>Given:</b> there is an organisation record in CRM (Org00)</p> <p><b>And:</b> an organisation (Org00) has (1, 2, 19, 20) solution records in CRM (S00 ..)</p> <p><b>When:</b> I call the API with a CRM identifier of an organisation (Org00)</p> <p><b>Then:</b> all solution records (S00, ..) are returned</p> <p><b>And:</b> a HTTP status code of 200 is returned</p>
the organisation is not in CRM	<p><b>Given:</b> there are no organisation records in CRM</p> <p><b>And:</b> I create an in-memory organisation record (Org00)</p> <p><b>When:</b> I call the API with a CRM identifier of an organisation (Org00)</p> <p><b>Then:</b> an empty list of solution records is returned</p> <p><b>And:</b> a HTTP status code of 404 is returned</p>
I retrieve the first 3 solutions	<p><b>Given:</b> there is an organisation record in CRM (Org00)</p> <p><b>And:</b> an organisation (Org00) has 66 solution records in CRM (S00 .. S65)</p> <p><b>When:</b> I call the API with a page size of 3 and an index of 1 and CRM identifier of an organisation (Org00)</p> <p><b>Then:</b> solution records (S00, S01, S02) are returned</p> <p><b>And:</b> a HTTP status code of 200 is returned</p>
I retrieve the second 3 solutions	<p><b>Given:</b> there is an organisation record in CRM (Org00)</p> <p><b>And:</b> an organisation (Org00) has 66 solution records in CRM (S00 .. S65)</p> <p><b>When:</b> I call the API with a page size of 3 and an index of 2 and CRM identifier of an organisation (Org00)</p> <p><b>Then:</b> solution records for (S03, S04, S05) are returned</p> <p><b>And:</b> a HTTP status code of 200 is returned</p>
I specify an invalid page size	<p><b>Given:</b> there is an organisation record in CRM (Org00)</p> <p><b>And:</b> an organisation (Org00) has 66 solution records in CRM (S00 .. S65)</p> <p><b>When:</b> I call the API with a page size of (-1, 0, 21, 60) and CRM identifier of an organisation (Org00)</p> <p><b>Then:</b> first 20 (default page size) solution records for (S00 .. S19) are returned</p> <p><b>And:</b> a HTTP status code of 200 is returned</p>

I specify an invalid index	<p><b>Given:</b> there is an organisation record in CRM (Org00)</p> <p><b>And:</b> an organisation (Org00) has 66 solution records in CRM (S00 .. S65)</p> <p><b>When:</b> I call the API with an index of (-1, 0) and CRM identifier of an organisation (Org00)</p> <p><b>Then:</b> first 20 (default page size) solution records for (S00 .. S19) are returned</p> <p><b>And:</b> a HTTP status code of 200 is returned</p>
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## /Solution/Create

### User Story

As an API user, I want to create a new solution for an organisation

### Acceptance Criteria

- a user should be able to create a new solution for an organisation had have this new solution returned to them
- if the previous solution does not exist, then an error code should be returned
- if the organisation does not exist, then an error code should be returned

### Test Cases

The one where...	Test Case
I create new solution for an organisation	<p><b>Given:</b> there is an organisation record in CRM (Org00)</p> <p><b>And:</b> an organisation (Org00) has no solution records in CRM</p> <p><b>And:</b> I create an in-memory solution record (S00) which references an organisation (Org00)</p> <p><b>When:</b> I call the API with a solution record (S00)</p> <p><b>Then:</b> a solution record (C00) is returned with its CRM identifier</p> <p><b>And:</b> a HTTP status code of 200 is returned</p>
the organisation is not in CRM	<p><b>Given:</b> there are no organisation records in CRM</p> <p><b>And:</b> I create an in-memory solution record (S00) which references an organisation (Org00)</p> <p><b>When:</b> I call the API with a solution record (S00)</p> <p><b>Then:</b> no solution record is returned</p> <p><b>And:</b> a HTTP status code of 404 is returned</p>
I create the same solution for an organisation	<p><b>Given:</b> there is an organisation record in CRM (Org00)</p> <p><b>And:</b> an organisation (Org00) has a solution record (S00) in CRM</p> <p><b>And:</b> I create an in-memory solution record (S00) which references an organisation (Org00)</p> <p><b>When:</b> I call the API with a solution record (S00)</p> <p><b>Then:</b> a solution record (S00) is returned with its CRM identifier</p> <p><b>And:</b> a HTTP status code of 200 is returned</p>
I create a new solution for an organisation	<p><b>Given:</b> there is an organisation record in CRM (Org00)</p> <p><b>And:</b> an organisation (Org00) has 66 solution records in CRM (S00 .. S65)</p> <p><b>And:</b> I create an in-memory solution record (S66) which references an organisation (Org00)</p> <p><b>When:</b> I call the API with a solution record (S66)</p> <p><b>Then:</b> a solution record (S66) is returned with its CRM identifier</p> <p><b>And:</b> a HTTP status code of 200 is returned</p>

I create a new solution with a previous version	<p><b>Given:</b> there is an organisation record in CRM (Org00)</p> <p><b>And:</b> an organisation (Org00) has a solution record (S00) in CRM</p> <p><b>And:</b> I create an in-memory solution record (S01) which references an organisation (Org00) and a previous version (S00)</p> <p><b>When:</b> I call the API with a solution record (S01)</p> <p><b>Then:</b> a solution record (S01) is returned with its CRM identifier</p> <p><b>And:</b> a HTTP status code of 200 is returned</p>
the previous version is not in CRM	<p><b>Given:</b> there is an organisation record in CRM (Org00)</p> <p><b>And:</b> I create an in-memory solution record (S00) which references an organisation (Org00)</p> <p><b>And:</b> I create an in-memory solution record (S01) which references an organisation (Org00) and a previous version (S00)</p> <p><b>When:</b> I call the API with a solution record (S01)</p> <p><b>Then:</b> no solution record is returned</p> <p><b>And:</b> a HTTP status code of 404 is returned</p>

## /Solution/Update

### User Story

As an API user, I want to change information for an existing solution for an organisation

### Acceptance Criteria

- a user should be able to change information about an existing solution for an organisation
- if the previous solution does not exist, then an error code should be returned
- if the organisation does not exist, then an error code should be returned

### Test Cases

The one where...	Test Case
I update a solution for an organisation	<p><b>Given:</b> there is an organisation record in CRM (Org00)</p> <p><b>And:</b> an organisation (Org00) has a solution record (S00) in CRM</p> <p><b>And:</b> I create an in-memory solution record (S00a) based on an existing record (S00)</p> <p><b>When:</b> I call the API with a solution record (S00a)</p> <p><b>Then:</b> a HTTP status code of 200 is returned</p>
the organisation is not in CRM	<p><b>Given:</b> there is an organisation record in CRM (Org00)</p> <p><b>And:</b> an organisation (Org00) has a solution record (S00) in CRM</p> <p><b>And:</b> I create an in-memory organisation record (Org01)</p> <p><b>And:</b> I create an in-memory solution record (S00a) based on an existing record (S00) which references an organisation (Org01)</p> <p><b>When:</b> I call the API with a solution record (S00a)</p> <p><b>And:</b> a HTTP status code of 404 is returned</p>
the solution is not in CRM	<p><b>Given:</b> there is an organisation record in CRM (Org00)</p> <p><b>And:</b> I create an in-memory solution record (S00) which references an organisation (Org00)</p> <p><b>When:</b> I call the API with a solution record (S00)</p> <p><b>Then:</b> a HTTP status code of 404 is returned</p>

the previous version is not in CRM	<p><b>Given:</b> there is an organisation record in CRM (Org00)</p> <p><b>And:</b> an organisation (Org00) has a solution record (S00) in CRM</p> <p><b>And:</b> I create an in-memory solution record (S01)</p> <p><b>And:</b> I create an in-memory solution record (S00a) based on an existing record (S00) which references a previous version (S01)</p> <p><b>When:</b> I call the API with a solution record (S00a)</p> <p><b>Then:</b> a HTTP status code of 404 is returned</p>
I transfer a solution to another organisation	<p><b>Given:</b> there is an organisation record in CRM (Org00)</p> <p><b>And:</b> an organisation (Org00) has a solution record (S00) in CRM</p> <p><b>And:</b> there is an organisation record in CRM (Org01)</p> <p><b>And:</b> I create an in-memory solution record (S00a) based on an existing record (S00) which references an organisation (Org01)</p> <p><b>When:</b> I call the API with a solution record (S00a)</p> <p><b>Then:</b> a HTTP status code of 200 is returned</p>

## /Solution/ById/{id}

### User Story

As an API user, I want to get a previous version of an existing solution

### Acceptance Criteria

- a user should be able retrieve a previous version of an existing solution
- if a previous version does not exist, then an error code should be returned

### Test Cases

The one where...	Test Case
I retrieve a solution	<p><b>Given:</b> there is an organisation record in CRM (Org00)</p> <p><b>And:</b> an organisation (Org00) has a solution record (S00) in CRM</p> <p><b>When:</b> I call the API with a solution identifier (S00)</p> <p><b>Then:</b> a solution record is returned (S00)</p> <p><b>And:</b> a HTTP status code of 200 is returned</p>
the solution is not in CRM	<p><b>Given:</b> there is an organisation record in CRM (Org00)</p> <p><b>And:</b> I create an in-memory solution record (S00) which references an organisation (Org00)</p> <p><b>Then:</b> no solution record is returned</p> <p><b>And:</b> a HTTP status code of 404 is returned</p>

## /Solution/ByFramework/{frameworkId}

### User Story

As an API user, I want to get all existing solution/s on which were onboarded onto a framework in a paged list, given the CRM identifier of the framework

### Acceptance Criteria

- a user should be able retrieve all solutions associated with a framework
- if the framework does not exist, then an error code should be returned
- a user should be able to specify how many records (page size) are returned at a time
- a user should be able to specify an offset (index) into the total records

- if a user specifies an invalid value for how many records (page size), it should use a default value (20)
- if a user specifies an invalid value for an offset (index), it should use a default value (1)

## Test Cases

The one where...	Test Case
I retrieve all solutions in one page	<p><b>Given:</b> there is a framework record in CRM (F00)</p> <p><b>And:</b> a framework (F00) has (1, 2, 19, 20) solution records in CRM (S00 ..)</p> <p><b>When:</b> I call the API with a CRM identifier of a framework (F00)</p> <p><b>Then:</b> all solution records (S00, ..) are returned</p> <p><b>And:</b> a HTTP status code of 200 is returned</p>
the framework is not in CRM	<p><b>Given:</b> there are no framework records in CRM</p> <p><b>And:</b> I create an in-memory framework record (F00)</p> <p><b>When:</b> I call the API with a CRM identifier of a framework (F00)</p> <p><b>Then:</b> an empty list of solution records is returned</p> <p><b>And:</b> a HTTP status code of 404 is returned</p>
I retrieve the first 3 solutions	<p><b>Given:</b> there is a framework record in CRM (F00)</p> <p><b>And:</b> an framework (F00) has 66 solution records in CRM (S00 .. S65)</p> <p><b>When:</b> I call the API with a page size of 3 and an index of 1 and CRM identifier of a framework (F00)</p> <p><b>Then:</b> solution records (S00, S01, S02) are returned</p> <p><b>And:</b> a HTTP status code of 200 is returned</p>
I retrieve the second 3 solutions	<p><b>Given:</b> there is a framework record in CRM (F00)</p> <p><b>And:</b> an framework (F00) has 66 solution records in CRM (S00 .. S65)</p> <p><b>When:</b> I call the API with a page size of 3 and an index of 2 and CRM identifier of a framework (F00)</p> <p><b>Then:</b> solution records for (S03, S04, S05) are returned</p> <p><b>And:</b> a HTTP status code of 200 is returned</p>
I specify an invalid page size	<p><b>Given:</b> there is a framework record in CRM (F00)</p> <p><b>And:</b> an framework (F00) has 66 solution records in CRM (S00 .. S65)</p> <p><b>When:</b> I call the API with a page size of (-1, 0, 21, 60) and CRM identifier of a framework (F00)</p> <p><b>Then:</b> first 20 (default page size) solution records for (S00 .. S19) are returned</p> <p><b>And:</b> a HTTP status code of 200 is returned</p>
I specify an invalid index	<p><b>Given:</b> there is a framework record in CRM (F00)</p> <p><b>And:</b> an framework (F00) has 66 solution records in CRM (S00 .. S65)</p> <p><b>When:</b> I call the API with an index of (-1, 0) and CRM identifier of a framework (F00)</p> <p><b>Then:</b> first 20 (default page size) solution records for (S00 .. S19) are returned</p> <p><b>And:</b> a HTTP status code of 200 is returned</p>