Process specification template structure

Goal of the page

What ?	Recommendations for writing a back-end specification Sub-topic of Amadeus specifications guidelines
Why ?	
Who ?	• By who ? Amadeus product definition analyst community • For who ? Anybody writing back-end specifications in Amadeus

How ?	• **This template needs to be added in your own specification space, for anybody writing specifications in it**
	• You can suggest changes and enhancements to the template:
	  • By adding comments
	  • By contacting 1A PDA Community core team members

When ?	Check it any time you write a new back-end specification or review an existing back-end specification.

Global structure

This template is a proposal of specification structure

- What is important is to make sure **mandatory titles** appear in the document.
- The optional section must be added when relevant, but may not always be applicable.
- Sections can be moved around/merged/adapted to answer specific needs. Below you can find a structure proposition:

- **Process name**
- Overview
  - **Summary**
  - Limitations
  - **Pre-conditions**
  - **Post-conditions**
- Process
  - **Input**
  - **Output**
  - Diagram/Workflow
  - **Description**
  - Data description
  - **Warnings/Errors**
  - Exceptions
- **Examples**
- Configuration
  - **Associated configurations**
  - **Security settings**
- Additional information & references
  - **Context**
  - Possible evolutions
  - Called interface(s)
  - Monitoring
  - Technical documentation
  - Functional validation
  - Other related documentations
  - Revision table

Content

*: when present in Status check "Content/in practice" column

Section	Status	Objective	Content / in practice	Audience	More information (How to, examples,

process name	Mandatory	**Explain the WHAT?**	Process name is • present in the title of the page • used each time referring to the process Using action verb is a good practice	Any	Examples (action verbs): • Check • Compute/Calculate • Retrieve/Get • Request • ... Examples: • Get bid price • Get LSS access
Summary	Mandatory	**Explain the WHAT?** Process abstract Help the reader to determine if this specification page is relevant or not for him.	High level functional summary defining topic of specification Give aim of the process/business need, for what is it used? (functional view not user view) List the products/services using this process to give more context (optional).	Any	Correct example: This process aims at <> in Incorrect example (part c This process is used by <t
Limitations	Optional	List functionalities that are explicitly and voluntarily excluded from the process.	It indicates any limitations of • version of the service • the functionality provided as part of the process • compatibility with other process	Any	Misc examples: • This process is only accessible via • This process only support up to xx
Pre-conditions	Mandatory	**Explain the WHEN?** List the conditions needed for the process to happen.	Can contain some configuration allowing the process to start • Add a link to "Configurations" Don't write here the first checks done in process itself, it fits in "Description"	Any	Examples (formulation): • When the session/context has this Carrier is *ZZZ*) • The system calls the service with t Examples (real): • The system receives an a
Post-conditions	Mandatory	List the possible end-states of the process.	End states are relative to • success case(s) • error case(s) (optional): mention that the process can end in error (not a list!) This does not contain the call to the post-process	Any	Examples (real): • This process returns the availability.
Input	Mandatory*	List data/information needed during the process, and provided when calling the process.	The list of information/data must be provided with details like: mandatory/optional, meaning... Reference to the related interface document (if any) can be included here. The pre-condition(s) that are present in a given input message are not necessarily present in the Input table. *This section can be empty ("None") when no input exist, or "See Description" if it does not help the understanding of the process	Internal	Example (real): From Get Bid Price Service I Click here to expand...

NAME
Number in Party
1. O&D
Cabin (1..n)
1.2 Segment (1..n)
Airline Code
Flight Number
Board Point
Off Point
Departure Date
Booking Class
Polling Indicator

** Possible values:*

					M: Mandatory *C: Conditional* *O: Optional*
Output	Mandatory*	List data/information returned by the process, and provided when replying to the calling process.	The list of information/data must be provided with details like: mandatory/optional, meaning, ... Reference to the related interface document (if any) can be included here. The post-condition elements should normally be present in this output table. *ℹ This section can be empty ("None") when no output exist, or "see Description" if it does not help the understanding of the process	Internal	Example (real): From Get Bid Price Service › Click here to expand... **ATTRIBUTE** T **1. O&D (1..n)** O&D Bid Price Value (1..n) M O&D Bid Price Average M Yield M Availability M **1.1 Cabin (1..n)** IATA Cabin C IATA Cabinpath C Cabin Bid Price average M Cabin Bid Price Value (1..n) C
Diagram/Workflow	Optional	**Explain the HOW?** Describe, in a visual manner, the flow/steps of the process itself, and its interactions.	Let know through diagram(s): • how all systems/steps interact • how the functionality works • what are the conditions/errors/permissions Chose the type of diagram depending on what it is important to highlight: • Sequence diagram • Decision diagram • Activity diagram ⚠ The preceding external interactions should not be included as they are under the ownership of another process. The same way, the calling actors are not to be included as they can change.	Depends on the level of details	Examples (real): › Click here to expand... From: Create Yields › Click here to expand... From: BE - Create action
Description	Mandatory	**Explain the HOW?** Detail each step of the process.	Functionality is described from the system perspective. Content includes: • All possible cases (give an *else* to any *if*)	Any	Example (real): › Click here to expand... *From Apply Dynamic Gat* If the **Reference Airline** (**INV_USE_DYN_GATING** for **each segment** of **the** Dynamic Gating Rule).

- All possible outcomes
  - Explicit information when process stops: can be in different steps or just at the end.
  - Warnings/Errors (and next steps*)
  - Exceptions (and next steps*)
- All configurations and security settings checked

*Next steps can be stopping, continuing, or doing something else.

Interface can be mentioned, clear reference will be included in additional information dedicated session.

The list of Warnings/Errors and Exceptions mentioned here should also be aggregated in their related sections below.

⭐ Using diagram(s) is a good practice.

INV_USE_DYN_GATINC Value
I
B
N

Case #1: Availability requ

If an applicable rule is fou

Hours Before Departure Date/Time

- Hours Before Departure: define
- Minutes Before Departure: defi
- Scheduled Departure Time: def

then the use case returns Availability' Flag set to 'Y'

Case #2: Sell request

If an applicable rule is fou

Hours Before Departure Date/Time

- Hours Before Departure: define
- Minutes Before Departure: defi
- Scheduled Departure Time: def

Then the use case return: Waitlist' Flag set to 'Y'.

For more details about the **Gating Rule**.

Click here to expand...

From Provide Availability

Sum-up of this use-case:

- 1. Validate Airline Polling ar
- 2. Validate and Filter Input
- 3. Retrieve Inventory Data
- 4. Call RTDP for Availabilit
- 5. Process Availability on A

1. Validate Airline Polling and Determine R

The request given in inpu Reference Airline. Before and polling given in input

This is done by calling Va Journey Data segments) Airline Polling - functiona

If an error 'Unable' is retu

Then, the Reference Airli Travel Solution given in in

2. Validate and Filter Input Data

The Validate and Retrieve the segments in input.

The aim of this use case i

- To check the validity of data
- To return the codeshare details
  - Of the Reference Ai
  - Of other airline segr

Unknown macro: 'plantuml

This use case could retur codes) or a *'Mass Close'* functionality **(COM_XAC_ (COM_XAC_AVL_PARAM**

If there is a Frequent Flye
Use Case returns the Fre
traveller identification nur

Note: Filtering of the clas

Unknown macro: 'plantuml

3. Retrieve Inventory Data for all Referenc

If no error has been foun
'Flown' nor *'Specific segn*

Reference Airline segmer

4. Call RTDP for Availability and final checl

Then, the use case**<<Cal**
the Reference Airline **enri**

figures and Constraints.

In case RTDP was called
common classes with **its**
Reservation.

By default (**COM_XAC_CI**
Altea Reservation in inpu

Unknown macro: 'plantuml

In case the ***'Always retur***
waitlist has not been exp
status is equal to L), **waitl**

It is then equal to the Wai
capped by:

- 9 if the *'True Availability'* Flag is
- 999 if the *'True Availability'* Fla

Unknown macro: 'plantuml

'Unable' Flag or RTD
In case an ***'Unable'*** I
calculation cannot be
disrupted), the **proce**

It will generate a **link**
(Cache/AVS) to **resp**

Unknown macro: 'plantuml

Unknown macro: 'plantuml

5. Process Availability on Altéa Inventory

In case **RTDP** was **not ca**

- For each requested class, the a
  - The AU Availability is returr
  - If the AU Availability is zerc
    - L if the WL Availability i
    - C if the WL Availability i
  - If the 'True Availability' Flag

In addition, in case the **'A**
availability has to be **retu**

Availability' Flag is set to

How-to

See guidelines for Warnings

Examples (real)

- Text for exception
  - In case of link down during po
  - In case of PNR storage issue t

Data description	Mandatory*	Define the data manipulated in the process.	This section helps decoding/understanding the content of the data being used. Information to be included: ▪ data model ▪ format ▪ naming conventions	Internal	How to It is recommended to create For confluence users, it is re that we can build a report of Examples • Strategy Data • PONDA ONDAVL Key Definition • OneOrder - Service Statu › OneOrder data description OneOrder data description For dedicated information about the OneOrder st https://rndwww.nce.amadeus.net/confluence, https://rndwww.nce.amadeus.net/confluence, From ETSync perspective, a simplified description i • Every PNR contains a unique OrderID • Every Passenger/Segment pair is identified Hence, in this document, each Passenger/Segmen PNR ABCDEF | OrderID | Orde PAX_1 / SEG_A | ORDER_ABCDEF | ORD PAX_2 / SEG_B | ORDER_ABCDEF | ORD OrderID: Unique by PNR. That means, common to all Note that, multiple SSR ETLP may be present done on this data. IMD+SSR SSR+ETLP:1:TR:::::HK:::::::::V:::::HK:SQ618 OrderItemID and ServiceID: Unique for each Passenger/Segment pair. Th It is assumed that at most one SK OIDS is lin IMD+SK SSR+OIDS:1:TR:::::::::::::::::HK:SQ618P5Y

Warnings/Errors	Mandatory*	List the errors and warnings returned by this process.	An error or warning is
			• functional
			• a specific event that ends the functionality or creates a specific treatment
			• mentioned in the description
			• defined with
			  • id / canned message number
			  • text
			If any error(s) is inherited by a called process, make sure that the information is not replicated in both pages.
			*ℹ This section can say "No error applicable"
				Any	How to
					To avoid duplicating the erro
					• only mention that those errors are
					• or reference all errors away and re
					In Confluence to list the erro
					• create 1 page for each error
					  • (example: Family not found)
					  • with standardized information
					  • in a "page properties" macro
					  • add labels ("error", "name of p
					• create 1 page listing all errors
					  • (example: Errors)
					• in each process
					  • (example: Build travel solution
					  • add a "page properties report"
					  • with relevant labels ("error", "n
					Examples (real):
					› Click here to expand...
					From Get Bid Price Servic
					Flight Date retrieval:
					• Exception Occurred during Jou
					• Unable to retrieve Journey Serv
					• No Flight Date found
					Codeshare check
					• Exception occurred during Cod
					• No Operating Data
					• Class mapping issue
					• No Segment Date found
					• No Reference Airline and No C
					Bid price retrieval:
					• No Booking Class found
					• No Segment Cabin found
					• No Bid Price found

					If an error is returne contains the segmen then continues with t Click here to expand... From BE - Create action - HTTP Code | Description 400 | Invalid action 403 | Not allowed t Following 1 how to recomme Other example: Error Manag

Exceptions	Optional	List the exceptions possible in this process.	An exception is
			• usually technical (link down, DB down, ...)
			• an unusual or unexpected event that may disrupt the normal processing of a functionality
			• mentioned in the description
			• defined with
			  • id / canned message number
			  • text
			⚠ The aim is to cover as many exception cases as possible to avoid the "UNABLE TO PROCESS", which will be used for missed cases.
				Any	

Examples	Mandatory*	Description of a case of usage of the process.	The example illustrates and ease understanding of the description.
			Recommendation is to have at least one example of each type:
			• success
			• failure
			  • warning
			  • error
			  • exception
			An example must be valid and consistent, especially in between query/reply or input/output.
			*ℹ This section can be empty (N/A) if the example does not bring any value to the description.
				Any	Examples (real):
					• Examples for different contexts: Ne

Associated configurations	Mandatory*	List any settings having an impact on the process.	Any configuration associated to the process with its
			• Type
			  • OTF variables
			  • ABR
			  • EZT
			  • ...
			• Name
			• Value(s)
			Configurations can be
			• to enter the process (those that are mentioned in pre-conditions)
			• to trigger specific logic in the description
			*ℹ This section can say "No configuration used"
				Internal	How to
					In Confluence to list the cor
					• same principle as for errors can be
					  • 1 page for each configuration
					  • example: PRoHibited count
					  • 1 page listing all configurations
					  • example: Settings
					  • in each process
					  • example: Check prohibited
					Examples (real):
					• if OTF Variable XXX on backend Z
					• if OTF Variable YYY_DRYRUN on b

Security settings	Mandatory*	List security settings.	Security settings (eg. LSS permission and Description).	Internal	How-to See guidelines for Warnings

			*ℹ This section can be empty ("No particular security clearance or access rights are applicable to this operation.") if there is no security on this process.		Examples (real): ▪ LSS permission in Update Hotel Pr ▪ LSS Permission Management Guid
Additional information & references					

Context	Mandatory*	Reference the project and/or description that explains why the process was done/updated.	• Explanation why this process was developed: problem statement
			• Corresponds to initial requirement
			• Project(s) reference(s) with links to:
			  • project documentation (including HLDs, HLSs, studies)
			  • Sizing Task
			  • JIRA ticket
			  • Win@proach CR / PTR
			  • etc.
			*ℹ This section can be empty when the process is old and the original project/context/requirement is unknown
				Always INTERNAL!	• Should contain the design constrai

Possible evolutions	Optional	Describe/reference potential improvements.	Can contain: • JIRA ticket • Win@proach CR / PTR • Free text of potential evolutions	Always INTERNAL!	
Called interface(s)	Optional	Reference the interfaces called by the process.	This section references the interface documentation(s) associated to this process. That document should be stored **outside** the process specification.	Any (except if internal interface)	Example *(not exhaustive as* Please refer to CSV-based A Please refer to ICD_Amadeu
Monitoring	Optional	Reference to related tools/view/dashboard for monitoring.	Link to any relevant dashboards and short explanation of what it allows to monitor. • Splunk • Elastic • Grafana • Sentinel • ErrorViewer • ... Do not do the specifications of the monitoring tools itself in this section, it should be on a dedicated page	Always INTERNAL!	Examples: To be completed
Technical documentation	Optional	Find easily related technical information.	Developer can add information or links to technical documentation	Always INTERNAL!	Examples (real): • Example • Minimum Connecting Time (MCT)#
Functional validation	Optional	Link the related test plans.	This section contains the list of links to test plans that validated this process.	Always INTERNAL!	see Guidelines to improve traceability I
Other related documentations	Optional	List other documentations linked to the process.	This section contains references to the following documents • Presentation • How to • User guide • Implementation procedure • Troubleshooting guide • Documents delivered to customer	Always INTERNAL!	
Revision table	Optional	List updates performed on specification document.	This section contains the following information • date	Always INTERNAL!	How to In Confluence can be easily • adding comments in "What did you

			• name of updater • content of update • name of reviewer		• using Comala workflow Examples: • From SellConnect Spec  Version and review status Epic User story Legend • SDI - Fare driven flow: search for i