

MICHIGAN STATE

U N I V E R S I T Y

Alpha Presentation

Automated Process for Airworthiness Release

The Capstone Experience

Team United Airlines Training

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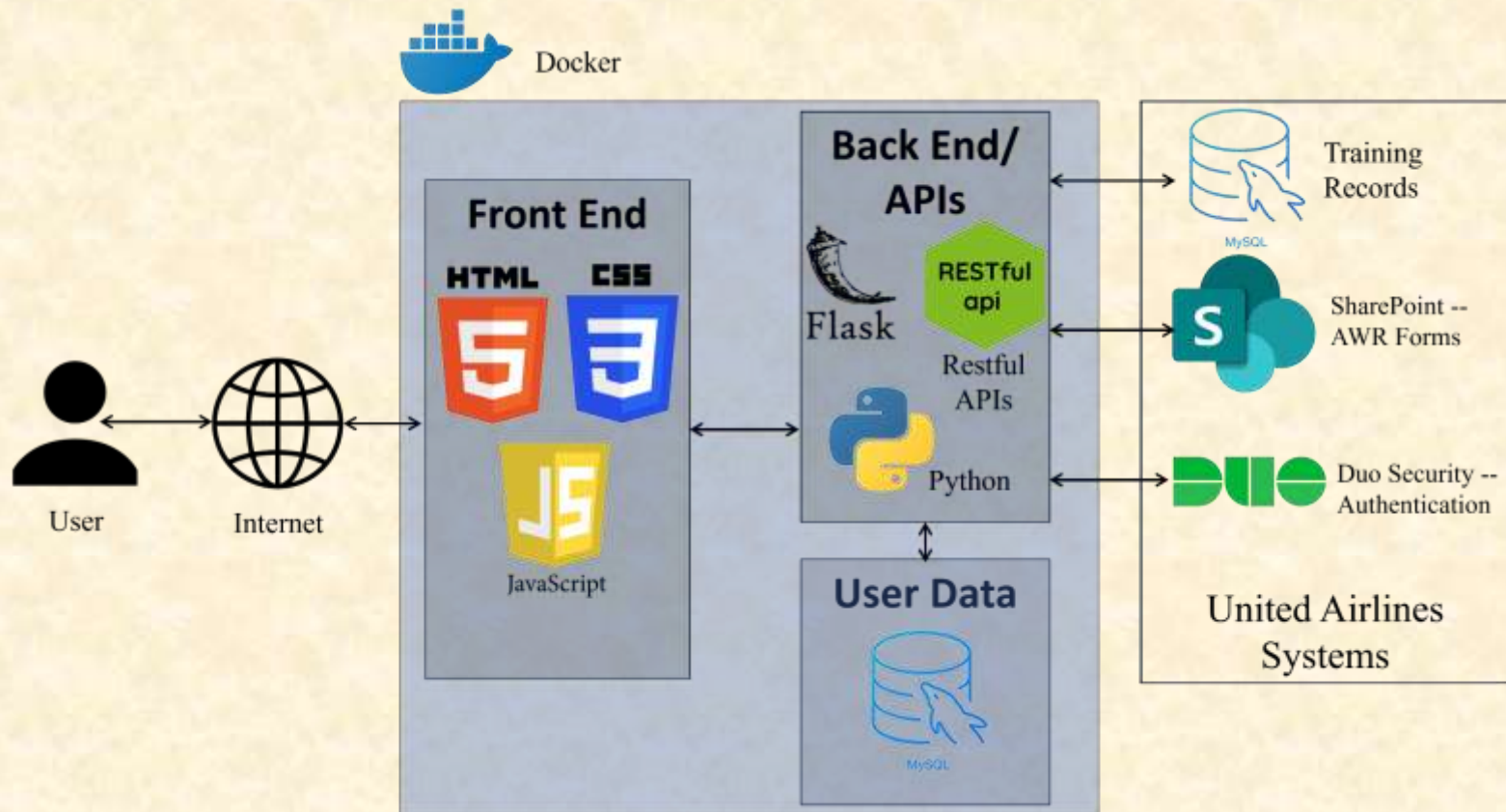
*From Students...
...to Professionals*

Project Overview

- United Airlines needs to store all information for an AWR form in one place
- Our solution is a website that provides automated record checks, progress tracking and notifications, and record updates for technicians and supervisors
- Digital signatures are utilized to authenticate and monitor technician progress



System Architecture



Create Form Page

AWR Management System Home Search for Form Log Out

Step 1 - Application Information:

* Please enter a valid name with a space between first and last Name:

* Please enter only numbers EMP. No.:

* Please enter exactly three letters Station:

* Please enter only numbers A&P No.:

Rapirman Certificate (if applicable):

Step 2 - Fleet Type Requested:

* Please select a fleet Fleet:

Create

AIRWORTHINESS RELEASE AUTHORIZATION REQUEST

Step 1 - Applicant Information

Name: _____ Emp. No: _____ Station: _____

AWP No: _____ Rapirman Certificate (if applicable): _____

Step 2 - Fleet Type Requested

A1833B A2YN 33N0 33MAR 19T 78P 7T1 78P OTHER _____

Step 3 - Applicant Acknowledgments (Initial each item and sign)

1. My Training Record contains the following in MTDB:

- ____ Completion of Paperwork Policies and Procedures, Training (DMM or equivalent for supplier)
- ____ CAT Assessment
- ____ ETOFS Assessment
- ____ 841/DT Assessment
- ____ 80VSM Assessment

2. _____ I affirm I have met the requirements of 14 CFR 65.83 and have 6 months aircraft maintenance experience within the last 24 months at United Airlines as I have met the equivalent requirements as per [General Maintenance Manual \(GMM\) 80.0002](#)

3. I have read the following DMM sections plus other related material and have signed the Memorandum of Understanding on the reverse side of this form:

- ____ 80.0002 Aircraft Release Release
- ____ 80.0011 Aircraft Maintenance List/Log
- ____ 80.0001 Release Maintenance Policy and Procedures
- ____ 80.0001 (Reserved Issues) (at Item 2)(1)
- ____ 80.0001 (Reserved Issues) (at Item 2)(2)
- ____ 80.0001 (Reserved Issues) (at Item 2)(3)
- ____ 80.0001 (Reserved Issues) (at Item 2)(4)
- ____ 80.0001 (Reserved Issues) (at Item 2)(5)
- ____ 80.0001 (Reserved Issues) (at Item 2)(6)
- ____ 80.0001 (Reserved Issues) (at Item 2)(7)
- ____ 80.0001 (Reserved Issues) (at Item 2)(8)
- ____ 80.0001 (Reserved Issues) (at Item 2)(9)
- ____ 80.0001 (Reserved Issues) (at Item 2)(10)
- ____ 80.0001 (Reserved Issues) (at Item 2)(11)
- ____ 80.0001 (Reserved Issues) (at Item 2)(12)
- ____ 80.0001 (Reserved Issues) (at Item 2)(13)
- ____ 80.0001 (Reserved Issues) (at Item 2)(14)
- ____ 80.0001 (Reserved Issues) (at Item 2)(15)
- ____ 80.0001 (Reserved Issues) (at Item 2)(16)
- ____ 80.0001 (Reserved Issues) (at Item 2)(17)
- ____ 80.0001 (Reserved Issues) (at Item 2)(18)
- ____ 80.0001 (Reserved Issues) (at Item 2)(19)
- ____ 80.0001 (Reserved Issues) (at Item 2)(20)
- ____ 80.0001 (Reserved Issues) (at Item 2)(21)
- ____ 80.0001 (Reserved Issues) (at Item 2)(22)
- ____ 80.0001 (Reserved Issues) (at Item 2)(23)
- ____ 80.0001 (Reserved Issues) (at Item 2)(24)
- ____ 80.0001 (Reserved Issues) (at Item 2)(25)
- ____ 80.0001 (Reserved Issues) (at Item 2)(26)
- ____ 80.0001 (Reserved Issues) (at Item 2)(27)
- ____ 80.0001 (Reserved Issues) (at Item 2)(28)
- ____ 80.0001 (Reserved Issues) (at Item 2)(29)
- ____ 80.0001 (Reserved Issues) (at Item 2)(30)
- ____ 80.0001 (Reserved Issues) (at Item 2)(31)
- ____ 80.0001 (Reserved Issues) (at Item 2)(32)
- ____ 80.0001 (Reserved Issues) (at Item 2)(33)
- ____ 80.0001 (Reserved Issues) (at Item 2)(34)
- ____ 80.0001 (Reserved Issues) (at Item 2)(35)
- ____ 80.0001 (Reserved Issues) (at Item 2)(36)
- ____ 80.0001 (Reserved Issues) (at Item 2)(37)
- ____ 80.0001 (Reserved Issues) (at Item 2)(38)
- ____ 80.0001 (Reserved Issues) (at Item 2)(39)
- ____ 80.0001 (Reserved Issues) (at Item 2)(40)
- ____ 80.0001 (Reserved Issues) (at Item 2)(41)
- ____ 80.0001 (Reserved Issues) (at Item 2)(42)
- ____ 80.0001 (Reserved Issues) (at Item 2)(43)
- ____ 80.0001 (Reserved Issues) (at Item 2)(44)
- ____ 80.0001 (Reserved Issues) (at Item 2)(45)
- ____ 80.0001 (Reserved Issues) (at Item 2)(46)
- ____ 80.0001 (Reserved Issues) (at Item 2)(47)
- ____ 80.0001 (Reserved Issues) (at Item 2)(48)
- ____ 80.0001 (Reserved Issues) (at Item 2)(49)
- ____ 80.0001 (Reserved Issues) (at Item 2)(50)

4. _____ I understand that I am not to exercise my Airworthiness Release until the authorization appears at my MTDB being issued

5. _____ I understand that if my Airman or Rapirman Certificate has limitations (i.e. Access ONLY of FSL) I am only authorized to sign off for work within the scope of my certificate limitations.

800



Step 3 Signing Page

AWR Management System Home Search for Form Log Out

Step 3 - Applicant Acknowledgments (Initial each item and sign)

1. My Training Record contains the following in MTISE:

- Completion of Paperwork Policies and Procedures Training (GMMN or equivalent for suppliers)
- CAT Awareness
- ETOPS Awareness
- RII / IDT Awareness
- RSVSM Awareness

2. I affirm I have met the requirements of 14 CFR 65.83 and have 6 months aircraft maintenance experience within the last 24 months at United Airlines or I have met the equivalent requirements as per General Maintenance Manual (GMM) 06-20-05

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Form: 75-0064
RMS: 00-0703-3-0033
Date: 06/15/2023

AIRWORTHINESS RELEASE AUTHORIZATION REQUEST

Step 1 - Applicant Information

Name: John Smith Emp. No: 134134 Station: PHO
AMP No: 52313123 Repairman Certificate: (if applicable)

Step 2 - Fleet Type Requested

A319X20 A321X 737NG 737MAX 757 767 777 787 OTHER: _____

Step 3 - Applicant Acknowledgments (Initial each item and sign)

1. My Training Record contains the following in MTISE:
 - Completion of Paperwork Policies and Procedures Training (GMMN or equivalent for suppliers)
 - CAT Awareness
 - ETOPS Awareness
 - RII / IDT Awareness
 - RSVSM Awareness
2. I affirm I have met the requirements of 14 CFR 65.83 and have 6 months aircraft maintenance experience within the last 24 months at United Airlines or I have met the equivalent requirements as per [General Maintenance Manual \(GMM\) 06-20-05](#)
3. I have read the following GMM sections plus other related materials and have signed the Memorandum of Understanding on the reverse side of this form:
 - [06-20-05 Airworthiness Release](#)
 - [06-30-10 Aircraft Maintenance Logbook](#)
 - [05-30-05 Deferred Maintenance Policy and Procedures](#)
 - [09-20-03 Required Inspection Items \(RII\)](#)
 - [09-10-05 Inspection Discrepancy Items](#)
 - MEL, CDL, and NEF, including the Preface section of the requested fleet type



Search Page

The screenshot shows a web browser window with the URL `www.united-airlines.com/search`. The page title is "AWR Management System". The navigation bar includes "Home", "Search for Form", and a "Log Out" button. The search interface includes a text input field labeled "Type name here..." and a "Search" button. Below this are filter fields: "Fleet", "Plane Type", "Date Range", "A&P No.", "Station", and "Form ID".

#	Name	Fleet	Form ID	Supervisor	Progress	Date Started
1	John Doe	A319/320	31-0054	John Appleseed	Step 1/2	Mon, 01 Jan 2024 00:00:00 GMT
2	Jane Doe	A321N	31-0059	Mark Cuban	Step 3	Fri, 02 Feb 2024 00:00:00 GMT
3	AL Yankovic	737NG	31-0052	Hugh Jackman	Step 4	Sun, 31 Dec 2023 00:00:00 GMT
4	Helen Parr	737MAX	31-0045	Brittney Smith	Complete	Tue, 07 Nov 2023 00:00:00 GMT
5	John Doe	757	31-0048	John Appleseed	Step 1/2	Tue, 12 Dec 2023 00:00:00 GMT

At the bottom of the table, there is a pagination control with buttons for pages 1, 2, 3, 4, and 5. Page 1 is currently selected.



Form Progress Page

AWR Management System Home Search for Form Log Out

Hunter Jones AWR Progress

- Step 0: Pre-Requisites Completed
- Step 1&2: Applicant Information & Fleet Type
- Step 3&4: Applicant Acknowledgements & Airworthiness Release Authority
- Step 5: Supervisor Endorsements
- Certificate Validation

75%

[<-Back](#) [Next->](#)

Form: 01-0040
Rev: 00-07-01-0000
Date: 06/15/2011

UNITED

AIRWORTHINESS RELEASE AUTHORIZATION REQUEST

Step 1 - Applicant Information

Name: _____ Emp. No: _____ Station: _____
AAP No: _____ Position (Certificate of authority): _____

Step 2 - Fleet Type Requested

ADW300 432 FN 737NG 737MAX 747 767 777 787 OTHER _____

Step 3 - Applicant Acknowledgments (Initial each item and sign)

- My Training Record contains the following in MTBE:
 - Completion of Paperwork, Policies and Procedures Training (EMM) or equivalent for applicant;
 - CAT Awareness;
 - ETOPS Awareness;
 - RF - IOT Awareness;
 - RF/DB Awareness;
- I affirm I have met the requirements of 14 CFR 65.83 and have 6 months aircraft maintenance experience within the last 24 months at United Airlines and I have met the regulatory requirements as per [General Maintenance Manual \(GMM\) 06.05.01](#).
- I have read the following LHM sections plus other related materials and have signed the Mechanic's Declaration of Understanding on the reverse side of this form:
 - 06-20.01 - Aircraft Damage Release;
 - 06-20.02 - Aircraft Inspection Logbook;
 - 06-20.03 - Deferred Maintenance Policy and Procedures;
 - 06-20.04 - Requested Inspection Items (RIT);
 - 06-20.05 - Inspection Debriefed Tasks;
 - MEL, CDL, and MIP, including the Probable section of the requested fleet type.
- I understand that I am not to exceed my Appointment Expiration until the authorization appears in my MTBE training record.
- I understand that if my Airman or Repair Certificate has limitations (i.e. Authorized (DLT) or IFE), I am only authorized to sign off for work within the scope of my certificate limitations.

Sign

Applicant Signature: _____ Employee Number: _____ Date: _____

Page 1 of 2



What's left to do?

- System to assign forms
- MTISE / training checks
- Form purge feature
- UI sizing issues and error checking
- Proper integration between features



Questions?

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