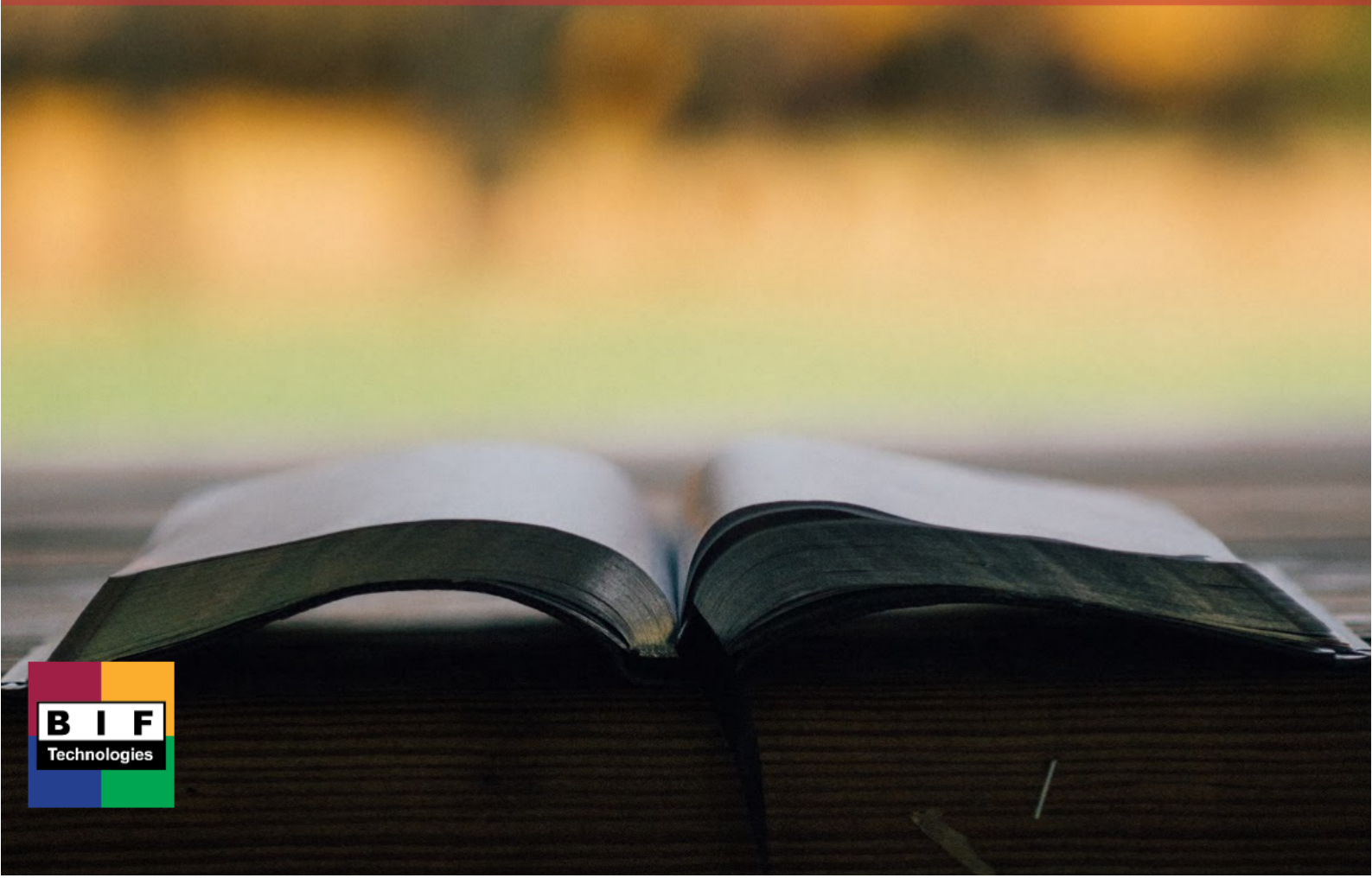
IDUT Documentation Library Overview

Author: Destini Pettus



BIF Technologies

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Date	Version	Change Description	Editor
[01 May 2020]	[1.0]	[Created the initial version of this document.]	[Destini Pettus]

1 Introduction

The purpose of this document is to provide an overview of the developing library of resources created by the Bif team in support of the Infectious Disease Unit Type (IDUT) effort. In acknowledgement of the current pandemic, it has become essential to augment the WMSNi unit types to support the data needs of the nursing community. The Bif Team is committed to making data meaningful through data collection and tracking, as well as the assessment of key data points to differentiate between infectious disease patients and non-infectious disease patients. For more information on the specific documents created in support of the IDUT effort, see **2.0 Project Documentation Overview** where there are detailed summaries. To read a document in-depth, click the heading of each document. This will take you to the portion of the library overview containing the specific documentation.

2 Project Documentation Overview

2.1 IDUT Environment Setup Document

The purpose of the IDUT Environment setup document is to function as a guide for the process necessary to view the new IDUT efforts from the cloud setting. The database requirements for the functionality of the development environment, testing environment, and production environment are listed in an efficient checklist, including factors such as platform, environment type, security, routing, and databases, to name a few. To further demonstrate the layout of the environmental architecture and increase visualization of the proposed environment, an architecture diagram is included in the document. There are also step by step instructions, including screenshots as a demonstration, to aid in the creation of the elastic beanstalk environments. The goal of the IDUT Environment Setup Document is to

Contributors: Michael Gotcher, Marco Roman

2.2 WMSNi IDUT Design Document

The IDUT Design document functions as a written description of the product, which will inform the reader of the overall architecture of the additional components required to successfully integrate the new Infectious Disease Unit Type into the WMSNi program. Included in the outline of the architecture are descriptions of the updated Organizational Management and Patient Management Data Models. The current models are depicted using graphics and description, followed by a section presenting the optimized data models, displaying its usages and benefits with updated graphics and description. For example, the optimized data model includes patient data, employee data and schedule data, whilst avoiding the issue of Primary Key collisions and removing certain constraints for a more nimble WMSNi Organization Table. Similarly, the Patient Management Data Model represents the information pertaining to the current model, whilst expounding upon the benefits, improvements and issues of the optimized model. The Patient Manager Design focuses on Adding Patient Attributes, outlines development tasks for folding the new IDUT into the existing structure, and lists new patient

attributes for tracking. The final section, Business Intelligence Design, presents an overview of IDUT Tracking Data fields, measures and design, including a *ward view* and a *strategic view*.

Contributors: Lucas Schamberger, Julius Campbell, Roderick Barnes, Linda Fisher PhD, and Mike Smith

2.3 WMSNi Business Intelligence OLAP and Reports Module Test Plan

Presented below is the test plan for the Business Intelligence Module. Readers can expect that each section will clearly explain who should perform the testing, what is being tested, and desired test results. Most testing sections have been constructed so the user can determine if the module is functioning as intended. Some portions of the testing may be required to be performed by an application administrator or by a database administrator; these portions of the test plan if present will be denoted by the Database Administrator or Application Administrator Avatars as they require someone with WMSNi database administrative privileges. Examples are:

- Query Execution - running diagnostic queries,
- Result Assessment - assessing the effect of scripts upon WMSNi schema objects

2.4 WMSNi Patient Manager Module Test Plan

Presented below is the test plan for the Patient Manager Module. Readers can expect that each section will clearly explain who should perform the testing, what is being tested, and desired test results. Most testing sections have been constructed so the user can determine if the module is functioning as intended. Some portions of the testing may be required to be performed by an application administrator or by a database administrator; these portions of the test plan if present will be denoted by the Database Administrator or Application Administrator Avatars as they require someone with WMSNi database administrative privileges. Examples are:

- Query Execution - running diagnostic queries,
- Result Assessment - assessing the effect of scripts upon WMSNi schema objects

2.5 WMSNi Test Plan Guidance

The collection of WMSNi test plan documents cover multiple testing scenarios, and each step of the delivery process warrants a different category of testing. This guidance document specifies recommendations on when to execute each category of testing. The categories are:

- **Functional Testing -** Testing specific functional changes for each release.
- **Regression Testing -** Testing the overall application to verify that software which was previously developed and tested still performs correctly after a release.
- **Critical Path Testing -** Spot-check testing of key components of the application to verify that software which was previously developed and tested still performs correctly after a release.

2.6 WMSNi 12c 2.4.7.0R4 Production Critical Path Test Plan

Presented below is the test plan for the WMSNi Critical Path is presented in the material that follows. The Critical Path Test Plan is a high-level test plan to ensure the functionality of major functions within WMSNi are performing correctly after routine system changes. Readers can expect that each section will clearly explain who should perform the testing, what is being tested, and desired test results. Most testing sections have been constructed so the user can determine if the module is functioning as intended. Some portions of the testing may be required to be performed by an application administrator or by a database administrator; these portions of the test plan, if present, will be denoted by the Database Administrator or Application Administrator Avatars as they require someone with WMSNi database administrative privileges. Examples are:

- Query Execution - running diagnostic queries,
- Result Assessment - assessing the effect of scripts upon WMSNi schema objects

2.7 IDUT Release Plan

Lorem ipsum dolor sit

3 IDUT Environment Setup Document

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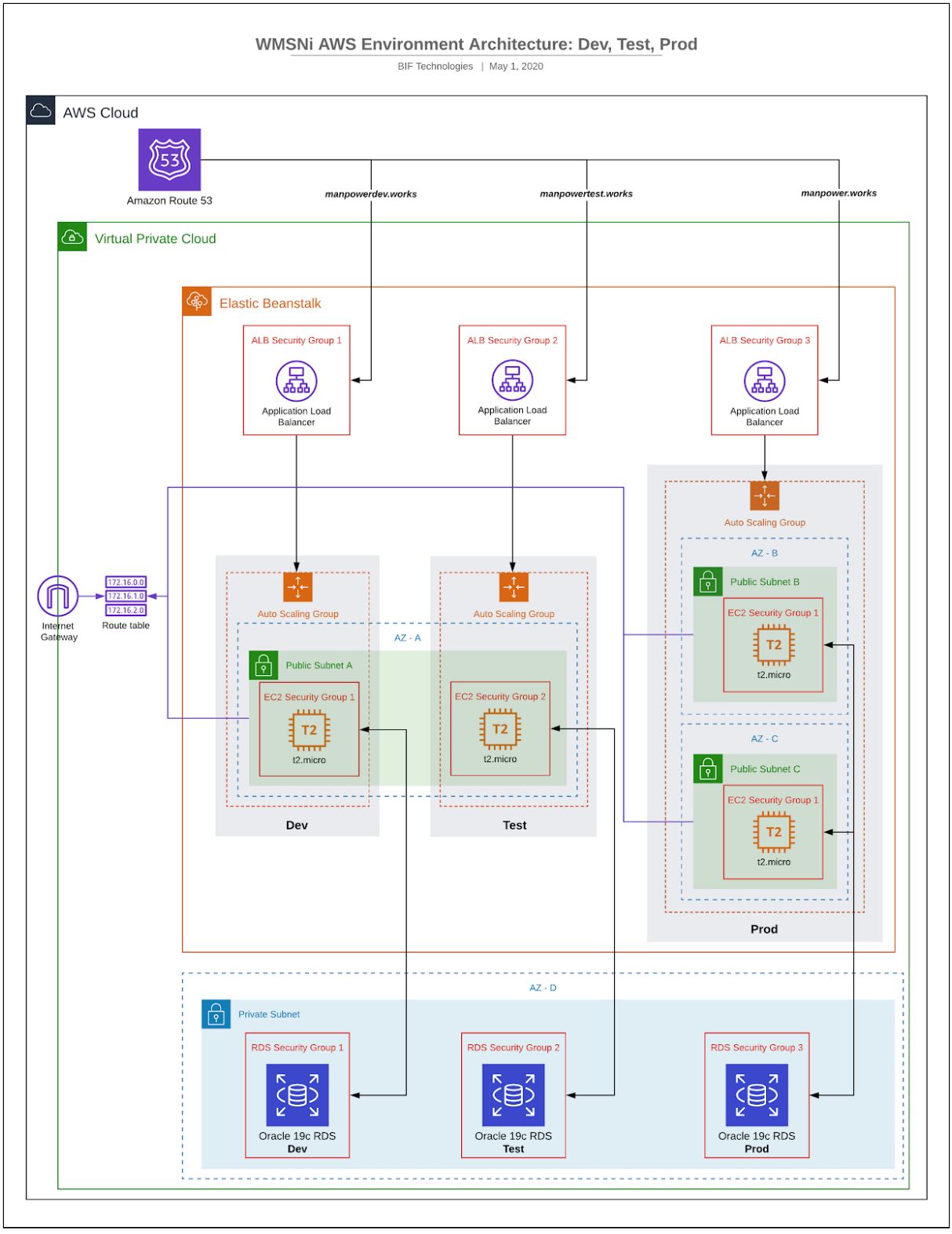
Environment Requirements (Dev/Test/Prod)

- Platform: Apache Tomcat **8.5** with Java 8
- EC2 instance type
  - Not under a high load
  - Ask Moises → **t2.micro** should be fine
  - VPC generation
- Environment type (**load balancing**/single instance)
  - Load balancing → routing rules?
    - TCP/HTTP traffic: unspecified
  - High availability
    - Production only
- Routing
  - Route53: yes → new domain name (probably)
    - Production only
    - Domain name → ask Roderick
      - BrainJack Manpower?
- Security
  - Security group rules
    - EC2: allow SSH access on port 22
  - NACL?
    - None
  - EC2 subnet type (public/private)
    - No private subnet required
  - VPC
    - Separate from CIDR range used for BrainJack?
    - Will environments have distinct subnets within VPC?
    - **New** VPC
      - All can be in the same subnet
      - Only production needs 2 AZ (at least)
- Database
  - Oracle 19c RDS
  - Jarvis2 - default-vpc-7330d114
- CAC-Enabled access
  - Application level
- Deployment
  - **Multiple WAR files** per instance
    - wmsni.war
    - liferay.war **deploys as ROOT**
      - Version 6.2(?)
    - mondrian.war (if OLAP cube) → BrainJack can also replace
    - Birt or BrainJack for reporting
  - Liferay “triggers” CAC security
- EC2 instance mods
  - Modify tomcat context.xml
  - server.xml
  - Need SSH access to instances

Environment Diagram



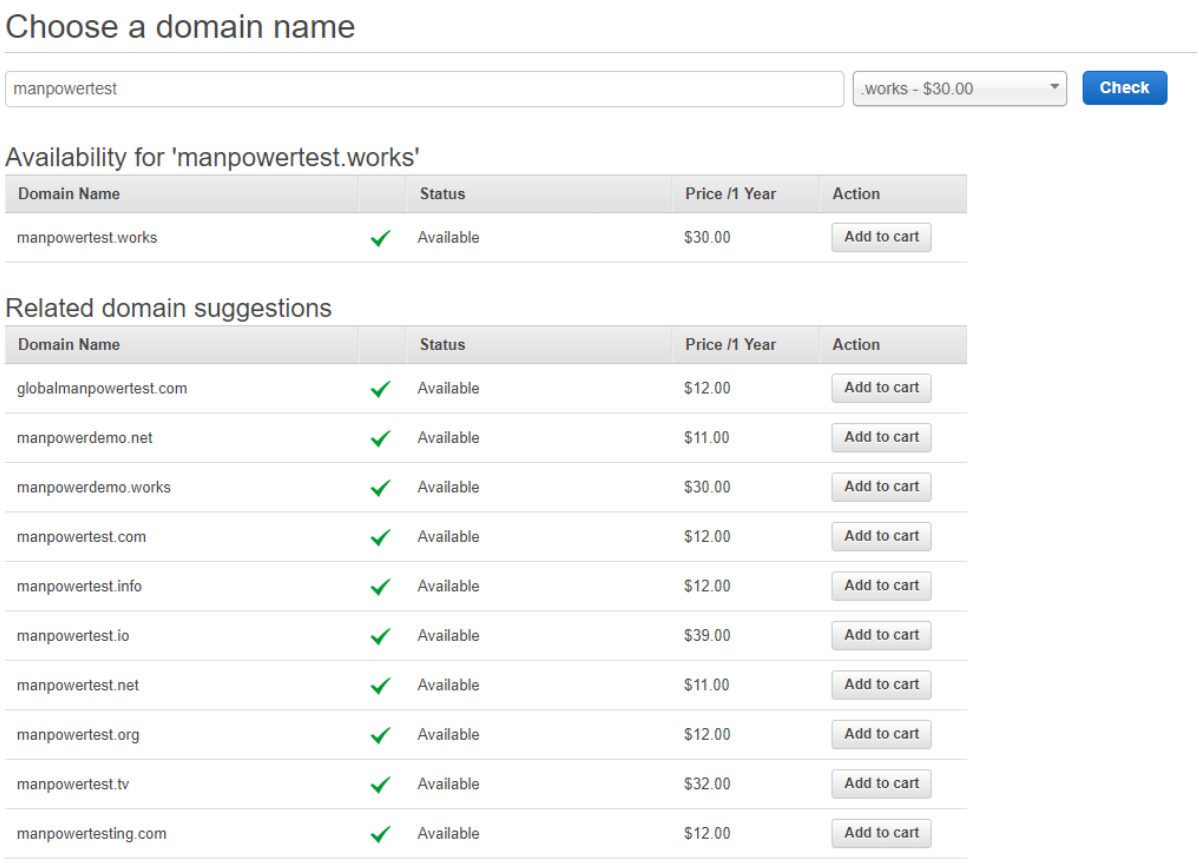
1 Checklist

- ❑ Register a domain name using Amazon Route 53
- ❑

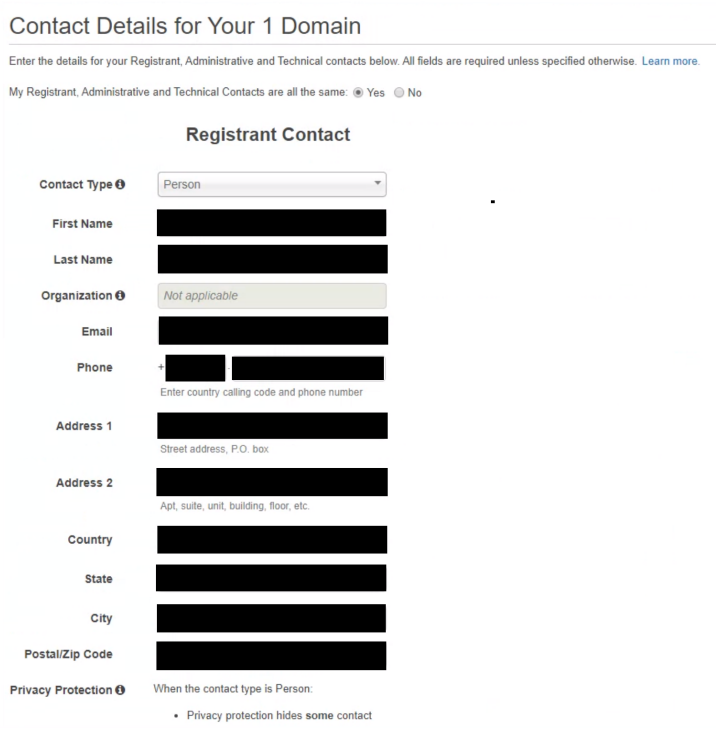
2 Step by Step Process

2.1 Creating a new hosted zone/domain name

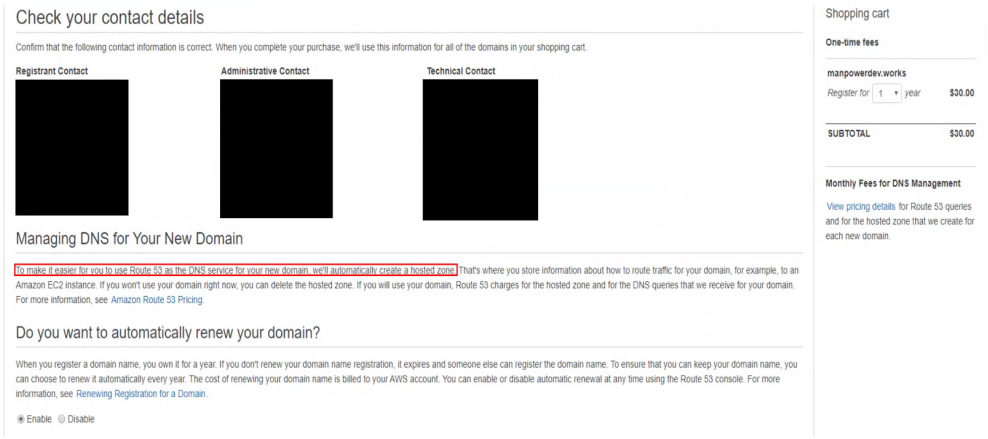
Services → Networking & Content Delivery → Route53 → Registered domains



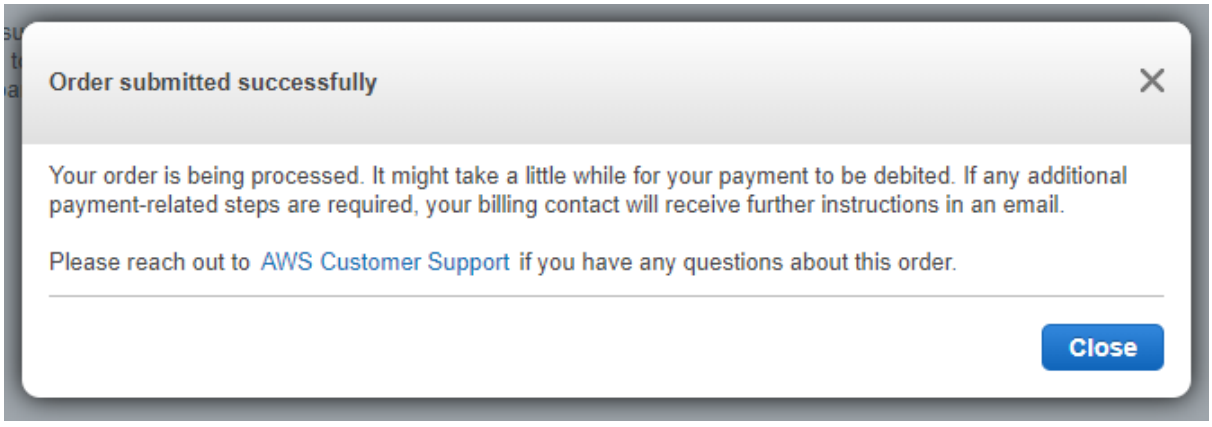
Add to cart



Enter contact details (admin, technical, etc.)
Note that hosted zone is automatically created



Enable auto renewal

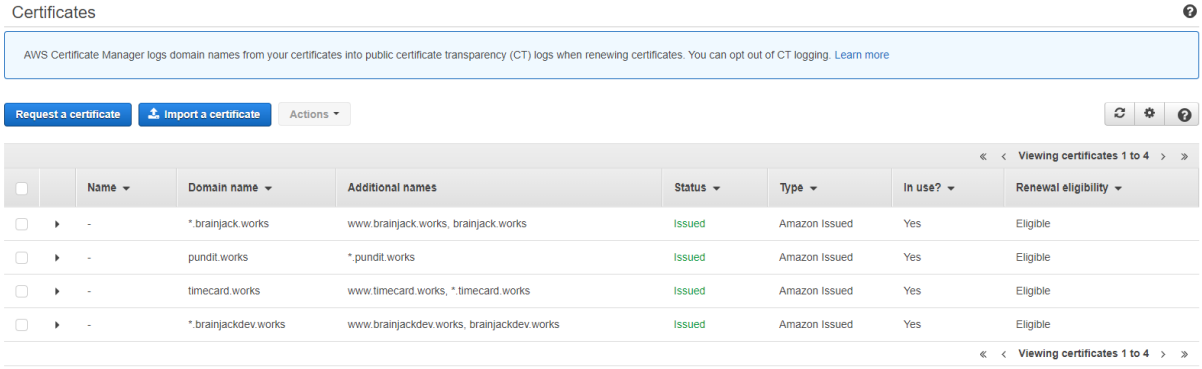


Success box

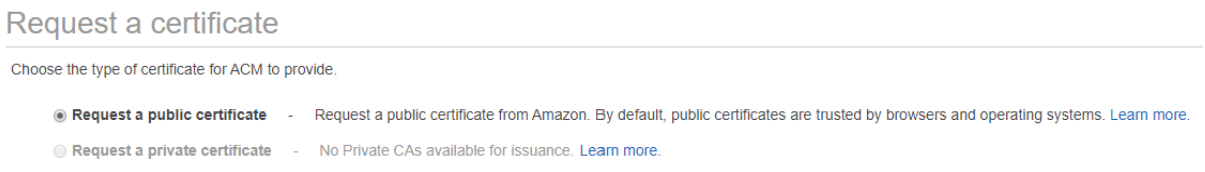
Verify domain name registrant (email)

Create SSL Certificates

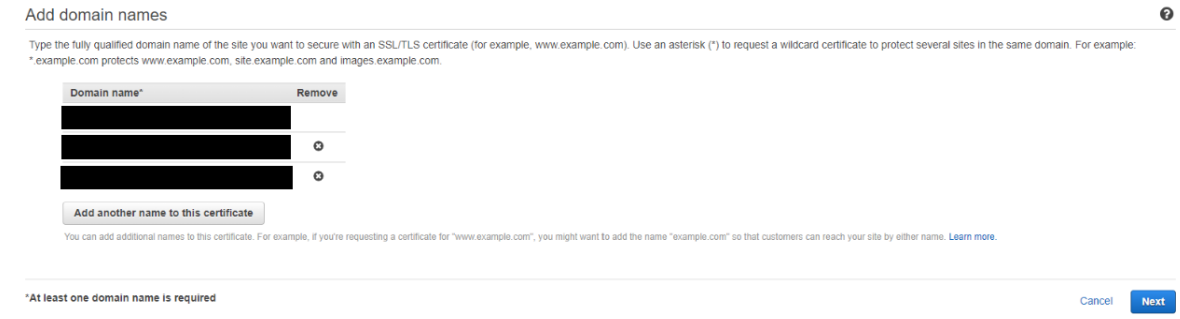
Services → Security, Identity, & Compliance → Certificate Manager → Request a certificate



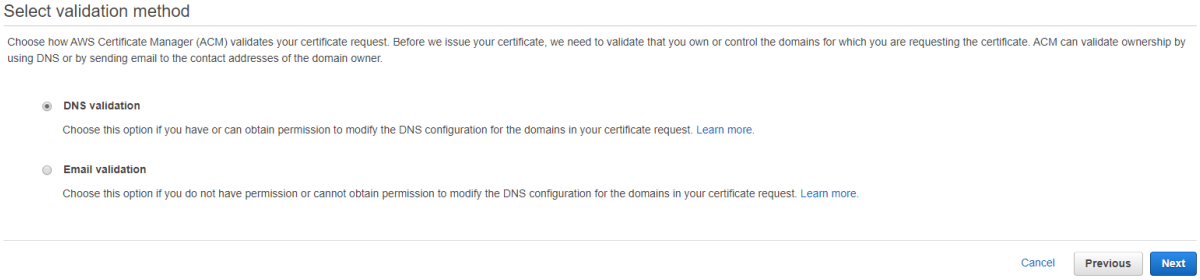
Select **public** certificate



Add domain names to the certificate

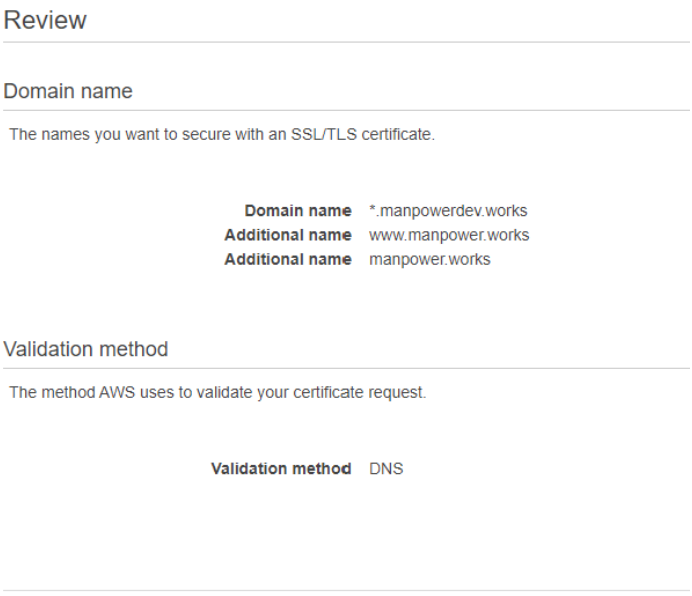


Select DNS validation

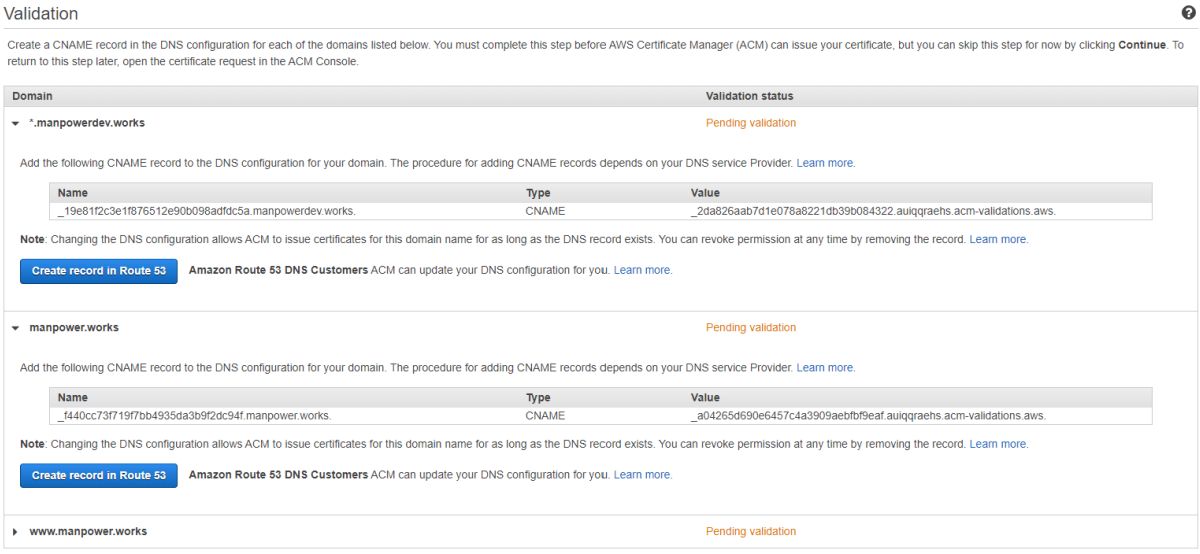


No tags

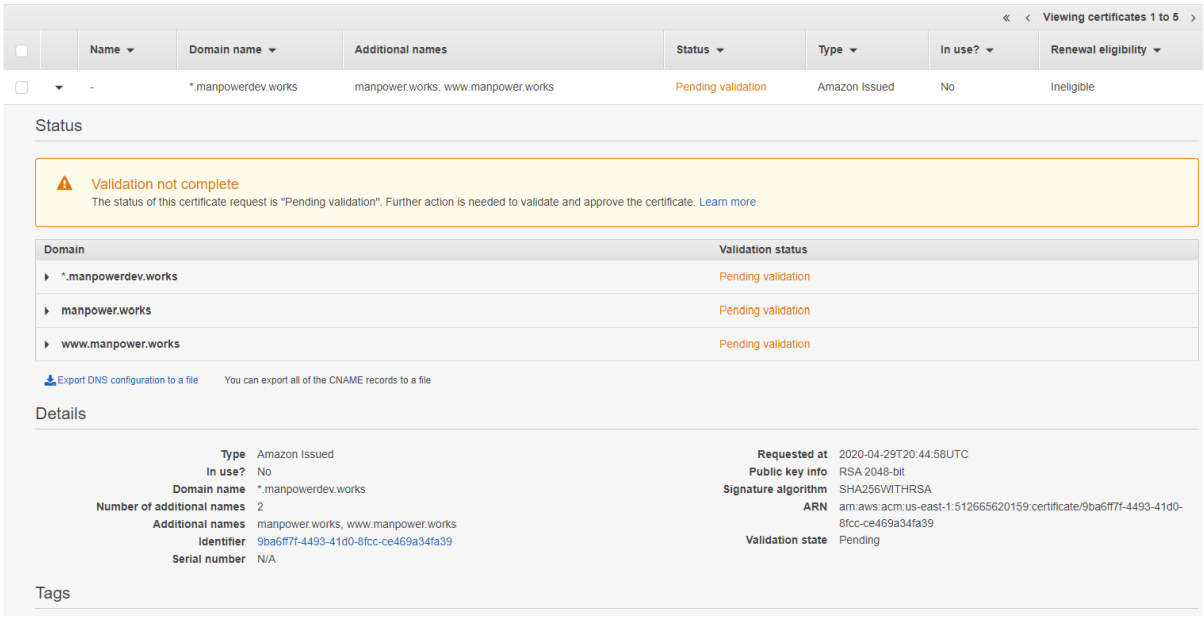
Review → **confirm and request**



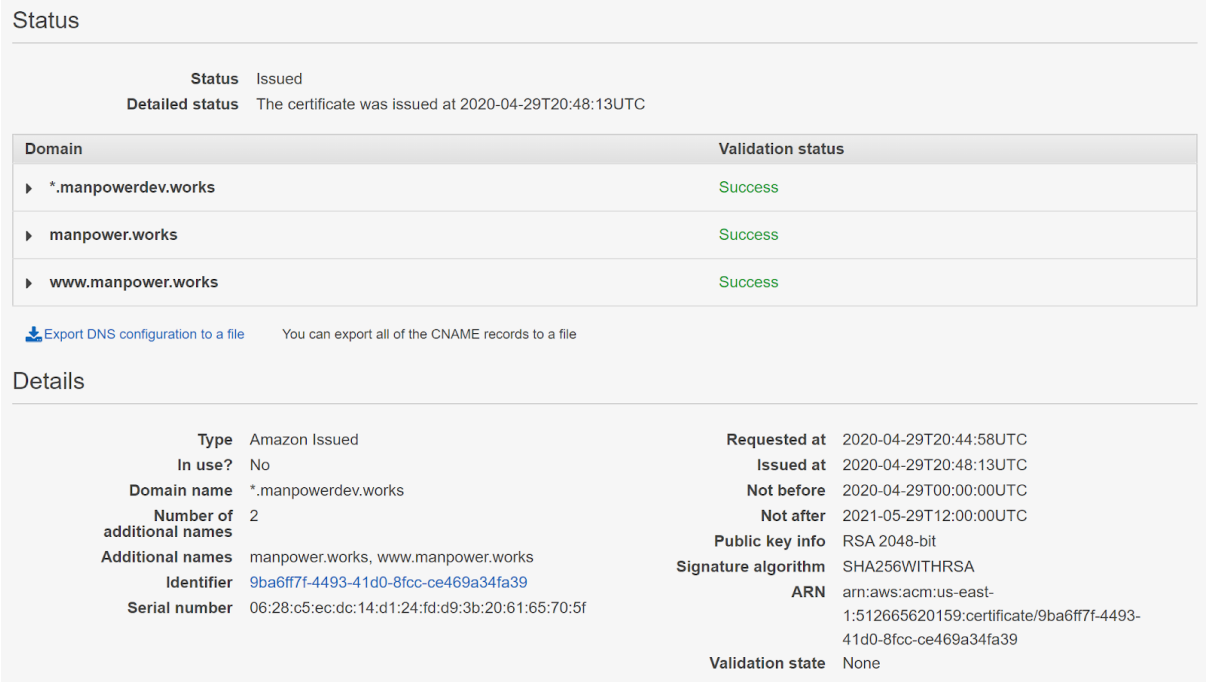
Validate - for each domain name: create Route53 records



Wait for DNS validation to complete - will be pending until then

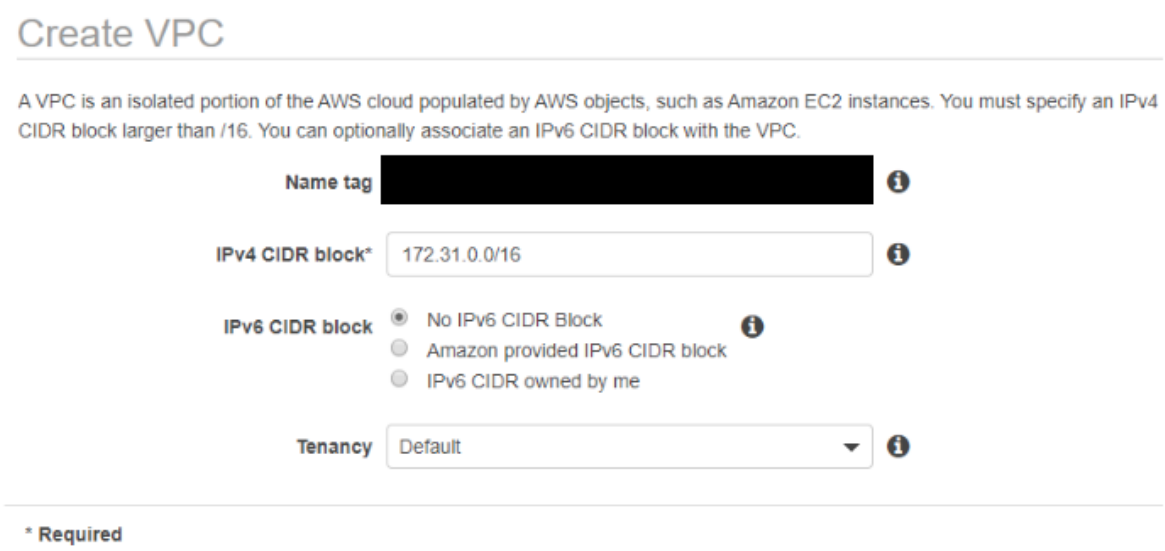


DNS validation complete



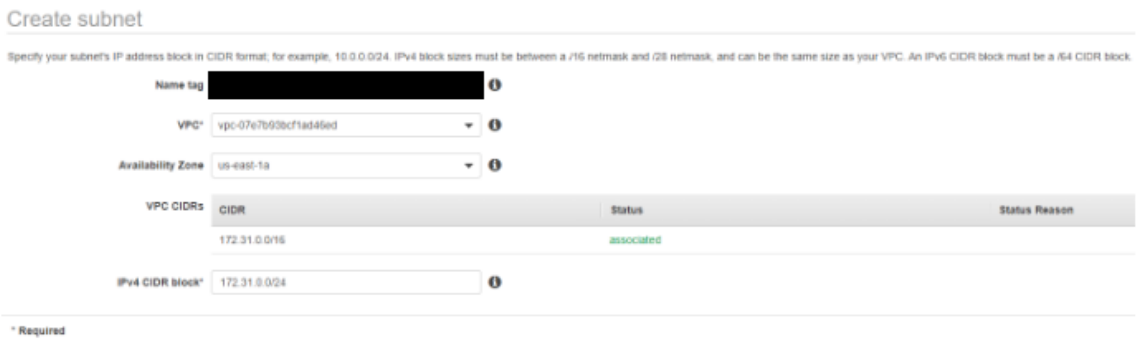
2.2 Create VPC

Services → Networking → VPC → create VPC



Make sure CIDR block is non-conflicting

2.2.1 Create VPC Subnet

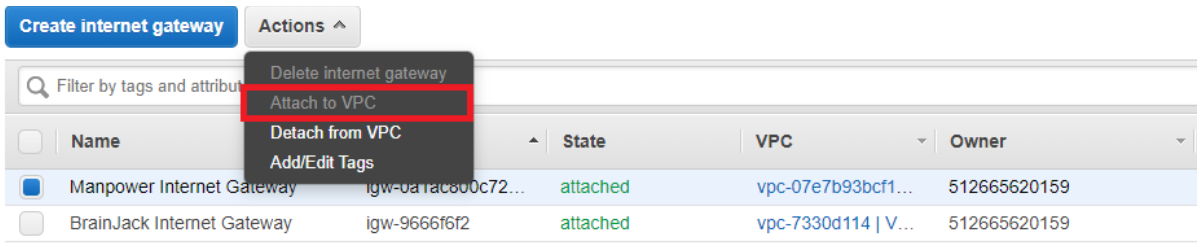


Repeat for other AZs as needed

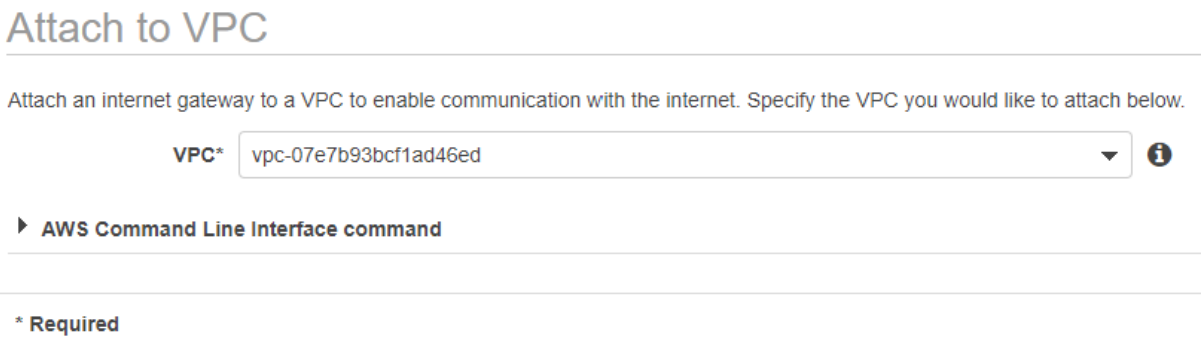
2.2.2 Create Internet gateway

Note: update diagram

Attach IGW to VPC

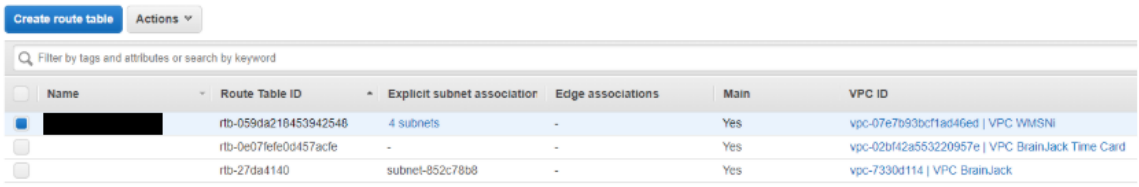


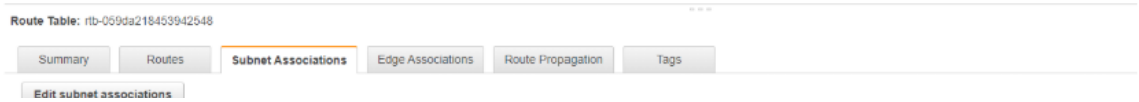
Select WMSNi VPC



Set up route table

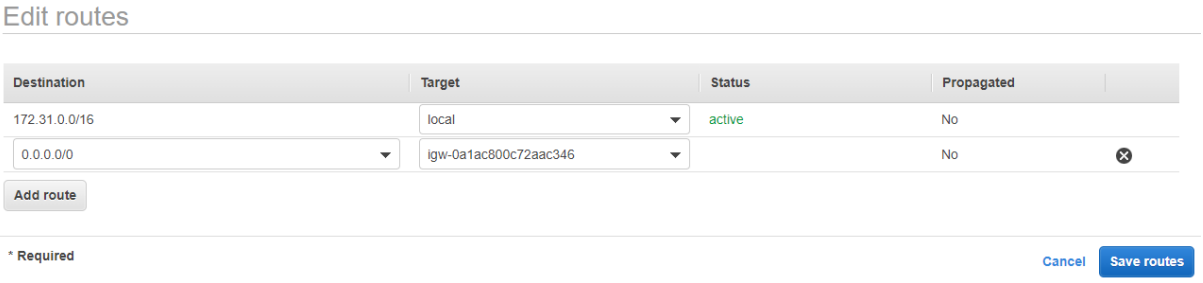
Set up route table





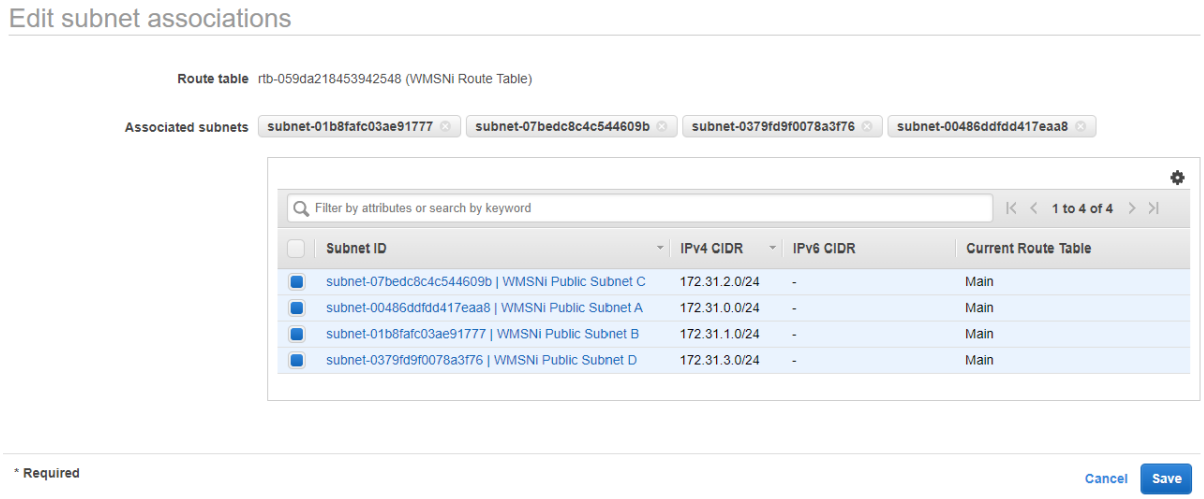
VPC → route tables → **routes** tab → edit routes

Add route for the new internet gateway as follows:



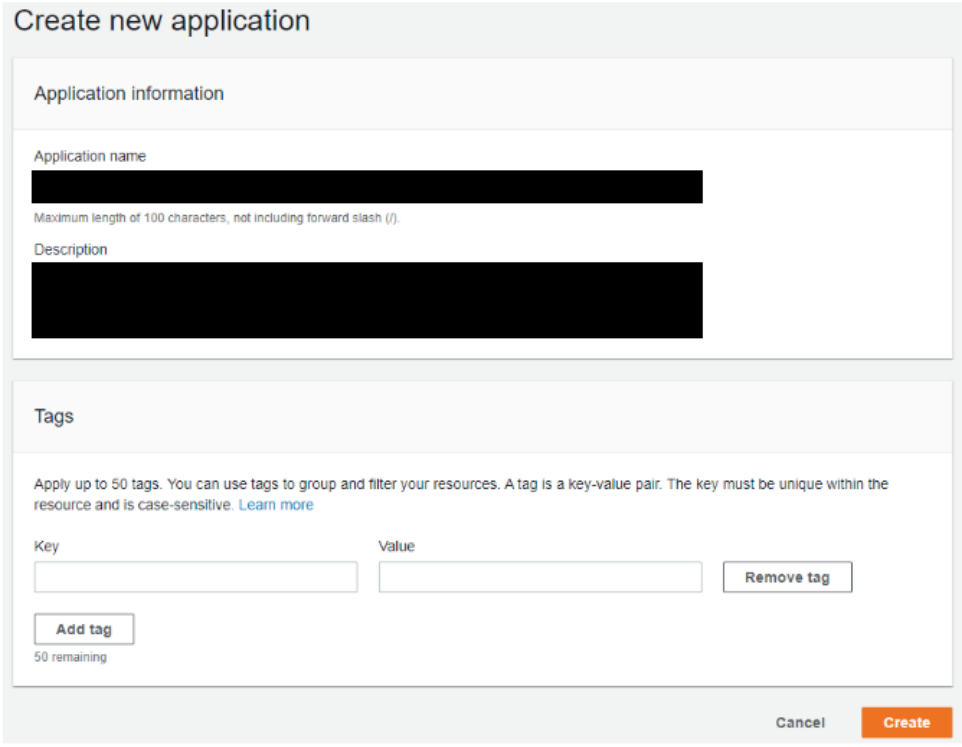
Subnet associations tab → edit subnet associations

Associate the new subnets (may need to revisit this step)

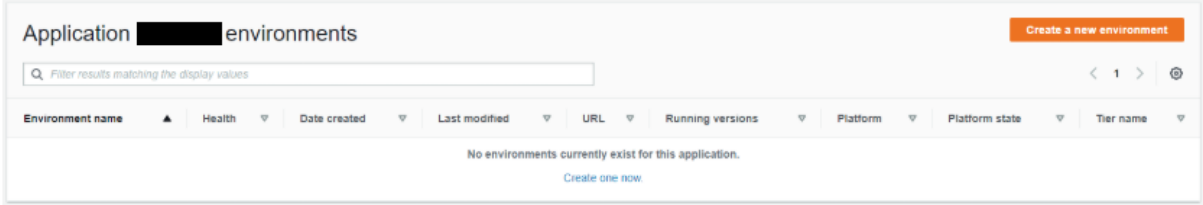


2.3 Elastic Beanstalk

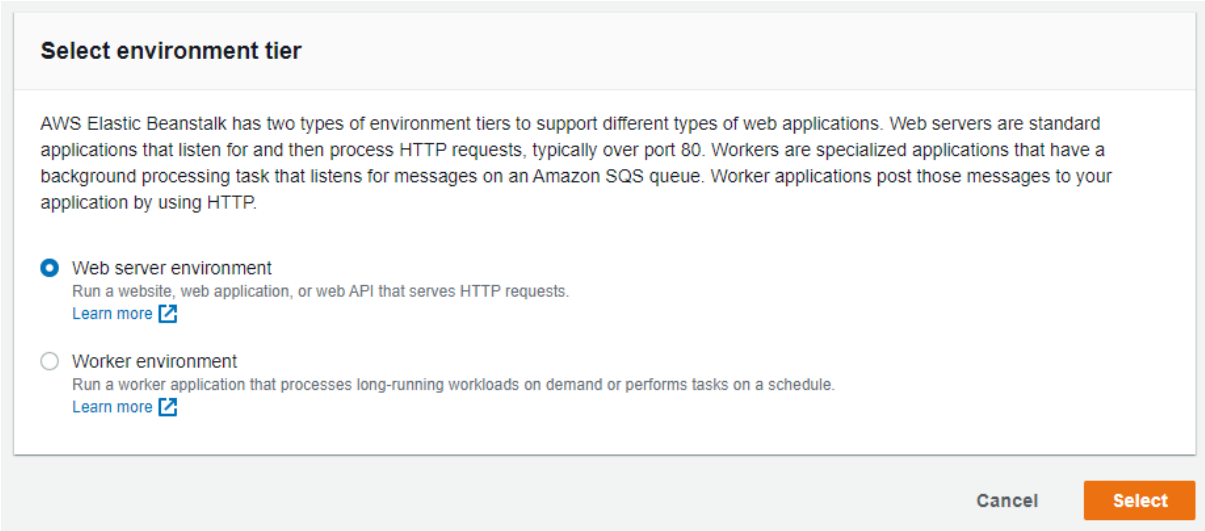
Services → Compute → EB → applications → create application
Create new EB application



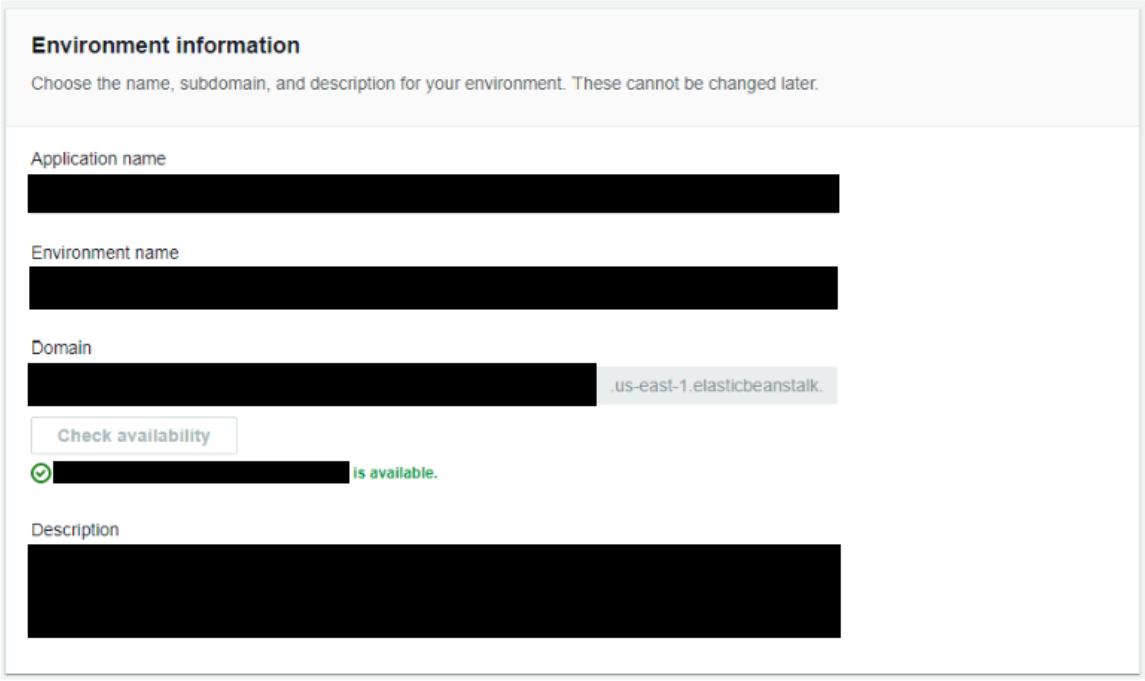
Create new EB environment



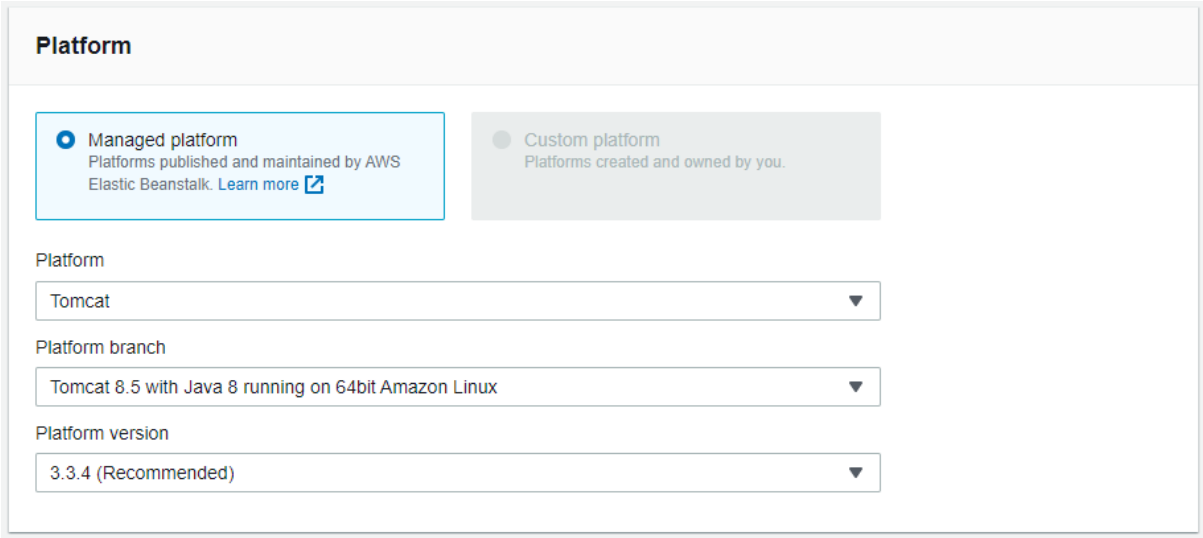
Select web server environment



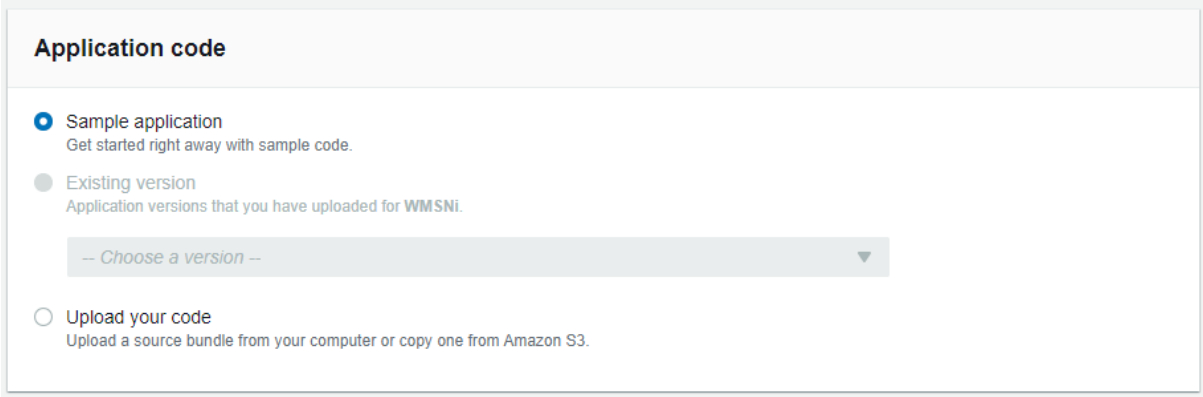
Enter environment information



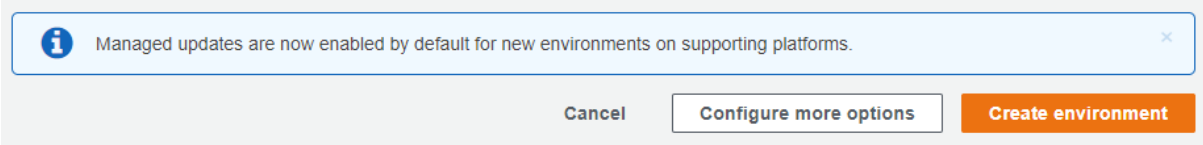
Select platform



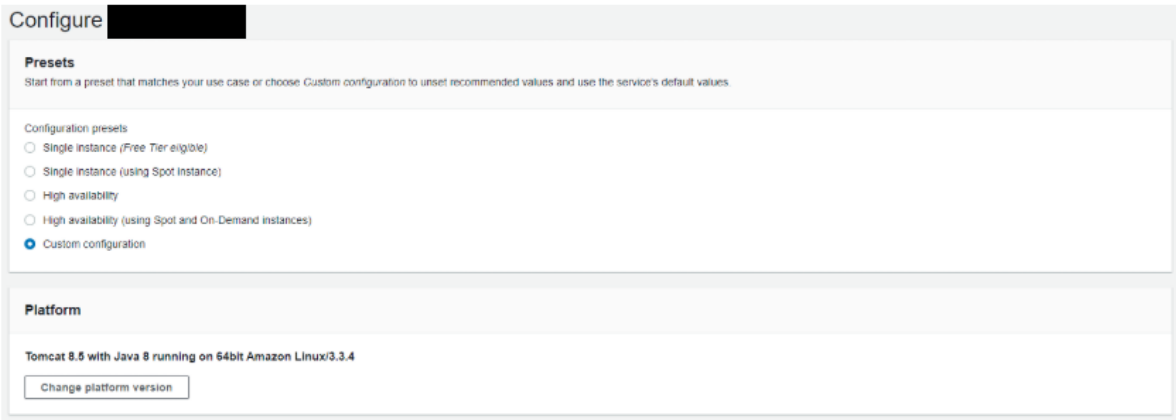
Start with a sample application



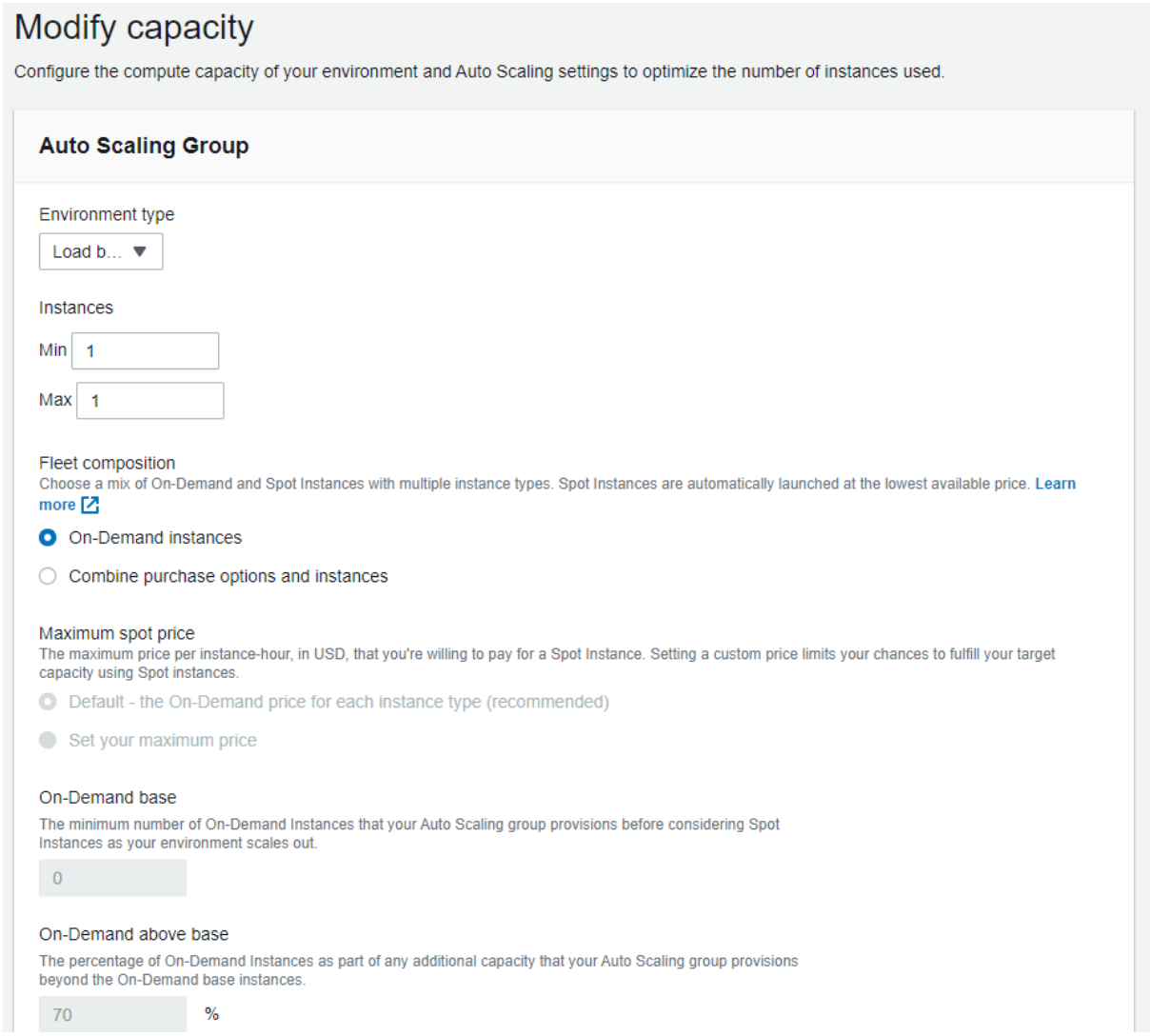
IMPORTANT: Select **Configure More Options**



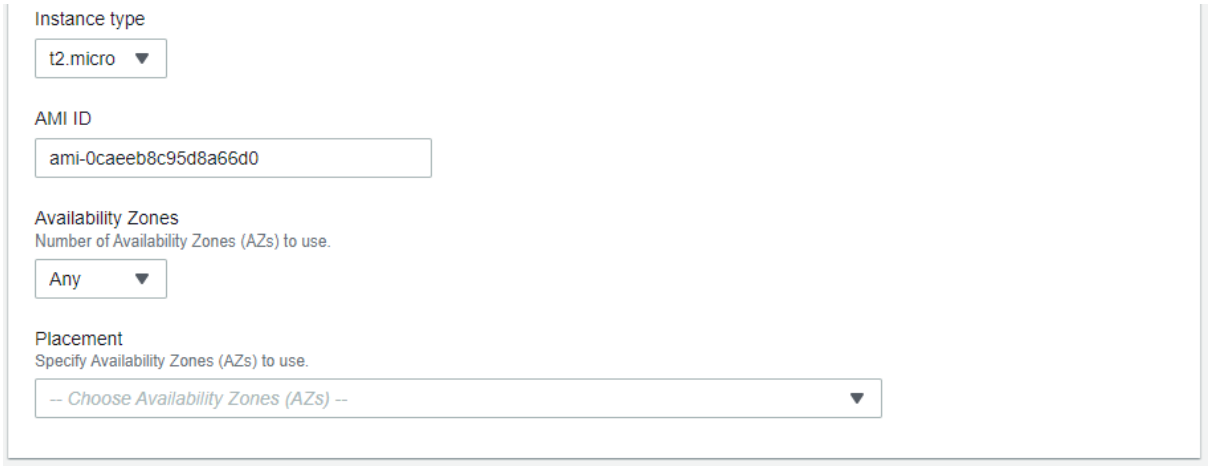
Environment configurations



Modify capacity
Auto Scaling Group

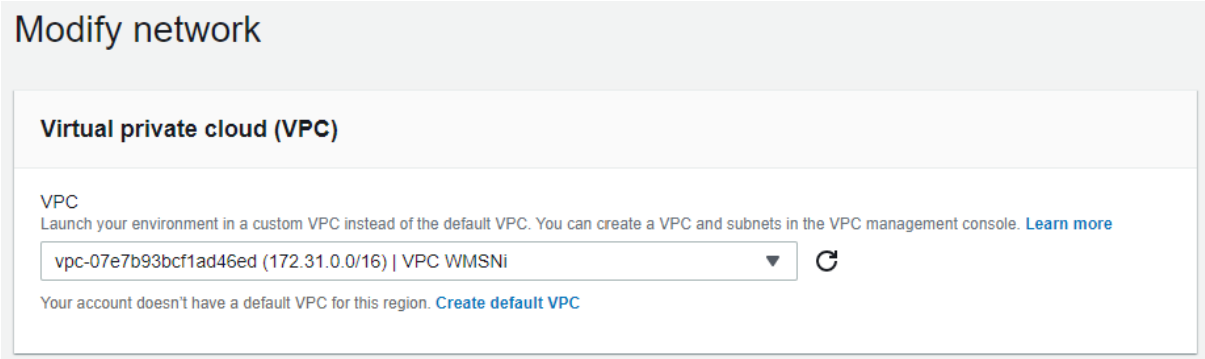


Instance type

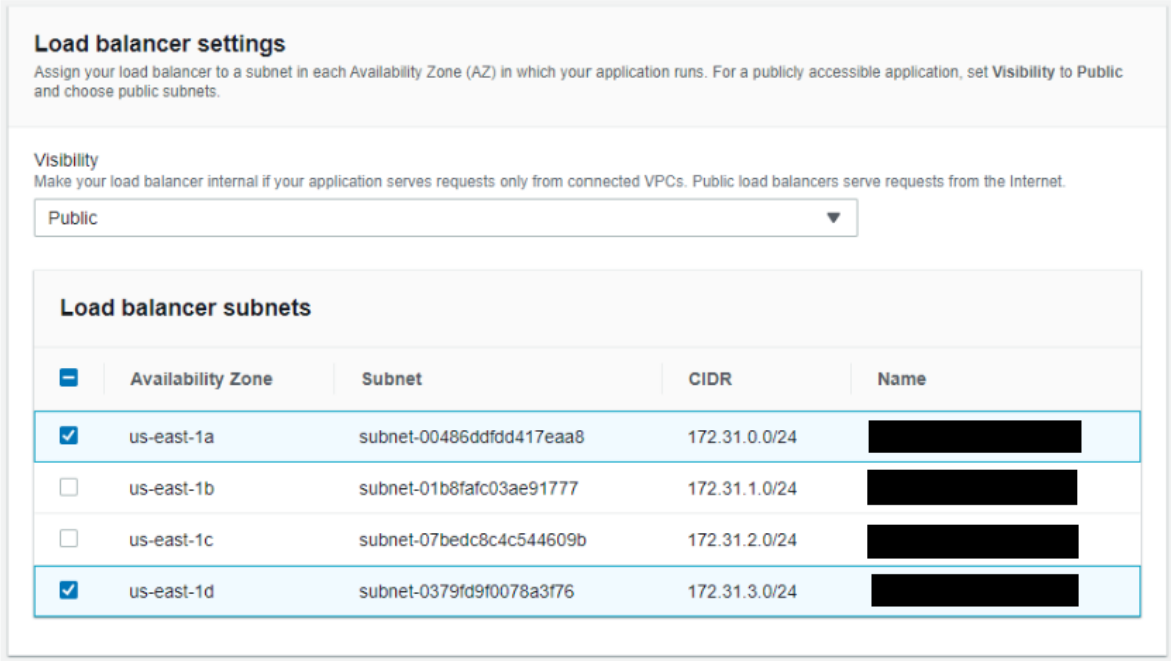


Note: AZ options will be handled later in **Network** settings
Leave Scaling Triggers alone (for now)

Modify Network
Select the VPC

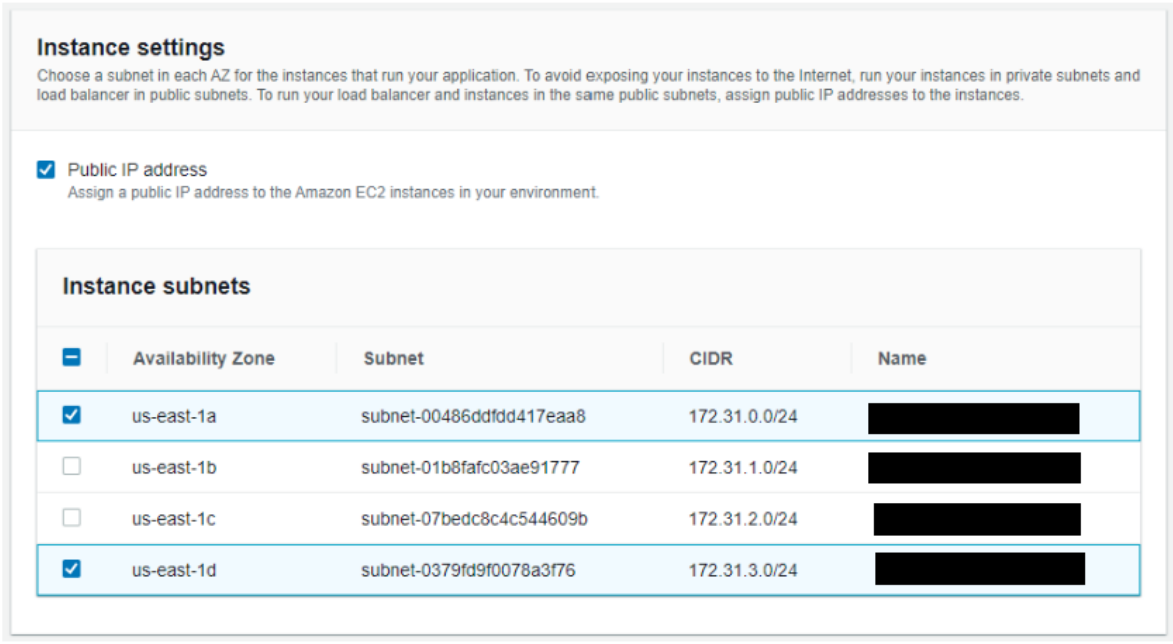


Select load balancer subnets



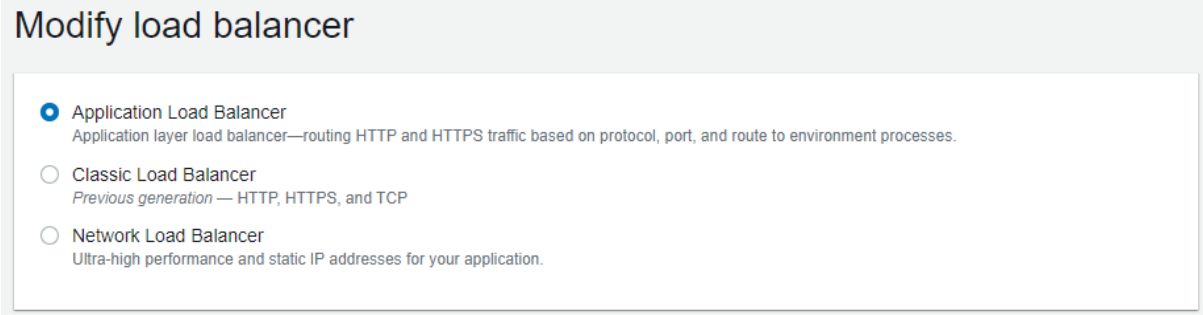
Note: subnet D will be ignored. Only there because ALB requires 2 AZs

Select EC2 instance subnets → **only one selected for Dev and Test**



Enable public IP for instances to allow SSH access later

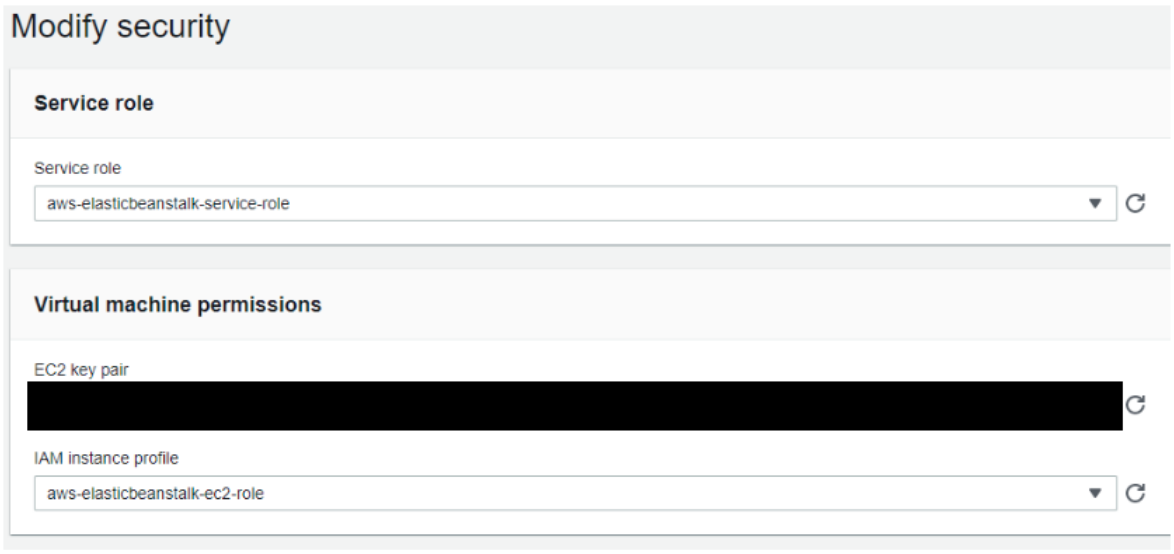
Modify Load Balancer
Select application load balancer



Skip secure port/HTTPS access for now (domain name not registered yet)
All other options can be left as default

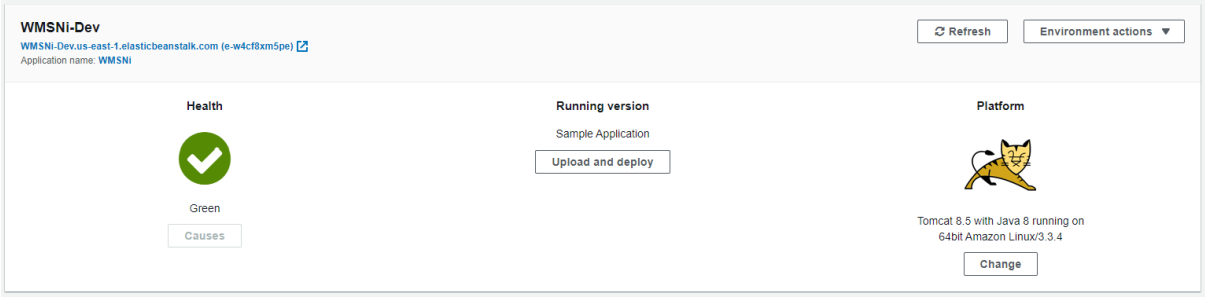
Modify instances
Do not need to; Elastic Beanstalk automatically creates new security group for instances

Modify security



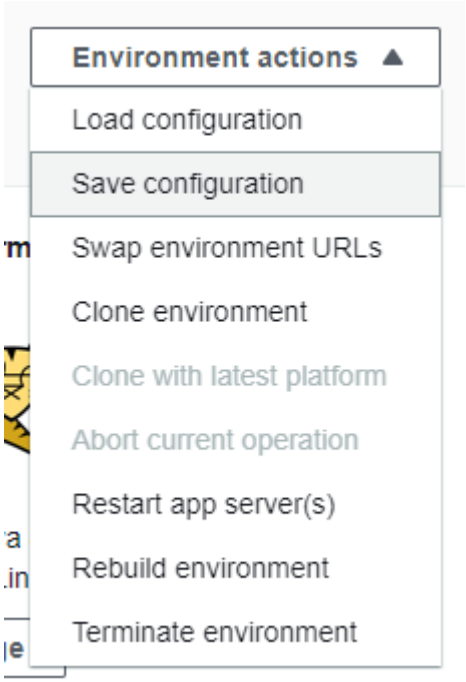
Should have an EC2 key pair available for this step (needed for SSH access)

Select **create environment**

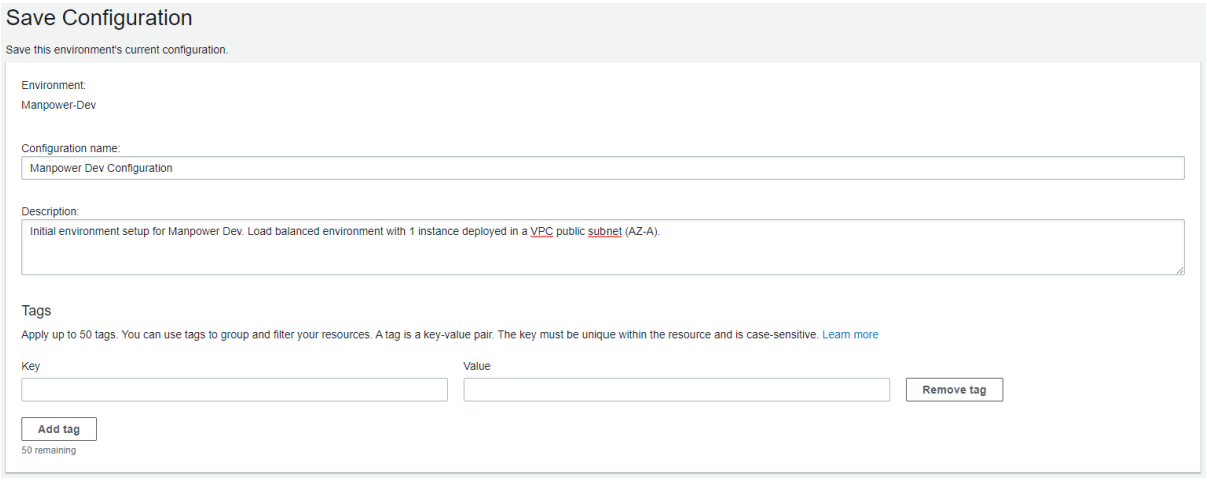


Successful EB environment creation

Save the environment configuration (can be done now or after additional configurations are applied)



Provide configuration name and description

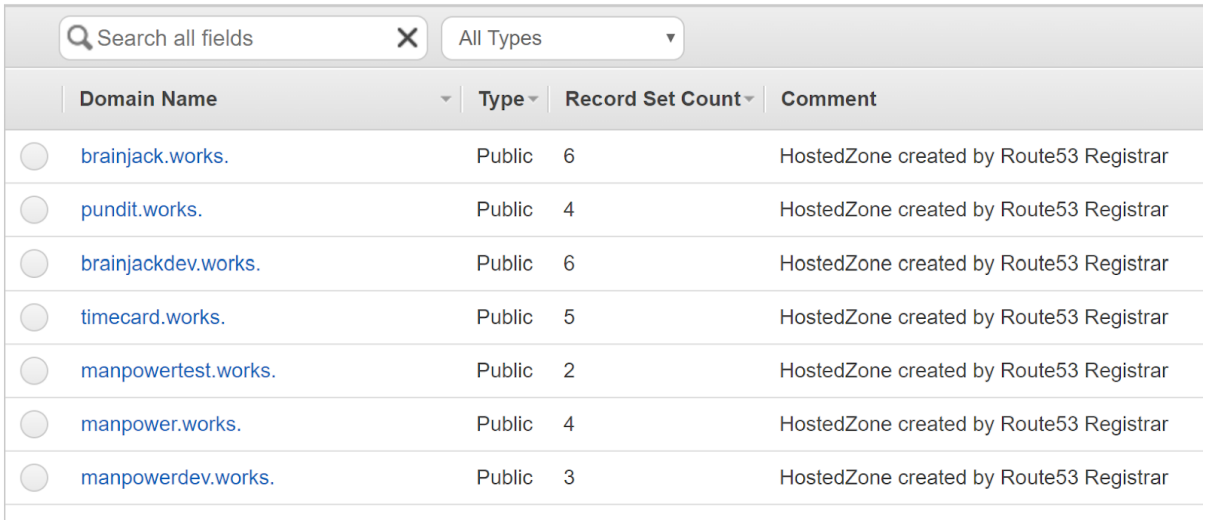


Save configuration

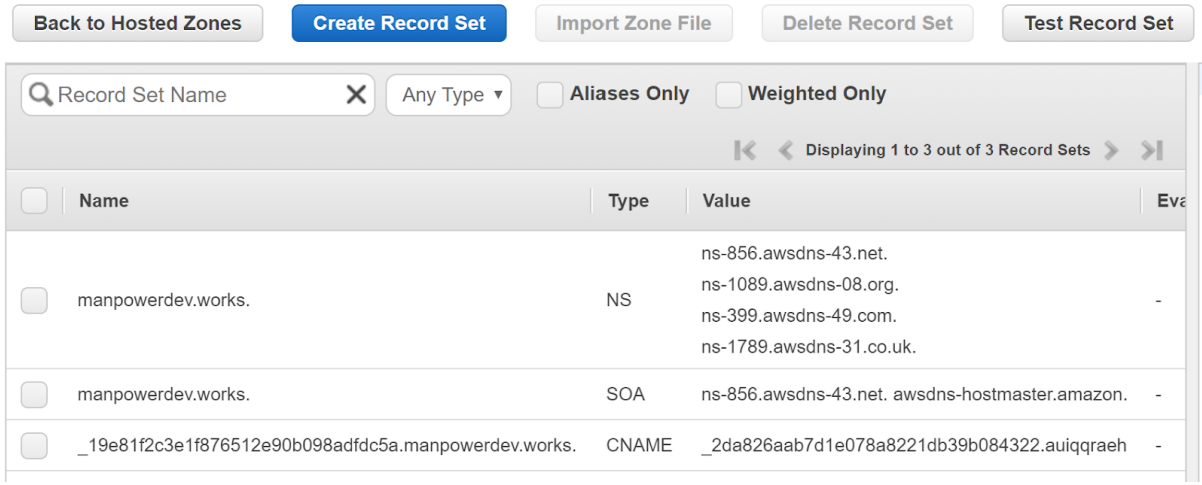
Domain Name routing

Navigate to Services → Networking & Content Delivery → Route53 → Hosted Zones

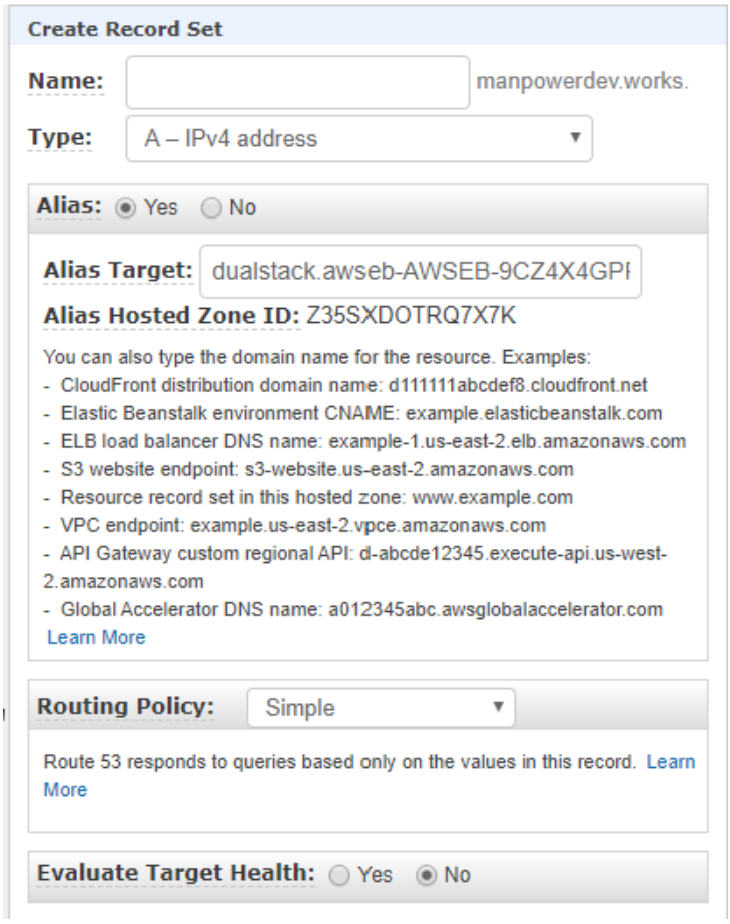
Select the appropriate hosted zone for the Elastic Beanstalk environment



Select **Create Record Set**

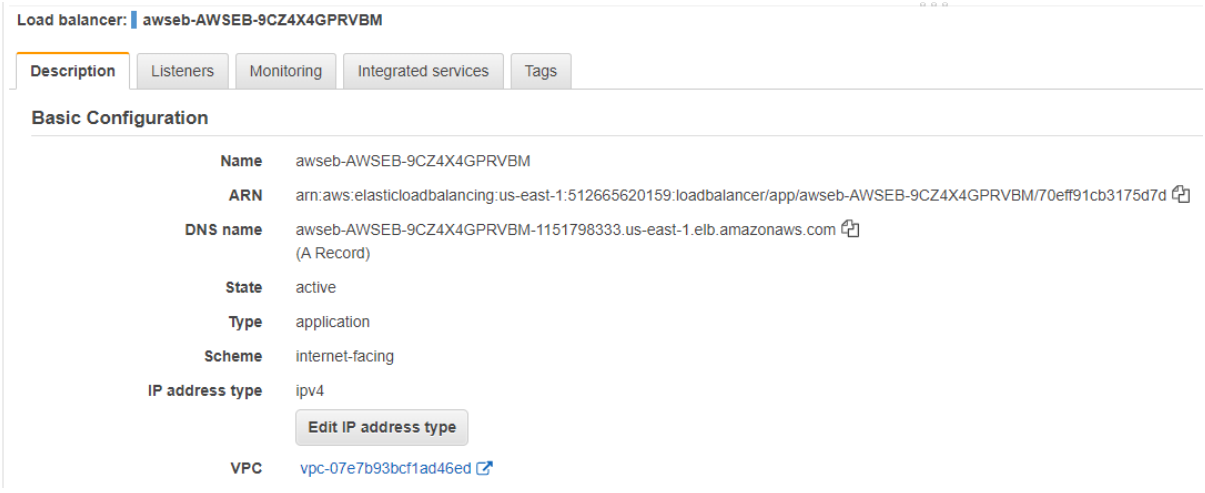


Enter record set details
Specify that it is an **alias** record
Alias target: the Application Load Balancer for the new Elastic Beanstalk environment



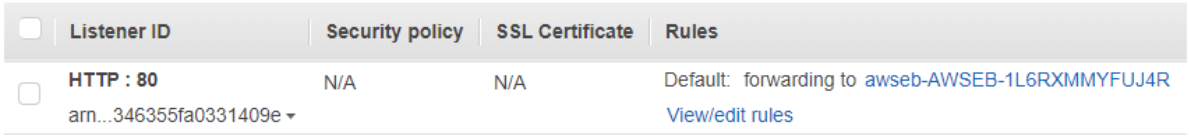
To check the DNS name for the ALB

- Services → Compute → EC2 → Load Balancers
- Select the load balancer for the environment
- Take note of the load balancer **name**



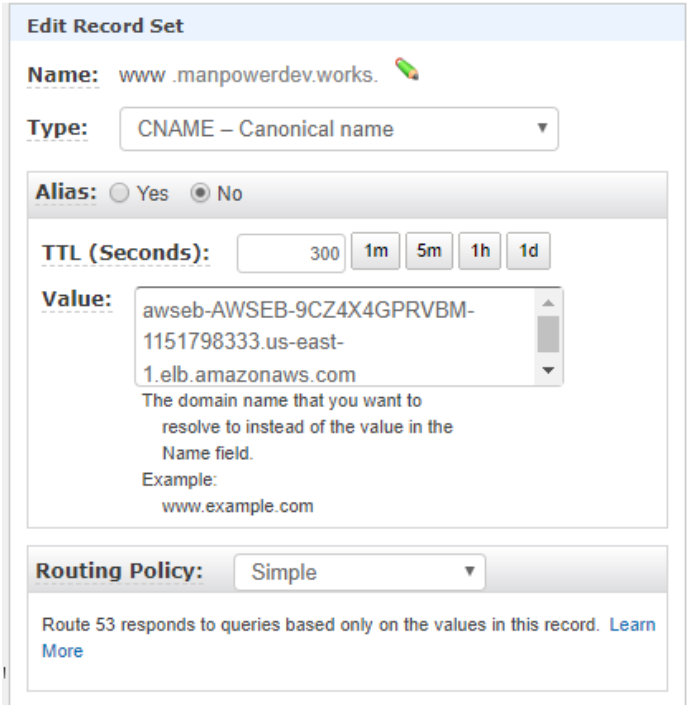
The load balancer can be identified by checking its routing

- **Listeners** tab
- Take note of forwarding **rules**
- Click on the ID in the rule → should be an **target group**



Check the target group **Targets** tab → should see the Elastic Beanstalk instance(s)

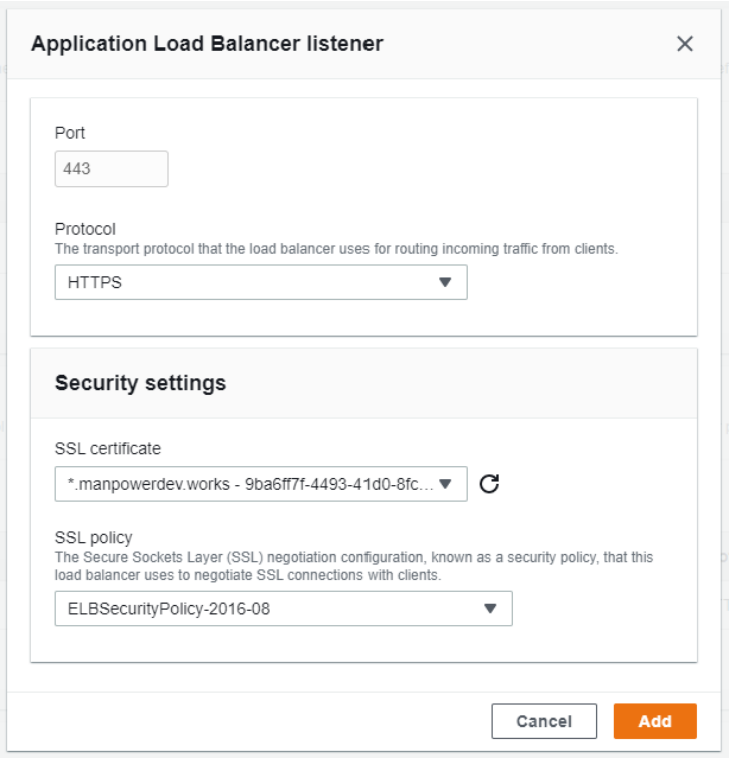
Create a **CNAME** record
Enter **www** for name
Type: CNAME
Value: load balancer **DNS name** from earlier



Go back to the new Elastic Beanstalk environment (Services → Compute → Elastic Beanstalk → new environment → Configurations → Load Balancer

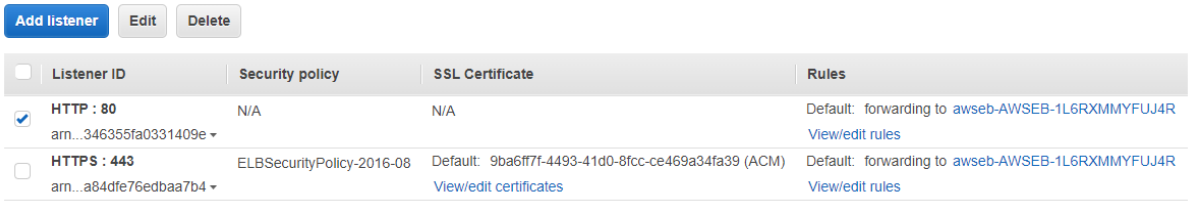
Modify the load balancer

- Under **Application Load Balancer**, select **Add Listener**
- Port: 443
- Protocol: HTTPS
- SSL Certificate: choose certificate for the domain name used above
    - To check: refer to previous steps

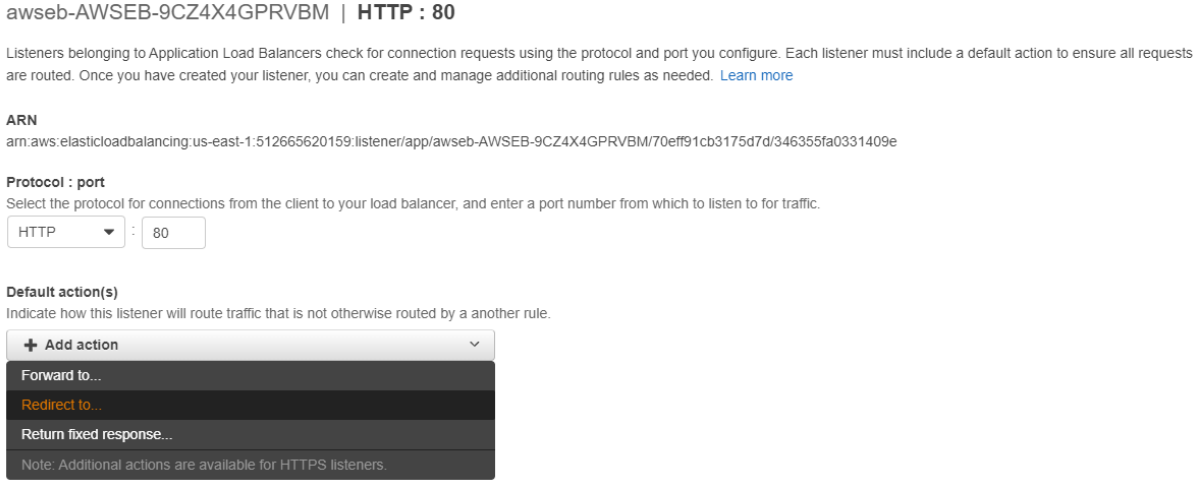


Apply Changes and the environment will start rebuilding.
Once the rebuilding is completed in order to test that it works simply type in the web address that you created and see if it routes you to your application.

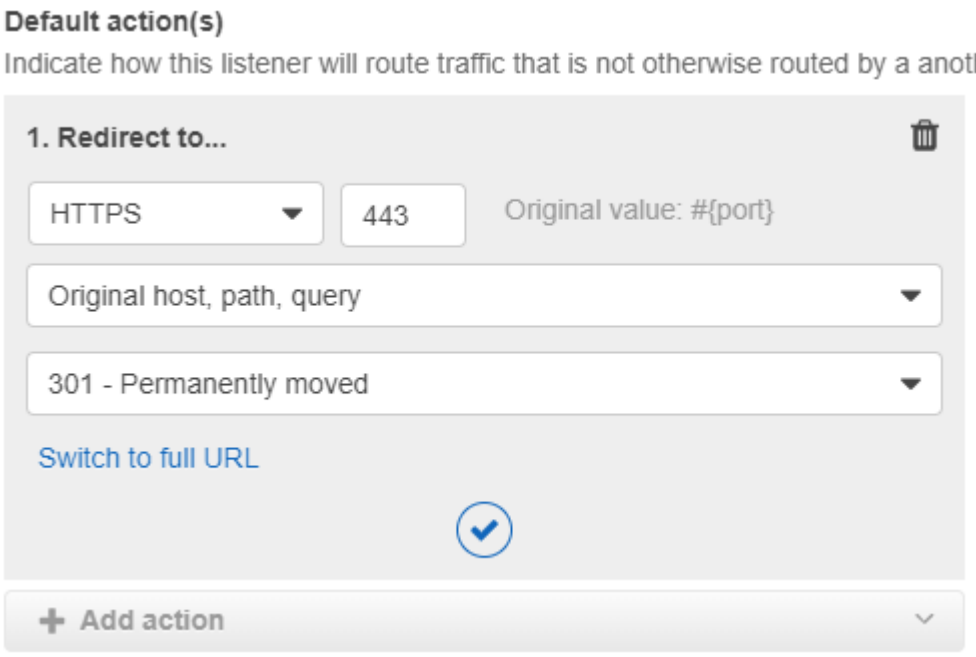
Forcing Secure SSL connections (HTTPS)
(Services → Compute → EC2 → Load Balancers → Select load balancer → **Listeners** tab)



Add action → **redirect**



Specify the following rule



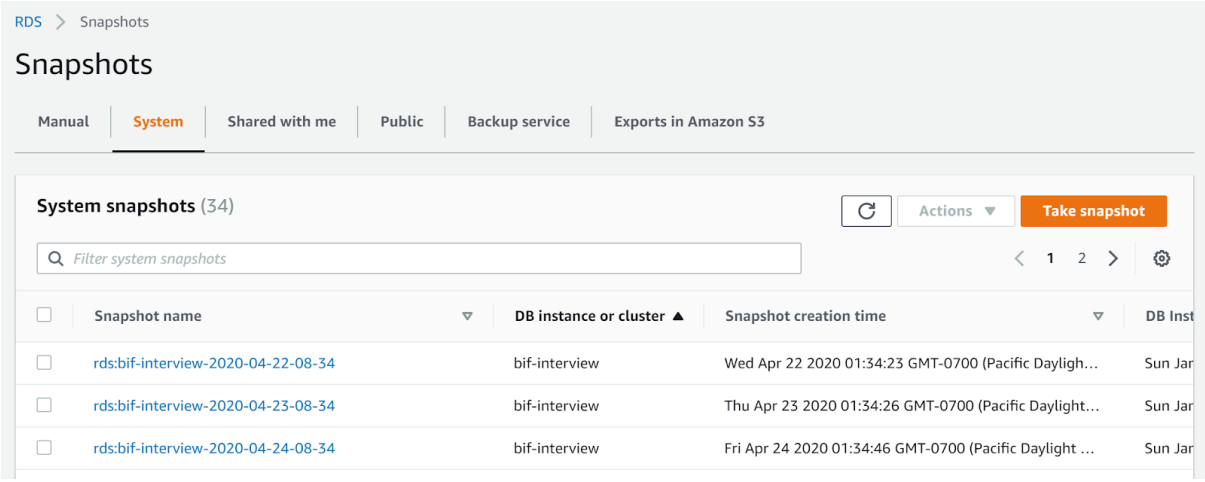
Save

Test the redirection

- Try typing just {domain_name} as the URL
- Type http://{domain_name}
- Both should redirect to https://{domain_name}

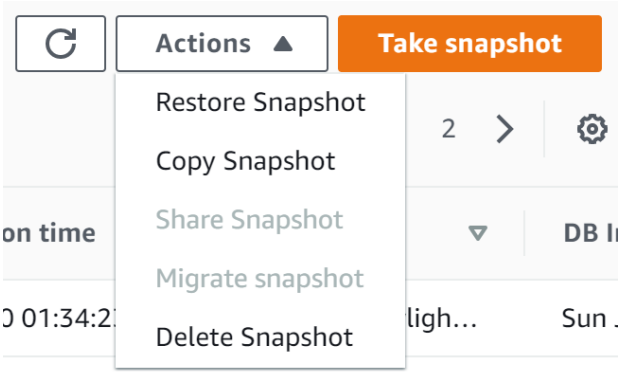
2.4 RDS

Restore database from a snapshot: Services → Database → RDS → Snapshots → **System** tab

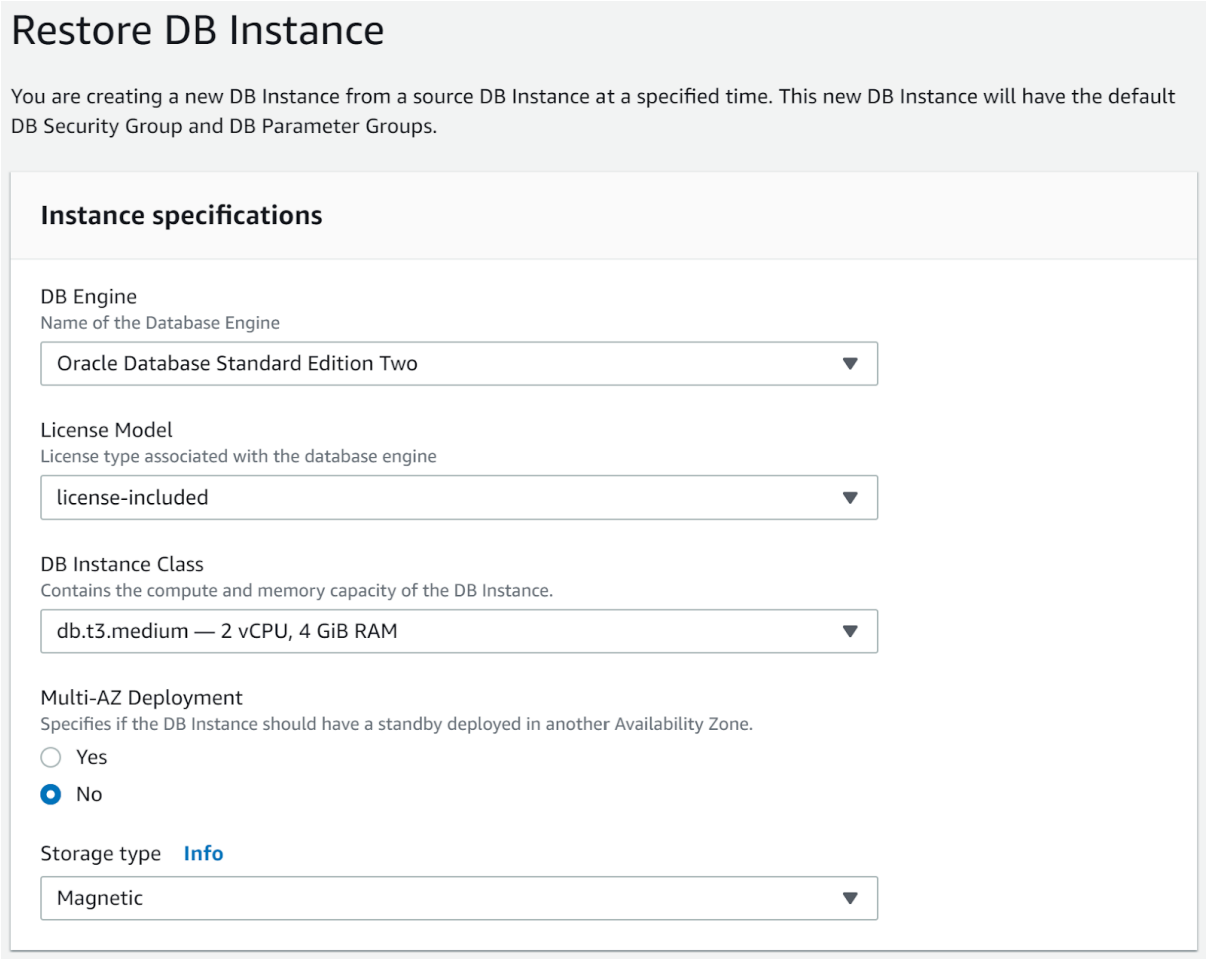


Select most recent snapshot for **jarvis**

Under Actions, select **Restore Snapshot**

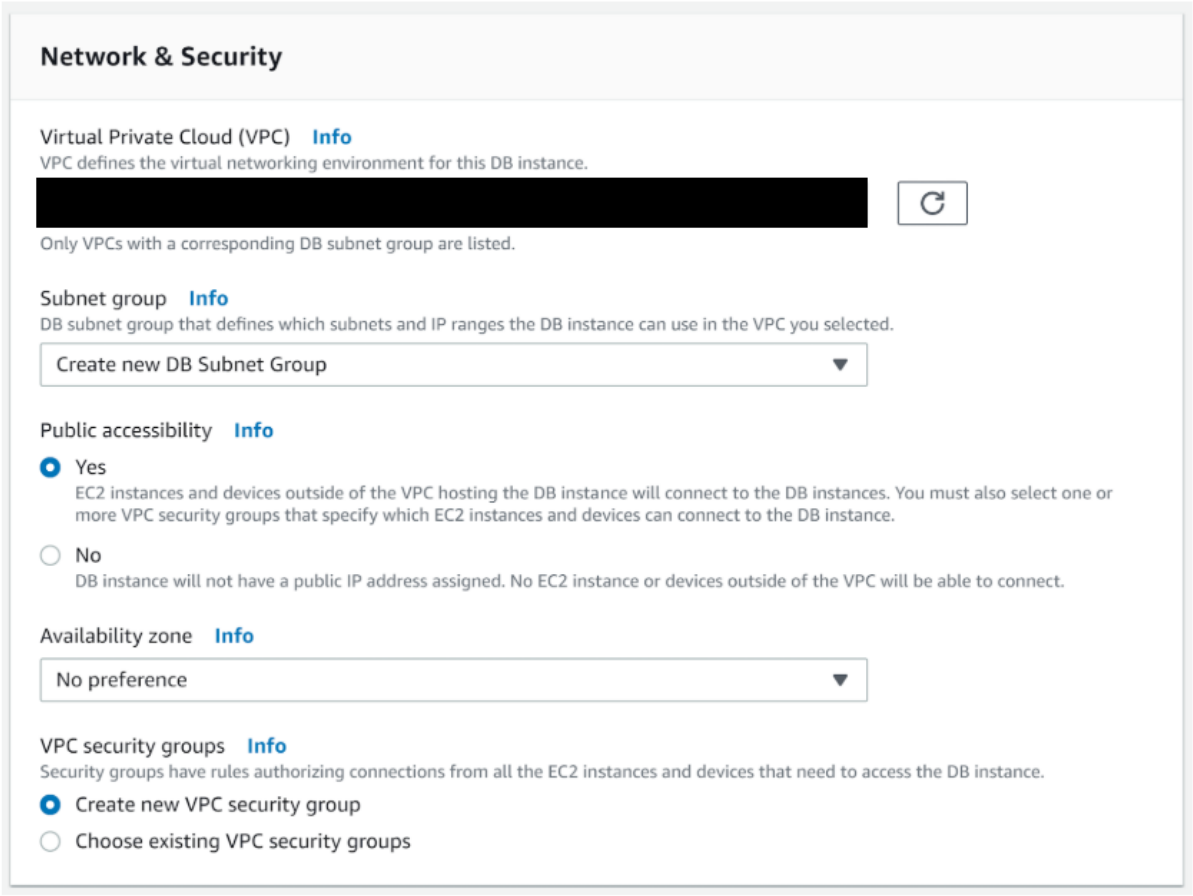


Instance specifications
Standard Edition 2
License-included model
t3.medium instance class
No multi AZ



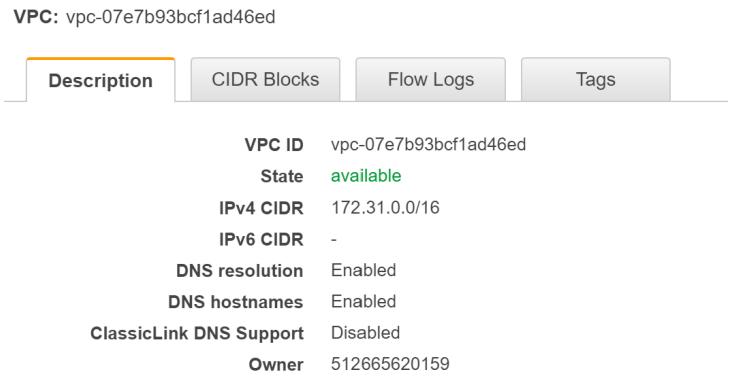
Specify DB instance DB identifier

Network & security

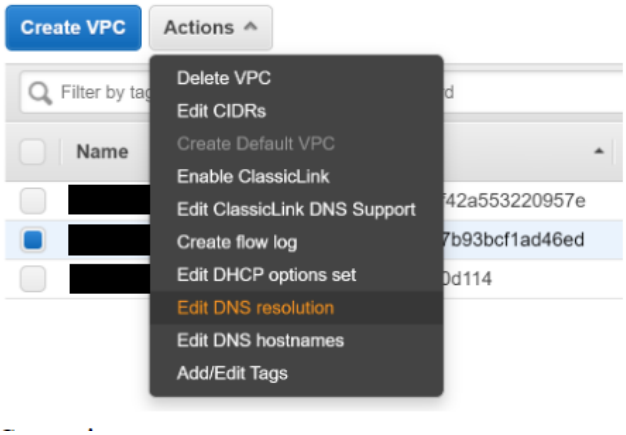


Select WMSNi VPC
New subnet group
Public accessibility: **yes?**

- **Important** if public, ensure that **DNS resolution** and **DNS hostnames** are both set to **enabled** in the VPC console (Services → Networking & Content Delivery → VPC → Your VPCs)

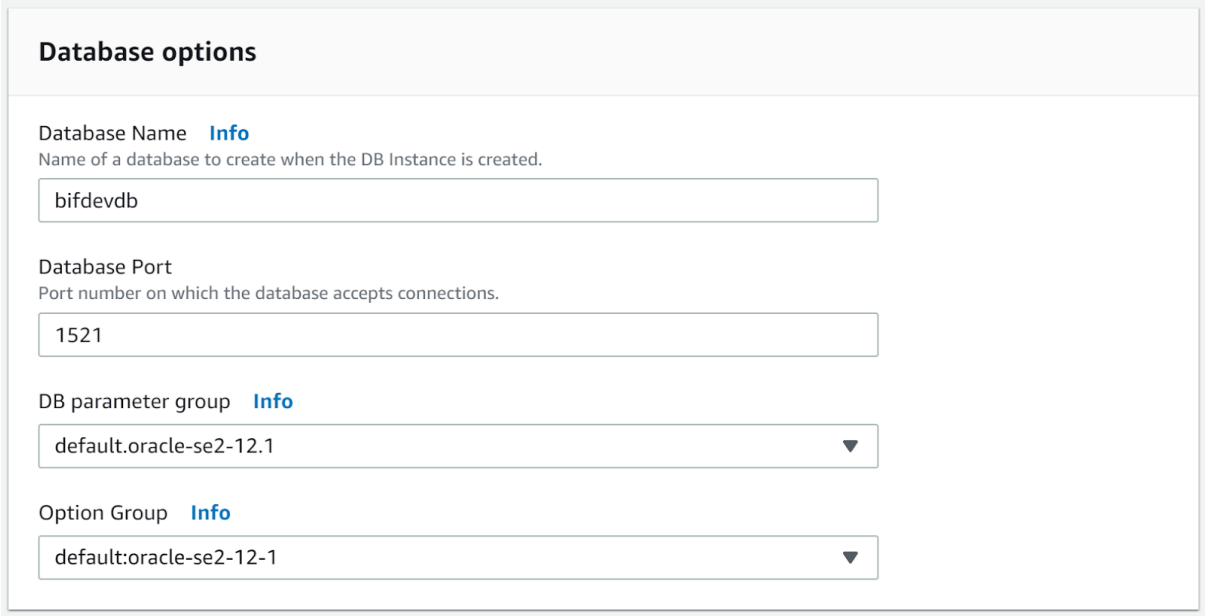


- If they are not enabled, select Actions → Edit DNS resolution/hostnames



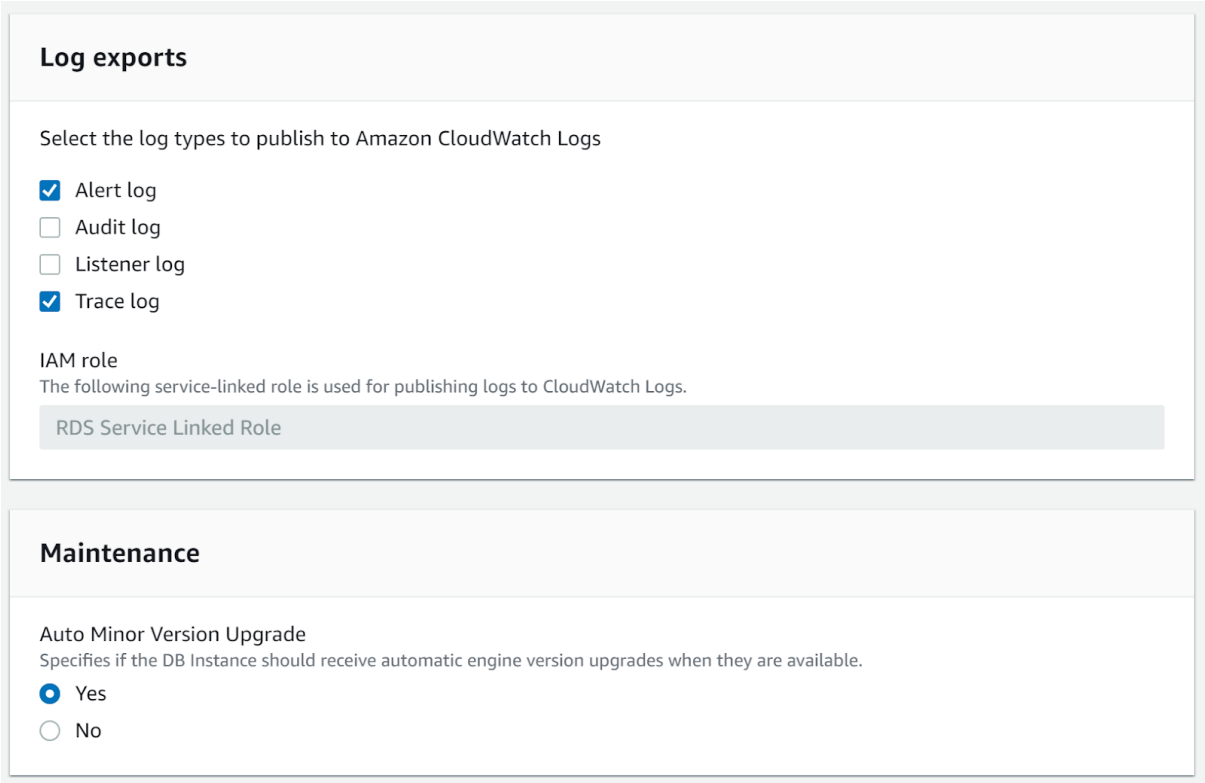
New VPC security group
Note: **this may need to be revisited** (the public accessibility)

Database options



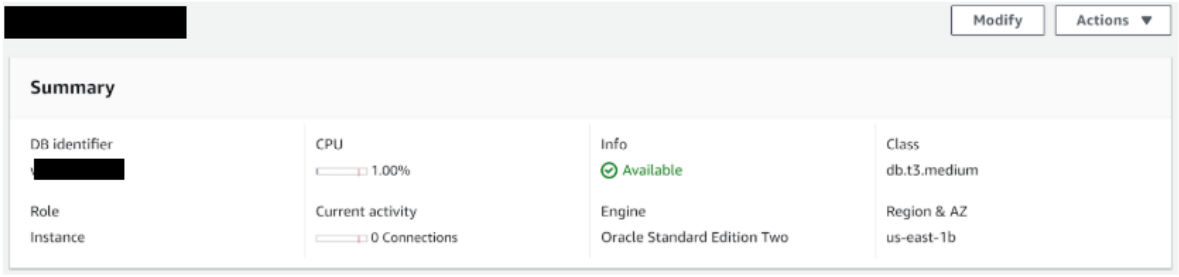
Defaults are fine
Name: **bifdevdb** (where does this show up?)
Note: **this may need to be revisited** (are the defaults fine)

Logs & Maintenance

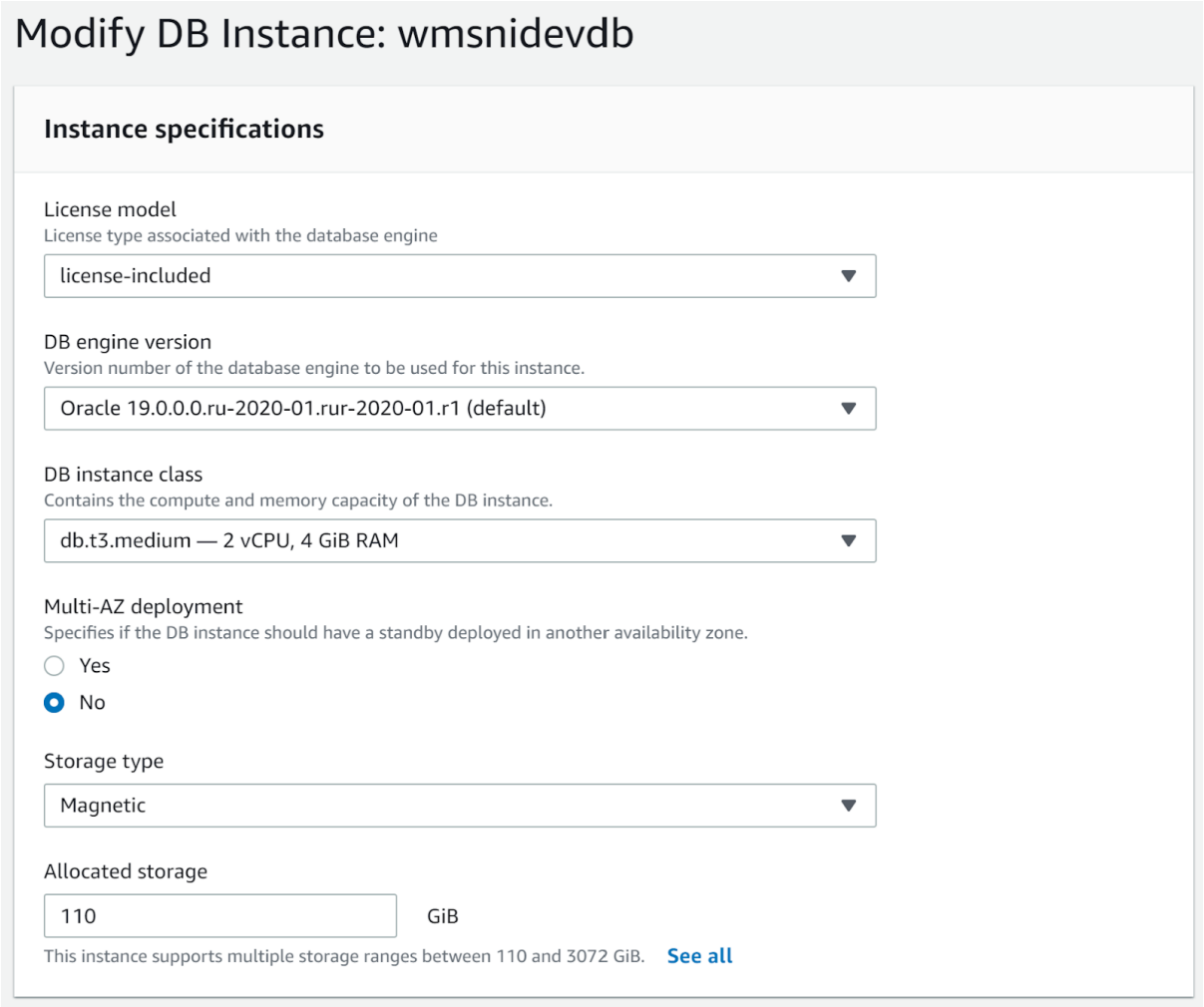


Restore DB Instance

Upgrade DB Engine Version: 19c
Select the new database in the RDS console: Services → RDS → Databases
Select **Modify**



Select Oracle 19

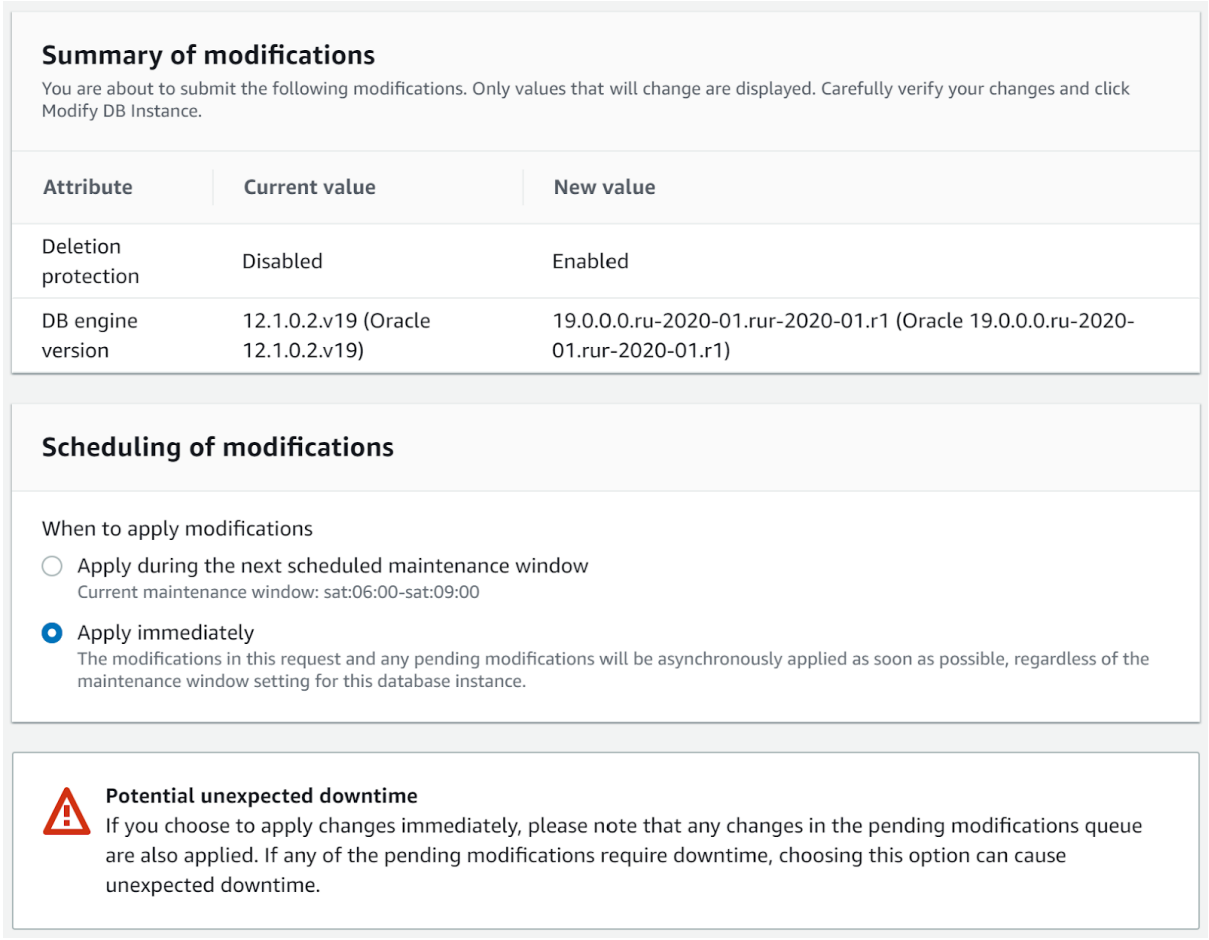


Leave all other settings alone

Worth revisiting (magnetic vs SSD storage?)

Summary of modifications

Select **apply immediately** for scheduling



The DB status will change to **Upgrading** in the RDS console until the upgrade is complete

4 WMSNi IDUT Design Document

Table of Contents

1 Organization Management Data Model

In response to the COVID-19 pandemic, WMSNi requires the addition of Infectious Disease units and an Infectious Disease Unit Type (IDUT). WMSNi must be capable of quickly adding and maintaining these units. Currently, WMSNi supports only Graphical User Interface (GUI) maintenance of organization data. The addition of an import/export option will enable speedy and less error-prone introduction of units into WMSNi. Enabling import/export will require modification of the data model concerning Organizations in WMSNi.

The addition of an import/export option to WMSNi organizations will require a way to uniquely identify an organization both without and within the context of the WMSNi database. Currently, an organization is uniquely identified by an integer which has guaranteed uniqueness only within the context of the WMSNi database. A Universally Unique Identifier (UUID) is capable of guaranteeing uniqueness in all contexts. The organization data model must be modified to include a UUID to avoid organization "collisions" when moving them from one context to another.

1.1 Current Model

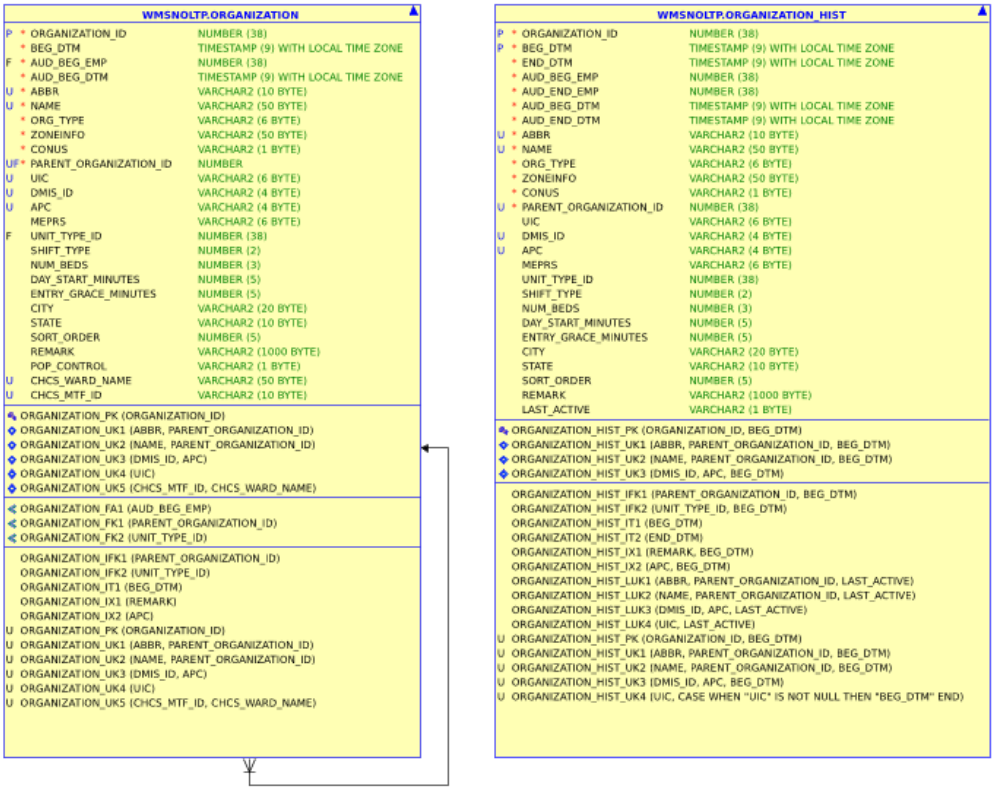
The WMSNi Organization table (`wmsnoltp.organization`) stores organization data for WMSNi. The table serves data for many parts of the application, including patient, employee, and schedule management. The records in the table are uniquely identified by an INTEGER as the Primary Key (`organization_id`).

1.1.1 Current Model Issues

Each organization is uniquely identified by an integer. An integer can uniquely identify an organization only within the context of the WMSNi database. This limitation makes it difficult to define, import and export organizations between multiple contexts.

1.1.2 SQL ERD

The SQL Model of `wmsnoltp.organization` and related tables is below:



1.2 Optimized Model

The WMSNi Organization table (`wmsnoltp.organization`) must be modified so that organizations can be identified by a UUID. In an optimized model, the integer-based unique identifier (primary key) would be replaced with a UUID in all places where organizations are referenced within the WMSNi application.

1.2.1 Issues

1. Organizations are referenced via foreign key relationships in nearly every aspect of the WMSNi application. Every aspect of the application affected by this modification must be evaluated to assess impact.
2. Some aspects of the application may require modification to accommodate the new data type used to reference organizations.

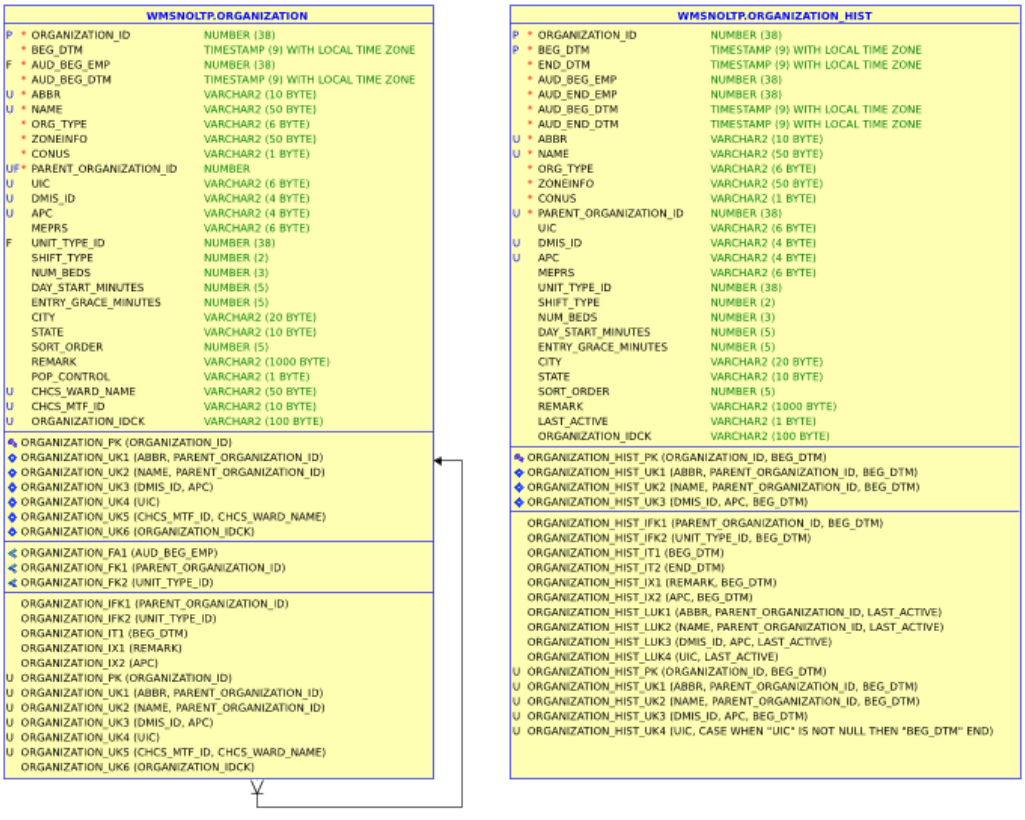
1.2.2 Actions

Phase 1. Create a UUID data type organization record identifier on the organization table (Candidate Key). Allow the existing integer-based primary key to remain and function as it does currently. This will lessen the impact to the existing application.

Phase 2. Cascade the data and data type to foreign key references, reports and application code in order to assess and address the impact to the application.

Phase 3. Remove original Integer Primary Key from organization table.

1.2.3 Results



2 Organization Manager Design

Import / Export Buttons

The availability of these buttons in the user interface is determined by WMSNi's role-based security. Users that do not have the requisite permissions will not see them.

Permission is granted by adding records to the table WMSNOLTP.ROLE. The records would have a CATEGORY value of USER_INTERFACE_ELEMENT. One role would have the name OrganizationManager.Import and the code value UIORGIMP. The other would have the name OrganizationManager.Export and the code value UIORGEXP.

These buttons will likely be available to just the support team.

Organization Editor Specifications

An editor for WMSNi organizations is valid if it fulfills the following requirements.

1. The editor must provide a way to create a new organization and subunits.
2. It must support hierarchical editing of infrastructure.
3. The editor must limit the types of the organization to RMC, WARD, MTF, BRANCH, MACOM, and SECT.
4. The editor must support the generation of a GUID for the organization identifier.
5. The editor must support editing the abbreviation, name, organization type, DMIS ID, MEPRS, APC, and unit type.
6. The unit types that can be assigned to an organization unit are limited to Labor and Delivery (LDP), Intensive Care (ICU), Medical/Surgical (M/S), Neonatal Intensive Care (NIC), Labor and Delivery (LAD), Medical/Surgical for Infectious Disease (MSI), and Intensive Care Unit for Infectious Disease (ICI).

Organization Import Business rules

Organizations cannot be removed under certain conditions:

i) The new model removes an organization (e.g., a sub organization) that has personnel associated with it.
ii) The new model would remove an organization unit for which there are patient location records.

Additionally an organization (e.g., a Med/Surg IDUT) that has been authored or edited in Organization Editor can only be imported per the compatibility matrix rules shown below.

	Agency / Branch	Major Command	Region	MTF	Section
Major Command	✓				
Region		✓			
MTF			✓		
Section				✓	
Ward				✓	✓

An MTF can be added to a Region but not to a Major Command. A ward can be added to a section or directly to the an MTF.

3 Patient Management Data Model

3.1 Description

WMSNi requires the ability to identify patients who require treatment specific to infectious disease. To meet this requirement, we are (1) adding Infectious Disease Service Types to the Patient Service Type field, and (2) adding an Infectious Disease Status field.

Infectious Disease Service type:

a. Infectious Disease-ICU
b. Infectious Disease-M/S

Infectious Disease Status:

a. Quarantined - Due to Contact
b. Isolation - With Symptoms
c. Tested Positive - Quarantined
d. Tested Positive - Discharged
e. Recovered - Hospitalized
f. Recovered - Discharged
g. Death - During Hospitalization

The above will be added to the List of Values table (`wmsnoltp.lov`) using an INSERT statement based on the following table to populate the drop-down list.

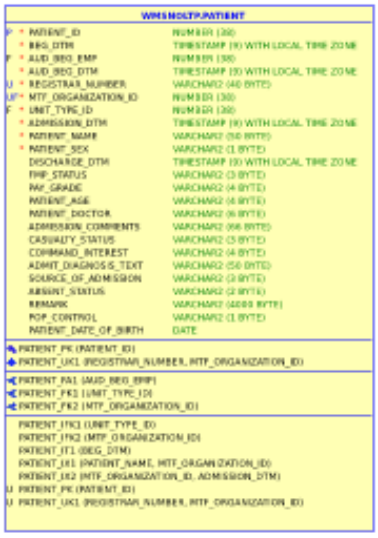
LOV_ID	List	Value	Name	Description	Sort Order
#	Infectious Disease	COV1	Quarantined - Due to Contact	Quarantined - Due to Contact: patient had contact with known transmittable infectious disease	10

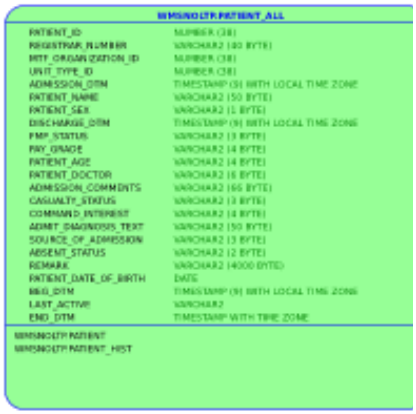
#	Infectious Disease	COV2	Isolation - With Symptoms	Isolation - With Symptoms: patient displaying symptoms of infectious disease	20
#	Infectious Disease	COV3	Tested Positive - Quarantined	Tested Positive - Quarantined: Patient quarantined based on positive test for infectious disease	30
#	Infectious Disease	COV4	Tested Positive - Discharged	Tested Positive - Discharged: patient discharged with positive test and self isolation instructions	40
#	Infectious Disease	COV5	Recovered - Hospitalized	Recovered - Hospitalized: patient recovered from known infectious disease as evidenced by negative test protocol while hospitalized	50
#	Infectious Disease	COV6	Recovered - Discharged	Recovered - Discharged: Infectious Disease patient recovered and discharged	60
#	Infectious Disease	COV7	Death - During Hospitalization	Death - During Hospitalization: patient with Infectious disease diagnosis died while hospitalized due to disease complications	70

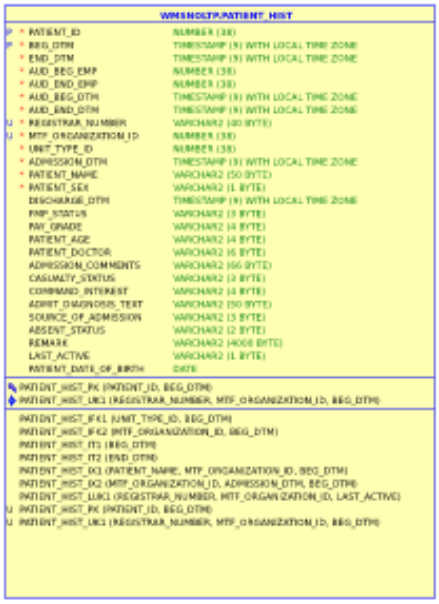
New Unit Types need to be inserted into the Unit Type table (`wmsnoltp.unit_type`). There will be one Infectious Disease Unit Type using the Intensive Care Unit (ICU) staffing model and one using the Medical Surgical (M/S) staffing model.

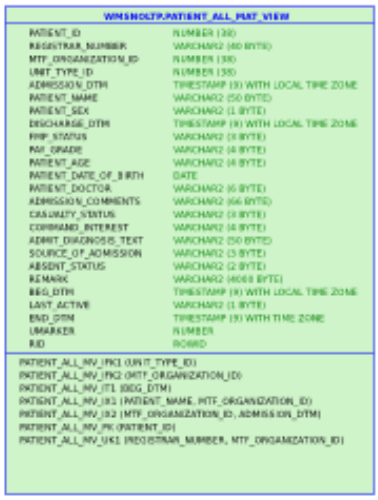
Name	Code	Category	Indirect Care Multiplier	Patient Baseline Points	Default Points	Workload type	Description	Sort Order
Infectious Disease-ICU	IDC	GENERAL	1.694	0	22	ASSESSED	Infectious Disease Unit Type using Intensive Care Unit staffing model	100
Infectious Disease-M/S	IDM	GENERAL	1.658	0	22	ASSESSED	Infectious Disease Unit Type using Medical Surgical staffing model	101

3.1.1 Issues


WMSNOLTP.PATIENT
PATIENT_ID
BEG_DTM
AUD_BEG_EMP
AUD_BEG_DTM
REGISTRAR_NUMBER
MTF_ORGANIZATION_ID
UNIT_TYPE_ID
ADMISSION_DTM
PATIENT_NAME
PATIENT_SEX
DISCHARGE_DTM
FMP_STATUS
PAY_GRADE
PATIENT_AGE
PATIENT_DOCTOR
ADMISSION_COMMENTS
CASUALTY_STATUS
COMMAND_INTEREST
ADMIT_DIAGNOSIS_TEXT
SOURCE_OF_ADMISSION
ABSENT_STATUS
REMARK
POF_CONTROL
PATIENT_DATE_OF_BIRTH
PATIENT_PK (PATIENT_ID)
PATIENT_UK1 (REGISTRAR_NUMBER, MTF_ORGANIZATION_ID)
PATIENT_FA1 (AUD_BEG_EMP)
PATIENT_FK1 (UNIT_TYPE_ID)
PATIENT_FK2 (MTF_ORGANIZATION_ID)
PATIENT_IFK1 (UNIT_TYPE_ID)
PATIENT_IFK2 (MTF_ORGANIZATION_ID)
PATIENT_IT1 (BEG_DTM)
PATIENT_IX1 (PATIENT_NAME, MTF_ORGANIZATION_ID)
PATIENT_IX2 (MTF_ORGANIZATION_ID, ADMISSION_DTM)
PATIENT_PK (PATIENT_ID)
PATIENT_UK1 (REGISTRAR_NUMBER, MTF_ORGANIZATION_ID)


WMSNOLTP.PATIENT_ALL
PATIENT_ID
REGISTRAR_NUMBER
MTF_ORGANIZATION_ID
UNIT_TYPE_ID
ADMISSION_DTM
PATIENT_NAME
PATIENT_SEX
DISCHARGE_DTM
FMP_STATUS
PAY_GRADE
PATIENT_AGE
PATIENT_DOCTOR
ADMISSION_COMMENTS
CASUALTY_STATUS
COMMAND_INTEREST
ADMIT_DIAGNOSIS_TEXT
SOURCE_OF_ADMISSION
ABSENT_STATUS
REMARK
PATIENT_DATE_OF_BIRTH
BEG_DTM
LAST_ACTIVE
END_DTM
WMSNOLTP.PATIENT
WMSNOLTP.PATIENT_HIST


WMSNOLTP.PATIENT_HIST
PATIENT_ID
BEG_DTM
END_DTM
AUD_BEG_EMP
AUD_END_EMP
AUD_BEG_DTM
AUD_END_DTM
REGISTRAR_NUMBER
MTF_ORGANIZATION_ID
UNIT_TYPE_ID
ADMISSION_DTM
PATIENT_NAME
PATIENT_SEX
DISCHARGE_DTM
FMP_STATUS
PAY_GRADE
PATIENT_AGE
PATIENT_DOCTOR
ADMISSION_COMMENTS
CASUALTY_STATUS
COMMAND_INTEREST
ADMIT_DIAGNOSIS_TEXT
SOURCE_OF_ADMISSION
ABSENT_STATUS
REMARK
LAST_ACTIVE
PATIENT_DATE_OF_BIRTH
PATIENT_HIST_PK (PATIENT_ID, BEG_DTM)
PATIENT_HIST_UK1 (REGISTRAR_NUMBER, MTF_ORGANIZATION_ID, BEG_DTM)
PATIENT_HIST_IFK1 (UNIT_TYPE_ID, BEG_DTM)
PATIENT_HIST_IFK2 (MTF_ORGANIZATION_ID, BEG_DTM)
PATIENT_HIST_IT1 (BEG_DTM)
PATIENT_HIST_IT2 (END_DTM)
PATIENT_HIST_IX1 (PATIENT_NAME, MTF_ORGANIZATION_ID, BEG_DTM)
PATIENT_HIST_IX2 (MTF_ORGANIZATION_ID, ADMISSION_DTM, BEG_DTM)
PATIENT_HIST_LUK1 (REGISTRAR_NUMBER, MTF_ORGANIZATION_ID, LAST_ACTIVE)
PATIENT_HIST_PK (PATIENT_ID, BEG_DTM)
PATIENT_HIST_UK1 (REGISTRAR_NUMBER, MTF_ORGANIZATION_ID, BEG_DTM)


WMSNOLTP.PATIENT_ALL_PIAT_VIEW
PATIENT_ID
REGISTRAR_NUMBER
MTF_ORGANIZATION_ID
UNIT_TYPE_ID
ADMISSION_DTM
PATIENT_NAME
PATIENT_SEX
DISCHARGE_DTM
FMP_STATUS
PAY_GRADE
PATIENT_AGE
PATIENT_DATE_OF_BIRTH
PATIENT_DOCTOR
ADMISSION_COMMENTS
CASUALTY_STATUS
COMMAND_INTEREST
ADMIT_DIAGNOSIS_TEXT
SOURCE_OF_ADMISSION
ABSENT_STATUS
REMARK
BEG_DTM
LAST_ACTIVE
END_DTM
UMARKER
RID
PATIENT_ALL_INV_IFK1 (UNIT_TYPE_ID)
PATIENT_ALL_INV_IFK2 (MTF_ORGANIZATION_ID)
PATIENT_ALL_INV_IT1 (BEG_DTM)
PATIENT_ALL_INV_IX1 (PATIENT_NAME, MTF_ORGANIZATION_ID)
PATIENT_ALL_INV_IX2 (MTF_ORGANIZATION_ID, ADMISSION_DTM)
PATIENT_ALL_INV_PK (PATIENT_ID)
PATIENT_ALL_INV_UK1 (REGISTRAR_NUMBER, MTF_ORGANIZATION_ID)

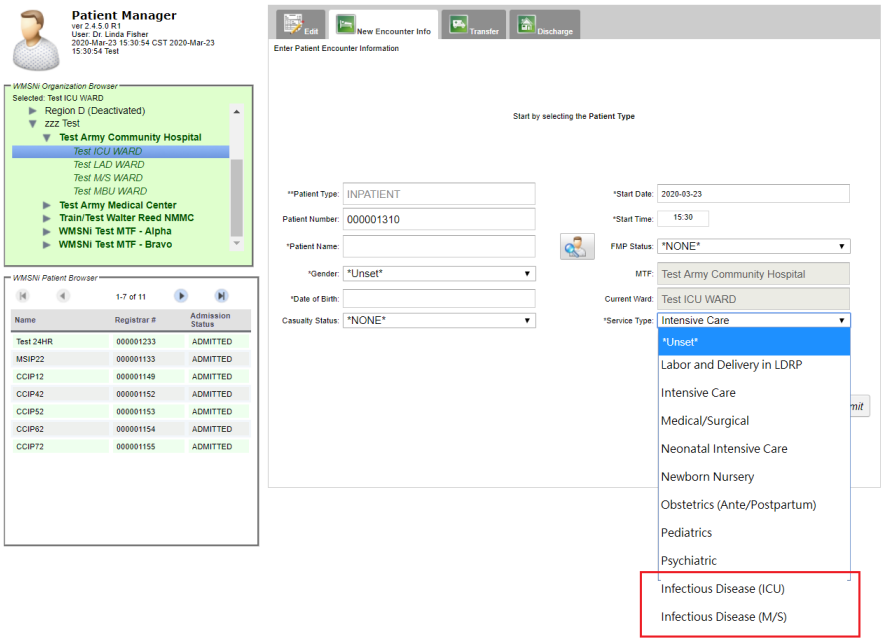
3.1.2 Results

4 Patient Manager Design

4.1 Adding Infectious Disease Service Type

A Service Type is an attribute of a patient to identify the type of care the patient receives. Within the WMSNi data model, a service type is equivalent to a unit type applied to a patient record. The new unit types for organizations will be able to be applied to patients so that they can be identified as “Infectious Disease” patients even if they are transferred outside an Infectious Disease unit.

When a patient is admitted, the Service Type: Infectious Disease (ICU) or Infectious Disease (Med/Surg) must be selected from the drop down and this patient will be tracked as an Infectious Disease patient. The new Service Types are based on a pre-existing Staff mix for Med/Surg and ICU. This assignment requires no new functionality and is folded into the current Patient Manager interface elements, seen below.



4.1.1 Development Tasks

The development effort follows the existing Unit Type model to create new Infectious Disease Unit Types and to fold them into the existing structure. Specifically records will be added to the Unit Type table. Both the ward types and service types (See Appendix for a list of unit types/service types) are based on that data and will be updated immediately. The staffing model of the new Unit Type will be based on a previously established skill mix. A current skill mix will be utilized in order to shorten time to delivery of the new types. The screenshot above shows a mockup of how the new Service Types could appear in Patient Manager.

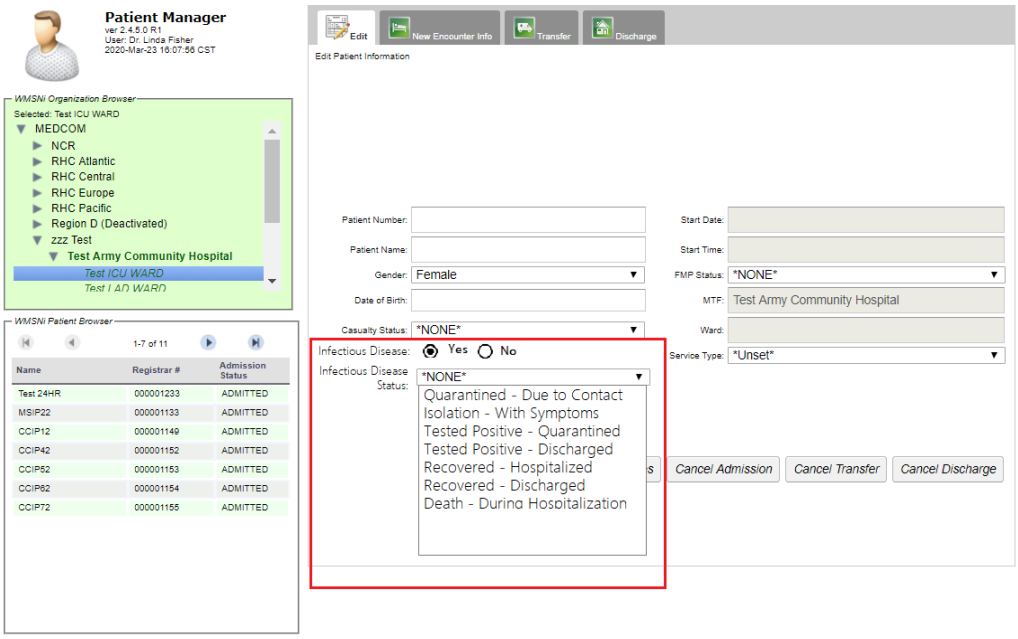
4.2 Adding Infectious Disease Status Patient Attribute for Tracking

WMSNi requires the ability to not only identify patients with Infectious Disease Service Types but also to track their Infectious Disease Status. To satisfy this requirement, a new patient attribute to track Infectious Disease Status is also being developed. This attribute requires a new data field on the patient record, seen in the previous data models. The Patient Manager user interface will require a new drop-down list for this attribute.

4.2.1 Development Tasks

The purpose of this attribute is to track Infectious Disease case progression and outcomes. The proposed statuses can be modified to meet customer requirements. The current statuses are:

1. Quarantined - Due to Contact
2. Isolation - With Symptoms
3. Tested Positive - Quarantined
4. Tested Positive - Discharged
5. Recovered - Hospitalized
6. Recovered - Discharged
7. Death - During Hospitalization



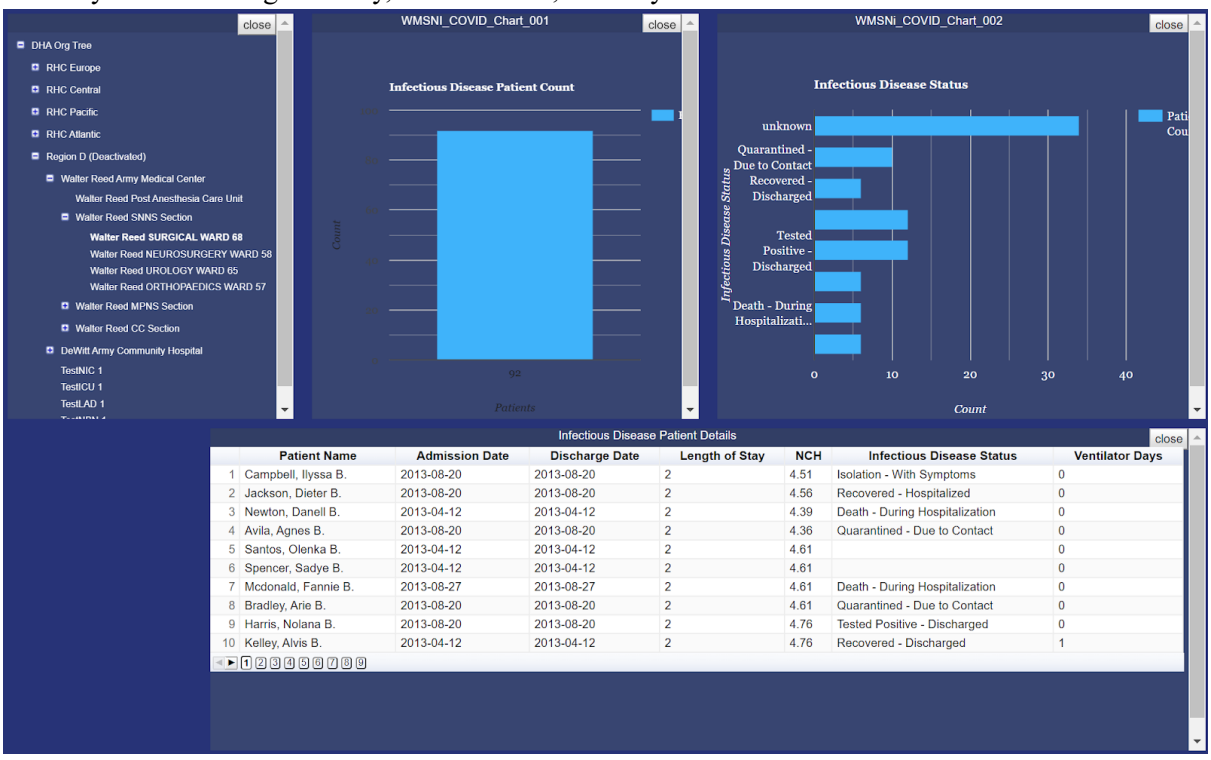
5 Business Intelligence Design

5.1 Description

In addition to all of the typical WMSNi measures, i.e. NCH Required, NCH Available, Length of Stay and Acuity we have created new IDUT data fields to track infectious disease patients and workload. The fields laid out above will identify patients as well as wards that are relevant to infectious disease. We will provide a unit (ward) view of patients that is tactical in nature, giving a current count and the breakout of statuses and details. For a more strategic view at any organizational level (ward, section, MTF, Region, MEDCOM) we want to provide tracking over time, with several strategic values to understand the demands and progress over time of the infectious disease patients.

5.1.1 Ward View

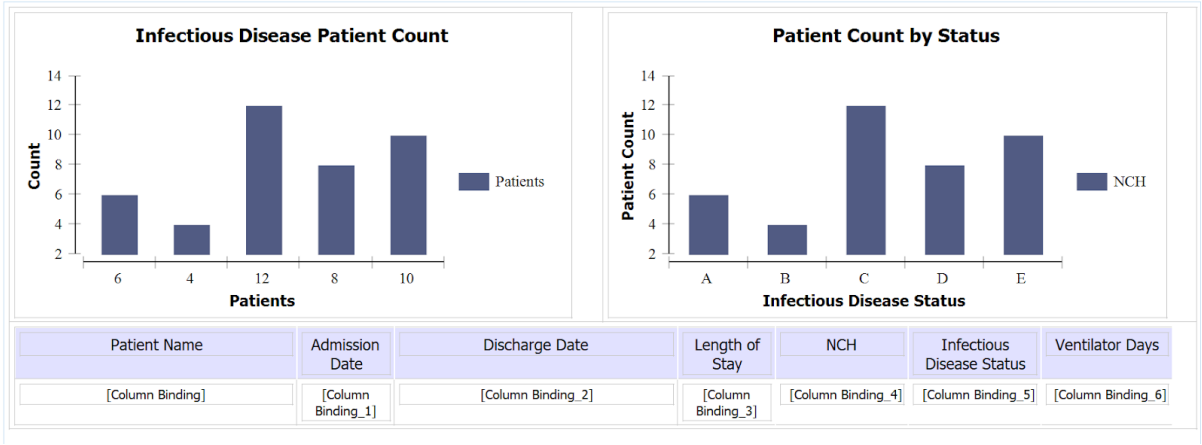
The Ward View of infectious disease patients (Infectious Disease Unit Status Report) is to give the User a tactical view of the current situation on a ward. This includes total count of infectious disease patients, a breakdown of the status of those patients and patient details. The detail table currently includes Length of stay, current NCH, and Days of Ventilation.



	Patient Name	Admission Date	Discharge Date	Length of Stay	NCH	Infectious Disease Status	Ventilator Days
1	Campbell, Ilyssa B.	2013-08-20	2013-08-20	2	4.51	Isolation - With Symptoms	0
2	Jackson, Dieter B.	2013-08-20	2013-08-20	2	4.56	Recovered - Hospitalized	0
3	Newton, Danell B.	2013-04-12	2013-04-12	2	4.39	Death - During Hospitalization	0
4	Avila, Agnes B.	2013-08-20	2013-08-20	2	4.36	Quarantined - Due to Contact	0
5	Santos, Olenka B.	2013-04-12	2013-04-12	2	4.61		0
6	Spencer, Sadye B.	2013-04-12	2013-04-12	2	4.61		0
7	Mcdonald, Fannie B.	2013-08-27	2013-08-27	2	4.61	Death - During Hospitalization	0
8	Bradley, Arie B.	2013-08-20	2013-08-20	2	4.61	Quarantined - Due to Contact	0
9	Harris, Nolana B.	2013-08-20	2013-08-20	2	4.76	Tested Positive - Discharged	0
10	Kelley, Alvis B.	2013-04-12	2013-04-12	2	4.76	Recovered - Discharged	1

Prototype - subject to change when deployed

View in BrainJack:
https://brainjack.works/BIFDashboardDesigner.html?dashboardID=6CD22490-FC3E-4986-8AB5-CA2675AD420E



5.1.2 Strategic View

The strategic view of the Infectious Disease Patients (Infectious Disease Strategic Tracker) will include data from all child wards with Infectious Disease Unit Type of a selected organization. The report will include tracking of patient status over time (admitted, tested positive, recovered, deaths), avg length of stay, and number of ventilated days. If there are other strategic values needed for nursing leadership they can be added to this report.

View in BrainJack:
https://brainjack.works/BIFDashboardDesigner.html?dashboardID=49000E5A-74E6-41D9-9922-CA736BFD3732

Components are:

1. Patient Count Over Time. (SUM of all child wards of selected organization)
2. Current status by Ward Chart and Table

5 WMSNi Business Intelligence OLAP and Reports Module Test Plan

History of Changes

Date	Version	Change Description	Editor
19 October 2016	0.1	Created the initial version of this document.	Linda W. Fisher
	1.0	Final revisions	
6 May 2020	2.0	Update to include Infectious Disease Reporting	Linda W. Fisher

Table of Contents

1 Introduction

The test plan for the Business Intelligence Module is presented in the material that follows. Readers can expect that each section will clearly explain who should perform the testing, what is being tested, and desired test results. Most testing sections have been constructed so the user can determine if the module is functioning as intended. Some portions of the testing may be required to be performed by an application administrator or by a database administrator; these portions of the test plan if present will be denoted by the Database Administrator or Application Administrator Avatars as they require someone with WMSNi database administrative privileges. Examples are:

- Query Execution - running diagnostic queries,
- Result Assessment - assessing the effect of scripts upon WMSNi schema objects[1]

In the table that follows the required testing roles are presented and explained.

Role Name	Description	Avatar
Database Administrator	Understands the RDBMS technologies used to provide persistent storage for WMSNi. This person must be capable of running SQL scripts and evaluating results.	
Tester:	Name: _____ Date: _____	
Application Administrator	Capable in the operation of WMSNi modules and conversant in the details of WMSNi business intelligence. This person should be able to manage roles, manage patients, manage schedules, run reports, and ensure that the functions of the system are in agreement with information presented by business intelligence components (charts, traditional reports, and OLAP cubes).	
Tester:	Name: _____ Date: _____	

Test results must be reviewed by technical personnel and a customer capable of interpreting results. The vendor will be presented test results in an electronic format and given one business day to (1) explain problems encountered by the testers and (2) formulate a plan for the rapid remediation of problems. Neither the technical nor the business testers can make the final judgment on whether or not

[1] Database administrators will know to look for objects that may be adversely affected by the installation or update of a PL/SQL object. E.g., the update of a package can cause triggers, other packages, and standalone procedures to become invalid.

to go forward with the system; the decision must be joint. The test plan and results will be delivered to DHA leadership.

2 Business Intelligence Module

2.1 Delivery Test Plan 

2.1.1 Prerequisites

Ensure that any prerequisites are listed: _____.

Delivery Assessment:	_____ _____ _____ _____

2.1.2 Installation Instructions

The vendor shall provide instructions for using installation scripts and executables for upgrading WMSNi to _____. Among the things that must be present in the installation instructions are the following

- ❑ An explanation of each solution included in the delivery.
- ❑ An enumeration of the files contained in the upgrade.
- ❑ Steps that when taken will apply install the solution.

Delivery Assessment:	_____ _____ _____ _____

2.2 Business Intelligence Module Test Plan (Analytic Reports)

The Business Intelligence Module provides the user with the ability to retrieve information in the WMSNi System within minutes of being input. This section tests the system's ability to allow the user to build custom reports in three areas; Capacity Cube, Critical Indicator Cube, and the Patient Count Cube. Note***Please save a screen shot of any errors received during report testing. Place in the document following the appropriate section.

Functional Testing

Step	Description: BI (Analytic Reports) ***Run the same test for each of the three cubes.
1	The user must login to the WMSNi user system using their CAC card.
2	Once logged into the WMSNi system the user must navigate to the Reports Tab, submenu titled Analytical Reports.
3	Select one of the three cubes from the list: Capacity Cube, Critical Indicator Cube, or Patient Count Cube.
4	Click on the Open OLAP Navigator Icon in the toolbar.
5	Decide where, when, and what. (Select an organization(s), a time period, and a list of measures).
6	Click on Organization.
7	Unselect All Organizations and click on the small red + sign. Select desired organization(s).
8	Click OK, it will appear nothing has changed. Click OK again and the table will reflect you choice.
9	Click on the Open OLAP Navigator Icon in the toolbar.
10	Select Time from the Data Element window. Click OK again and the table will reflect you choice.
11	Move unwanted items to the Filters list and select the items to be displayed in the table. Ensure that Measures is located in the Columns or Rows to allow the selected items to show in the table. (Check to see if you can move items from columns to rows and to the filter category).
12	Select the desired items from the Measures list. Click OK again and the table will reflect you choice.
13	Export the Table to Excel.

Pass	Passing Criteria	Comments
☐	All areas function as intended: ☐ Capacity Cube ☐ Critical Indicator Cube ☐ Patient Count Cube	Select a series of data for each cube. The modules can be further tested by entering data, tracking the data, and comparing to the data in the cubes.

Delivery Assessment: _____

2.3 Business Intelligence Module Test Plan (Strategic Reports)

This section tests the system's ability to allow the user to retrieve strategic reports.

Functional Testing

Step	Description: BI (Strategic Reports) ***WMSN Section Monthly Report WMSN Summary Report by Facility Manpower Staffing Dashboard Inpatient Nursing Summary Report DCN Dashboard Export Report PBAM Report
1	The user must login to the WMSNi user system using their CAC card.
2	Once logged into the WMSNi system the user must navigate to the Reports Tab, submenu titled Strategic Reports.
3	Select desired report from the Strategic Reports list.
4	When each Report opens select the MTF, Section, and/or Unit desired and select a date if required. Reports will open in a preselected format. If a date is not required the report will return the current day or most recent month(s) of data.
5	Check each report to ensure that it provides the intended data and that the exportable functions are working.

Pass	Passing Criteria	Comments
☐	All areas function as intended	☐ WMSN Section Monthly Report (Date Required) ☐ WMSN Summary Report by Facility (Date Required) ☐ Manpower Staffing Dashboard ☐ Inpatient Nursing Summary Report (Date Required) ☐ DCN Dashboard Export Report ☐ PBAM Report (Date Required) ☐ Infectious Disease Strategic Tracker

Delivery Assessment:	_____ _____ _____ _____

2.4 Business Intelligence Module Test Plan (Tactical Reports)

This section tests the system's ability to allow the user to retrieve tactical reports.

Functional Testing

Step	Description: BI (Tactical Reports) *** Workload Dashboard 24 Hour Report Patient Acuity File Listing Ward Activity Report Casualty Status Report Unassessed Patient Report
1	The user must login to the WMSNi user system using their CAC card.
2	Once logged into the WMSNi system the user must navigate to the Reports Tab, submenu titled Tactical Reports.
3	Select desired report from the Tactical Reports list.
4	When each Report opens select the MTF, Section, and/or Unit desired and select a date if required. Reports will open in a preselected format. If a date is not required the report will return the current day or most recent month(s) of data.
5	Check each report to ensure that it provides the intended data and that the exportable functions are working.

Pass	Passing Criteria	Comments
☐	All areas function as intended	☐ Workload Dashboard ☐ 24 Hour Report (Date Required) ☐ Patient Acuity File Listing ☐ Ward Activity Report ☐ Casualty Status Report ☐ Unassessed Patient Report ☐ Infectious Disease Unit Status Report

Delivery Assessment: _____
_____
_____
_____

2.5 Business Intelligence Module Test Plan (IRR Reports)

This section tests the system's ability to allow the user to retrieve Inter-Rater Reliability (IRR) repor

Functional Testing

Step	Description: BI (IRR Reports) *** IRR Test Results Inter-Rater Reliability Dashboard IRR Command Status Report	
1	The user must login to the WMSNi user system using their CAC card.	
2	Once logged into the WMSNi system the user must navigate to the Reports Tab, submenu titled IRR Reports.	
3	Select desired report from the IRR Reports list.	
4	When each Report opens select the MTF, Section, and/or Unit desired and select a date if required. Reports will open in a preselected format. If a date is not required the report will return the current day or most recent month(s) of data.	
5	Check each report to ensure that it provides the intended data and that the exportable functions are working.	
Pass	**Passing Criteria**	**Comments**
☐	All areas function as intended	☐ IRR Test Results ☐ Inter-Rater Reliability Dashboard ☐ IRR Command Status Report

Delivery Assessment: _____
_____
_____
_____

2.6 Business Intelligence Module Test Plan (Classification Reports)

This section tests the system's ability to allow the user to retrieve classification reports.

Functional Testing

Step	Description: BI (Classification Reports) *** Individual Patient Acuity Classification LAD Inpatient Classification Report	
1	The user must login to the WMSNi user system using their CAC card.	
2	Once logged into the WMSNi system the user must navigate to the Reports Tab, submenu titled Classification Reports.	
3	Select desired report from the Classification Reports list.	
4	When each Report opens select the MTF, Section, and/or Unit and patient desired and select a date if required. Reports will open in a preselected format. If a date is not required the report will return the current day or most recent month(s) of data.	
5	Check each report to ensure that it provides the intended data and that the exportable functions are working.	
Pass	**Passing Criteria**	**Comments**

☐	All areas function as intended	☐ Individual Patient Acuity Classification ☐ LAD Inpatient Classification Report

Delivery Assessment: _____
_____
_____
_____

2.7 Business Intelligence Module Test Plan (Schedule Reports)

This section tests the system's ability to allow the user to retrieve schedule reports.

Functional Testing

Step	Description: BI (Schedule Reports) *** Single Day Schedule	
1	The user must login to the WMSNi user system using their CAC card.	
2	Once logged into the WMSNi system the user must navigate to the Reports Tab, submenu titled Schedule Reports.	
3	Select Single Day Schedule report from the Schedule Reports list.	
4	When the Report opens select the MTF, Section, Unit desired and select a Date. Reports will open in a preselected format. Selecting a different date will provide staff for the newly entered date.	
5	Check the report to ensure that it provides the intended data and that the exportable functions are working.	
Pass	**Passing Criteria**	**Comments**
☐	All areas function as intended	☐ Single Day Schedule (Date Reqired)

Delivery Assessment: _____
_____
_____
_____

2.8 Business Intelligence Module Test Plan (PAC Reports)

This section tests the system's ability to allow the user to retrieve Post-Anesthesia Care (PAC) reports.

Functional Testing

Step	Description: BI (PAC Reports) *** PACS Daily Report

1	The user must login to the WMSNi user system using their CAC card.
2	Once logged into the WMSNi system the user must navigate to the Reports Tab, submenu titled PAC Reports.
3	Select PACS Daily Report from the PAC Reports list.
4	When the Report opens select the MTF, Section, Unit desired and select a Date. Reports will open in a preselected format. Selecting a different date will provide data for the newly entered date.
5	Check the report to ensure that it provides the intended data and that the exportable functions are working.

Pass	Passing Criteria	Comments
☐	All areas function as intended	☐ PACS Daily Report (Date Required)

Delivery Assessment: _____
_____
_____
_____

2.9 Business Intelligence Module Test Plan (Other Reports)

This section tests the system's ability to allow the user to retrieve reports not contained in the other sections. Those reports are the Scheduling Time Exceptions and the Classification Export Tool.

Functional Testing

Step	Description: BI (Other Reports) *** Scheduling Time Exceptions Classification Export Tool
1	The user must login to the WMSNi user system using their CAC card.
2	Once logged into the WMSNi system the user must navigate to the Reports Tab, submenu titled Other Reports.
3	Select desired report from the Other Reports list.
4	The Scheduling Time Exceptions report requires no additional information, it is the same each time. The Classification Export Tool requires selections from the following elements: Opening and Closing Dates, Employee, MEPRS Code, Patient, Patient Type, and Status. The report will return the data based on selected elements for the requested time period.
5	Check each report to ensure that it provides the intended data and that the exportable functions are working.

Pass	Passing Criteria	Comments
☐	All areas function as intended	☐ Scheduling Time Exceptions ☐ Classification Export Tool (Date Required)

Delivery Assessment:	_____ _____ _____ _____

6 WMSNi Patient Manager Module

History of Changes

Date	Version	Change Description	Editor
14 October 2016	0.1	Created the initial version of this document.	Linda W. Fisher
19 October 2016	2.0	Added LADS to document to Ensure Testing.	Linda W. Fisher
	3.0	Final revisions	
6 May 2020	4.0	Update to include Infectious Disease Unit Type	Linda W. Fisher

Table of Contents

1 Introduction

The test plan for the Patient Manager Module is presented in the material that follows. Readers can expect that each section will clearly explain who should perform the testing, what is being tested, and desired test results. Most testing sections have been constructed so the user can determine if the module is functioning as intended. Some portions of the testing may be required to be performed by an application administrator or by a database administrator; these portions of the test plan if present will be denoted by the Database Administrator or Application Administrator Avatars as they require someone with WMSNi database administrative privileges. Examples are:

- Query Execution - running diagnostic queries,
- Result Assessment - assessing the effect of scripts upon WMSNi schema objects[2]

In the table that follows the required testing roles are presented and explained.

Role Name	Description	Avatar
Database Administrator	Understands the RDBMS technologies used to provide persistent storage for WMSNi. This person must be capable of running SQL scripts and evaluating results.	
Tester:	Name: _____ Date: _____	
Application Administrator	Capable in the operation of WMSNi modules and conversant in the details of WMSNi business intelligence. This person should be able to manage roles, manage patients, manage schedules, run reports, and ensure that the functions of the system are in agreement with information presented by business intelligence components (charts, traditional reports, and OLAP cubes).	
Tester:	Name: _____ Date: _____	

Test results must be reviewed by technical personnel and a customer capable of interpreting results. The vendor will be presented test results in an electronic format and given one business day to

[2] Database administrators will know to look for objects that may be adversely affected by the installation or update of a PL/SQL object. E.g., the update of a package can cause triggers, other packages, and standalone procedures to become invalid.

(1) explain problems encountered by the testers and (2) formulate a plan for the rapid remediation of problems. Neither the technical nor the business testers can make the final judgment on whether or not to go forward with the system; the decision must be joint. The test plan and results will be delivered to DHA leadership.

2 Patient Manager Module

2.1 Delivery Test Plan 

2.1.1 Prerequisites

Ensure that any prerequisites are listed: _____.

Delivery Assessment:	_____ _____ _____ _____

2.1.2 Installation Instructions

The vendor shall provide instructions for using installation scripts and executables for upgrading WMSNi to _____. Among the things that must be present in the installation instructions are the following

- ❑ An explanation of each solution included in the delivery.
- ❑ An enumeration of the files contained in the upgrade.
- ❑ Steps that when taken will apply install the solution.

Delivery Assessment:	_____ _____ _____ _____

2.2 Patient Manager (Admit Outpatient) Module Test Plan 

The Patient Manager Module provides the user with the ability to enter patients that are not entered automatically via the CHCS HL7 feed. This module must function as expected to allow the entry of patients when needed to ensure the patients are present for classification. This section tests the system's ability to allow the entry of an outpatient by a user via the Patient Manager.

Functional Testing 

Step	Description (Patient Manager Admit Outpatient) *** Include at least one Labor & Delivery Patient to check the LADS function.
1	The user must login to the WMSNi user system using their CAC card.
2	Once logged into the WMSNi system the user must navigate to the Patient Services submenu titled Patient Manager.
3	Select Unit from the WMSNi 2.0 Organization Browse window.
4	Select New Encounter Info Tab
5	Click in the "Patient Type" box.
6	Select Outpatient from the pop-up window.
7	Enter the MEPRS code for the clinic where the outpatient originated or type in the clinic name.
8	Select OK to accept or cancel to exit.
9	Enter patient name (Last, First) in patient name box.
10	Select the correct gender.
11	Enter Birthdate in "Date-of-Birth" box.
12	Use the calendar to select a date.
13	Select the correct casualty status.
14	Start Date will automatically be filled.
15	Start Time will automatically be filled.
16	Time selection pop-up.
17	Select correct FMP status.
18	Select the correct Service Type if different from the pre-filled service.
19	If the user has incorrectly entered information the "Clear Form" button may be used. (If clear is used reenter information and admit)
20	Admit the outpatient.

Pass	Passing Criteria	Comments
☐	All areas function as intended	Check the WMSNi Patient Browser window to ensure Patient is admitted.

Delivery Assessment:	_____ _____ _____ _____

2.3 Patient Manager (Admit Inpatient) Module Test Plan 

This section tests the system's ability to allow the entry of an inpatient by a user via the Patient Manager.

Functional Testing 

Step	Description (Patient Manager Admit Inpatient) *** Include at least one Labor & Delivery Patient to check the LADS function.
1	The user must login to the WMSNi user system using their CAC card.
2	Once logged into the WMSNi system the user must navigate to the Patient Services submenu titled Patient Manager.
3	Select Unit from the WMSNi 2.0 Organization Browse window.
4	Select New Encounter Info Tab
5	Click in the "Patient Type" box.
6	Select Inpatient & OK from the pop-up window.
7	Enter the correct Register Number for the Inpatient.
8	Enter patient name (Last, First) in patient name box.
9	Select the correct gender.
10	Enter Birthdate in "Date-of-Birth" box.
11	Use the calendar to select a date.
12	Select the correct casualty status.
13	Start Date will automatically be filled. Check date.
14	Start Time will automatically be filled. Check time.
15	Time selection pop-up.
16	Select correct FMP status.
17	Select the correct Service Type if different from the pre-filled service.

18	If the user has incorrectly entered information the “Clear Form” button may be used.
19	Admit the Inpatient.

Pass	Passing Criteria	Comments
☐	All areas function as intended	Check the WMSNi Patient Browser window to ensure Patient is admitted.

Delivery Assessment:	_____ _____ _____ _____

2.4 Patient Manager (Admit Infectious Disease Inpatient) Module Test Plan

This section tests the system’s ability to allow the entry of an inpatient by a user via the Patient Manager.

Functional Testing 

Step	Description (Patient Manager Admit Infectious Disease Inpatient)
1	The user must login to the WMSNi user system using their CAC card.
2	Once logged into the WMSNi system the user must navigate to the Patient Services submenu titled Patient Manager.
3	Select Unit from the WMSNi 2.0 Organization Browse window.
4	Select New Encounter Info Tab
5	Click in the “Patient Type” box.
6	Select Inpatient & OK from the pop-up window.
7	Enter the correct Register Number for the Inpatient.
8	Enter patient name (Last, First) in patient name box.
9	Select the correct gender.
10	Enter Birthdate in “Date-of-Birth” box.
11	Use the calendar to select a date.
12	Select the correct casualty status.
13	Start Date will automatically be filled. Check date.

14	Start Time will automatically be filled. Check time.
15	Time selection pop-up.
16	Select correct FMP status.
17	Select the Infectious Disease Service Type if different from the pre-filled service.
18	Select the Radio Button for Infectious Disease.
19	From the Dropdown select the correct Status of the Infectious Disease patient.
20	If the user has incorrectly entered information the “Clear Form” button may be used.
21	Admit the Inpatient.

Pass	Passing Criteria	Comments
☐	All areas function as intended	Check the WMSNi Patient Browser window to ensure Patient is admitted.

Delivery Assessment: _____
_____
_____
_____

2.5 Patient Manager (Transfer) Module Test Plan

This section tests the system’s ability to allow a user to use the Patient Manager to transfer a patient from one ward to another.

Functional Testing

Step	Description (Patient Manager Transfer) *** Include at least one Labor & Delivery Patient to check the LADS function.
1	The user must login to the WMSNi user system using their CAC card.
2	Once logged into the WMSNi system the user must navigate to the Patient Services submenu titled Patient Manager.
3	Select Unit from the WMSNi 2.0 Organization Browse window.
4	Select Transfer Tab.
5	Select Patient.
6	Check to ensure the correct patient has been selected.
7	Start Date will automatically be filled. Check date.
8	Start Time will automatically be filled. Check time.

9	Click “Transfer to Ward” box. Select ward from the dropdown menu. Click OK.
10	Verify that “Service Type” box is correct. If not select correct service type from the dropdown menu.
11	Click Transfer Patient button.

Pass	Passing Criteria	Comments
☐	All areas function as intended	Check the WMSNi Patient Browser window for the ward the patient was transferred to and ensure Patient was correctly transferred.

Delivery Assessment: _____
_____
_____
_____

2.6 Patient Manager (Discharge) Module Test Plan 

This section tests the system’s ability to allow the user to discharge a patient using the Patient Manager.

Functional Testing 

Step	Description (Patient Manager Discharge) *** Include at least one Labor & Delivery Patient to check the LADS function.
1	The user must login to the WMSNi user system using their CAC card.
2	Once logged into the WMSNi system the user must navigate to the Patient Services submenu titled Patient Manager.
3	Select Unit from the WMSNi 2.0 Organization Browse window.
4	Select Discharge Tab.
5	Select Patient.
6	Check to ensure the correct patient has been selected.
7	Start Date will automatically be filled. Check date.
8	Start Time will automatically be filled. Check time.
9	Click “Discharge Patient” button.

Pass	Passing Criteria	Comments

☐	All areas function as intended	Check the WMSNi Patient Browser window to ensure Patient discharged.

Delivery Assessment:	_____ _____ _____ _____

2.7 Patient Manager (Edit) Module Test Plan

This section tests the system's ability to allow a user to edit a patient record using the Patient Manager. Note** Patient Register numbers cannot be edited.

Functional Testing

Step	Description (Patient Manager Edit) *** Include at least one Labor & Delivery patient to check the LADS function.
1	The user must login to the WMSNi user system using their CAC card.
2	Once logged into the WMSNi system the user must navigate to the Patient Services submenu titled Patient Manager.
3	Select Unit from the WMSNi 2.0 Organization Browse window.
4	Select Edit Tab.
5	Select Patient.
6	Check to ensure the correct patient has been selected.
7	To edit gender, select the "Gender" dropdown menu and make the correction.
8	To edit date of birth, click in the "Date of Birth" box and make the correction or use the calendar pop-up to make the correction.
9	To edit casualty status, select the "Casualty Status" dropdown menu and make the correction.
10	To edit FMP status, select the "FMP Status" dropdown menu and make the correction.
11	To edit service type, select the "Service Type" dropdown menu and make the correction.
12	The operations for Cancel Admission, Cancel Transfer & Cancel Discharge can only be tested on patients admitted or transferred without a classification or a patient that has been discharged within 24 hours.
13	Click "Save Changes" button.

Pass	Passing Criteria	Comments
☐	All areas function as intended	Check patient manager to ensure changes were made.

Delivery Assessment:	_____ _____ _____ _____

7 WMSNi Test Plan Guidance

History of Changes

Date	Version	Change Description	Editor
22 May 2017	0.1	Created the initial version of this template.	Robert L. Hollis
16 July 2019	0.1	Verification of this document as current.	Linda W. Fisher
5 May 2020	0.2	Updated to add Infectious Disease Update	Linda W. Fisher

Table of Contents

2 Introduction

The collection of WMSNi test plan documents cover multiple testing scenarios, and each step of the delivery process warrants a different category of testing. This guidance document specifies recommendations on when to execute each category of testing. The categories are:

- **Functional Testing -** Testing specific functional changes for each release.
- **Regression Testing -** Testing the overall application to verify that software which was previously developed and tested still performs correctly after a release.
- **Critical Path Testing -** Spot-check testing of key components of the application to verify that software which was previously developed and tested still performs correctly after a release.

3 WMSNi Environments

In the next several sections, execution guidance is provided relative to personnel and environments. Personnel are described as follows:

- Developers - Developers represent the group of team members who produced the fix or upgrade.
- Users - Users represent a CADRE of Subject Matter Experts (SMEs) who understand the application through daily, operational usage.

The environments are broken out as illustrated in Figure 1. The arrows depict the flow from one environment to the next.

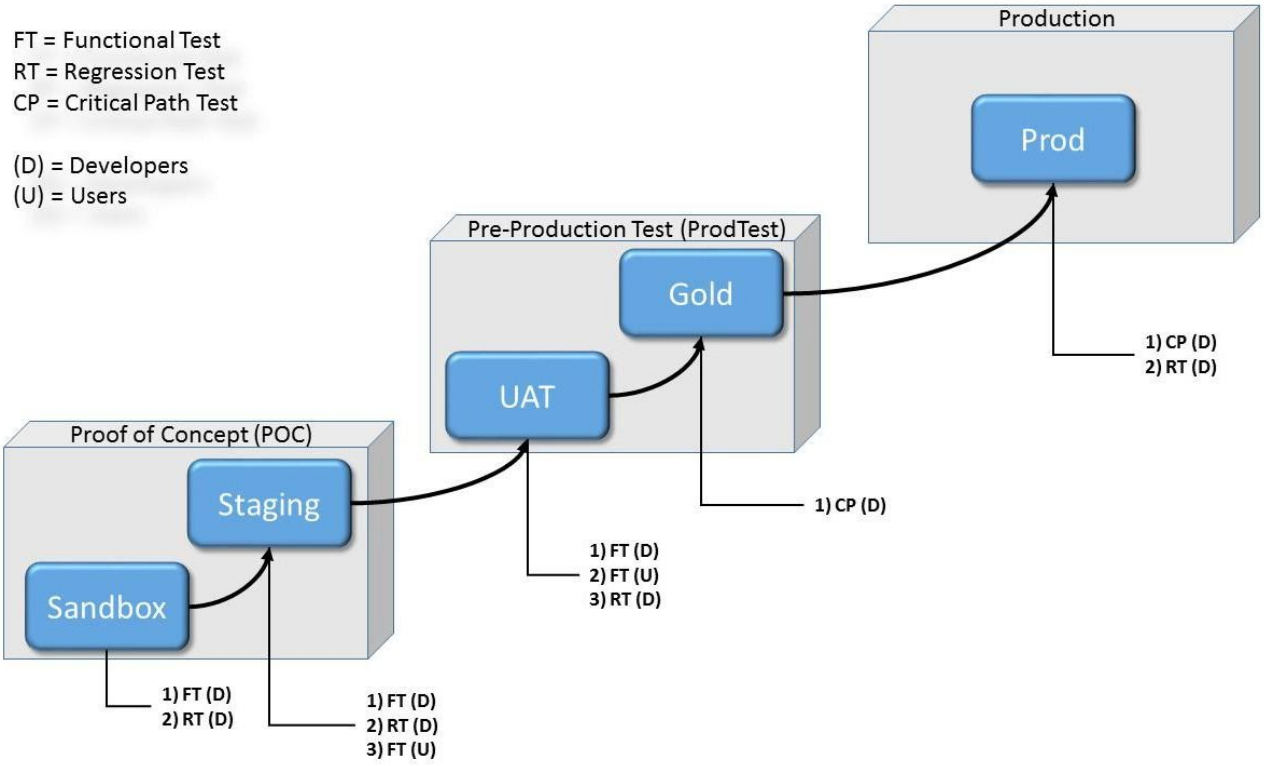


Figure 1: WMSNi Environment Flow Diagram

WMSNi Environments:

- Proof of Concept (POC)
  - **Sandbox:** Environment for development, tweaking, and establishment of installation procedures.
  - **Staging:** User Acceptance Test Environment: Initial installation test bed, also used to present initial release functionality to the Users.
- Pre-Production Test (ProdTest)
  - **UAT:** This is the final pre-production installation environment, used to ensure that issues that could surface during the transition to the Live Production environment are minimized or eliminated.
  - **Gold:** Intended to be a near-clone of the Production system allowing Users to test how changes will perform when they are installed in the Live Production environment.
- Production (Prod)
  - **Live:** Software in this environment is available to all WMSNi users.

4 Functional Test Plan

3.1 Why Execute

Each WMSNi release includes a number of updates to the application. In many cases, application functionality was altered to either fix a condition or improve a process. When functionality changes for either of these reasons, the release includes a Functional Test Plan document, covering the test steps for each functional change. These test steps reflect a set of requirements, and provide steps to verify those requirements are met.

3.2 When to Execute

Execute the Functional Test Plan steps as follows:

Environment	Situation	by Whom
Sandbox	Before installation to Staging to test the update and verify test steps.	Developers
Staging	Before installation to UAT.	Developers
UAT	Before installation to Gold.	Users
Gold	Functional Testing prior to Production Live Release.	Users
Production Live	After transition to Live, re-verify new functionality.	Developers and Users

4 Regression Test Plan

4.1 Why Execute

Each WMSNi release includes a number of updates to the application. Any update has the potential to affect functionality beyond the expected. Therefore, the regression test plan was drafted to provide guidance on how to ensure functionality which was previously developed and tested still performs correctly.

4.2 When to Execute

Execute the Regression Test Plan steps as follows:

Environment	Situation	by Whom
POC Sandbox	Before installation to POC UAT to verify legacy functionality.	Developers
POC UAT	Before User testing in POC UAT to verify legacy functionality.	Developers
ProdTest UAT	Before final transition to ProdTest Staging.	Developers
Production Live	After Critical Path Testing to verify legacy functionality.	Developers & Users

5 Critical Path Test Plan

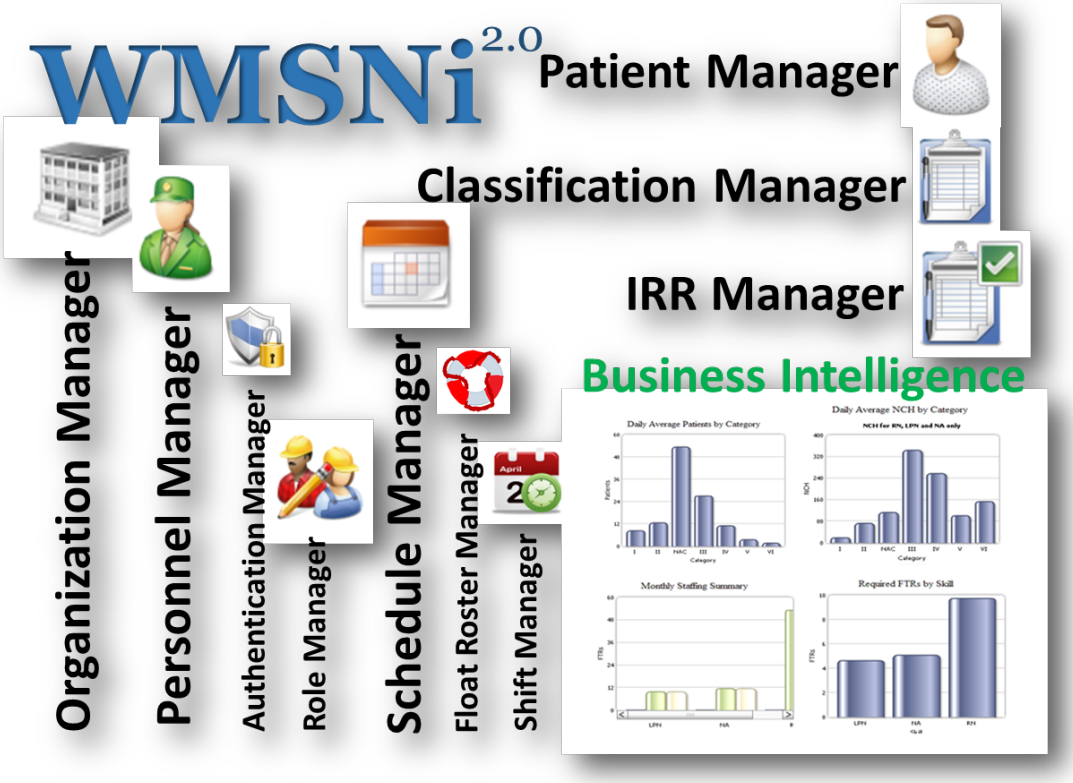
5.1 Why Execute

Critical path testing is performed to ensure that major functionality remains operable after system changes. This difference from regression testing in that it's more of a high-level test. Critical Path testing ensures that key modules remain functional, but does not dive deep into verifying accuracy of calculations.

5.2 When to Execute

Execute the Regression Test Plan steps as follows:

Environment	Situation	by Whom
UAT	Before final transition to Gold to verify operability.	Developers/ User
Gold	Before final transition to Production Live to verify operability.	Developers/ User
Production Live	Immediately after transition to Live to verify legacy operability.	Developers/ User



WMSNi-12c 2.4.7.0 R4 Production Critical Path Test Plan

8 WMSNi- 12c 2.4.7.0 R4 Production Critical Path Test Plan

History of Changes

Date	Version	Change Description	Editor
2 November 2016	0.1	Created the initial version of this document.	Linda W. Fisher
23 April 2019	0.2	Updated for Use for SE Linux Test	Linda W. Fisher
30 April 2019	0.3	Updated to include WIT	Linda W. Fisher
17 July 2019	0.4	Updated to include missing reports	Linda W. Fisher
5 April 2020	0.5	Update to include 2.4.7.0 R4/12c Oracle DB	Linda W. Fisher
5 May 2020	0.6	Update to include Infectious Disease Unit Type	Linda W. Fisher

READ PRIOR TO TESTING

The tester shall replace all results screens with results from the current test site. The expected screen view shall not be replaced but remains as a visual example for evaluators. The tester shall follow the instructions provided in the test plan. Note* Entered "Names" of test patients and "test wards" for use in follow-on test items.

Dates shall reflect the dates of testing.

All Pass boxes, Comments, & Delivery Assessments shall be updated.

Update Table of Contents when document is complete.

Table of Contents

1 Introduction

The test plan for the WMSNi Critical Path is presented in the material that follows. The Critical Path Test Plan is a high-level test plan to ensure the functionality of major functions within WMSNi are performing correctly after routine system changes. Readers can expect that each section will clearly explain who should perform the testing, what is being tested, and desired test results. Most testing sections have been constructed so the user can determine if the module is functioning as intended. Some portions of the testing may be required to be performed by an application administrator or by a database administrator; these portions of the test plan, if present, will be denoted by the Database Administrator or Application Administrator Avatars as they require someone with WMSNi database administrative privileges. Examples are:

- Query Execution - running diagnostic queries,
- Result Assessment - assessing the effect of scripts upon WMSNi schema objects[3]

In the table that follows the required testing roles are presented and explained.

Role Name	Description	Avatar
Database Administrator	Understands the RDBMS technologies used to provide persistent storage for WMSNi. This person must be capable of running SQL scripts and evaluating results.	
Tester:	Name: _____ Date: _____	
Application Administrator	Capable in the operation of WMSNi modules and conversant in the details of WMSNi business intelligence. This person should be able to manage roles, manage patients, manage schedules, run reports, and ensure that the functions of the system are in agreement with information presented by business intelligence components (charts, traditional reports, and OLAP cubes).	
Tester:	Name: _____ Date: _____	

[3] Database administrators will know to look for objects that may be adversely affected by the installation or update of a PL/SQL object. E.g., the update of a package can cause triggers, other packages, and standalone procedures to become invalid.

Test results must be reviewed by technical personnel and a customer capable of interpreting results. The vendor will be presented test results in an electronic format and given one business day to (1) explain problems encountered by the testers and (2) formulate a plan for the rapid remediation of problems. Neither the technical nor the business testers can make the final judgment on whether or not to go forward with the system; the decision must be joint. The test plan and results will be delivered to DHA leadership.

2 Critical Path Test Plan

2.1 Delivery Test Plan 

2.1.1 Prerequisites

Ensure that any prerequisites are listed: _SE Linux is turned on in the operating system where the application resides_____.

Delivery Assessment:	_____ _ _____ _ _____ _ _____ _

2.1.2 Installation Instructions

The vendor shall provide instructions for using installation scripts and executables for upgrading WMSNi Certificate. Among the things that must be present in the installation instructions are the following

- ☑ Explanation of each solution included in the delivery.
- ☑ Enumeration of the files contained in the upgrade.
- ☑ Steps that when taken will apply install the solution.

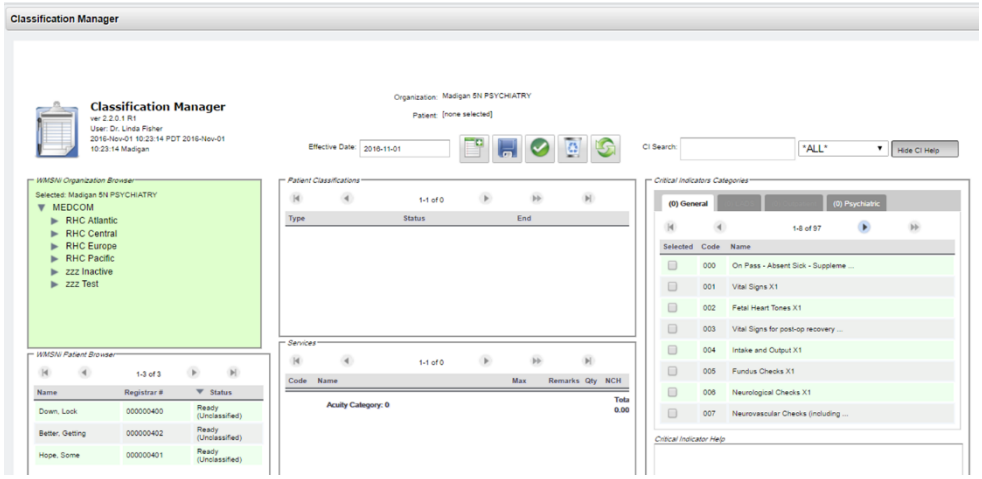
Delivery Assessment:	_Version 2.4.7.0 R4/12c_____

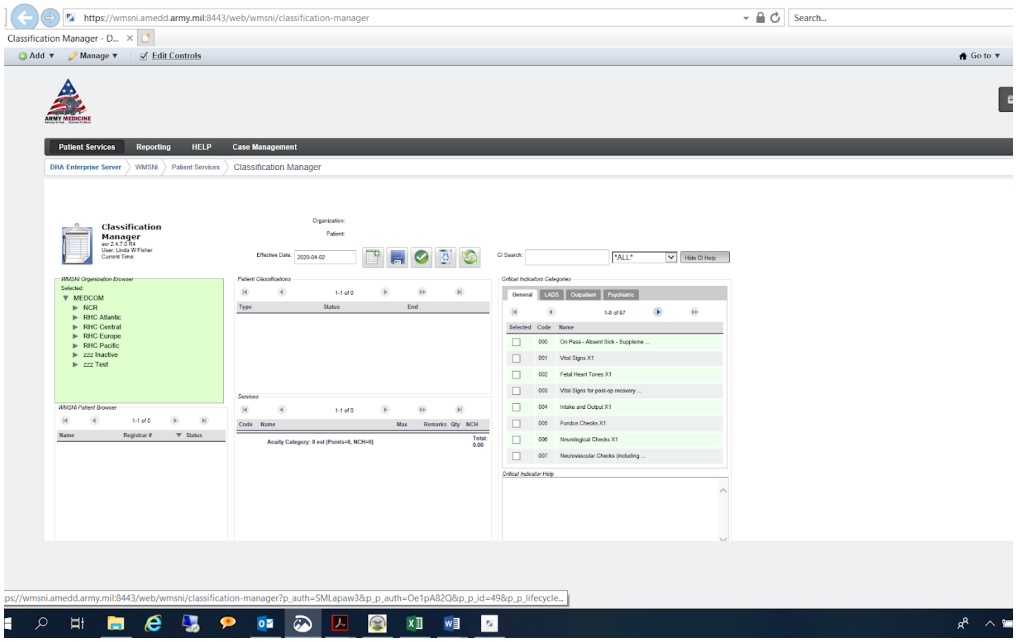
2.2 Patient Services Critical Path Test Plan

The Patient Services Modules are where all data are entered into WMSNi. These modules must function as expected for the purpose of data integrity and reliability. The following Test are meant to test operability for high level quick functions testing. These tests do not test data accuracy. More detailed testing is required to test the data input and output validation.

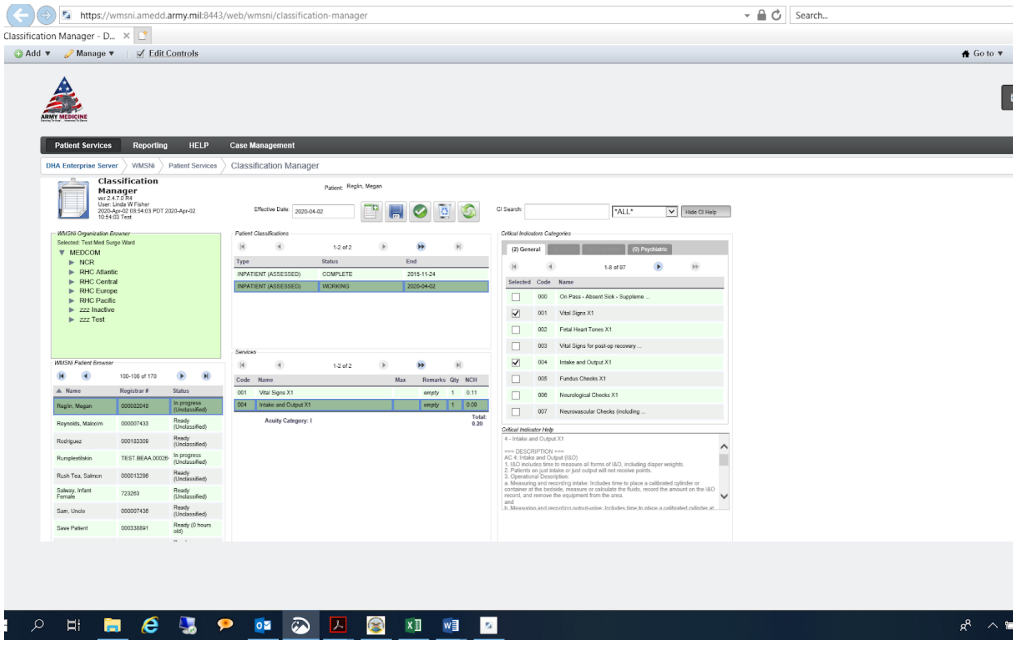
The test steps will return a WMSNi screen for each test. Screenshots of correctly working modules are provided for comparison. Please note any portions of the screens that do not populate or any unexpected returned errors or other malfunctions. Additional screenshots are added to support the changes in 2.4.7.0 R4 1) Print/View Schedule restoration, 2) Hospital Roster restoration, 3) Prevention of same employee schedule time overlap, 4) Shift Manager - Start of Day - Removal of ability to change by users, & 5) Personnel Manager – Edit employee Information – email input box – Changed the email to commit the email address of the user to all lowercase.

Functional Testing

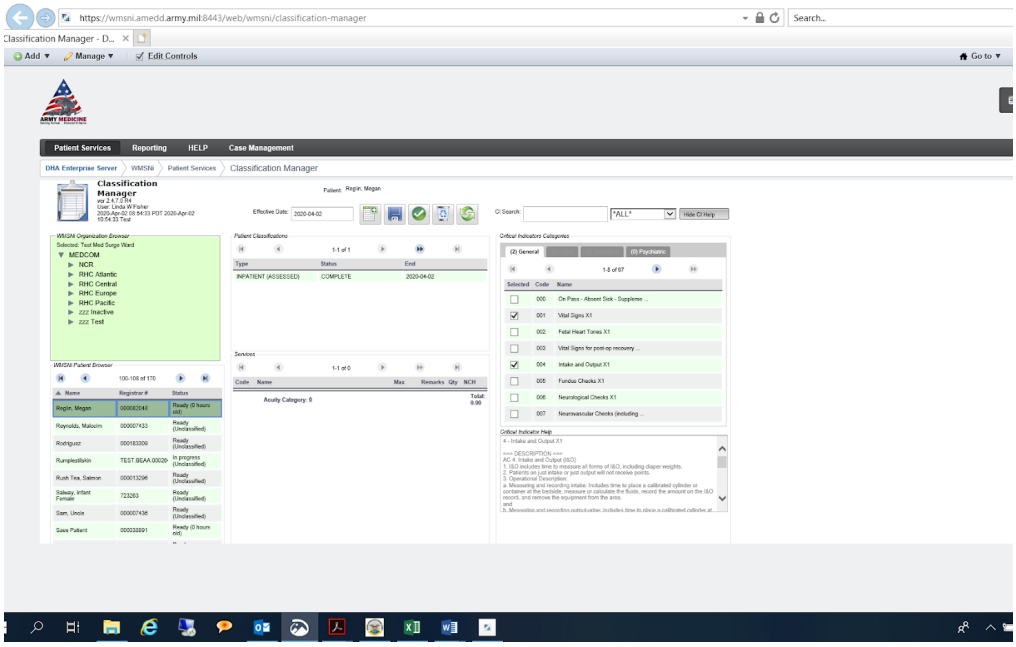
Step	Description: Patient Services Critical Paths Test Plan
1	The user must login to the WMSNi user system using their CAC card. a) Startup authorized government PC/laptop/etc.… and Insert CAC for authorization b) Startup Internet Explorer c) Select WMSNi URL https://wmsni.amedd.army.mil:8443 d) The User should see the WMSNi Welcome Page. e) The User is required to read and accept the terms of usage for the system by clicking on Click here to agree to all of the above and login with CAC at the bottom left of the page. f) The User should now be on the Menu Page for WMSNi.
2	Once logged into the WMSNi system the user must navigate to the Patient Services Tab.
3	From the submenu select the Classification Manager.
4	The following is the expected screen view:  Insert a screenshot of your results here:



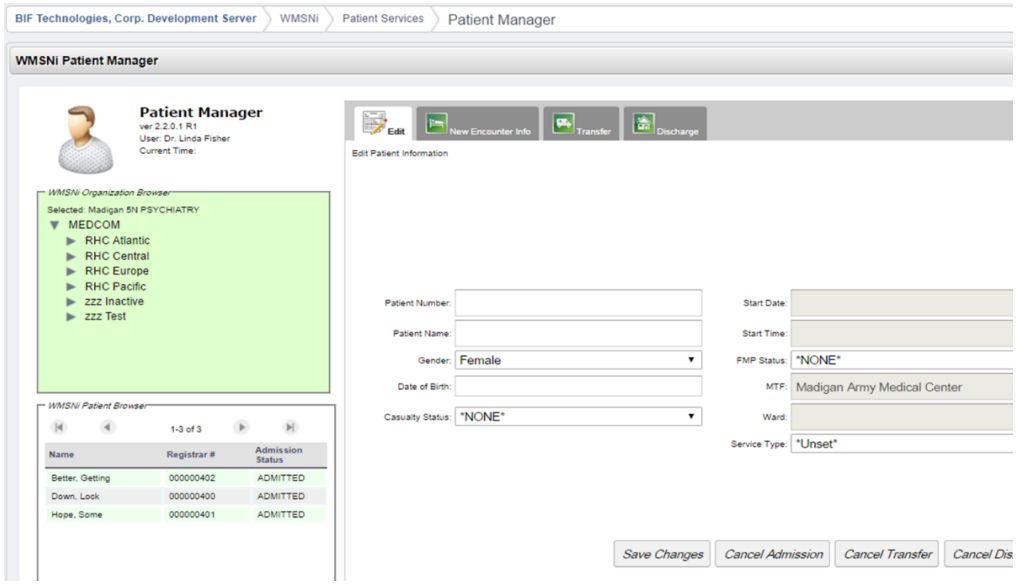
Classify any 3 patients. Use CIs 001 & 004. Check for anomalies.
Window closes automatically after selecting Complete.

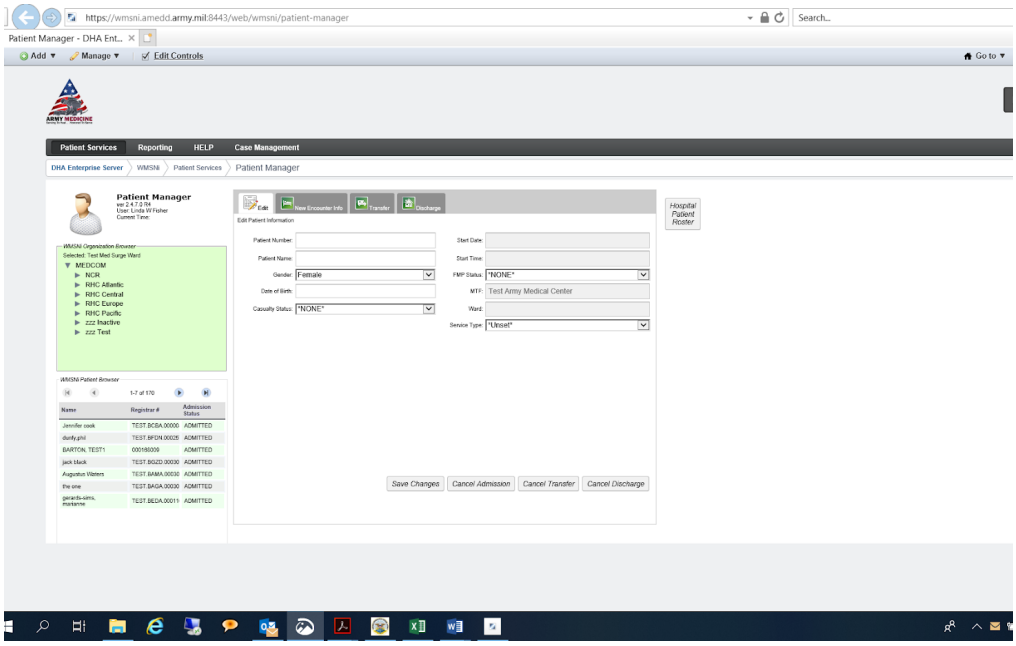


Patient Status correctly reflects: Ready (0 hours old). Screen Shot should show 1 minute or same time as Previous screen. This proves that the Patient completed in the last screen has an updated Status immediately.

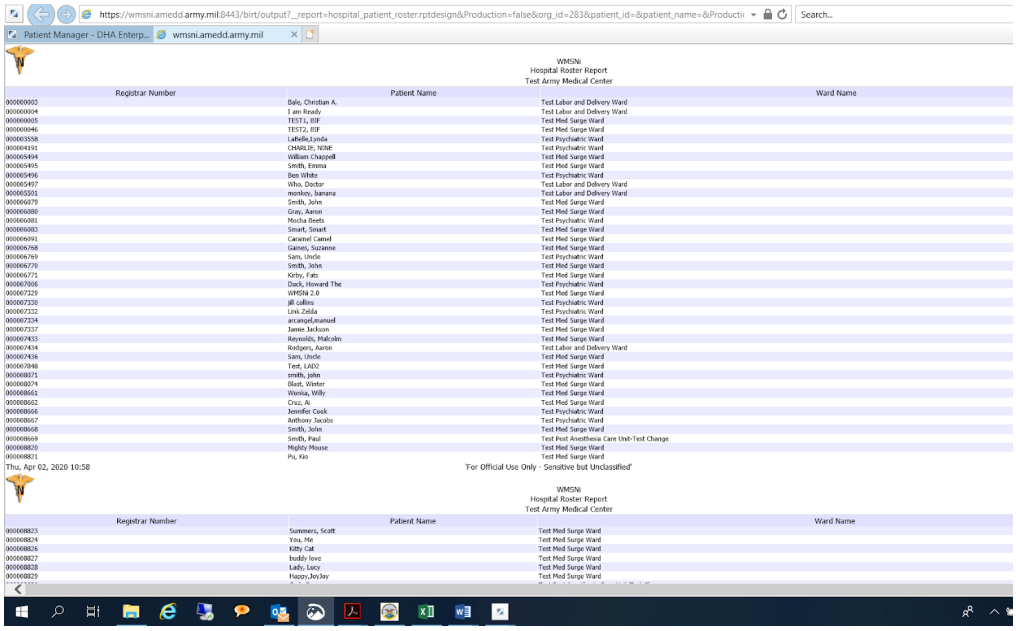


Pass	Passing Criteria	Comments
☑	Module opened as intended and appears to be properly functioning.	The expected screen was displayed when the module opened and the issue with delayed Status update is corrected.

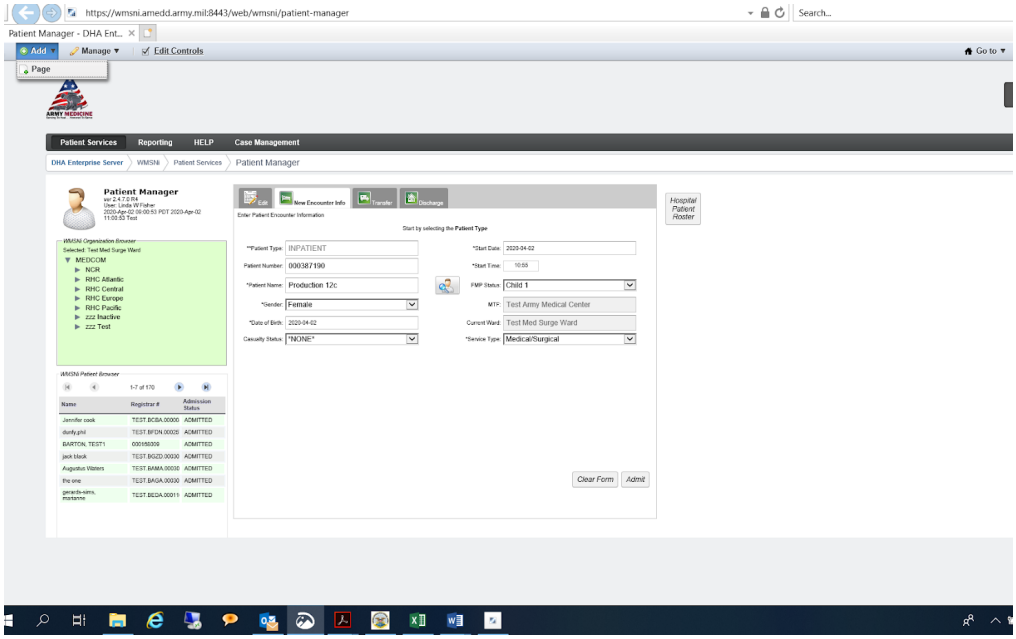
5	The user must login to the WMSNi user system using their CAC card.
6	Once logged into the WMSNi system the user must navigate to the Patient Services Tab.
7	From the submenu select the Patient Manager.
8	The following is the expected screen view:  Insert a screenshot of your results here:



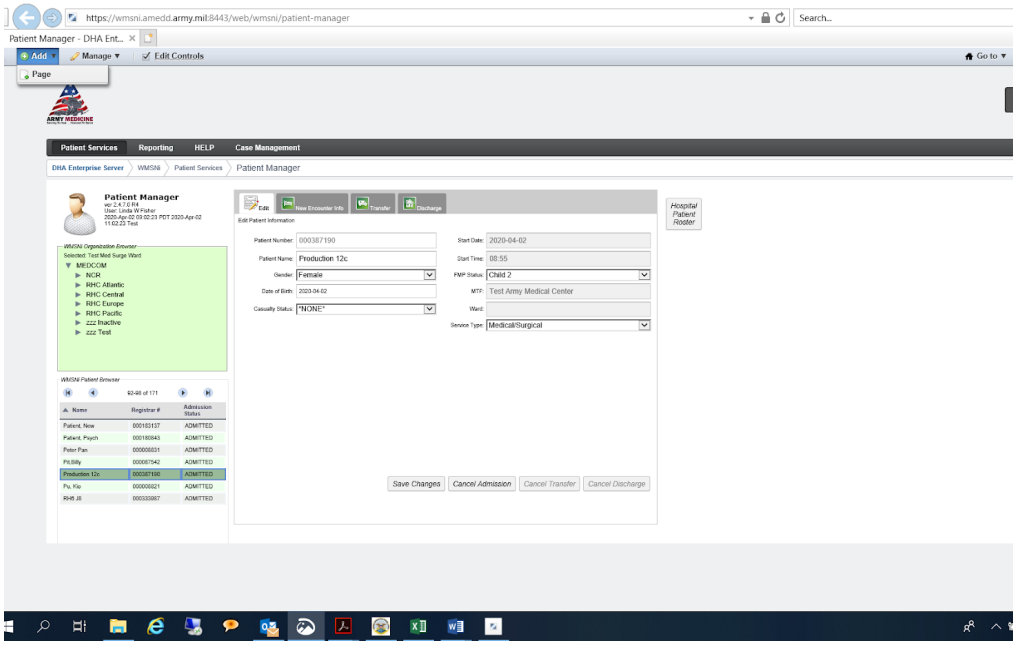
Insert a screenshot of Hospital Roster screen results here:
The Hospital Roster is located at the Upper Right of the Patient Manager screen:
Hospital Patient Roster reports all patients for target MTF as intended.



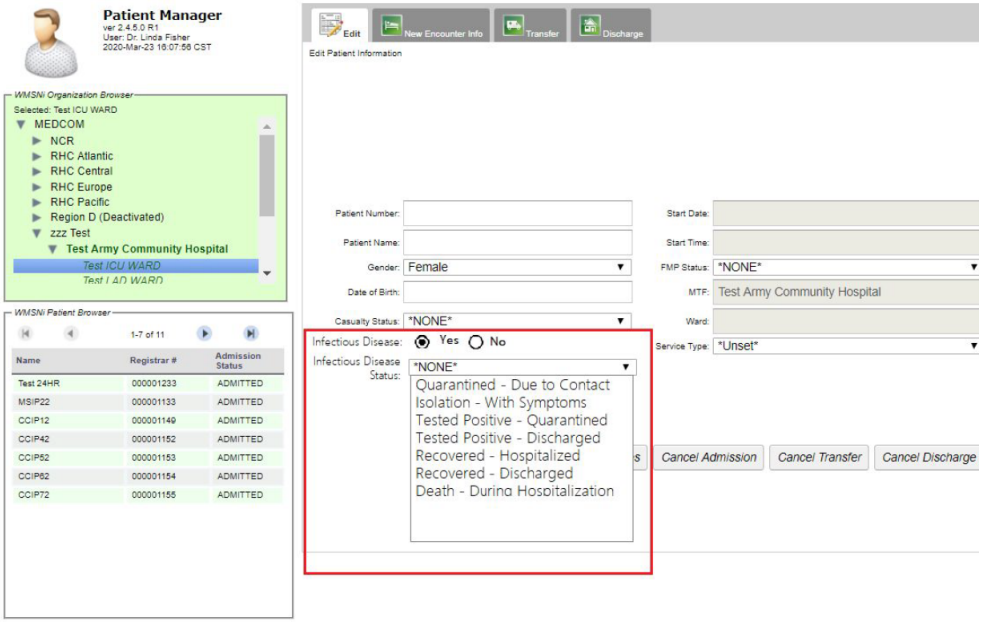
DOB offset Test: Admit new patient with DOB today & FMP Status of Child 1. Get screenshot.

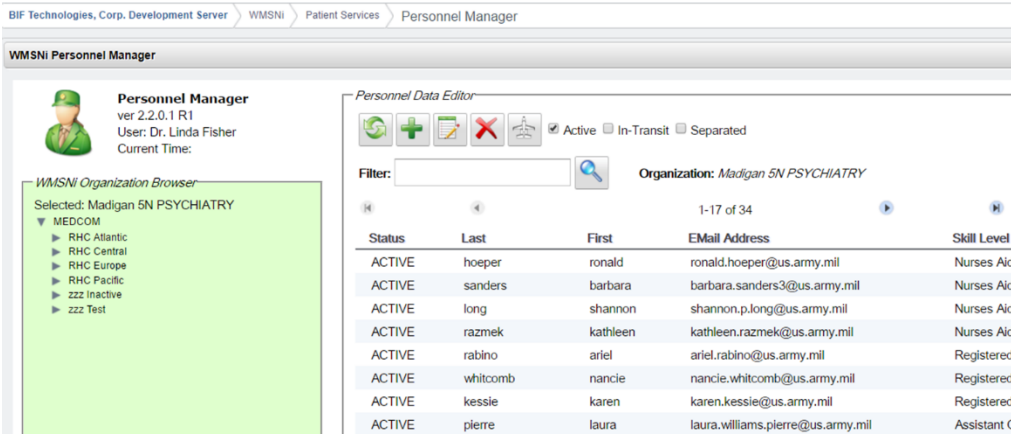


Edit FMP Status Child 1 change to Child 2, DOB should remain the same. Get Screenshot

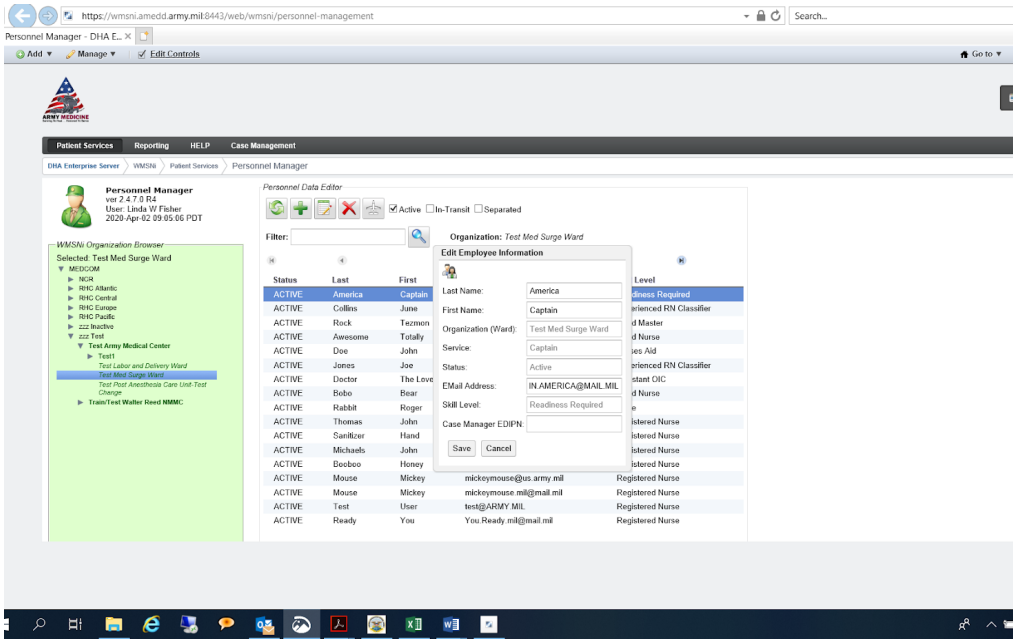


Test that Infectious Disease Unit Type is available and that Dropdown Infections Disease Stati are visible when Infectious Disease Radio Button is selected.

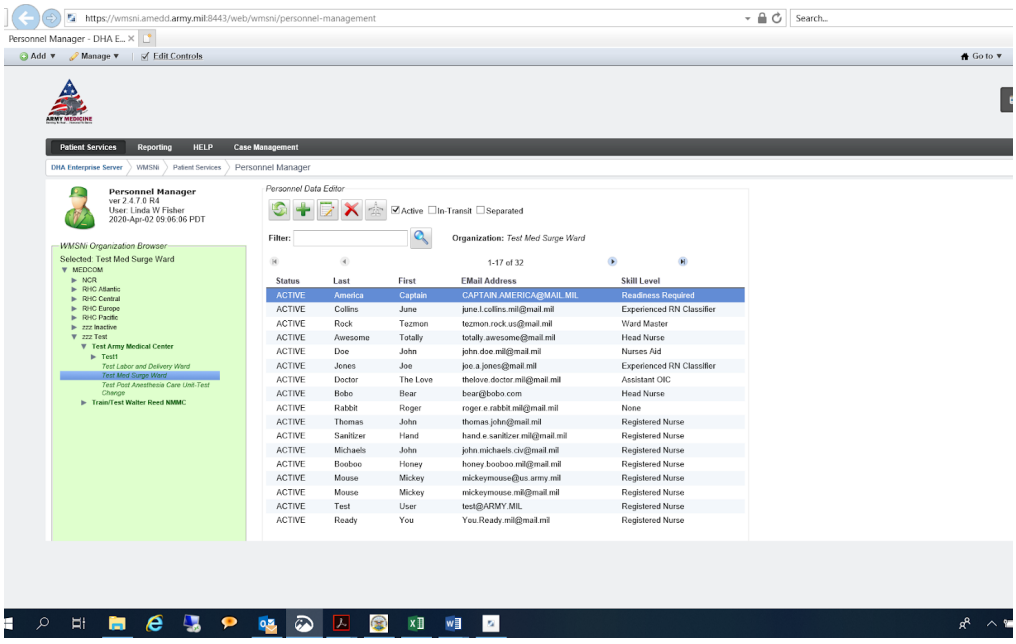


Pass	Passing Criteria	Comments
☑	Module opened as intended and appears to be properly functioning.	The expected screen was displayed when the module opened. Hospital Roster functions as expected. DOB does not change with patient updates.
9	The user must login to the WMSNi user system using their CAC card.	
10	Once logged into the WMSNi system the user must navigate to the Patient Services Tab.	
11	From the submenu select the Personnel Manager.	
12	The following is the expected screen view: 	

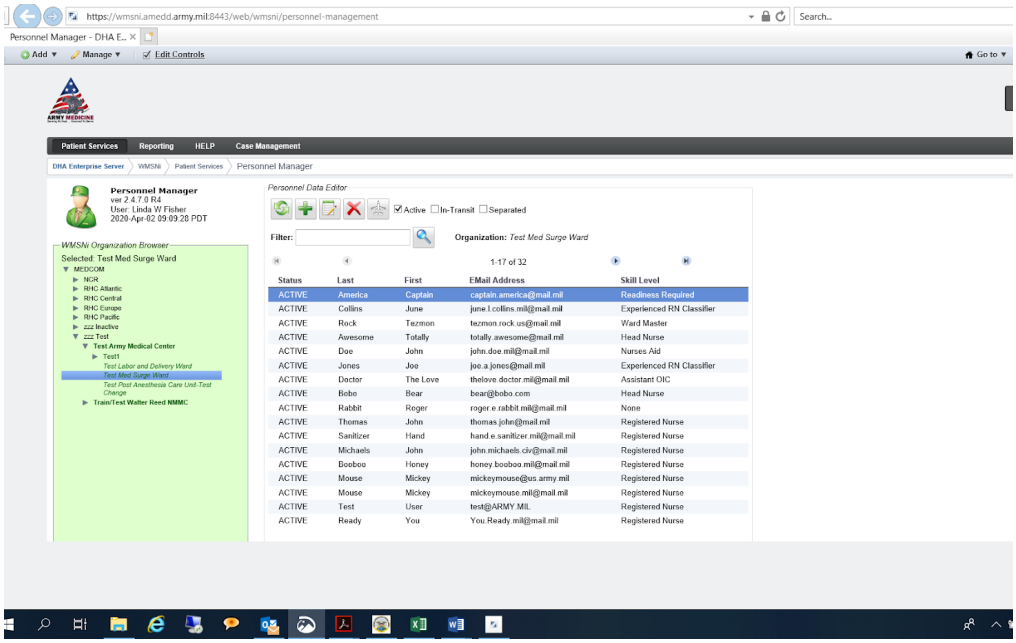
12 Insert a screenshot of your results here:

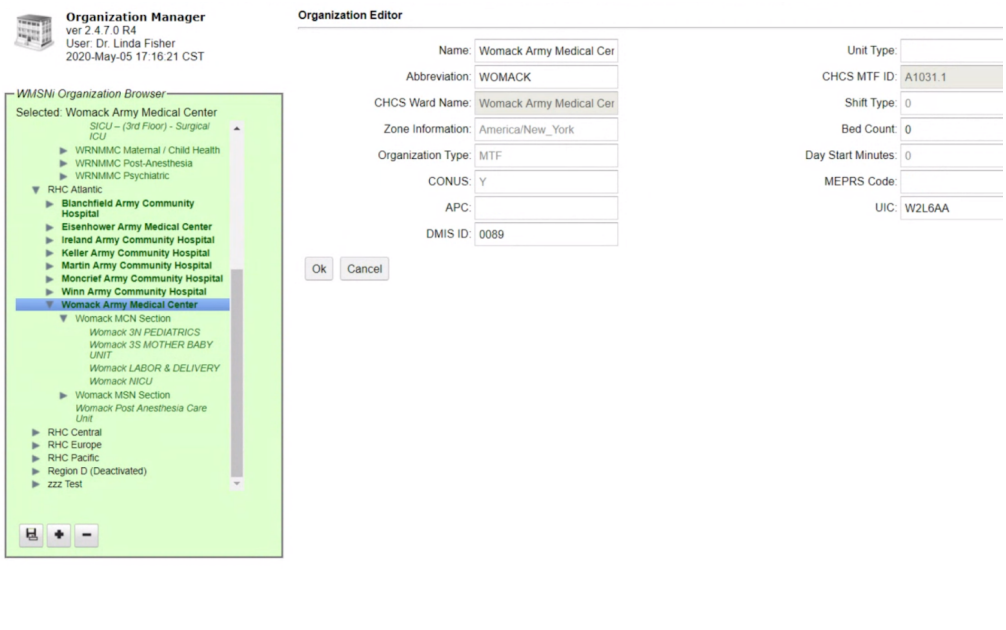


Select an Employee. Select Edit Icon. Attempt to edit an employee email using all Uppercase letters. The application should automatically force a lowercase email address.



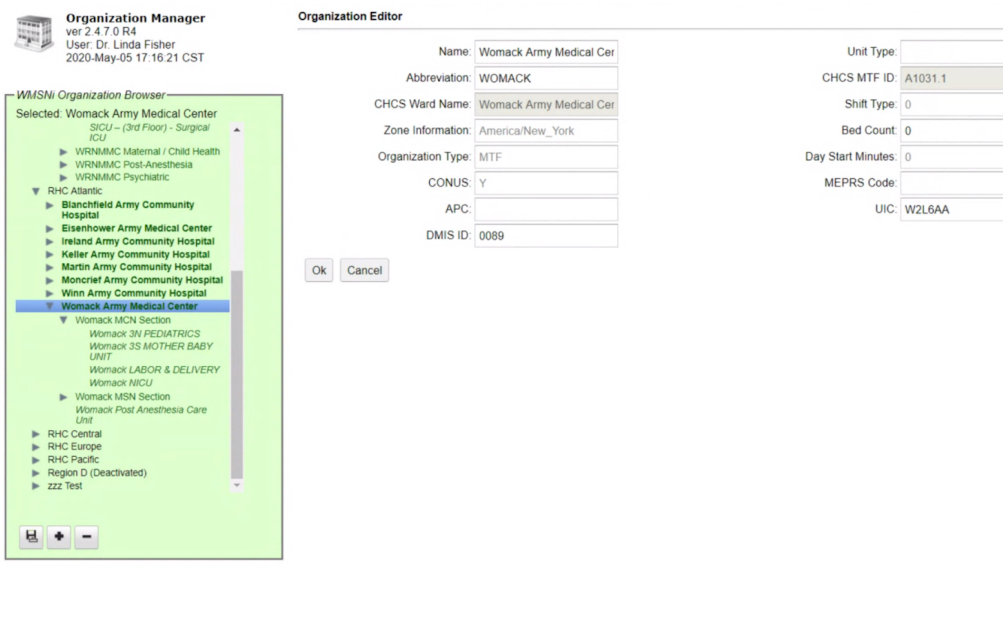
Leave Personnel Manager and reenter to see that the email is forced to lowercase.



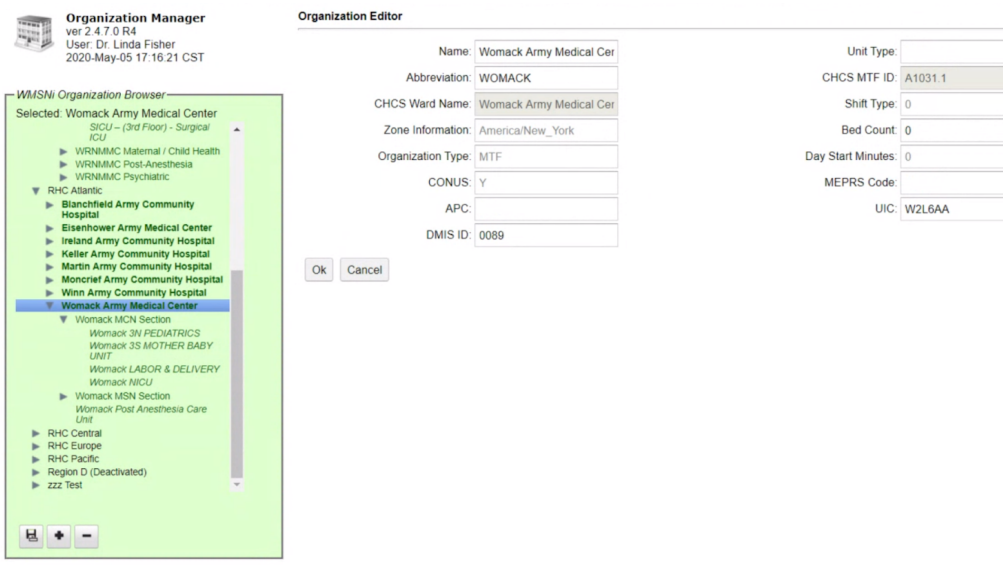
Pass	Passing Criteria	Comments
☑	Module opened as intended and appears to be properly functioning.	The expected screen was displayed when the module opened. Personnel Manager functions as expected. The addition of Forcing the email to be lowercase reverted after leaving and coming back to the Personnel Manager.
13	The user must login to the WMSNi user system using their CAC card.	
14	Once logged into the WMSNi system the user must navigate to the Patient Services Tab.	
15	From the submenu select the Organization Manager.	
16	The following is the expected screen view: 	

Insert a screenshot of your results here:

Must select Region for Sections to appear. Add a new unit using the (+) button and filling in the fields. Record a screenshot of the newly added unit.



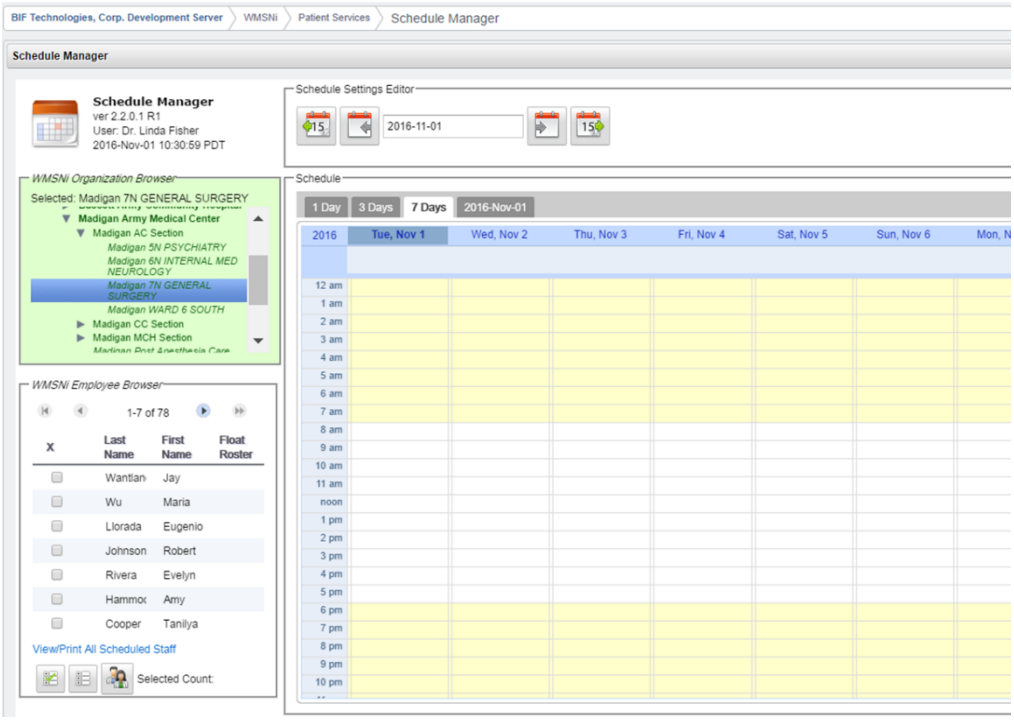
Use the (-) button to remove the newly added button and record a screenshot.



Pass	Passing Criteria	Comments
☑	Module opened as intended and appears to be properly functioning.	The expected screen was displayed when the module opened.
17	The user must login to the WMSNi user system using their CAC card.	
18	Once logged into the WMSNi system the user must navigate to the Patient Services Tab.	

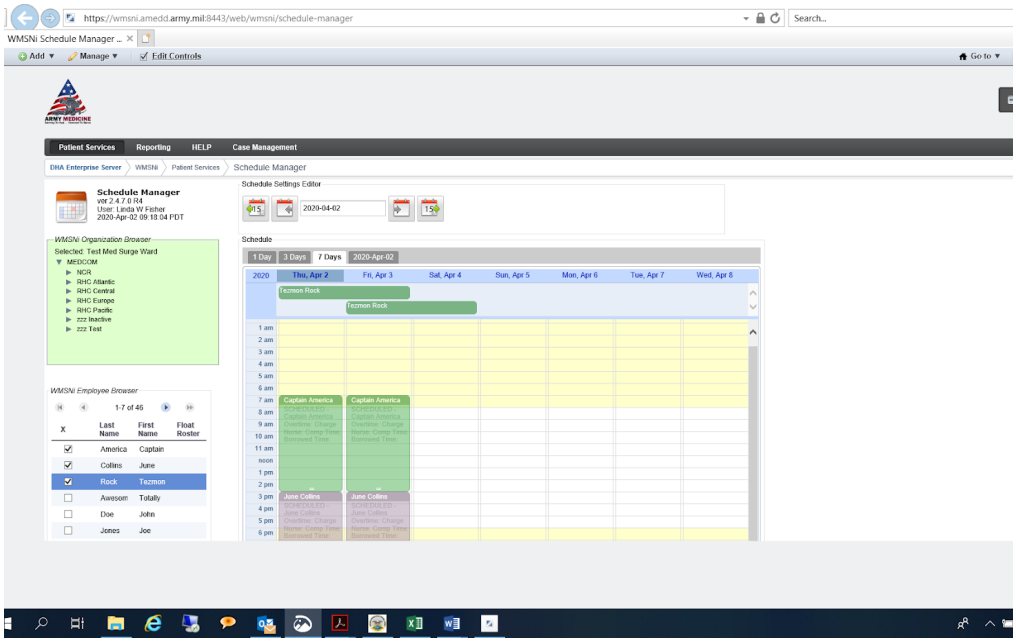
19	From the submenu select the Schedule Manager.

The following is the expected screen view:



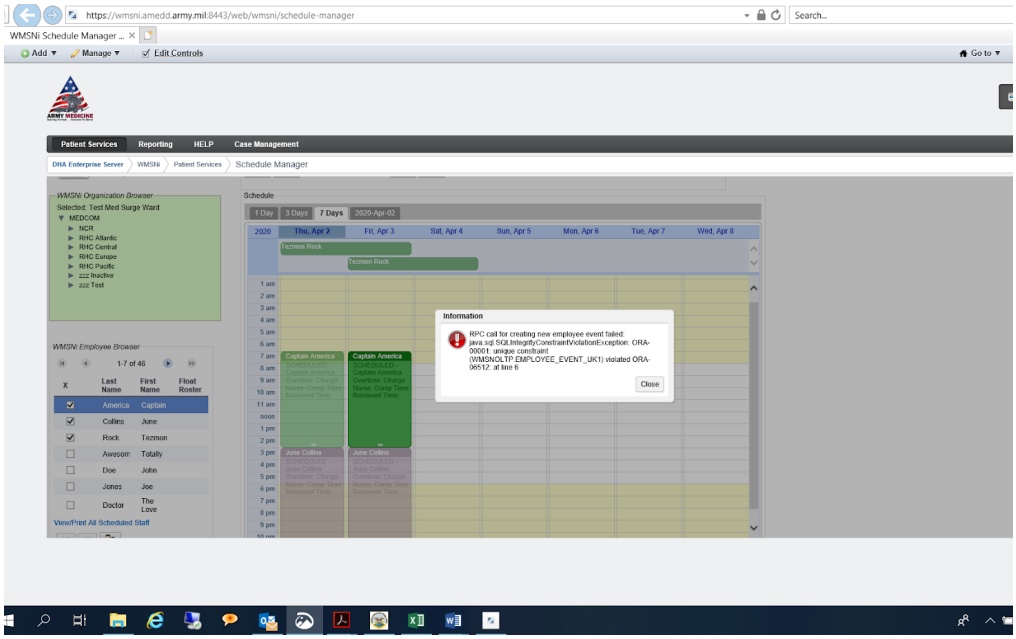
Insert a screenshot of your input screen results here:

20

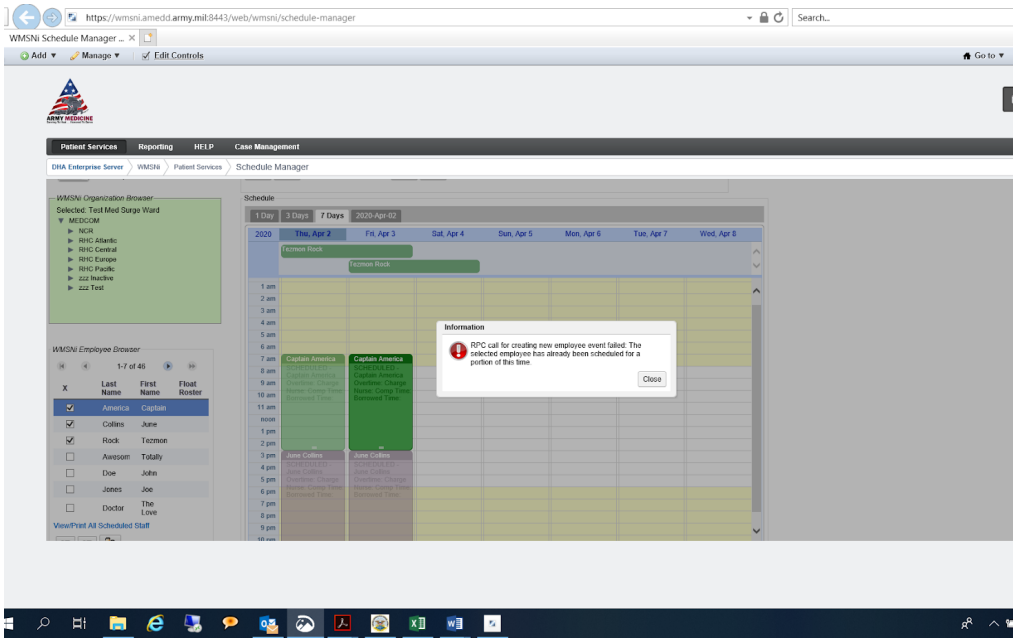


Select 3 employees, enter each employee on the same shift for 2 consecutive days. One employee on each 8 hour shift.

Same shift overlap: Select any employee and attempt to enter a second shift for the same employee at the same time as an existing shift. You should receive an error message and not be allowed to create the second same shift for the same employee.

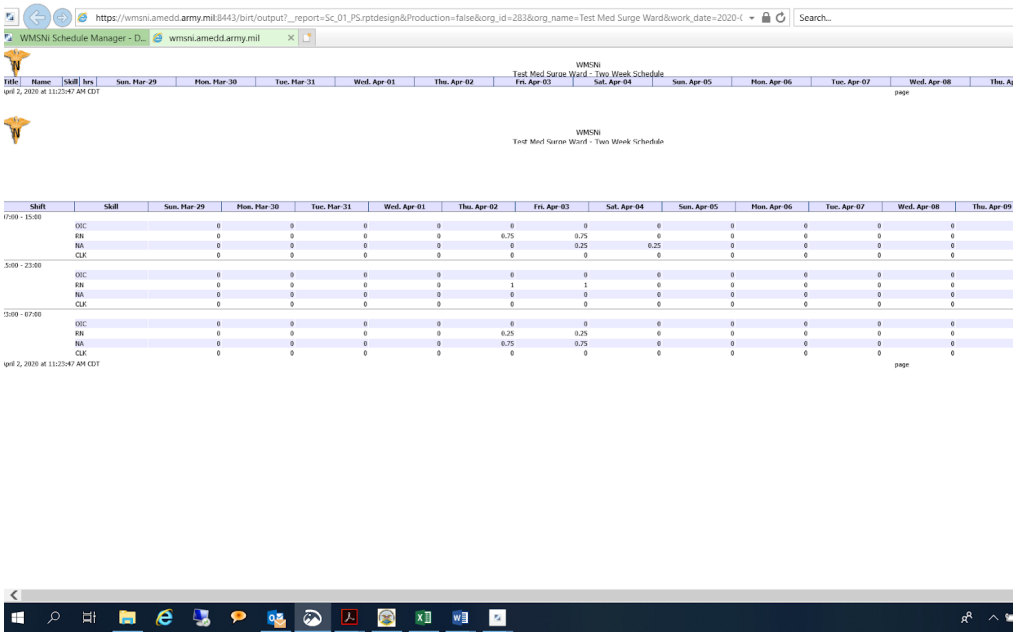


Partial Shift overlap: Select any employee and attempt to enter a second shift for the same employee at a time that overlaps an existing shift by at least an hour. You should receive an error message and not be allowed to create the second same shift for the same employee.

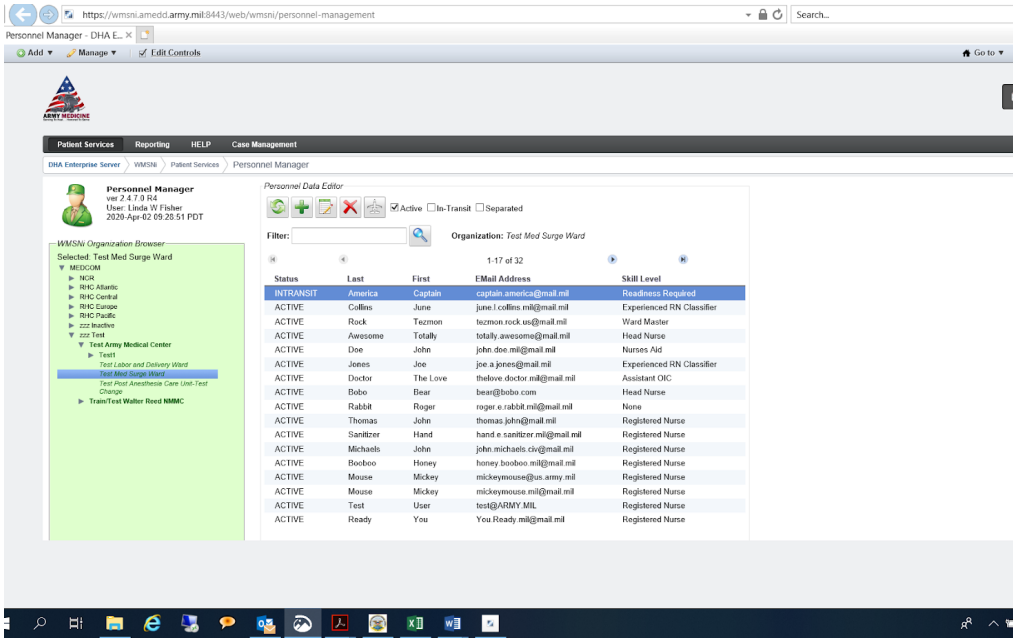


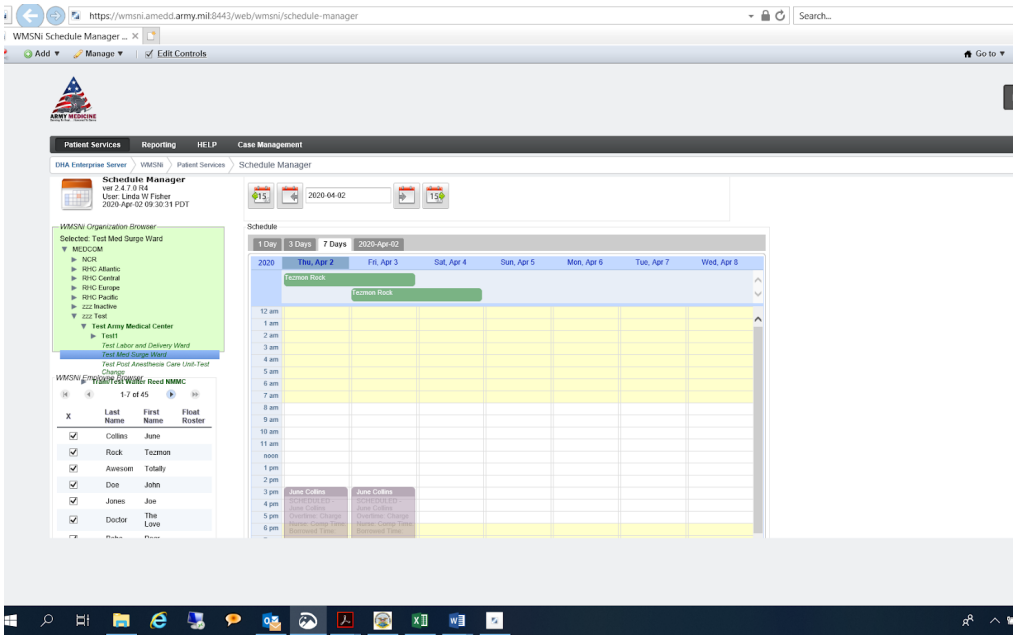
Insert a screenshot of your View/Print All Schedule screen results here:

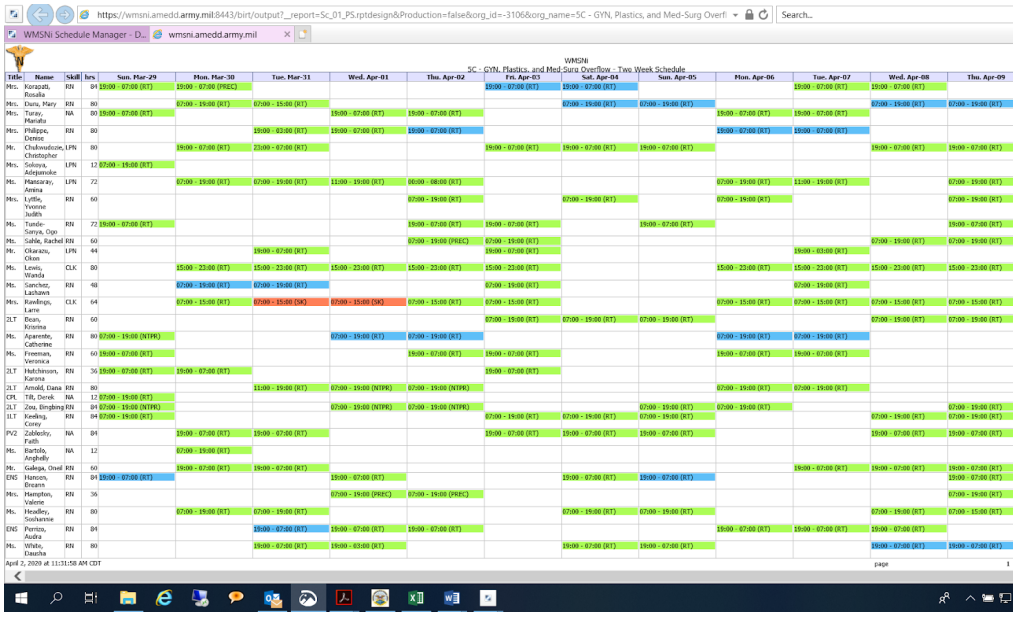
View Print Schedule: Link to Report is on the Schedule Manager page. The Report should include the employees you created schedules for and the roll-up should report the number of employees for each shift correctly.

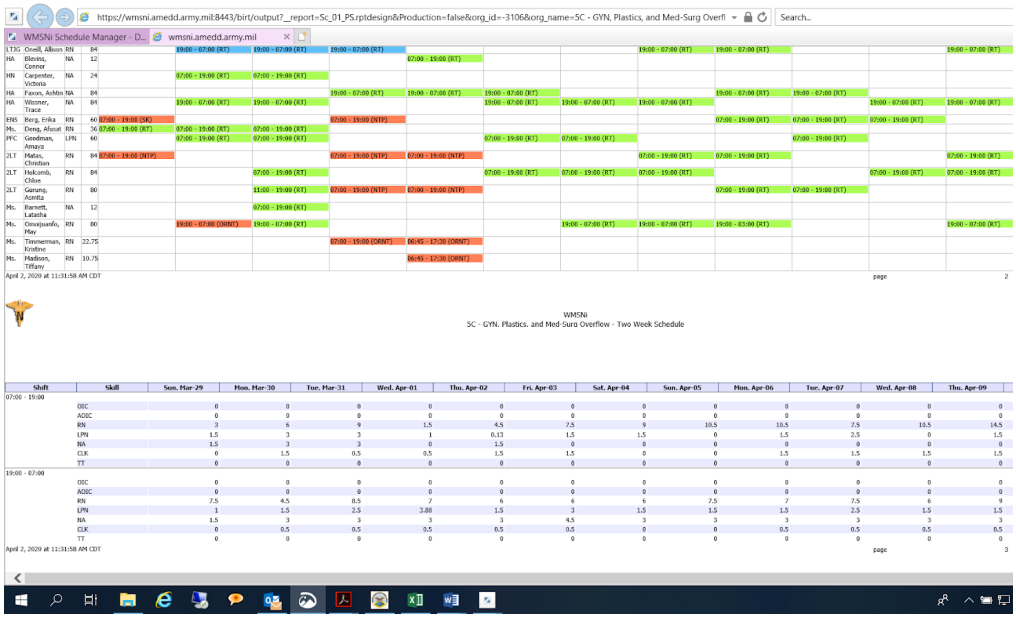


Delete employee schedule on removal of employee access: Return to Personnel Manager and place an above scheduled employee in an InTransit Status. Return to Schedule Manager and select the same 3 employees. The employee that you placed in InTransit Status should no longer be visible on the unit's schedule.

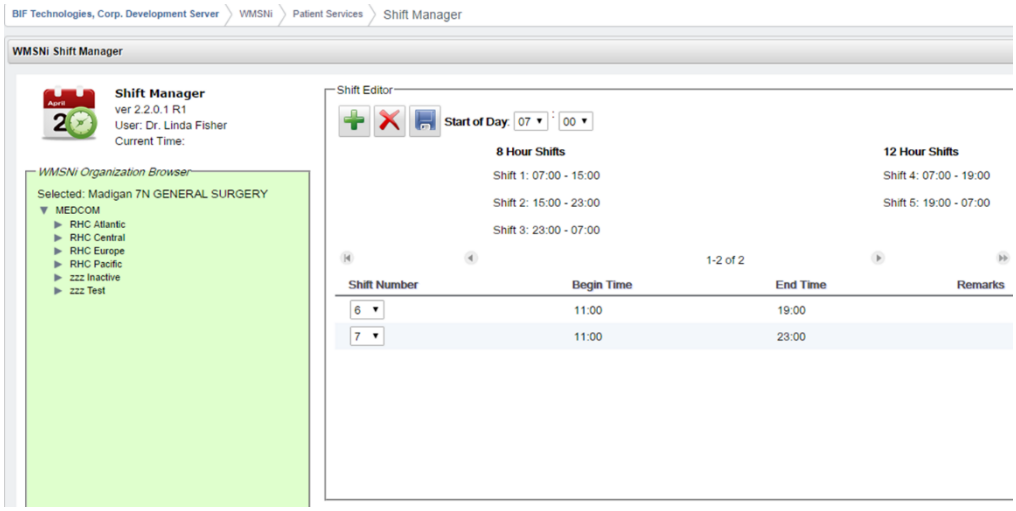



Schedule Manager
Patient Services
Reporting
HELP
Case Management
Schedule Manager

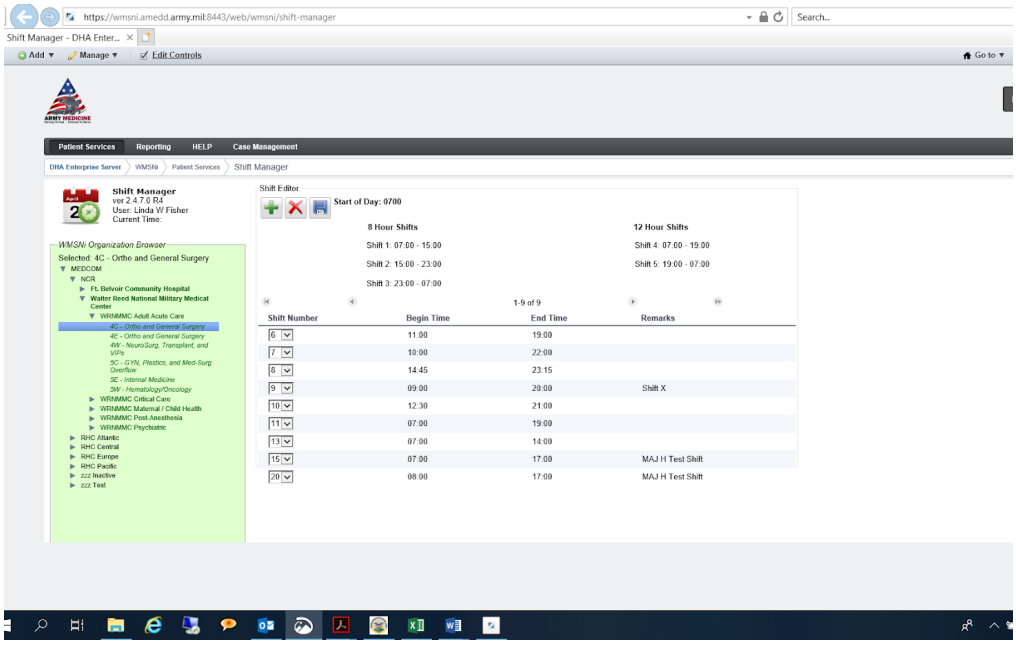

WMSNI
5C - GYN, Plastics, and Med-Surg Overflow - Two Week Schedule



Pass	Passing Criteria	Comments
☑	Module opened as intended and appears to be properly functioning.	The expected screen was displayed when the module opened. View/Print Schedule Report has returned to function. The additions of preventing same and partial shift overlaps is functioning as expected. And the schedule update to remove personnel from the schedule when no longer active now functions correctly. The Print/View schedule Roll-up numbers and the employee list in the Print/View All Schedule are functioning correctly (see live ward example).
21	The user must login to the WMSNi user system using their CAC card.	
22	Once logged into the WMSNi system the user must navigate to the Patient Services Tab.	
23	From the submenu select the Shift Manager.	
24	The following is the expected screen view:	



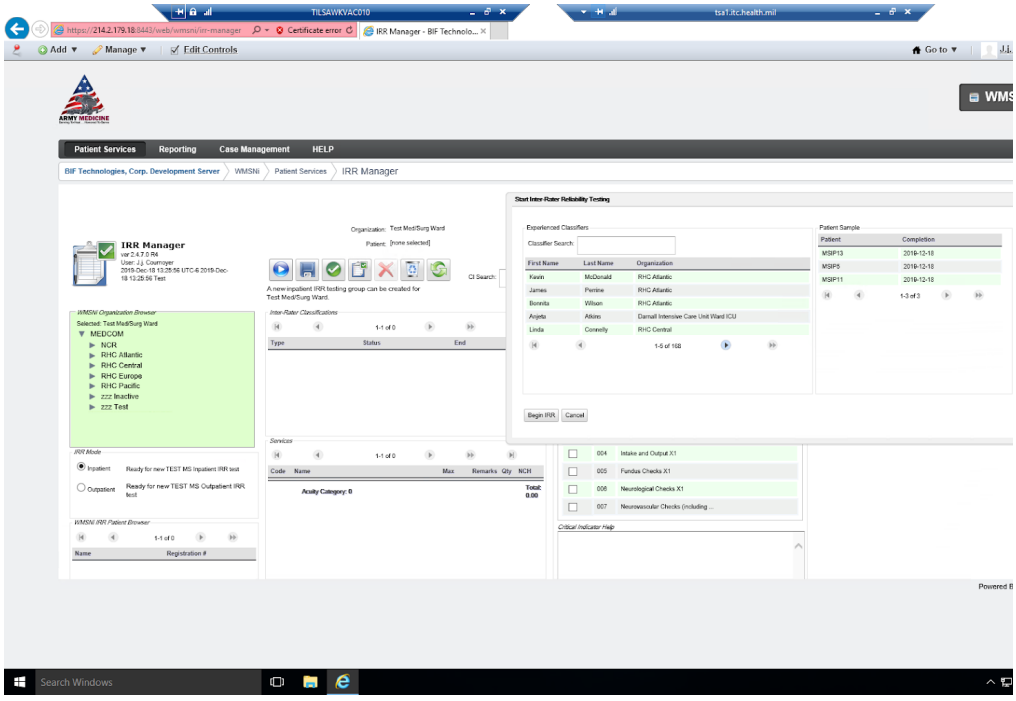
Insert a screenshot of your results here: The Shift Manager should show the Start of the Day 0700, without the ability to change it. It should also show the Standard Shifts for any selected individual ward.



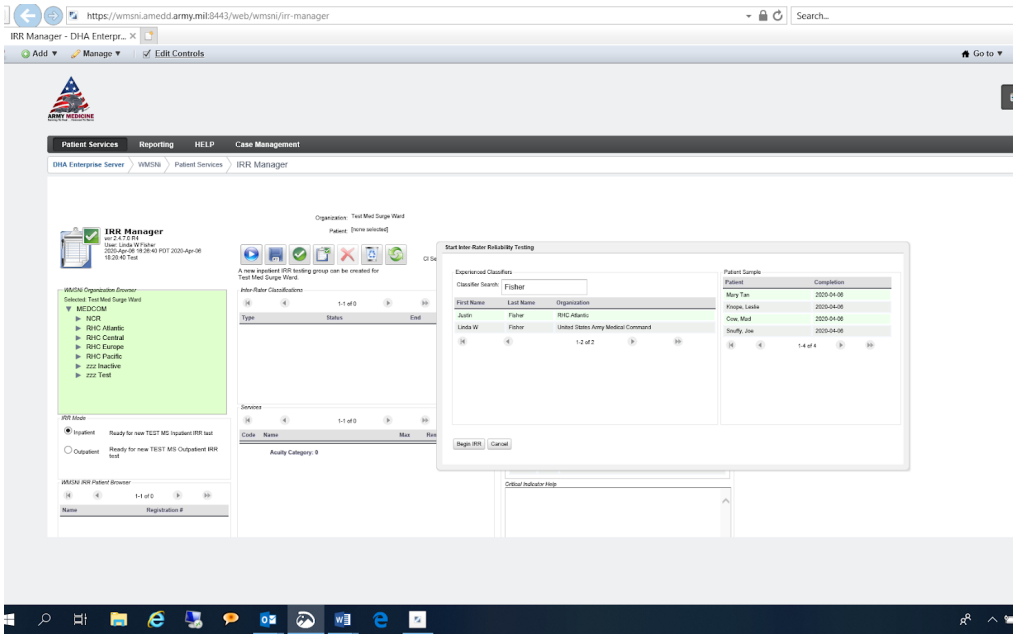
Pass	Passing Criteria	Comments
☑	Module opened as intended and appears to be properly functioning.	The expected screen was displayed when the module opened.
25	The user must login to the WMSNi user system using their CAC card.	
26	Once logged into the WMSNi system the user must navigate to the Patient Services Tab.	
27	From the submenu select the IRR Manager.	

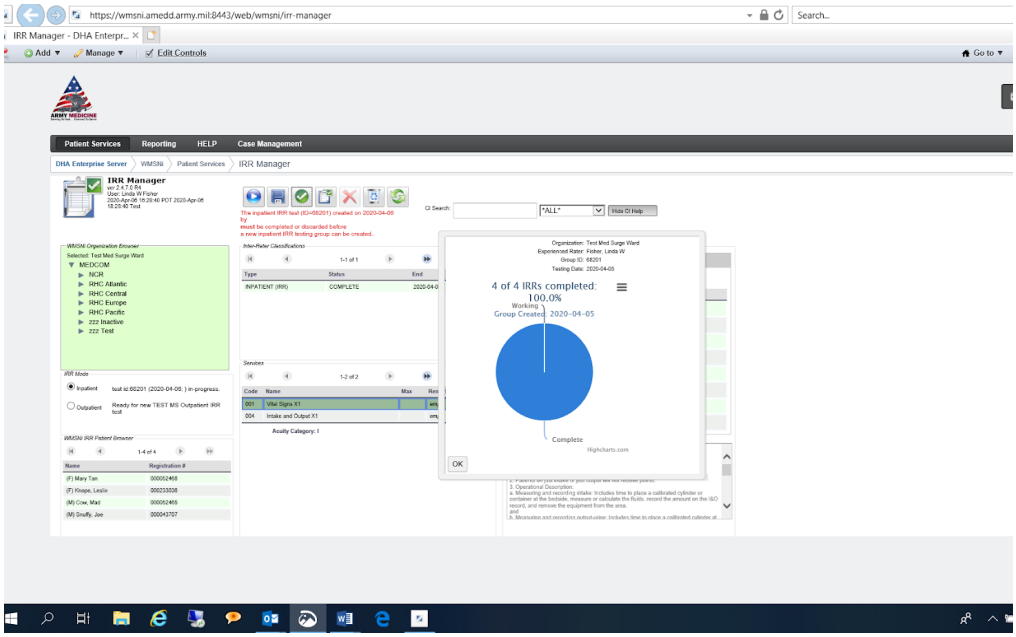
The following is the expected screen view: Select a unit and select  to ensure function

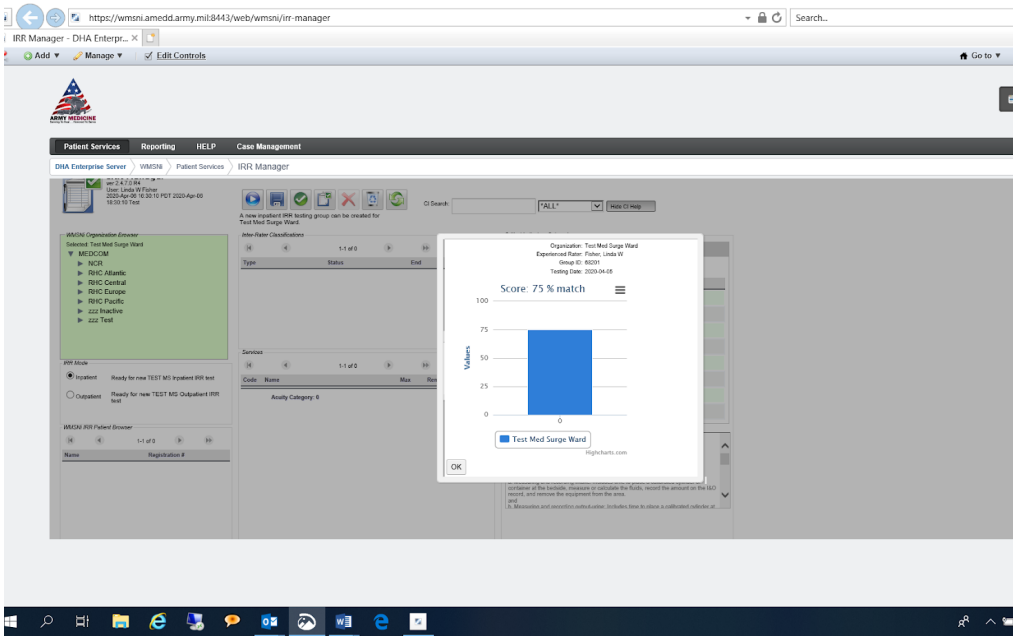
2
8



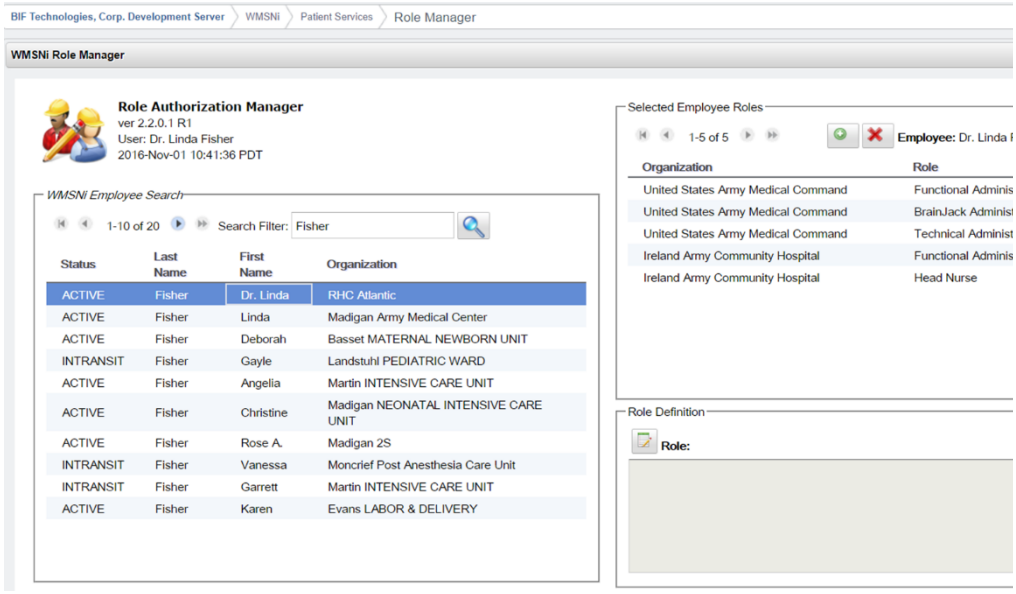
Insert a screenshot of your results here: The 3 patients the user classified in the Classification Manager should appear in the Patient Sample list.



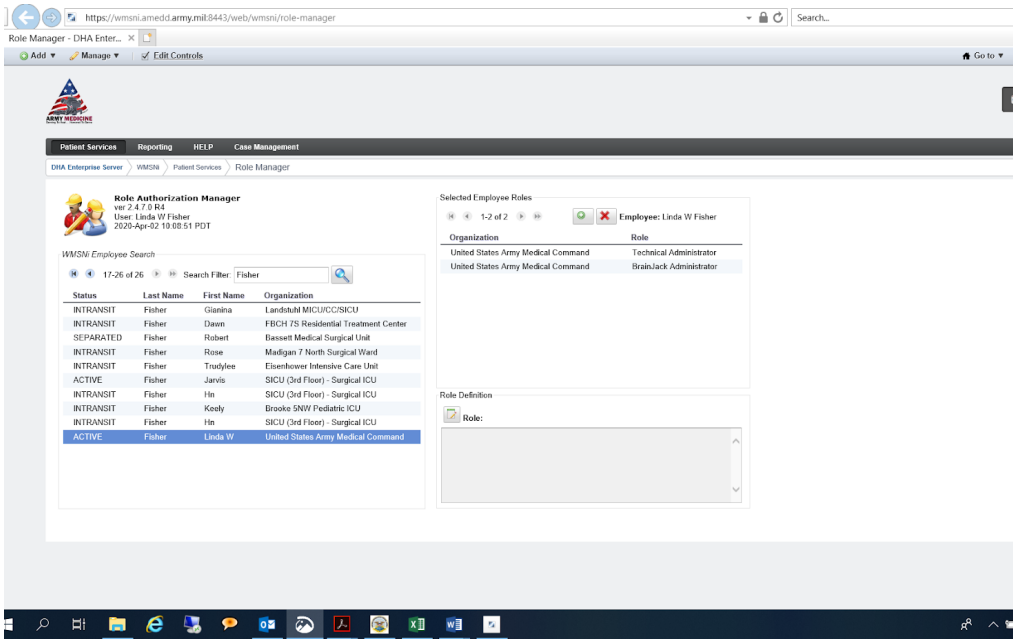




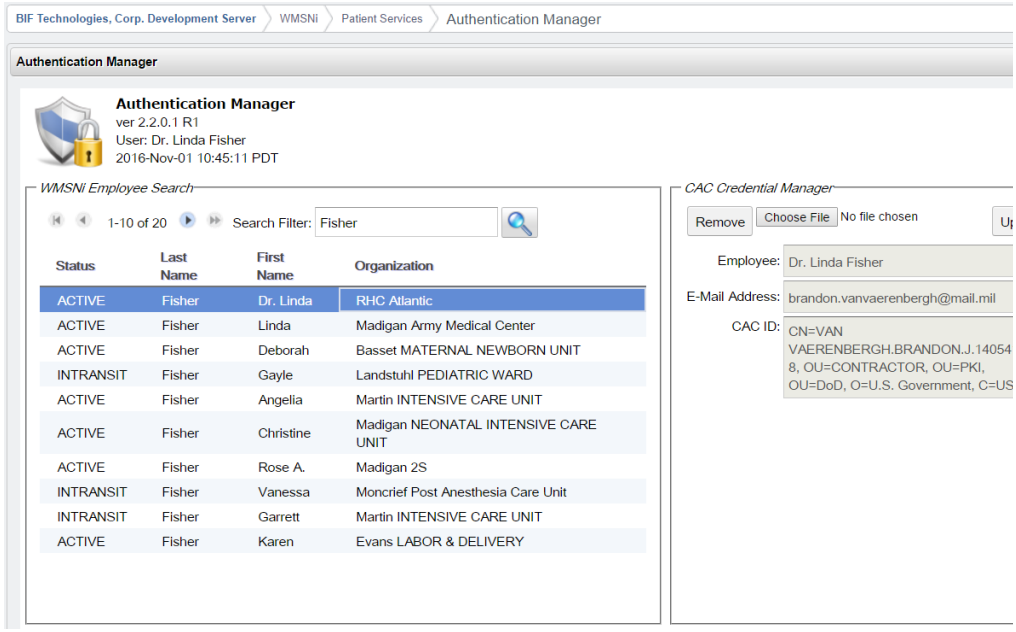
Pass	Passing Criteria	Comments
☑	Module opened as intended and appears to be properly functioning.	The expected screens were displayed when the module opened and throughout each portion of the IRR test.
29	The user must login to the WMSNi user system using their CAC card.	
30	Once logged into the WMSNi system the user must navigate to the Patient Services Tab.	
31	From the submenu select the Role Authorization Manager.	
32	The following is the expected screen view: Type a name into the Search Filter and select from the list to ensure function.	



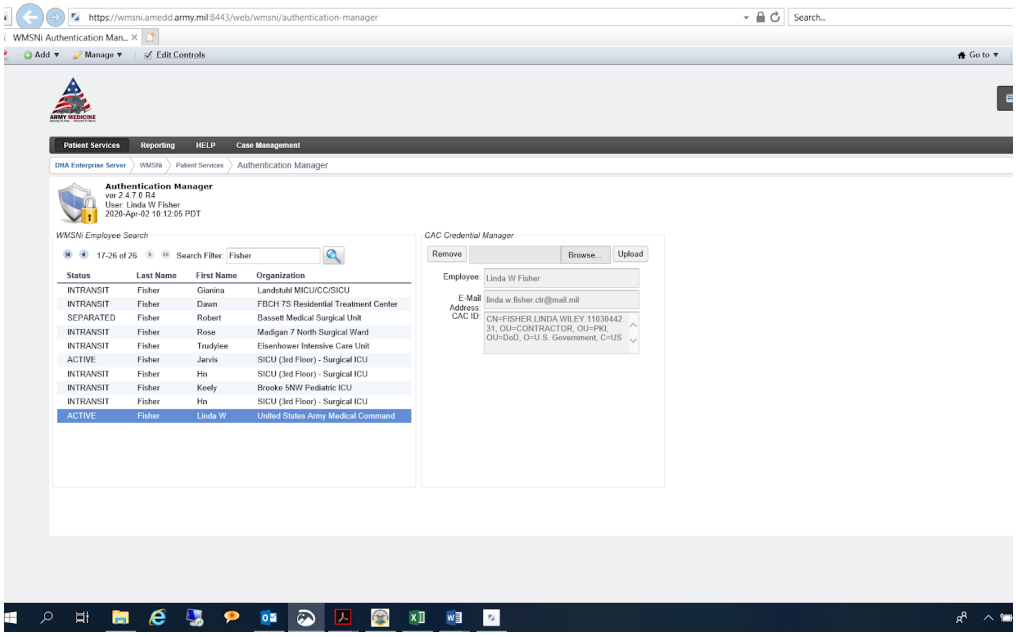
Insert a screenshot of your results here:



Pass	Passing Criteria	Comments
☑	Module opened as intended and appears to be properly functioning.	The expected screen was displayed when the module opened.
33	The user must login to the WMSNi user system using their CAC card.	
34	Once logged into the WMSNi system the user must navigate to the Patient Services Tab.	
35	From the submenu select the Authentication Manager.	
36	The following is the expected screen view: Type a name into the Search Filter and select from the list to ensure function.	



Insert a screenshot of your results here:



Pass	Passing Criteria	Comments
☑	Module opened as intended and appears to be properly functioning.	The expected screen was displayed when the module opened.

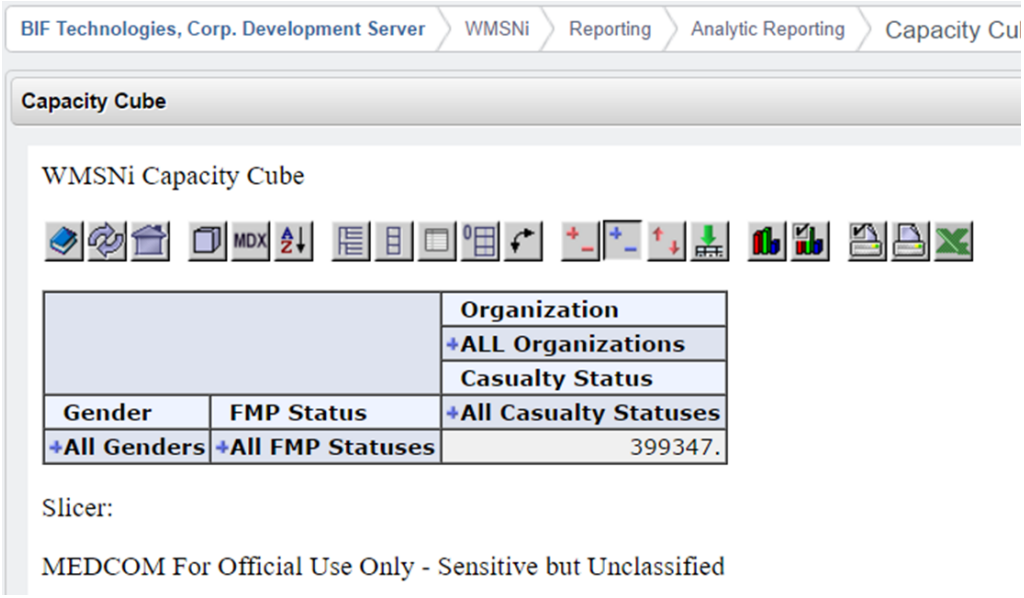
Delivery Assessment: PASS	All modules performed as expected.

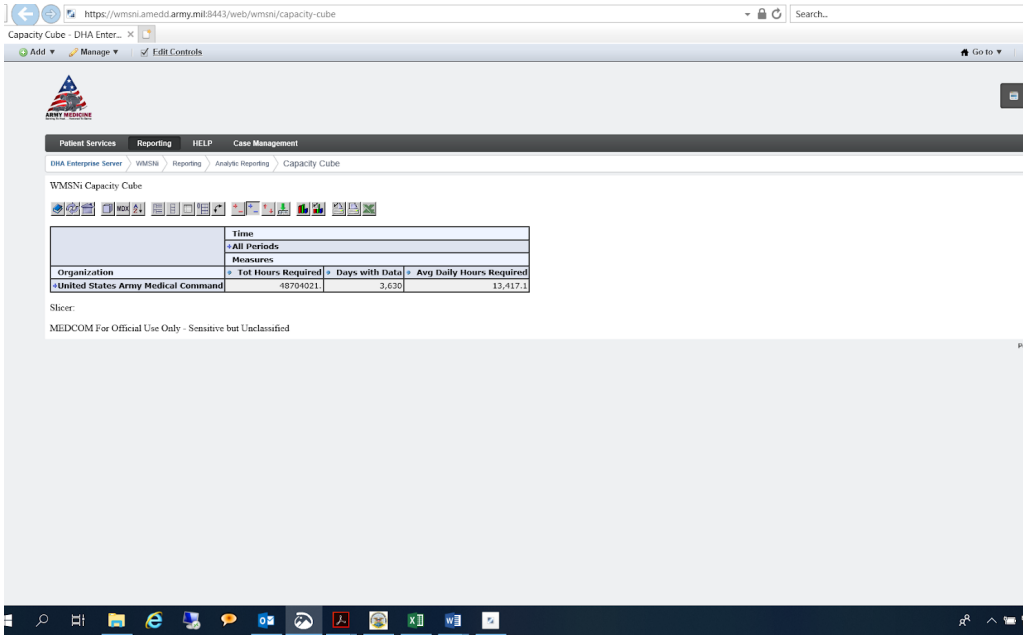
2.3 Reports Critical Paths Test Plan

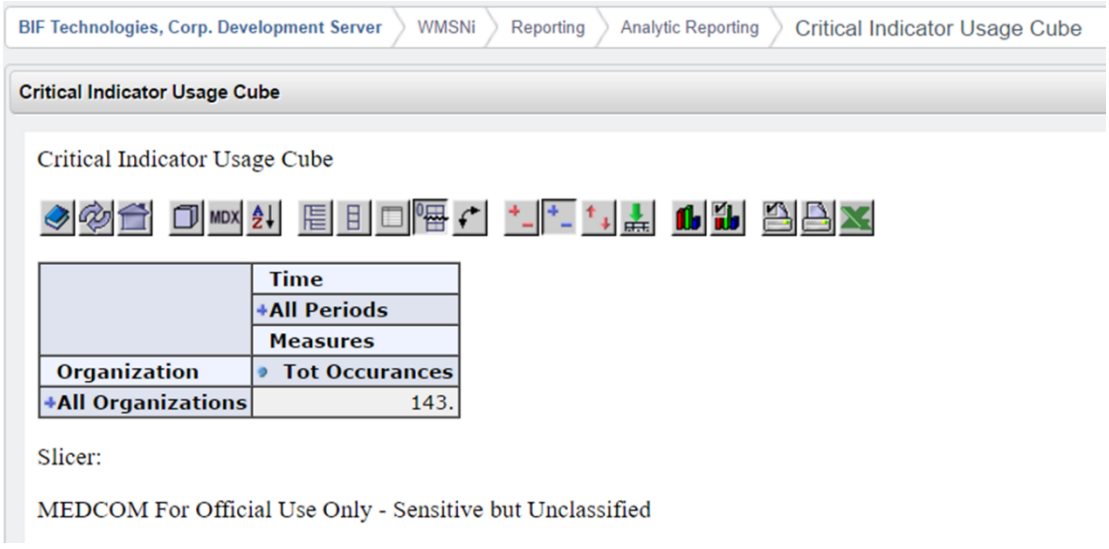
The Reports Modules are where all WMSNi reports and data outputs are performed. These modules must function as expected for the purpose of data integrity and reliability. The following Test are meant to test operability for high level quick functions testing. These tests do not test data accuracy. More detailed testing is required to test the data input and output validation.

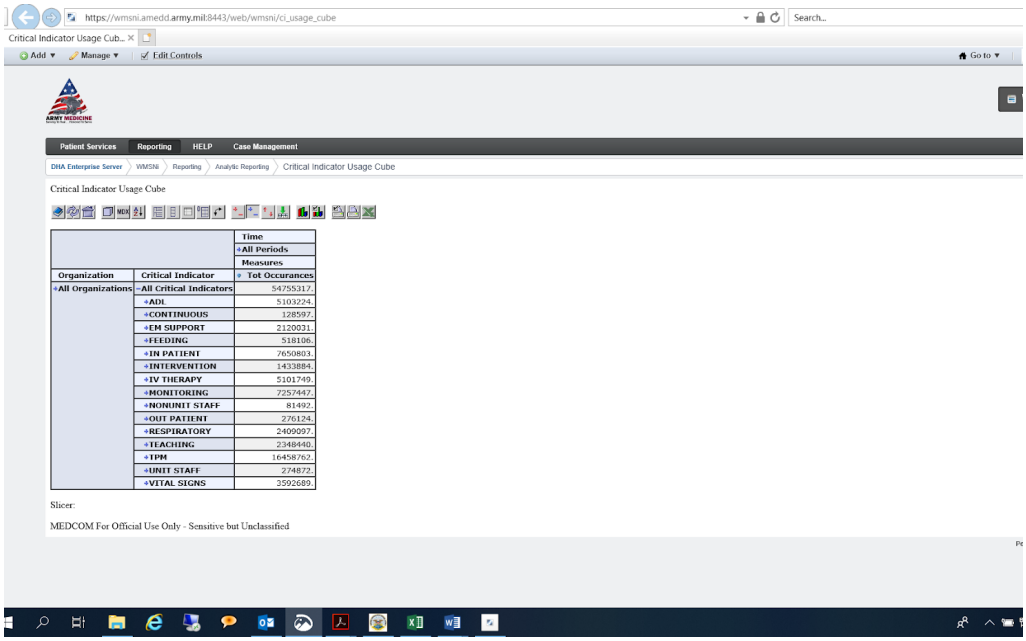
The test steps will return a WMSNi screen for each test. Screenshots of correctly working modules are provided for comparison. Please note any portions of the screens that do not populate or any unexpected returned errors or other malfunctions.

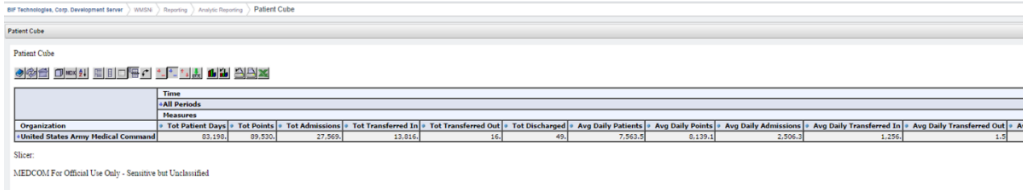
Functional Testing

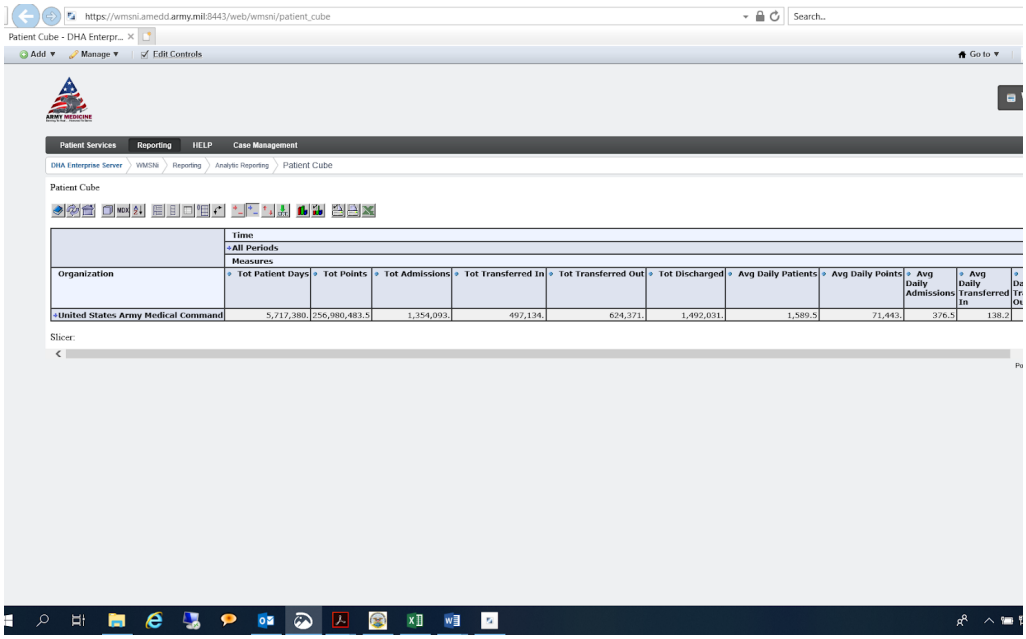
Step	Description: Reports Critical Paths Test Plan
1	The user must login to the WMSNi user system using their CAC card.
2	Once logged into the WMSNi system the user must navigate to the Reports Tab.
3	From the submenu select the Analytic Reporting / Capacity Cube.
4	The following is the expected screen view:  Insert a screenshot of your results here:

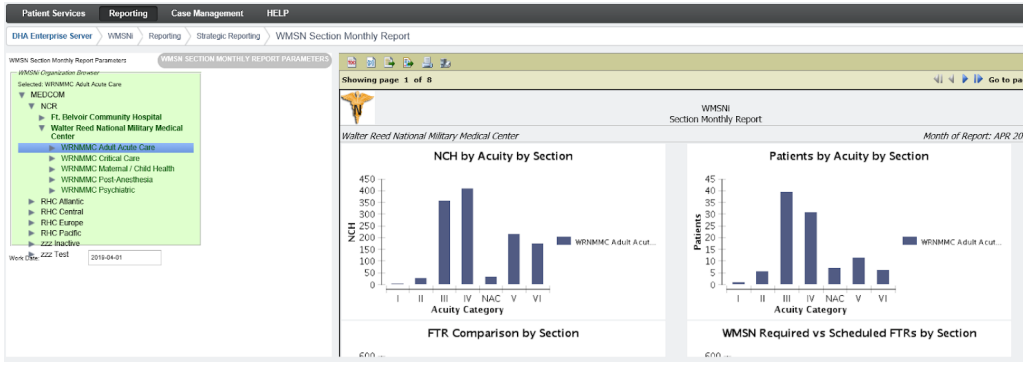


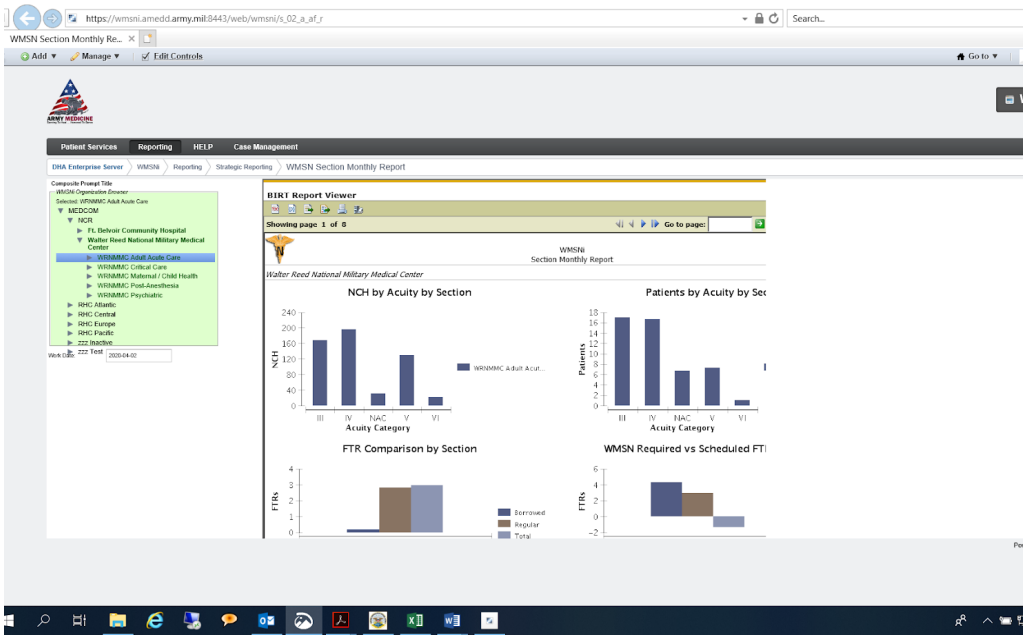
Pass	Passing Criteria	Comments
☑	Module opened as intended and appears to be properly functioning.	The expected screen was displayed when the module opened.
5	The user must login to the WMSNi user system using their CAC card.	
6	Once logged into the WMSNi system the user must navigate to the Reports Tab.	
7	From the submenu select the Analytic Reporting / Critical Indicator Usage Cube.	
8	The following is the expected screen view:  Insert a screenshot of your results here:	

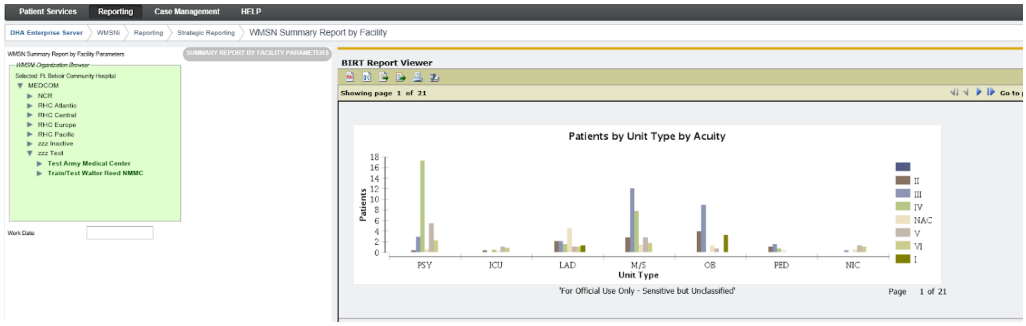


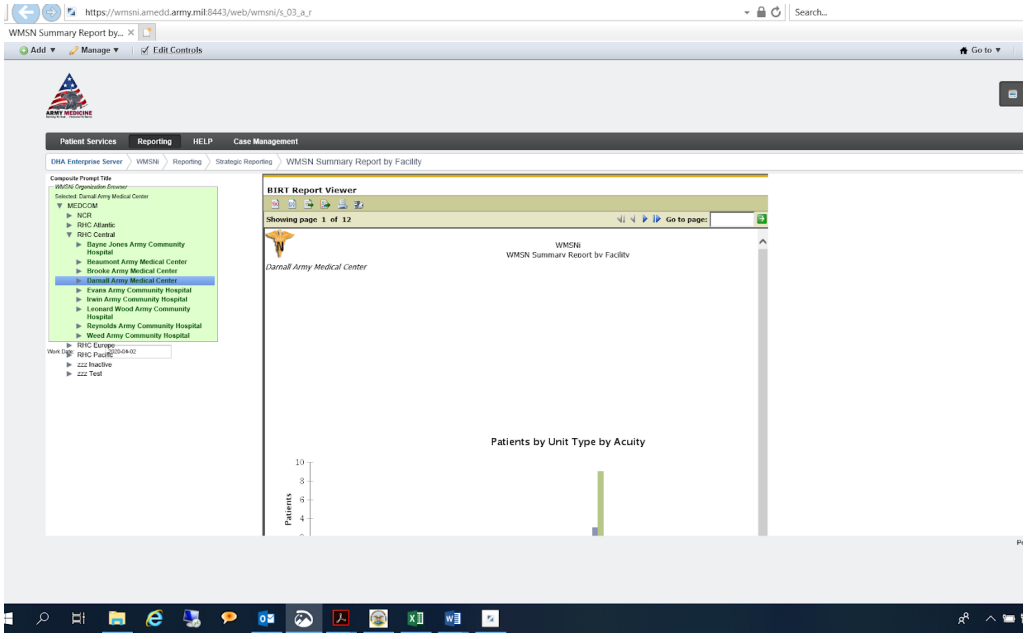
Pass	Passing Criteria	Comments
☑	Module opened as intended and appears to be properly functioning.	The expected screen was displayed when the module opened.
9	The user must login to the WMSNi user system using their CAC card.	
10	Once logged into the WMSNi system the user must navigate to the Reports Tab.	
11	From the submenu select the Analytic Reporting / Patient Cube.	
12	The following is the expected screen view:  Insert a screenshot of your results here:	



Pass	Passing Criteria	Comments
☑	Module opened as intended and appears to be properly functioning.	The expected screen was displayed when the module opened.
13	The user must login to the WMSNi user system using their CAC card.	
14	Once logged into the WMSNi system the user must navigate to the Reports Tab.	
15	From the submenu select the Strategic Reports / WMSN Section Monthly Report.	
16	The following is the expected screen view: Select a Section and date and the report should populate.  Insert a screenshot of your results here:	



Pass	Passing Criteria	Comments
☑	Module opened as intended and appears to be properly functioning.	The expected screen was displayed when the module opened.
17	The user must login to the WMSNi user system using their CAC card.	
18	Once logged into the WMSNi system the user must navigate to the Reports Tab.	
19	From the submenu select the Strategic Reports / WMSNi Summary Report by Facility.	
20	The following is the expected screen view: Select an MTF and date the report should populate.  Insert a screenshot of your results here:	



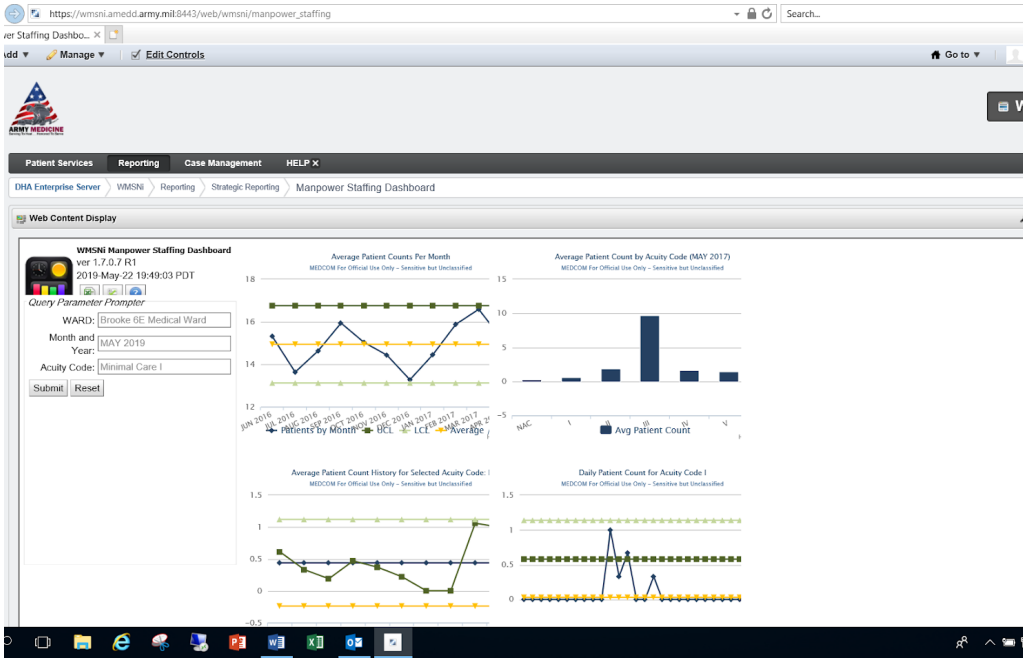
Pass	Passing Criteria	Comments
☑	Module opened as intended and appears to be properly functioning.	The expected screen was displayed when the module opened.

21 Once logged into the WMSNi system the user must navigate to the Reports Tab.

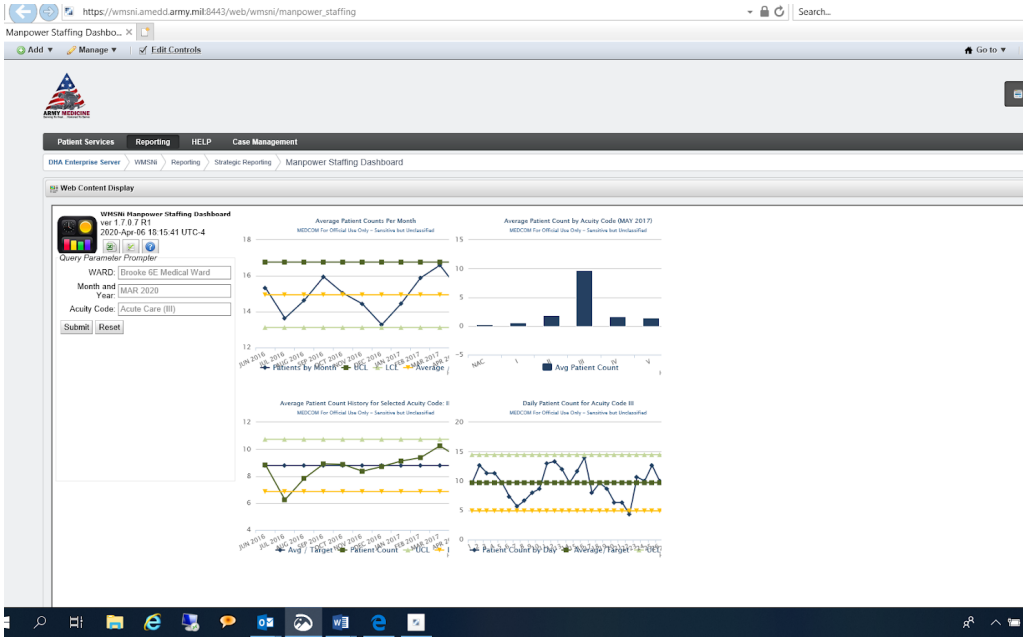
22 From the submenu select the Strategic Reports / Manpower Staffing Standards Report.

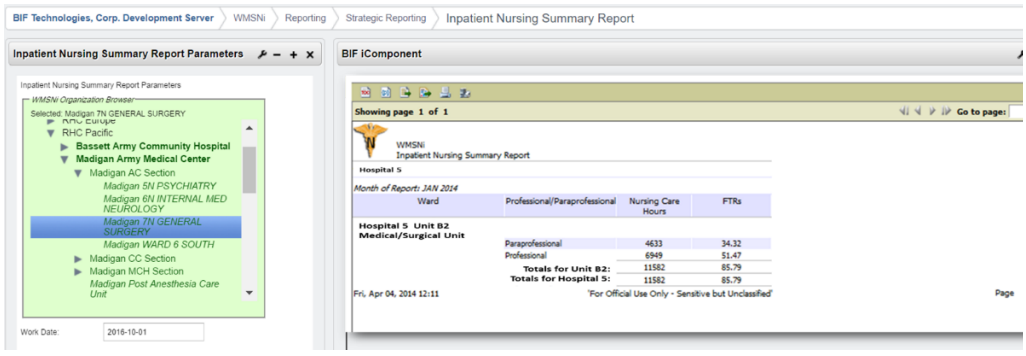
The following is the expected screen view: Select an MTF and date the report should populate.

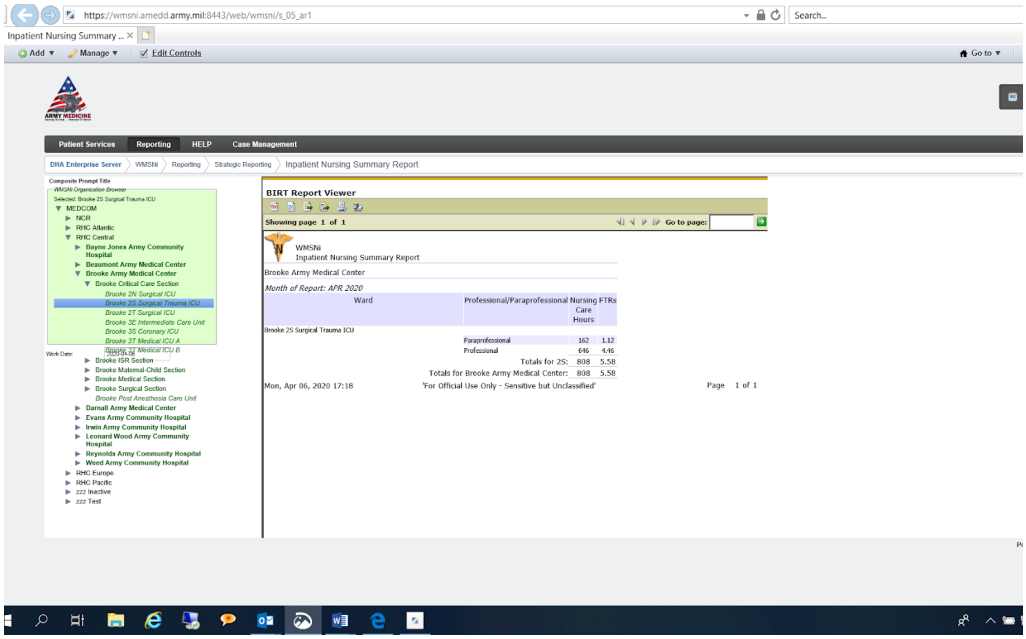
23

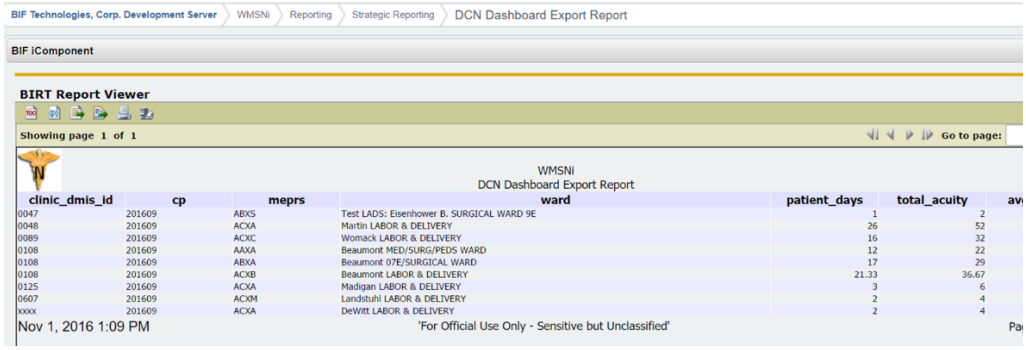


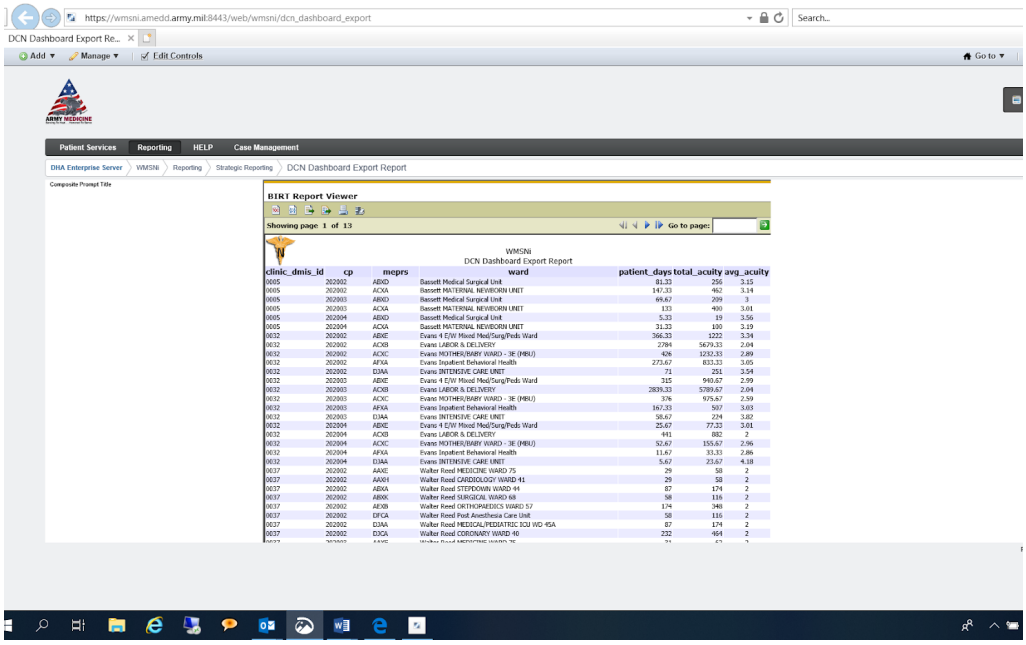
Insert a screenshot of your results here:

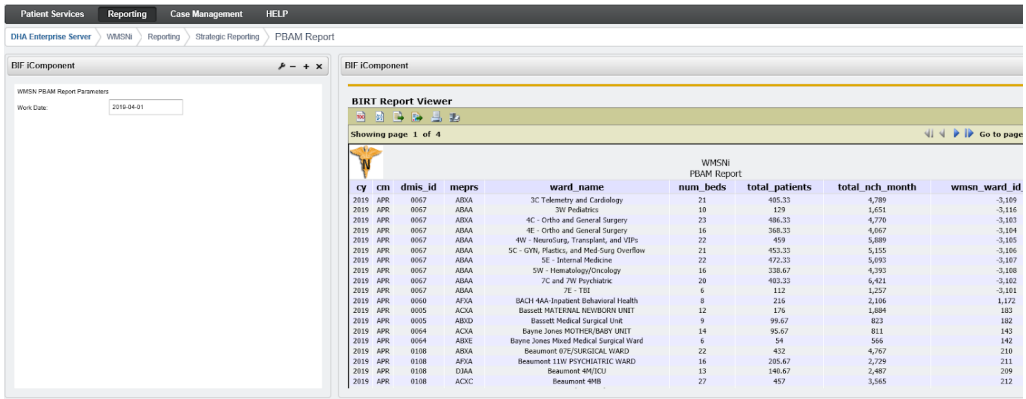


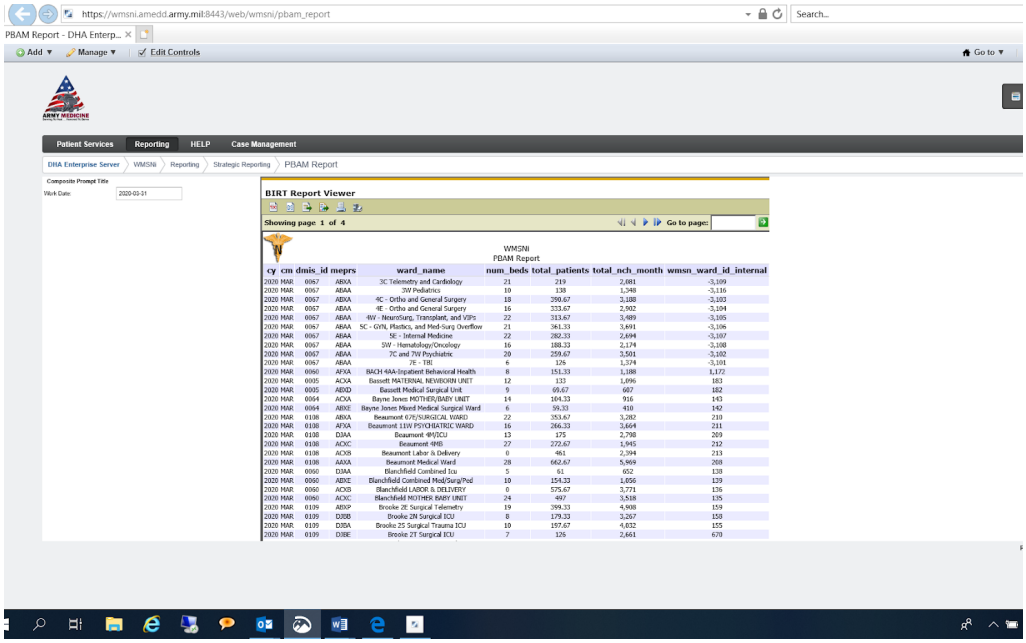
Pass	Passing Criteria	Comments
X	Module opened as intended and appears to be properly functioning.	The expected screen was not displayed when the module opened. Not reporting correct data.
24	The user must login to the WMSNi user system using their CAC card.	
25	Once logged into the WMSNi system the user must navigate to the Reports Tab.	
26	From the submenu select the Strategic Reports / Inpatient Nursing Summary Report.	
27	The following is the expected screen view: Select a unit and date the report should populate.  Insert a screenshot of your results here:	

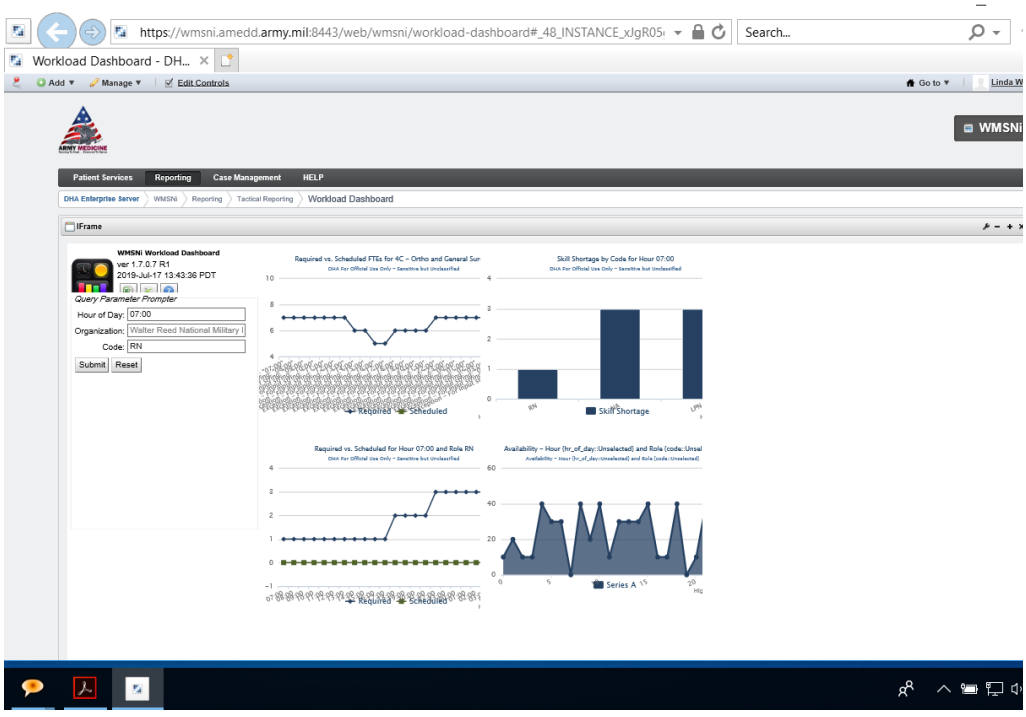


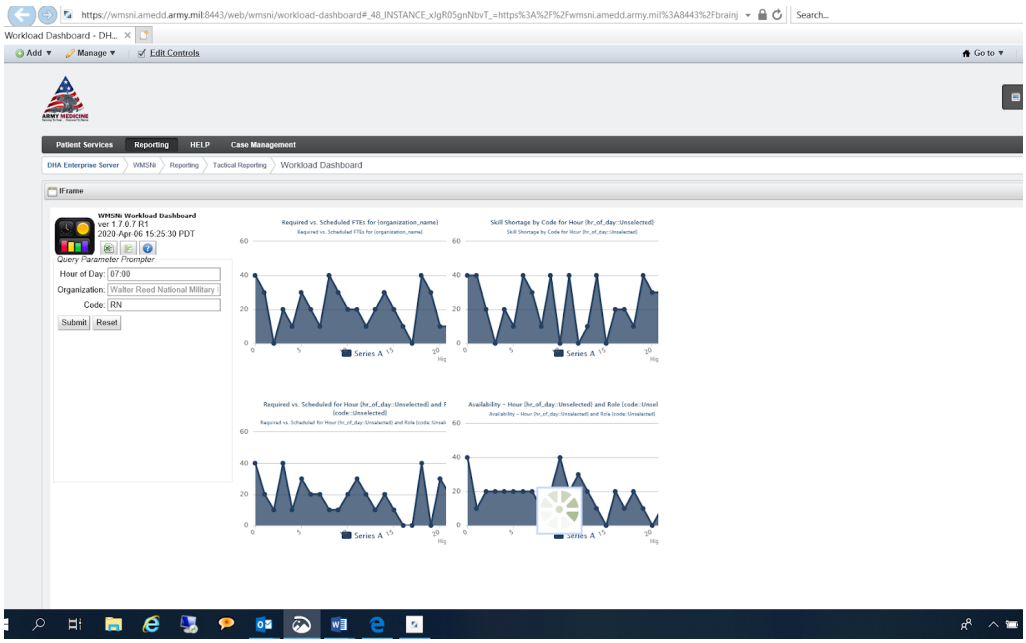
Pass	Passing Criteria	Comments
☑	Module opened as intended and appears to be properly functioning.	The expected screen was displayed when the module opened.
28	The user must login to the WMSNi user system using their CAC card.	
29	Once logged into the WMSNi system the user must navigate to the Reports Tab.	
30	From the submenu select the Strategic Reports / DCN Dashboard Export Report.	
31	The following is the expected screen view:  Insert a screenshot of your results here:	

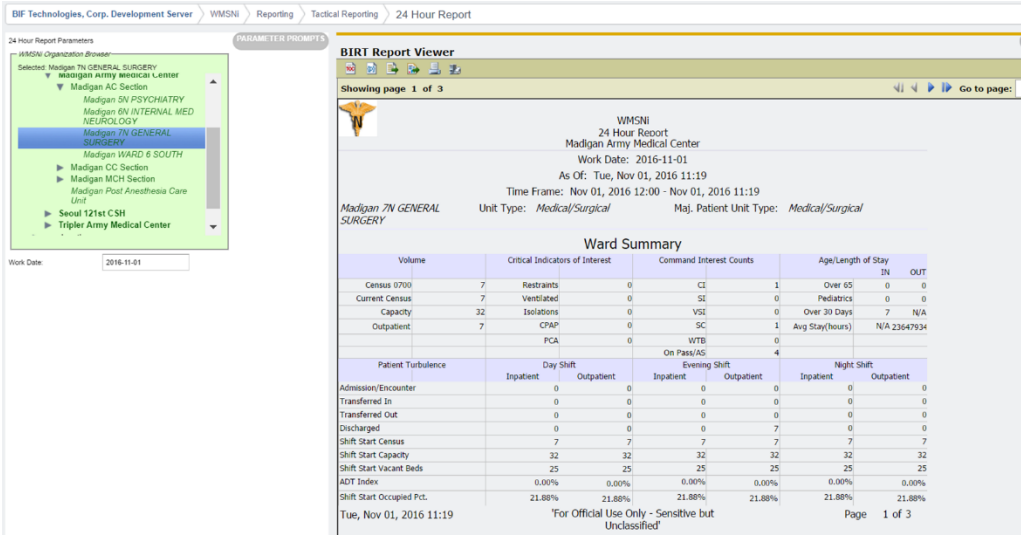


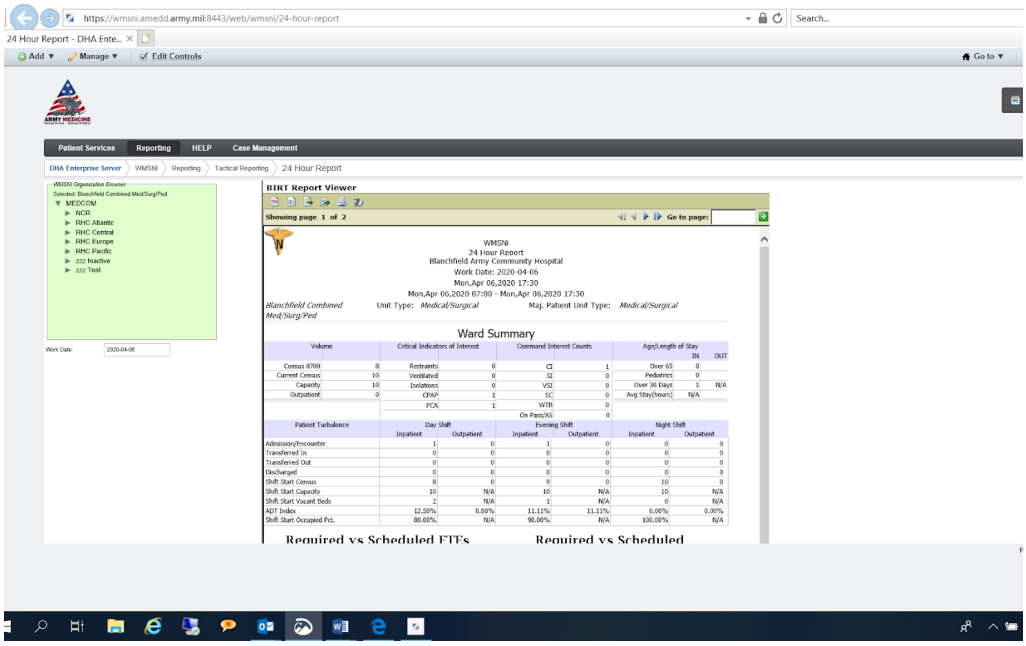
Pass	Passing Criteria	Comments
☑	Module opened as intended and appears to be properly functioning.	The expected screen was displayed when the module opened.
32	The user must login to the WMSNi user system using their CAC card.	
33	Once logged into the WMSNi system the user must navigate to the Reports Tab.	
34	From the submenu select the Strategic Reports / PBAM Report.	
35	The following is the expected screen view: Select 1st of the month date and the report should populate.  Insert a screenshot of your results here:	



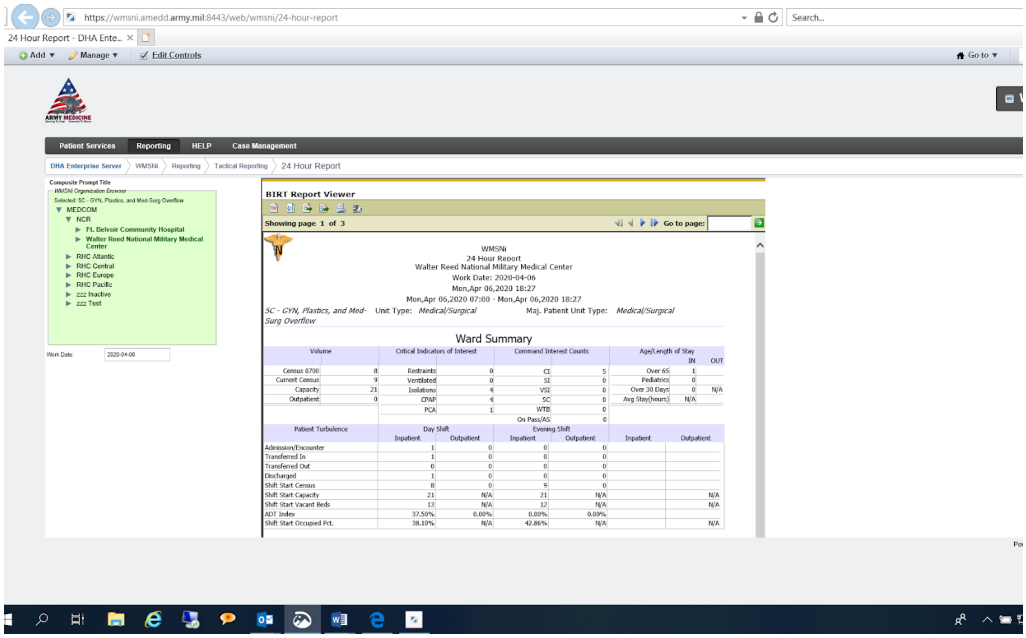
Pass	Passing Criteria	Comments
☑	Module opened as intended and appears to be properly functioning.	The expected screen was displayed when the module opened.
36	The user must login to the WMSNi user system using their CAC card.	
37	Once logged into the WMSNi system the user must navigate to the Reports Tab.	
38	From the submenu select the Tactical Reports / Workload Dashboard.	
39	The following is the expected screen view: Select a unit and the report should populate.  Insert a screenshot of your results here:	



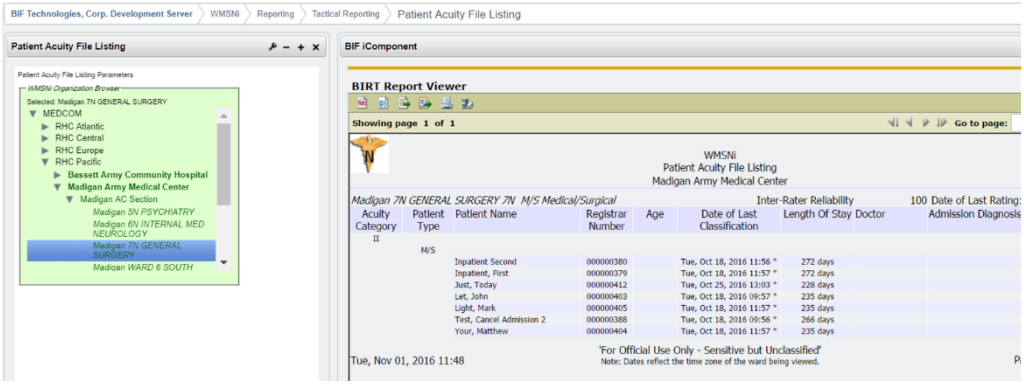
Pass	Passing Criteria	Comments
X	Module opened as intended and appears to be properly functioning.	Does not retrieve data as expected.
40	The user must login to the WMSNi user system using their CAC card.	
41	Once logged into the WMSNi system the user must navigate to the Reports Tab.	
42	From the submenu select the Tactical Reports / 24 Hour Report.	
43	The following is the expected screen view: Select a unit and date and the report should populate.  Insert a screenshot of your results here: Any ward that is not a WRNMMC ward	



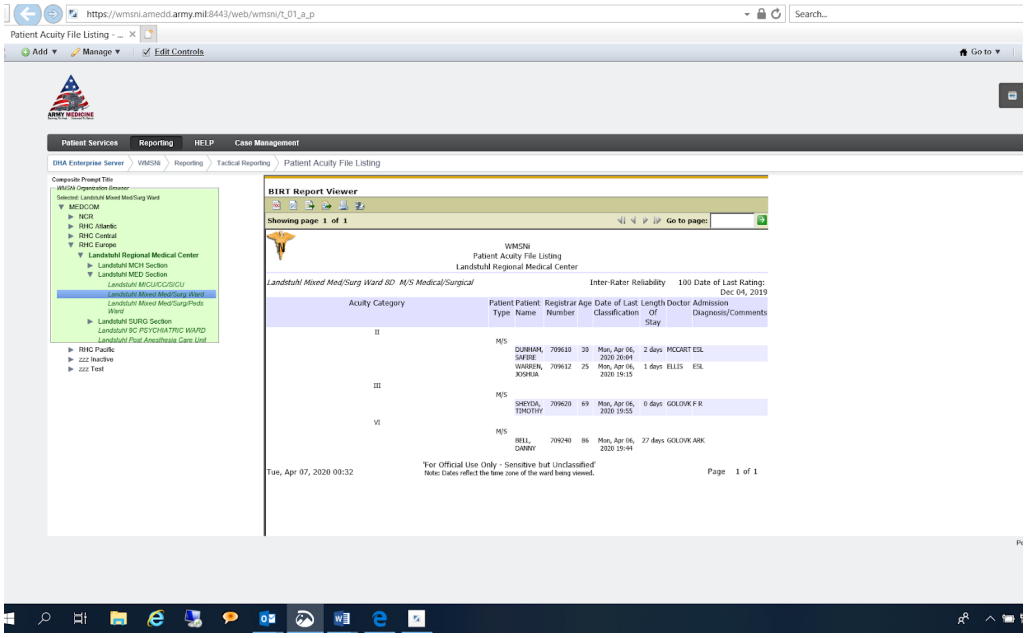
WRNMMC:



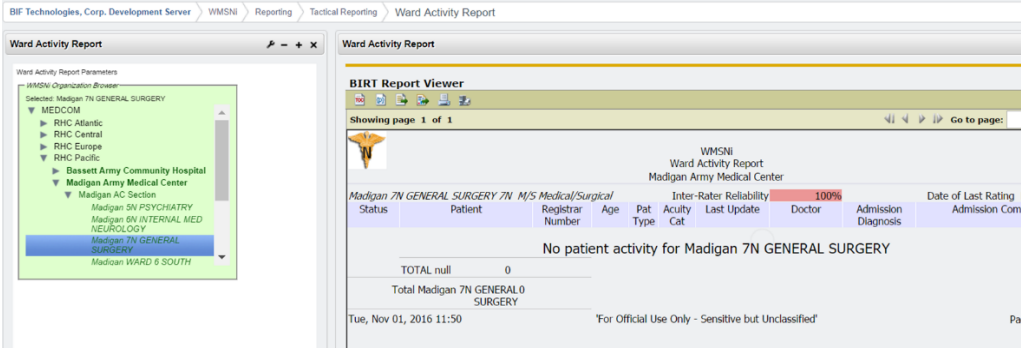
Pass	Passing Criteria	Comments
☑	Module opened as intended and appears to be properly functioning.	The expected screen was displayed when the module opened.
44	The user must login to the WMSNi user system using their CAC card.	
45	Once logged into the WMSNi system the user must navigate to the Reports Tab.	
46	From the submenu select the Tactical Reports / Patient Acuity File Listing.	
47	The following is the expected screen view: Select a unit and the report should populate.	



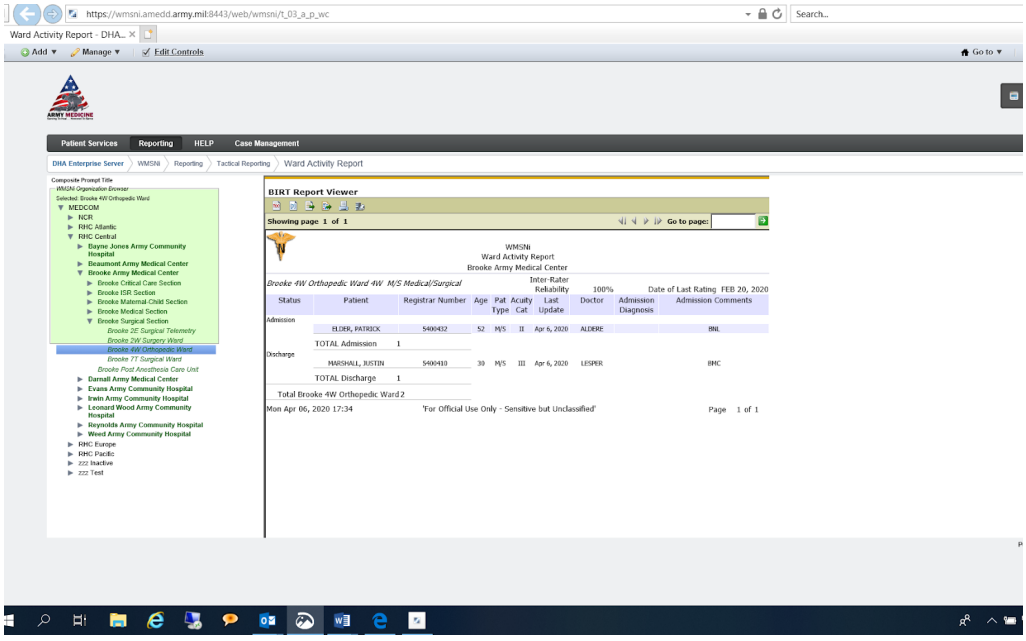
Insert a screenshot of your results here:



Pass	Passing Criteria	Comments
☑	Module opened as intended and appears to be properly functioning.	The expected screen was displayed when the module opened.
48	The user must login to the WMSNi user system using their CAC card.	
49	Once logged into the WMSNi system the user must navigate to the Reports Tab.	
50	From the submenu select the Tactical Reports / Ward Activity Report.	
51	The following is the expected screen view: Select a unit and the report should populate.	



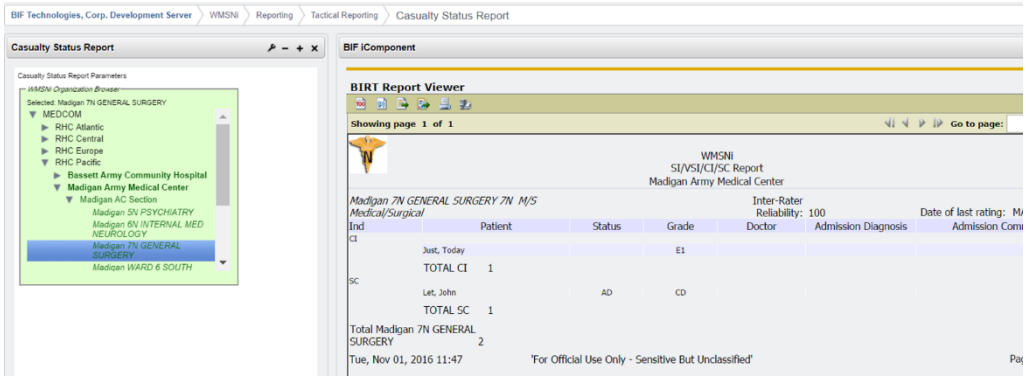
Insert a screenshot of your results here:



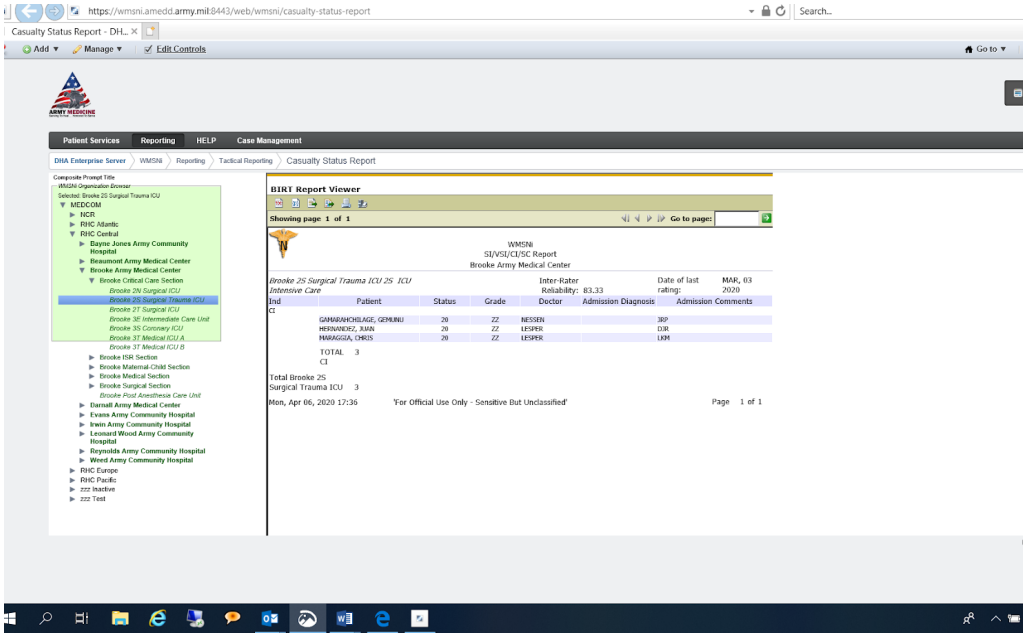
Pass	Passing Criteria	Comments
☑	Module opened as intended and appears to be properly functioning.	The expected screen was displayed when the module opened.
52	The user must login to the WMSNi user system using their CAC card.	
53	Once logged into the WMSNi system the user must navigate to the Reports Tab.	
54	From the submenu select the Tactical Reports / Casualty Status Report.	

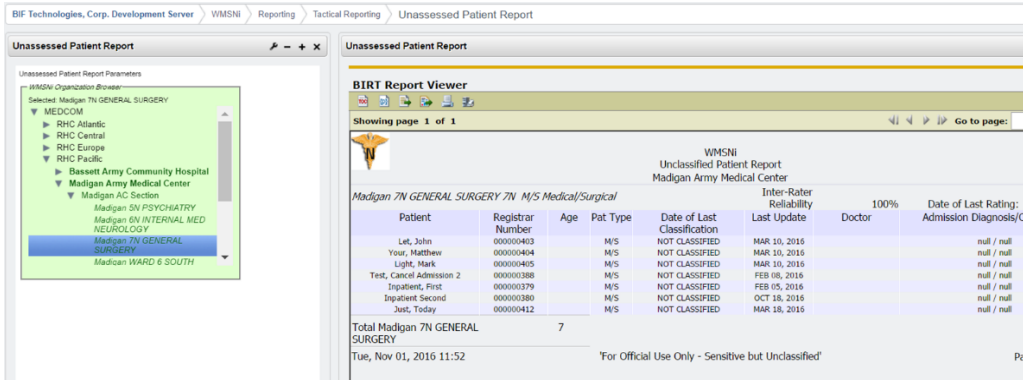
55

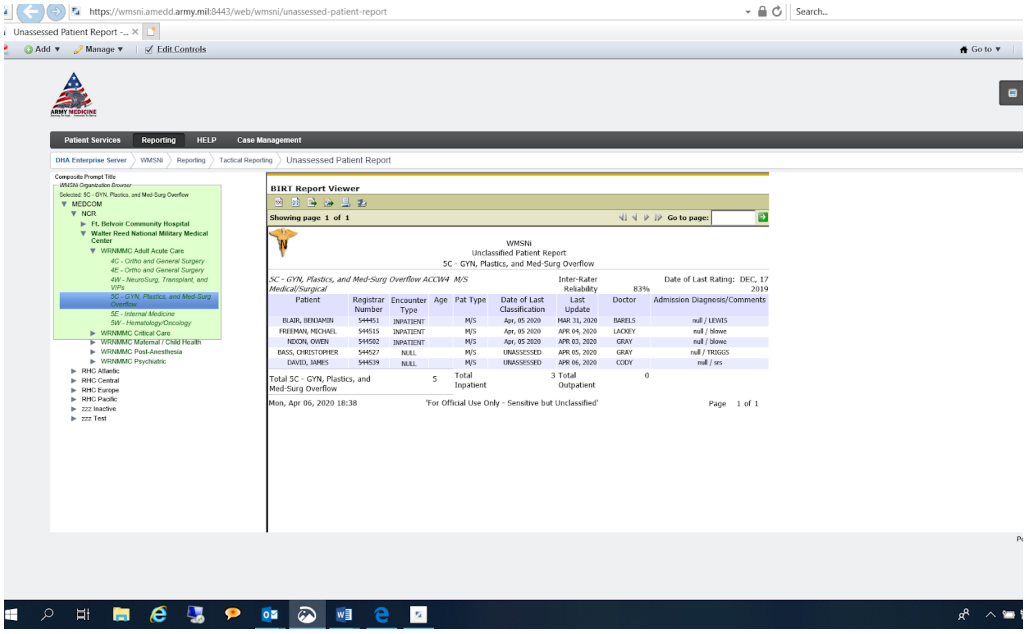
The following is the expected screen view: Select a unit and the report should populate.

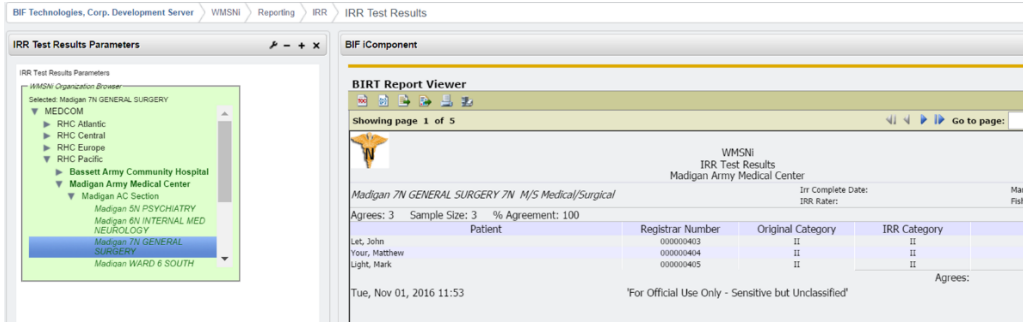


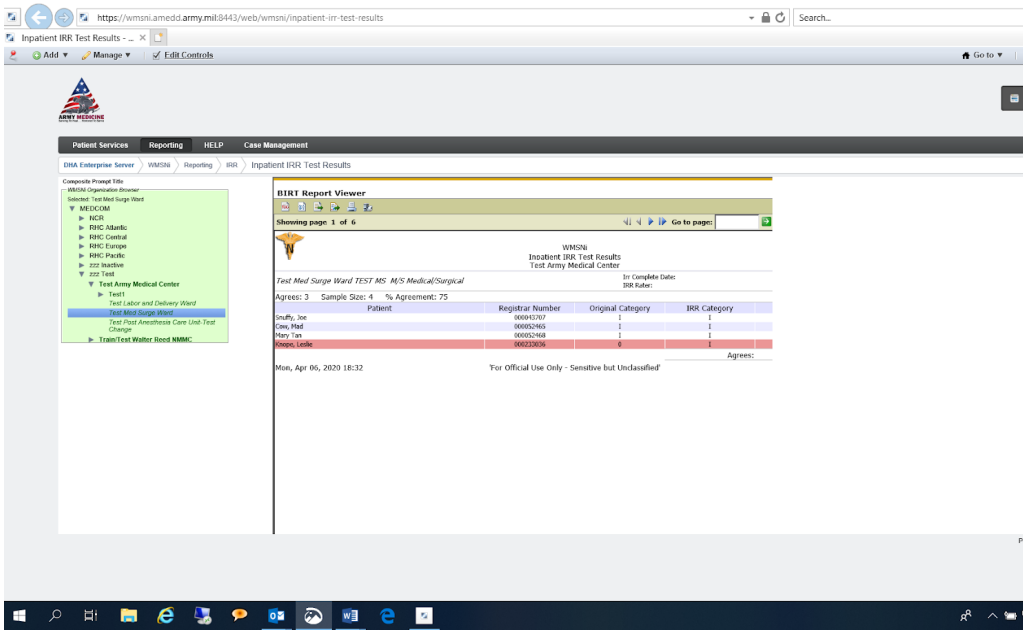
Insert a screenshot of your results here:



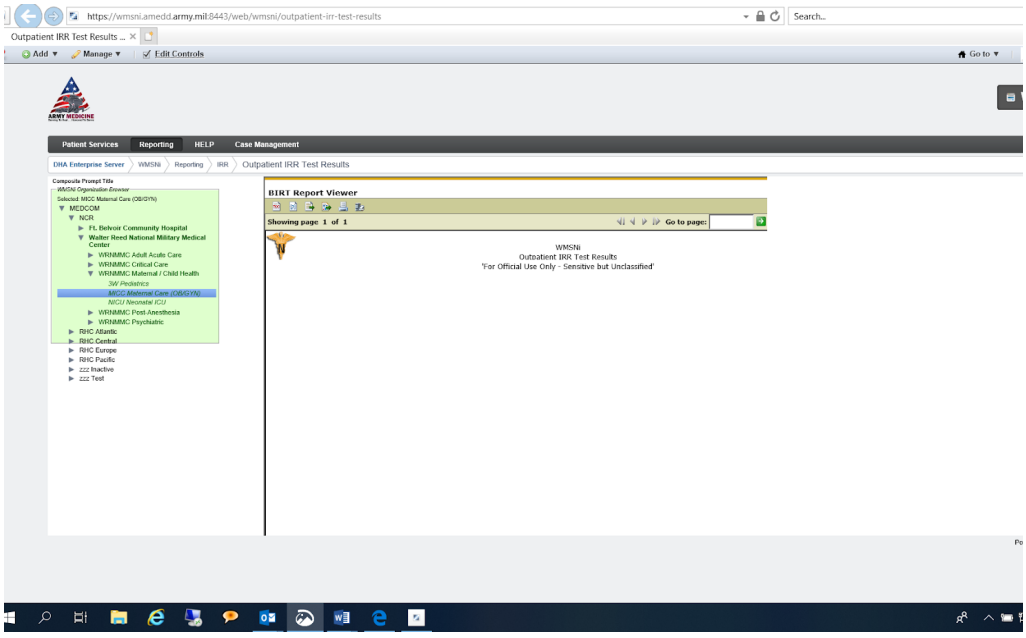
Pass	Passing Criteria	Comments
☑	Module opened as intended and appears to be properly functioning.	The expected screen was displayed when the module opened.
56	The user must login to the WMSNi user system using their CAC card.	
57	Once logged into the WMSNi system the user must navigate to the Reports Tab.	
58	From the submenu select the Tactical Reports / Unassessed Patient Report.	
59	The following is the expected screen view: Select a unit and the report should populate.  Insert a screenshot of your results here:	



Pass	Passing Criteria	Comments
☑	Module opened as intended and appears to be properly functioning.	The expected screen was displayed when the module opened.
60	The user must login to the WMSNi user system using their CAC card.	
61	Once logged into the WMSNi system the user must navigate to the Reports Tab.	
62	From the submenu select the IRR / IRR Test Results.	
63	The following is the expected screen view: Select a unit and the report should populate.  Insert a screenshot of your Inpatient results here:	



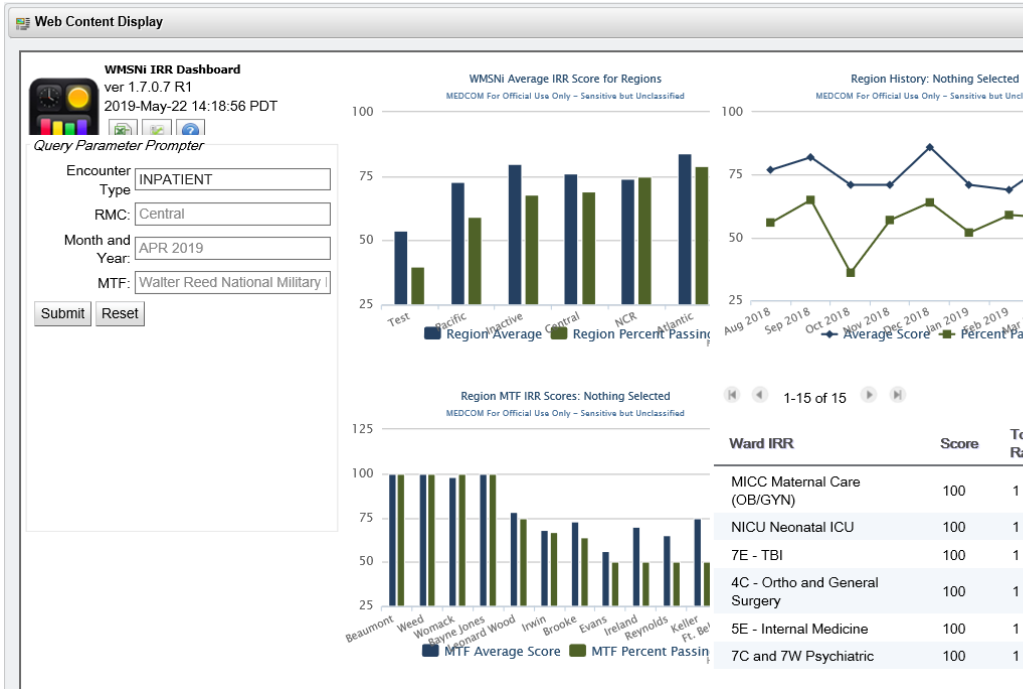
Insert a screenshot of your Outpatient results here:



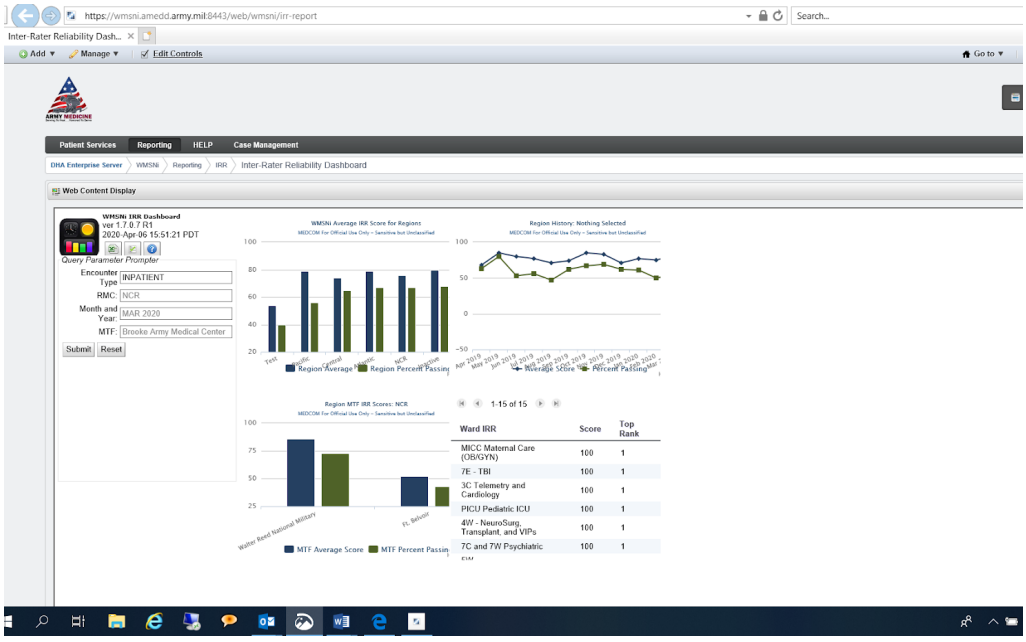
Pass	Passing Criteria	Comments
☑	Module opened as intended and appears to be properly functioning.	The Inpatient IRR results ran but seems a little slow (based on patients in IRR Module Test). The expected screen was displayed when the Outpatient report was opened (lack of Outpatient data).
64	The user must login to the WMSNi user system using their CAC card.	
65	Once logged into the WMSNi system the user must navigate to the Reports Tab.	
66	From the submenu select the IRR / Inter-Rater Reliability Dashboard.	

The following is the expected screen view:

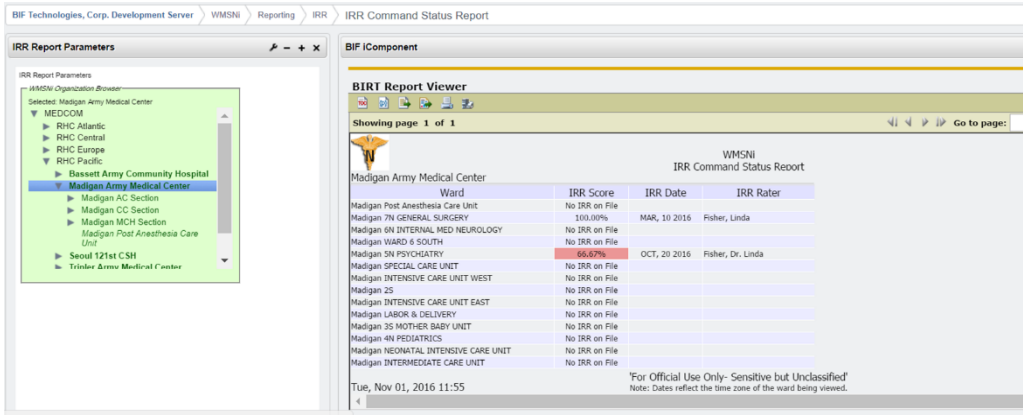
67



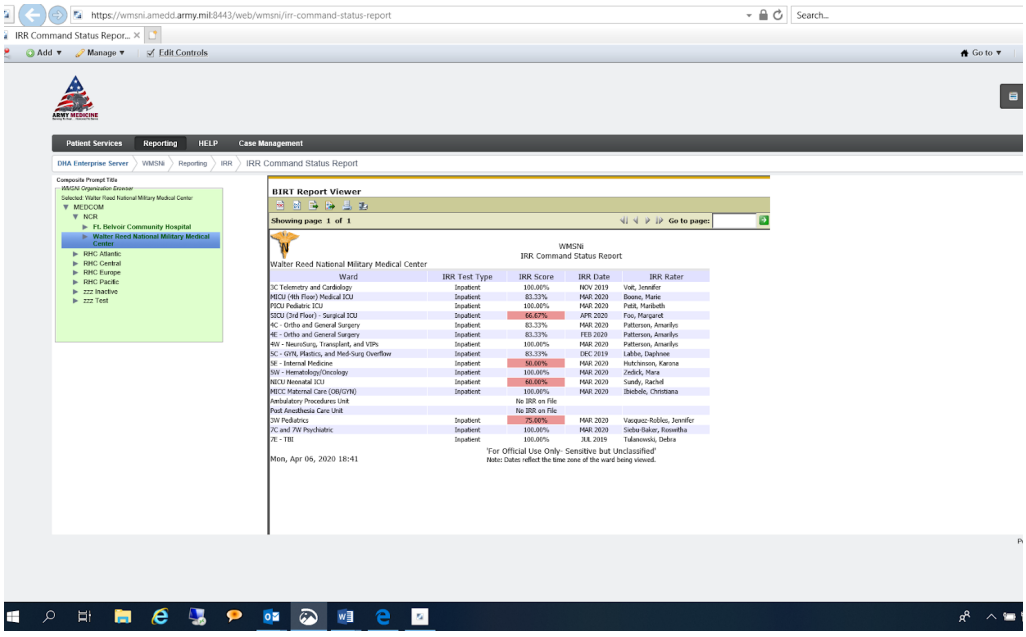
Insert a screenshot of your results here:



Pass	Passing Criteria	Comments
☑	Module opened as intended and appears to be properly functioning.	The expected screen was displayed when the module opened.
68	The user must login to the WMSNi user system using their CAC card.	
69	Once logged into the WMSNi system the user must navigate to the Reports Tab.	
70	From the submenu select the IRR / IRR Command Status Report.	
71	The following is the expected screen view: Select a unit, section, or MTF and the report should populate.	



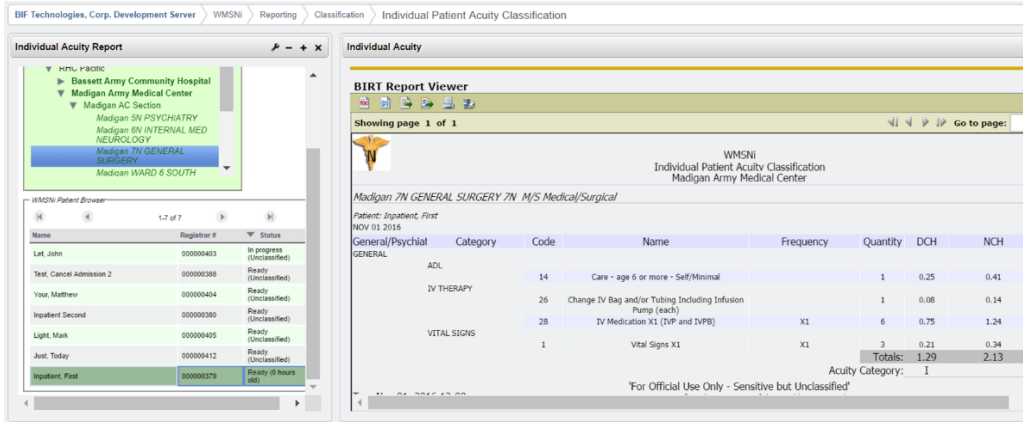
Insert a screenshot of your results here:



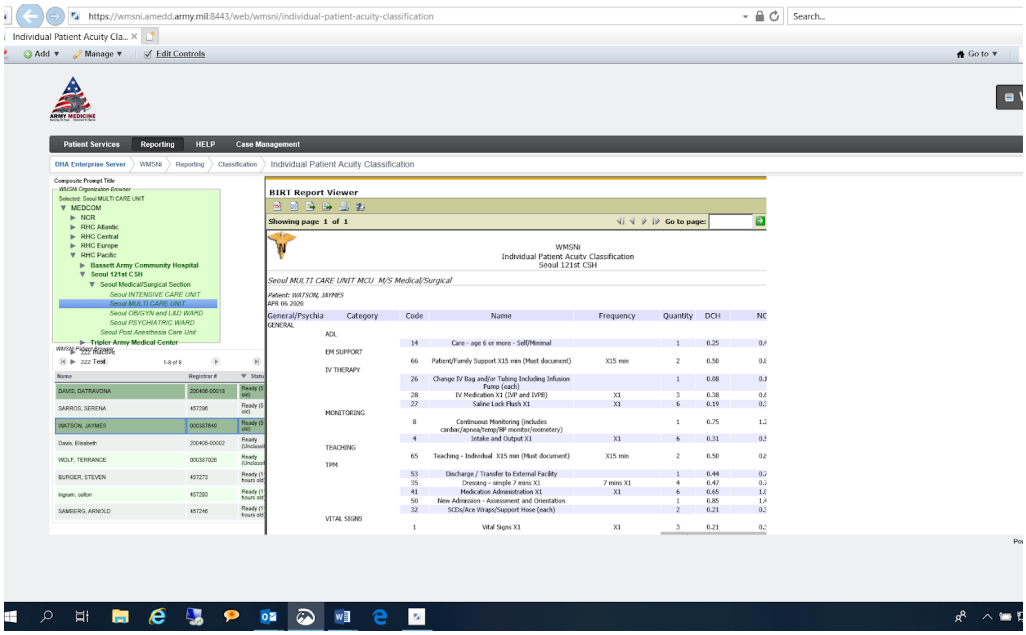
Pass	Passing Criteria	Comments
☑	Module opened as intended and appears to be properly functioning.	The expected screen was displayed when the module opened.
72	The user must login to the WMSNi user system using their CAC card.	
73	Once logged into the WMSNi system the user must navigate to the Reports Tab.	
74	From the submenu select the Classification / Individual Patient Acuity Classification.	

The following is the expected screen view: Select a unit and a patient and the report should populate.

75

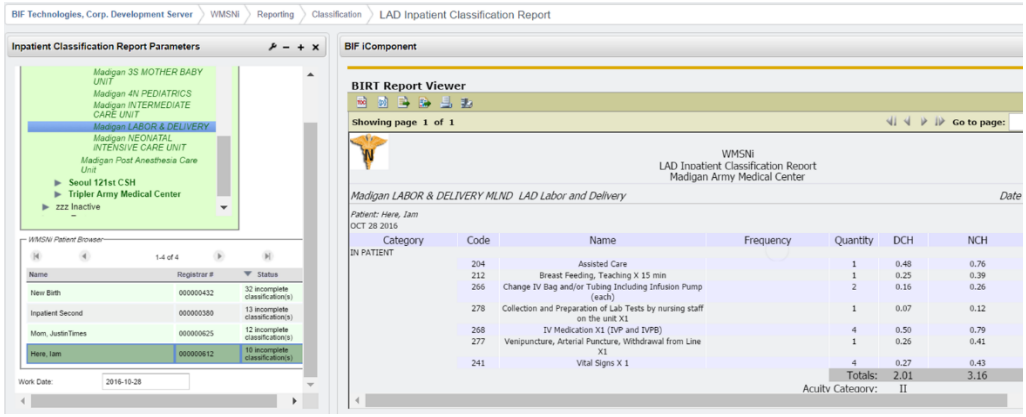


Insert a screenshot of your results here:

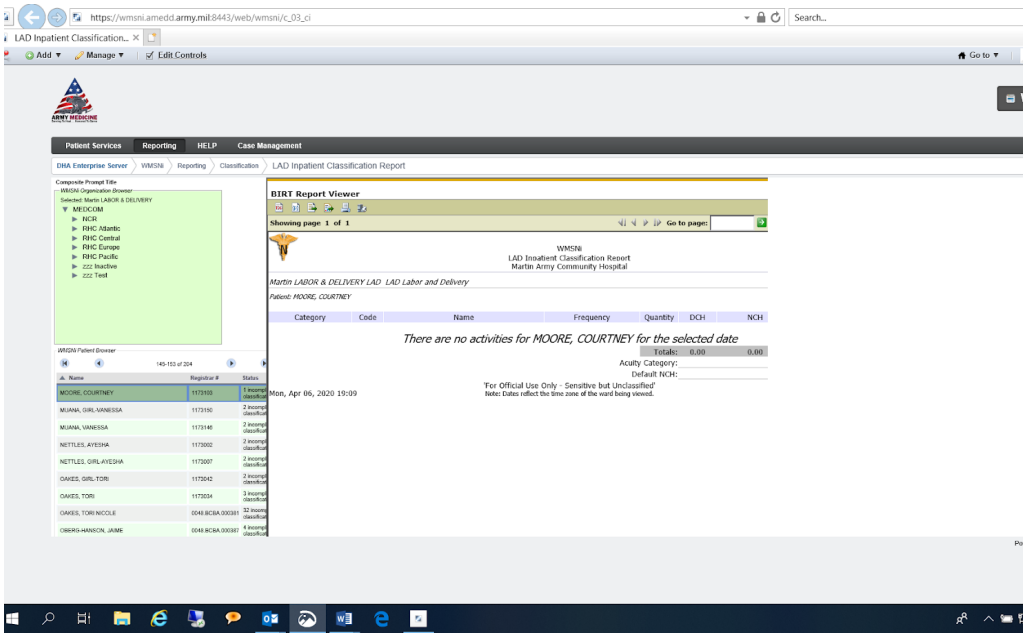


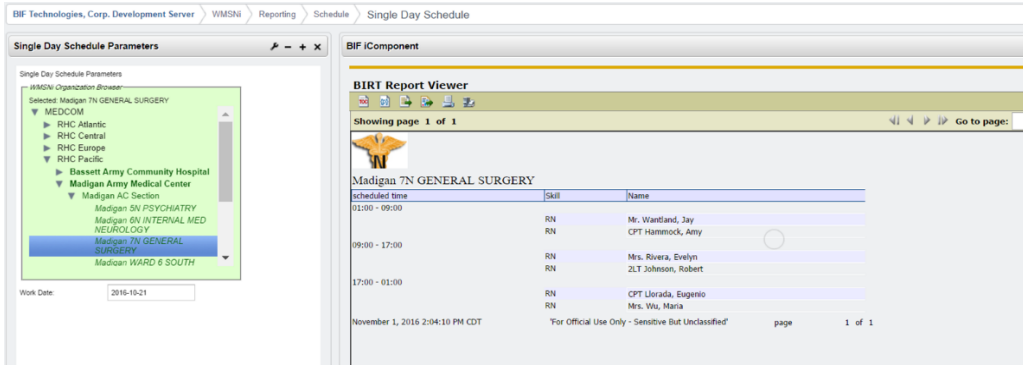
Pass	Passing Criteria	Comments
☑	Module opened as intended and appears to be properly functioning.	The expected screen was displayed when the module opened.
76	The user must login to the WMSNi user system using their CAC card.	
77	Once logged into the WMSNi system the user must navigate to the Reports Tab.	
78	From the submenu select the Classification / LAD Inpatient Classification Report.	

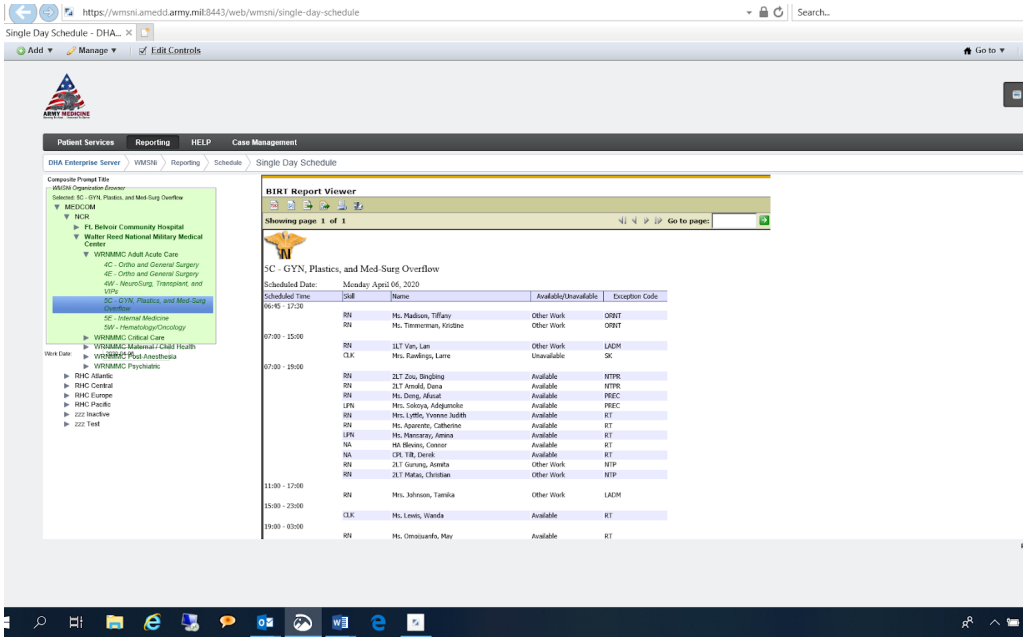
79 The following is the expected screen view: Select an L&D unit and a patient and the report should populate.



Insert a screenshot of your results here:



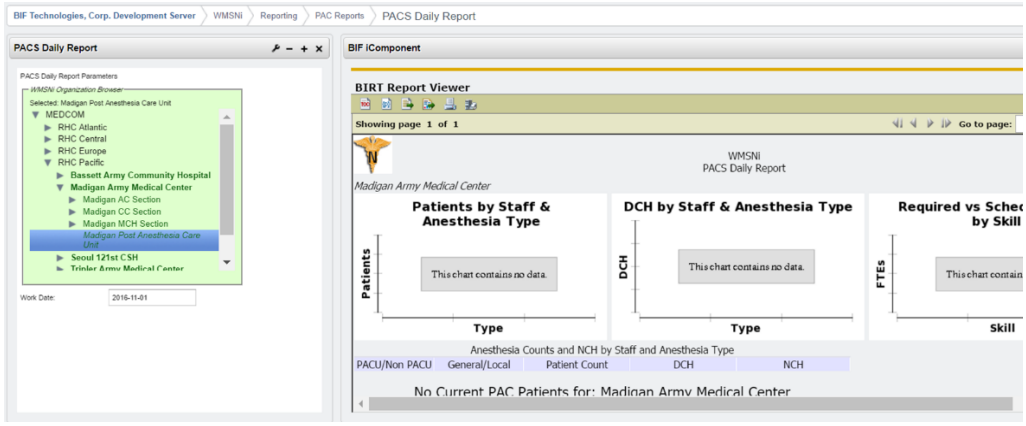
Pass	Passing Criteria	Comments
☑	Module opened as intended and appears to be properly functioning.	The expected screen was displayed when the module opened. A Labor & Delivery patient is only visible if there is a remaining unclassified journal day. Working to change the Patient Browser to show all active patients. Works but patient is not visible if all Journals are classified. It is unclear if the patients have been classified.
80	The user must login to the WMSNi user system using their CAC card.	
81	Once logged into the WMSNi system the user must navigate to the Reports Tab.	
82	From the submenu select the Schedule / Single Day Schedule.	
83	The following is the expected screen view: Select a unit and a date and the report should populate.  Insert a screenshot of your results here:	



Pass	Passing Criteria	Comments
☑	Module opened as intended and appears to be properly functioning.	The expected screen was displayed when the module opened.
84	The user must login to the WMSNi user system using their CAC card.	
85	Once logged into the WMSNi system the user must navigate to the Reports Tab.	
86	From the submenu select the PAC Reports / PACS Daily Report.	

87

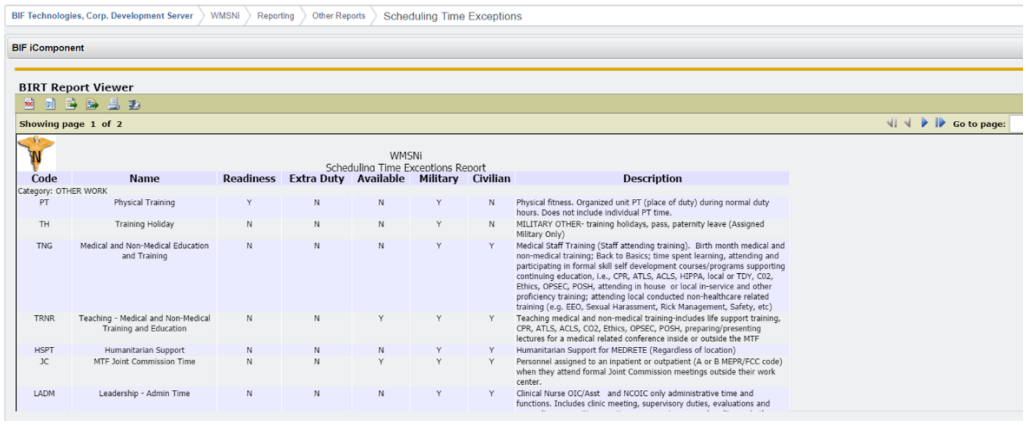
The following is the expected screen view: Select a PACS unit and a date and the report should populate.



Insert a screenshot of your results here:
Report no longer used. Not Tested.

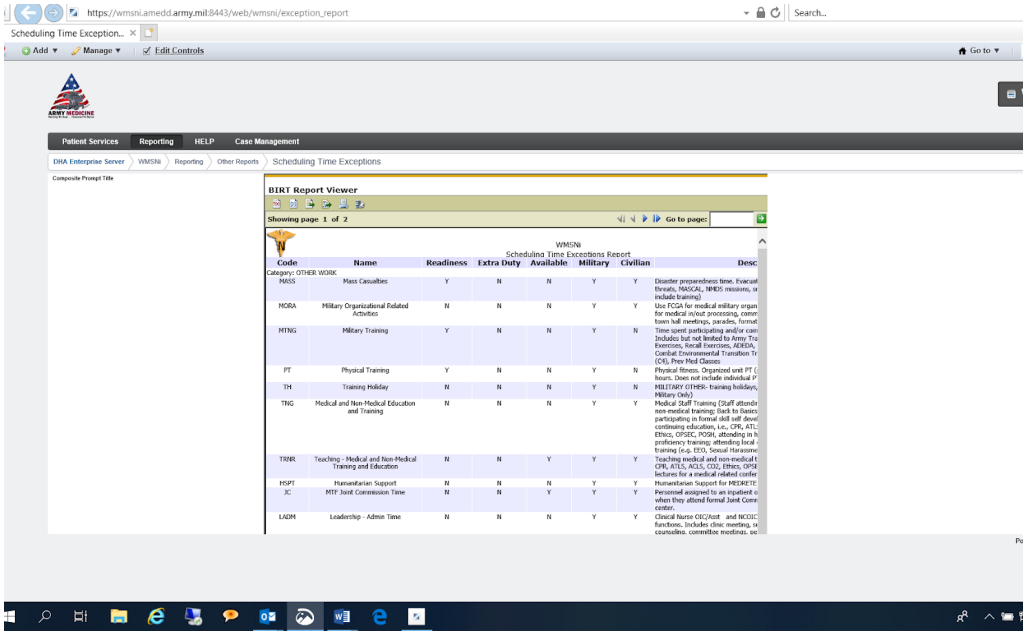
Pass	Passing Criteria	Comments
☐	Module opened as intended and appears to be properly functioning.	This report is no longer used.
88	The user must login to the WMSNi user system using their CAC card.	
89	Once logged into the WMSNi system the user must navigate to the Reports Tab.	
90	From the submenu select the Other Reports / Scheduling Time Exceptions.	

The following is the expected screen view:



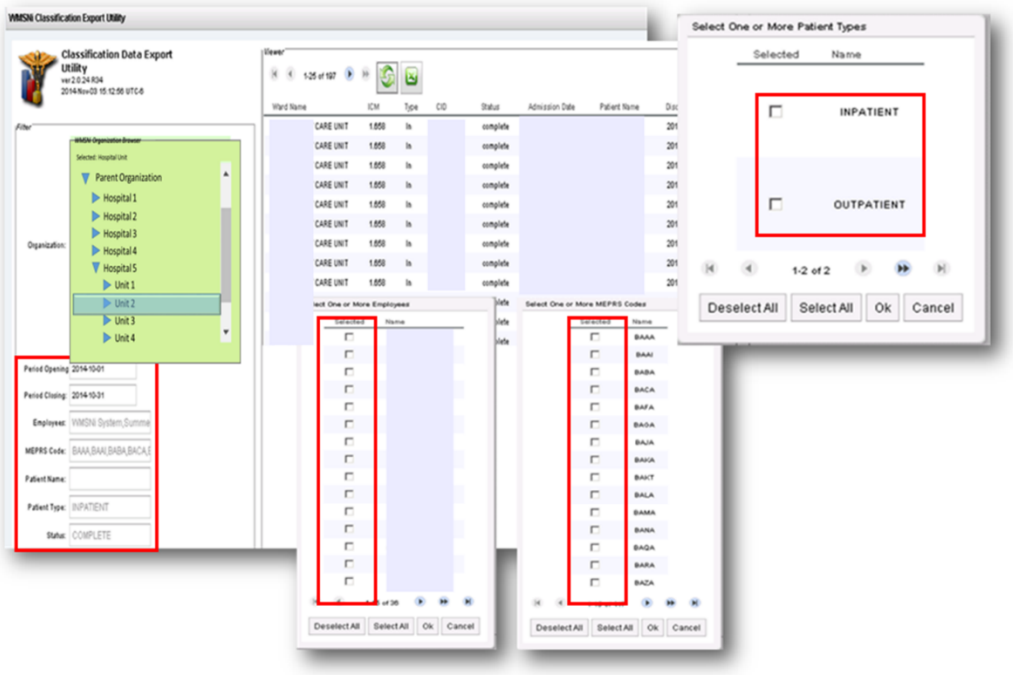
Insert a screenshot of your results here:

91



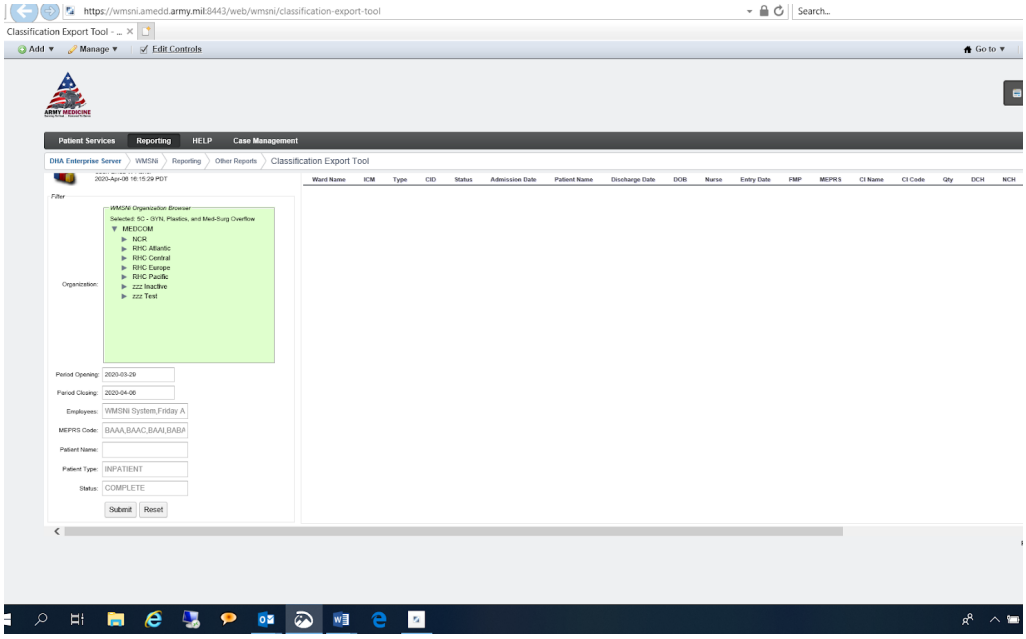
Pass	Passing Criteria	Comments
☑	Module opened as intended and appears to be properly functioning.	The expected screen was displayed when the module opened.
92	The user must login to the WMSNi user system using their CAC card.	
93	Once logged into the WMSNi system the user must navigate to the Reports Tab.	
94	From the submenu select the Other Reports / Classification Data Export.	

The following is the expected screen view: Select items from the dropdowns, then click the run button and the report should populate. The lists are expanded in this view.

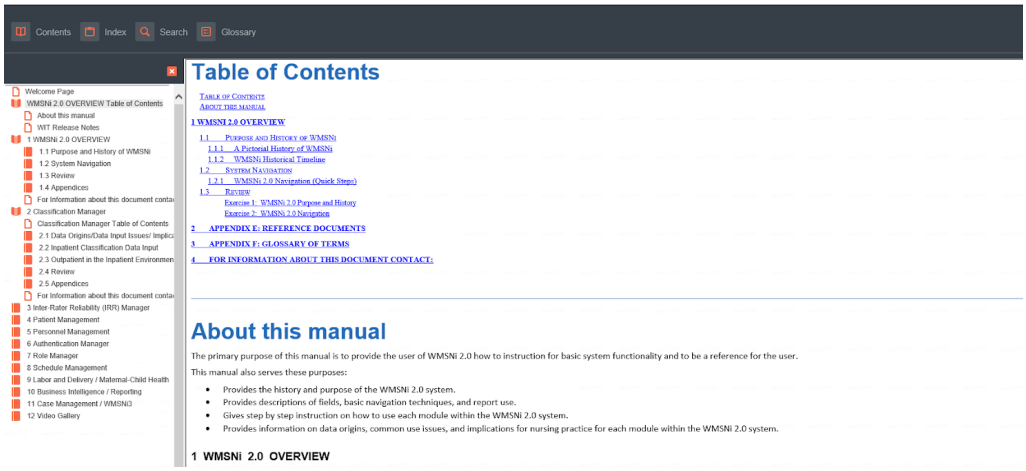


95

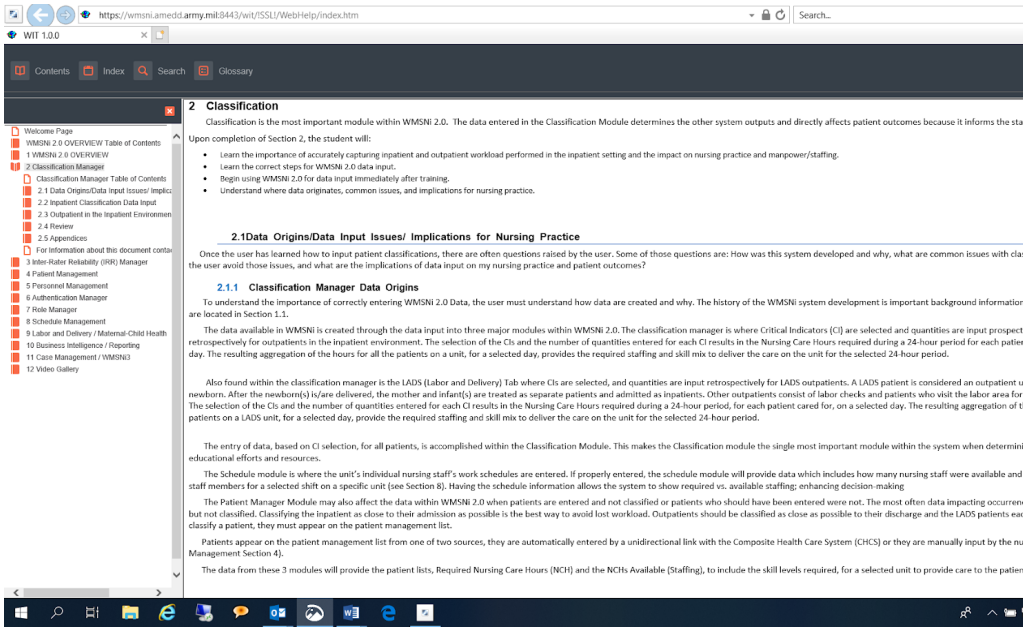
Insert a screenshot of your results here:



Pass	Passing Criteria	Comments
X	Module opened as intended and appears to be properly functioning.	Report opens but does not display data when run. Know issue. Excel export worked.
96	The user must login to the WMSNi user system using their CAC card.	
97	Once logged into the WMSNi system the user must navigate to the HELP Tab.	
98	Select Online Help.	
99	The following is the expected screen view: Select an MTF and date the report should populate.	

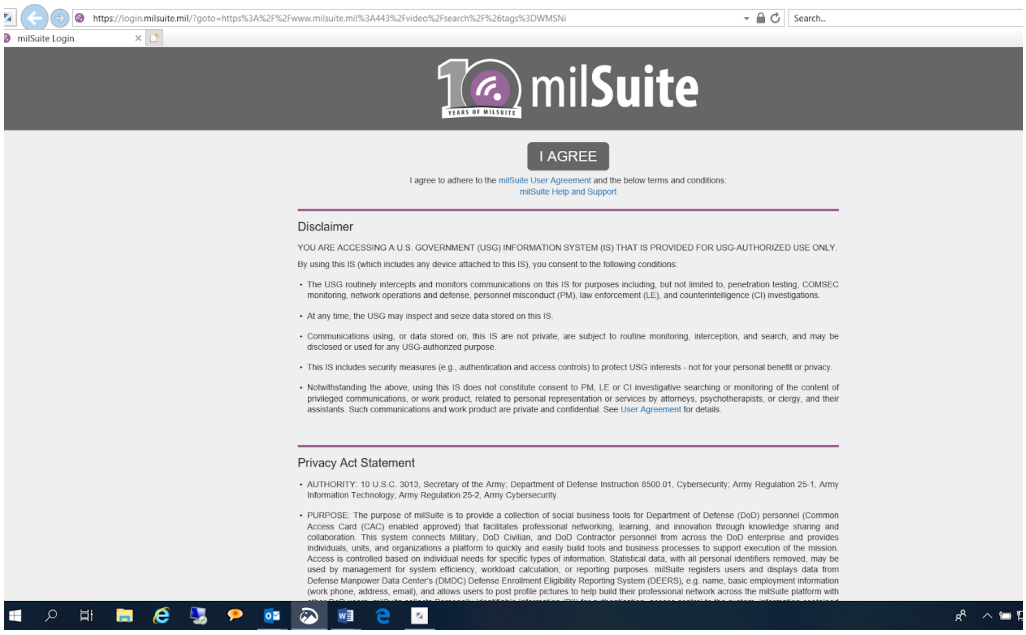


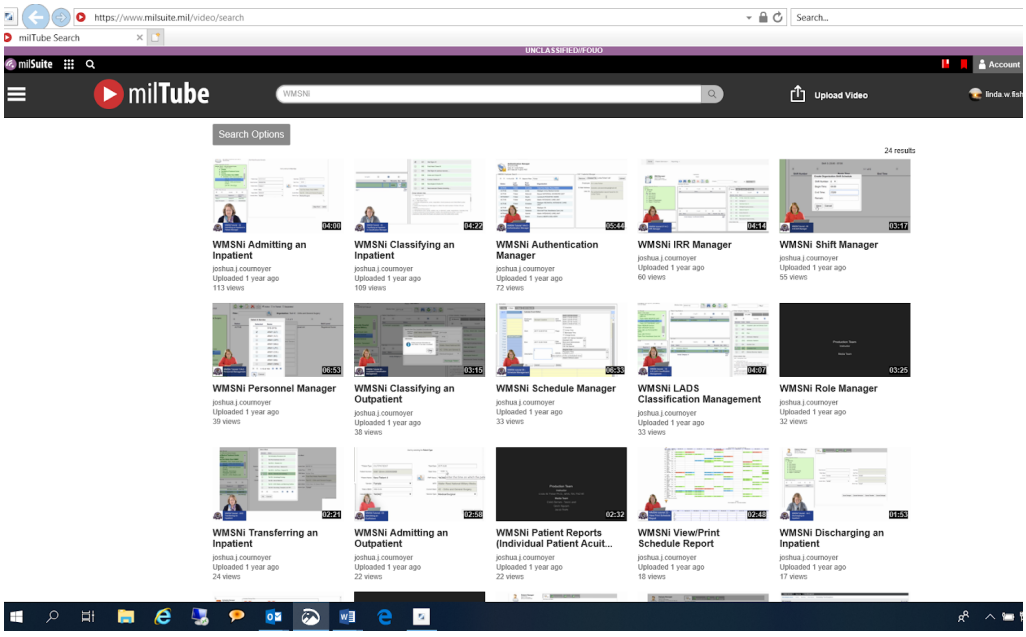
Insert a screenshot of your results here:



Pass	Passing Criteria	Comments
☑	Module opened as intended and appears to be properly functioning.	Help document displays as expected.
100	The user must login to the WMSNi user system using their CAC card.	
101	Once logged into the WMSNi system the user must locate the Video message on the entry screen.	
102	Select https://login.milsuite.mil/?goto=https%3A%2F%2Fwww.milsuite.mil%3A443%2Fvideo%2Fsearch%2F%26tags%3DWMSNi From the Entry Screen.	
103	The following is the expected screen view: Select an MTF and date the report should populate.	

Insert a screenshot of your results here:





Pass	Passing Criteria	Comments
☑	Module opened as intended and appears to be properly functioning.	Help Manual displays as expected. Videos will not connect from ITC.

Delivery Assessment: PASS	Issues: 1) 2 of 3 Dashboards not working (Manpower Staffing & Workload Dashboards. There were issues with these prior to the 12c update. 2) The Classification Data Export accepts selections but does not render a report, this behavior was present prior to the 12c update. 3) The Inpatient LAD Individual Classification report appears to run but patients are not available for selection – known issue.

9 IDUT Release Plan Example Only

Overview

Short summary specifying the objective to be accomplished by the document. Key points for the reader are mentioned in this section.

Table of Contents

1 Deployment Summary

1.1 Technical Summary: Version x.x.x

A description and the delivery method of each item in the release. What are you fixing/changing/updating?

What are the artifacts being delivered to provide that fix?

1. Item 1
2. Item 2
3. Etc…

1.1.1 Item 1

Version Number: x.x.x.x OR N/A
Description: Includes
Delivery Method: [SQL DML, SQL DDL, .war deployment, .jar deployment]
SHA 256:

1.1.2 Item 2

Version Number: x.x.x.x OR N/A
Description: Includes
Delivery Method: [SQL DML, SQL DDL, .war deployment, .jar deployment]
SHA 256:

2 Installation Instructions

The following are examples of potential deployment exercises.

2.1 Retrieving Artifacts

The above have been provided via TFS.

`

2.2 Installation Steps

NOTE:

1) Download/move above artifacts to the working environment from TFS.
2)

2.3 RPTDESIGN File Deployment Instructions

NOTE:

1) Copy report files into an installation directory and execute subsequent commands from the installation directory.
2) Copy existing BIRT reports directory (for use in rolling back)

```
$ sudo -i cp -R /var/webapps/birt/bif \
        /var/webapps/birt/bif.pre*release*.BAK
```

3) Confirm that the new directory exists

$ sudo -i ls -lt /var/webapps/birt/bif.pre*release*.BAK

4) Give ownership of report files to insight
   $ sudo -i chown insight:insight ~/*.rptdesign
5) Copy all .rptdesign files to reports directory
   $ sudo -i mv ~/*.rptdesign /var/webapps/birt/bif/
6) Execute shell script to update report database connection details. Be prepared to interactively supply the database password, database IP address, database SID, and the path to the reports directory.
   $ sudo -i /opt/insight/server/set_report_URL_plus_enc_pw.sh

2.4 Pre-deployment Preparation

1) Shutdown TomCat
   $ sudo -i /opt/insight/server/bin/shutdown.sh
2) Rename the log file
   $ sudo -i mv /opt/insight/server/logs/catalina.out \
   /opt/insight/server/logs/catalina_out_$(date \
   +%0Y-%0m-%0d_%0k%0M).txt
3) Backup existing wmsn2.war file (for use in rolling back).
   $ sudo -i mv /var/webapps/wmsn2.war \
   /var/webapps/brainjack.pre2.4.7R1.war.BAK
5) Give ownership of the file to insight
   $ sudo -i chown insight:insight ~/*.war

2.5 WAR File Deployment Instructions

1) Remove the wmsn2 deployment directory.
   $ sudo -i rm -rf /var/webapps/wmsn2
2) Deploy the new WAR files to the webapps directory.
   $ sudo -i mv ~/wmsn2.war /var/webapps/wmsn2.war

2.6 JAR File Deployment Instructions

1) Copy jar files from CD into an installation directory and execute subsequent commands from the installation directory.
2) Copy existing java library directory (for use in rolling back)
   $ sudo -i cp -R /opt/insight/server/lib /opt/insight/server/lib.pre*release*.BAK
3) Confirm that the new directory exists
   $ sudo -i ls -lt /opt/insight/server/lib.pre*release*.BAK
4) Give ownership of jar files to insight
   $ sudo -i chown insight:insight ~/*.jar
5) Copy all .jar files to lib directory
   $ sudo -i mv ~/*.jar /opt/insight/server/lib/
6) Stop the tomcat server
   $ sudo -i /opt/insight/server/bin/shutdown.sh

7) Restart the tomcat server
   $ sudo -i /opt/insight/server/bin/startup.sh
8) Monitor server startup
   $ sudo -i tail -f -n 200 /opt/insight/server/logs/catalina.out

2.7 SQL File Deployment Instructions

1) Back-up the database.
2) Copy contents of the sql directory on TFS to an installation directory on the database server. Execute subsequent commands from that directory location.
3) Execute the driver SQL script.
   $ sqlplus / as sysdba @*File_Name*.sql
4) Examine logs directory for errors.
   crt_ccl_core.log
   sql_resource_*.log
   compile_wmsni_schemas_report_errors.log