Complex Medical Conditions Claims Portal

(UHGWM110-005064)

Complex Medical Conditions Client

(UHGWM110-005663)

Complex Medical Conditions Provider

(UHGWM110-000802)

Complex Medical Conditions Gateway

(UHGWM110-005663)

Courtyard

(UHGWM110-000802)

COE

(UHGWM110-005064)

Application Migration Assessment Discovery and Design

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# Overview

The purpose of the Application Migration Assessment is to evaluate the readiness and completeness of the migration assessment and design phase documentation in preparation for migration planning.

Complex Medical Conditions (CMC) is a suite of applications designed for insurance providers, employers, and users.

* **CMC Provider:** A portal for insurance providers to receive and maintain referrals, manage claims, maintain patient records, track claim histories, and take surveys.

ASK ID: UHGWM110-000802

* **CMC Client:** A platform for employers to search, compare, and purchase CMC insurance plans based on various offerings from providers.

ASK ID: UHGWM110-005663

* **CMC Claims Portal:** A user-friendly interface for policyholders to initiate, submit, and manage their claims efficiently. It provides data such as claims, notifications, and provider contacts.

ASK ID: UHGWM110-005064

* **CMC Gateway:** Gtaeway has the quick links for all the products/services offered.

Gateway provids single-sign on for the externel apps like client and provider

ASK ID: UHGWM110-005663

* **Courtyard:** This application is only for internal users granting only specific functionalities in the menu. Provides tool for for veiwing contracts with various healthcare providers, courtyard is also a tool for managing claims and has many other adminitrative functionalities.

ASK ID: UHGWM110-000802

* **COE :** COE networkmanagement tool is built for cmc business operations to create standard networks, edit standard networks & view standard networks, client networks, carve out/undo carve out in client networks.

ASK ID: UHGWM110-005064

In addition to the 6 consumer-facing applications, there are batch-processing applications that streamline document preparation and management.

**Key Elements:**

* The application is currently hosted in both ELR & CTC datacenters for production and nonproduction.
* The application tech stack is Java, Spring Framework, JSP, Javascript, Tomcat, Apache HTTPD, Oracle Database, and Microsoft SQL Server.

# Application Profile

This is a group of six applications

Complex Medical Condition Provider: An application for CMC Insurance Providers to manage patients, claims, and related documents.

Complex Medical Condition Client: An application for employers to search and associate with CMC Insurance Providers by searching based on Insurance Plans.

Complex Medical Condition Claims Portal: An application for users to submit and manage claims.

Complex Medical Condition Gateway **:** Gateway has the quick links for all the products/services offered.Gateway provids single-sign on for the externel apps like client and provider.

Complex Medical Condition Courtyard**:** This application is only for internal users granting only specific functionalities in the menu. Provides tool for for veiwing contracts with various healthcare providers, courtyard is also a tool for managing claims and has many other adminitrative functionalities.

Complex Medical Condition COE**:** COE networkmanagement tool is built for cmc business operations to create standard networks, edit standard networks & view standard networks, client networks, carve out/undo carve out in client networks.

**Points of contact**: Kari Johnson, Jitender Chauhan, and Broin Daniel

**LOB**: OHFT - Optum Care Solutions Technology

**App R Disposition:** Re-Platform and Re-Architecture

# Methodology

The following methods were used as part of this assessment.

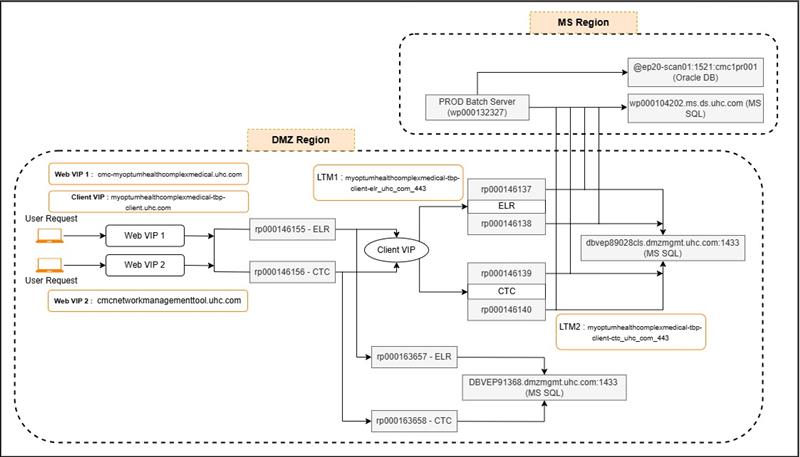
**Discovery sessions:**

Discovery sessions were held using Microsoft Teams Meeting and Chat to review existing documentation for the Complex Medical Conditions Application.  Items reviewed during Discovery are as follows:

1. Current State Architecture
2. Sizing of Servers
3. Backup Requirement
4. Disaster recovery and BCP requirements
5. Application requirements
6. Database Migration Requirements
7. ETL & Batch Processing requirements
8. Security & compliance requirement
9. Monitoring and Observability
10. Cost Management

# Architecture and Platform (Current & Future)

## Current Architecture



The applications are monolithic, built using the Java Spring Framework with JSP, embedded JavaScript, and CSS.

**Application & Deployment:**

* The primary database is Microsoft SQL Server 2019.
* Applications are deployed on Tomcat Application Server with Apache HTTPD as a facade.
* Packaged as WAR files.
* Secrets are currently stored in configuration files, with plans to migrate them to a secure vault.
* Deployments are handled via Jenkins, with a single Jenkins server managing individual jobs for each application and environment.

**Infrastructure & Configuration:**

* No Infrastructure as Code (IaC) or Configuration as Code (CaC) is in place.
* Tomcat and HTTPD version upgrade and patching are owned and done by the development team. The configuration files are not version controlled and maintained in repository.
* Firewalls are opened between application servers and database servers with risk record as app in DMZ and DB on MS region.

**Application Characteristics:**

* The applications are stateless but require sticky sessions.
* The applications are hosted on Linux servers. Batch jobs generate document files and store in NFS/SFTP. These generated files are downloaded to local storage by applications.
* Batch jobs fetch data from an Oracle database hosted in an Oracle Managed Database Service and MS SQL Service.
* Customer facing applications are integrated with OHID authentication (MFA) for application authentication.

**Technology Stack:**

* The backend APIs are RESTful. The front-end code makes HTTP calls to the backend APIs.
* Hibernate ORM is used with EH Cache enabled for caching.
* The frontend integrates TinyMCE editor for content editing.
* Apache Lucene is used for search functionality.

**Security Operations:**

* CMC applications are subjected to static security scans (SCA and SAST) and the vulnerabilities are recorded in security platform.
* There is no clarity on regular infrastructure and application penetration testing.

**Monitoring & Orchestration:**

* Application monitoring is handled via Grafana and Dynatrace.
* IBM Tivoli is used for batch job orchestration and monitoring.

**Data Growth & Retention:**

* Data is expected to grow 30% YoY.
* No data purge, archival, or retention policy is currently in place.

## Findings and Risks

Microsoft SQL Server 2019 enters the Extended Support phase in February 2025. It will no longer receive bug fixes or feature improvements, only security updates if an Extended Security Update (ESU) plan is purchased.

**Configuration Management Risks:**

* Tomcat and Apache HTTPD configurations are neither version-controlled nor properly maintained, posing security and operational risks.

**CI/CD Weaknesses:**

* Production CI/CD jobs are not isolated from non-production environments, leading to potential operational risks and release management issues.

**Scalability and Reliability Concerns:**

* The application's dependency on sticky sessions limits scalability and impact reliability.

**Data Growth & Performance Impact:**

* The lack of data retention and archival policy results in linear or even exponential database growth.
* Uncontrolled data expansion poses risks to application performance and user experience.

## Recommendations

A screenshot of a computer diagram

Description automatically generated

**Containerization & Deployment:**

* All three CM applications should be containerized and deployed to Azure Kubernetes Service (AKS) for improved scalability and management.
* Horizontal scalability can be fully leveraged if shared session management is implemented, eliminating the need for sticky sessions.

**Database Modernization:**

* The self-managed Microsoft SQL Server should be migrated to a managed SQL Server instance, ensuring better availability, automated maintenance, and security compliance.
* Regular backups should align with Recovery Point Objectives (RPO) to prevent data loss.

**Oracle Database Migration:**

* The on-prem Oracle database should be migrated to a self-managed Oracle instance in the cloud.
* Active-passive replication should be implemented to maintain high availability, eliminating the need to connect from the cloud to an on-premises database.

# Infrastructure

Refer to the Annexure Section for the list of servers / virtual servers in the infrastructure.

## Findings and Risks

**Infrastructure Overview:**

* The infrastructure spans across CTC and ELK datacenters, ensuring resiliency and high availability.
* It includes a mix of Windows and Linux servers (RHEL, Oracle Linux) that host web applications, application services, batch jobs, and databases.

**Applications:**

* In addition to CMCC, CMCCP, and CMCP, the infrastructure also supports other applications such as Gateway, Courtyard & COE.

**Server Management:**

* Some servers are planned for decommissioning as part of infrastructure optimization.

**Monitoring & Logging:**

* Telegraf and Grafana are used for server monitoring.
* Dynatrace is available for application monitoring and logging to ensure performance visibility and issue detection.

**Load Balancing:**

* Each application endpoint is managed by a dedicated F5 load balancer instance, ensuring efficient traffic distribution and high availability.

**CI/CD Infrastructure:**

* The Jenkins servers are hosted on an on-premises managed Kubernetes cluster, providing containerized CI/CD execution with centralized management.

## Recommendations

**Environment Segregation:**

* There is no clear indication that production and non-production environments are segregated into separate networks.
* It is recommended to establish dedicated VNets for production and non-production environments to enhance security and isolation.

**Infrastructure Monitoring:**

* The infrastructure should be monitored using Azure-native monitoring tools or a solution recommended by ARB (Architecture Review Board) for better visibility and compliance.

**Traffic Management & Security:**

* It is recommended to integrate Azure Load Balancer, Azure Front Door, and Web Application Firewall (WAF) to improve traffic distribution, security, and global reachability.

# Security and Compliance

The security and compliance portion evaluation.

## Findings and Risks

* CM applications handle PHI and PII data and must adhere to HIPAA compliance standards to ensure data security and privacy.
* The system undergoes enterprise-level vulnerability scanning and code-level security scans.
* There is no available information on network-level or application-level penetration testing, posing potential security risks.
* The Jenkins server for the production environment is not isolated from non-production environments, increasing the risk of unauthorized access and deployment inconsistencies.

## Recommendations

* A separate Jenkins setup for the production environment is crucial to ensure proper isolation and security.
* When migrating CI/CD to GitHub Actions Workflow, it is essential to use self-hosted runners with a dedicated pool for production jobs to maintain strict separation.
* Network level and application-level penetration testing should be performed periodically.
* Runtime vulnerability scanning must be implemented to detect zero-day vulnerabilities and enhance overall security posture.

# Data Management

## Data classification and tagging

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Application | PHI | PCI | PII | Company Confidential | Information Classification |
| CMCP | YES | NO | YES | NO | PROTECTED |
| CMCC | YES | NO | YES | NO | PROTECTED |
| CMCCP | YES | NO | YES | NO | PROTECTED |
| Gateway | YES | NO | YES | NO | PROTECTED |
| Courtyard | YES | NO | YES | NO | PROTECTED |
| COE | YES | NO | YES | NO | PROTECTED |
| BATCH JOBS | YES | NO | YES | NO | PROTECTED |

## Findings and Risks

**Data Management Gaps:**

* There are no defined data backup policies, posing a risk to data availability and recovery.
* There are no data retention policies in place, leading to uncontrolled data accumulation.

**Data Growth & Volume:**

* The data size is in terabytes (TB), with records dating back 30 years.
* The data is expected to grow at a rate of 30% year over year (YoY), increasing storage demands and potential performance risks.

## Recommendations

**Establish Data Backup Policies:**

* Define data backup policies aligned with business continuity planning (BCP) to ensure data availability, recovery, and resilience against failures.

**Implement Data Retention Policies:**

* Define data retention policies to purge or archive old data, reducing storage growth and improving system performance.
* Proper data retention will also help minimize legal liabilities associated with PII, ensuring compliance with regulatory requirements.

# TCO Assessment & Management

## Findings and Risks

**Infrastructure Utilization:**

* Grafana metrics indicate that the provisioned infrastructure is underutilized, suggesting opportunities for optimization and cost reduction.

**Server Decommissioning:**

* Some servers have been identified for decommissioning, which can further streamline resource usage and reduce operational overhead.

**Database Support Lifecycle:**

* Microsoft SQL Server 2019 has reached the end of mainstream support and has entered the extended support phase.
* This transition may lead to additional support costs or necessitate an upgrade to a supported version to ensure continued security and compliance.

## Recommendations

**Application Modernization:**

* Rearchitect applications into multiple containerized services, separating backend and frontend components.
* This approach enables better scalability, orchestration, and resource efficiency.

**Database Migration:**

* Migrate Microsoft SQL Server to the cloud, leveraging managed services for automated backups, maintenance, and high availability, reducing manual configuration and operational overhead.

**Adoption of Azure Native Services:**

* Transition to Azure-native solutions such as Azure Load Balancer, API Gateway, Front Door, WAF, Monitoring, and Logging.
* This enhances performance, security, and observability, while reducing reliance on manually managed infrastructure.

# Business Continuity & Disaster Recovery

Business Continuity (BC) and Disaster Recovery (DR) in private cloud environments are focused on ensuring minimal downtime and maintaining continuous operations through robust infrastructure design, including redundant systems and data replication across multiple locations. These strategies involve detailed planning and testing to handle potential disruptions smoothly, including automated failover to backup systems and regular recovery drills to ensure all systems and processes are effective and ready to deploy in an emergency. By leveraging the inherent scalability and control of private clouds, organizations can tailor their BC/DR plans to meet specific needs, ensuring both swift recovery from incidents and resilience in ongoing operations.

|  |  |  |
| --- | --- | --- |
| **Aspect** | **Business Continuity (BC)** | **Disaster Recovery (DR)** |
| **Primary Goal** | Ensure that business operations continue without significant disruption. | Restore critical IT functions and data access quickly after a disruption. |
| **Focus Area** | Holistic approach that includes all aspects of the organization’s operations. | Specifically focuses on IT and data systems recovery. |
| **Implementation** | Requires strategies that cover the entire organization, often involving multiple sites. | Typically involves technical solutions such as data backup and failover systems. |

## Findings and Risks

* Complex Claims Medical Conditions has a DR setup between their Elk River Data Center and their Chaska Data Center. Though these are two different data centers, they are within a few miles proximity to each other.
* As far as Complex Claims Medical Conditions Portal is concerned, the engineering team says there are annual DR events that are conducted by the DR team. However, they are not end to end DR (Failover/Fallback) type of events.
  + There DR (backup/recovery) is more associated with the data layer.
  + The failover/fallback is done at the data layer and not across the entire 3 tier infrastructure.
* There is no end-to-end documentation available for DR failover/fallback.
* The DR team maintains records of BCDR drill and failovers.

## Recommendations

* Implement Azure Site recovery upon rehosting/refactoring the application suite.

# Annexure 1: Server List

| **Application** | **ITSM Environment** | **ITSM FQDN** | **ITSM Operating System** | **Server Details** | **CPU Count** | **Mem** | **Location** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| CMCC | Development | apvrd97141.uhc.com | RedHat linux 8 | Dev Gateway App Server | 2 | 0 | MN011 |
| CMCC | Development | apvrd97142.uhc.com | RedHat linux 8 | Dev Client App Server | 2 | 0 | MN011 |
| CMCC | Development | wn000147624.dmzmgmt.uhc.com | Microsoft windows 2022 | Dev URN Database | 2 | 10 | ELR |
| CMCC | Production | rp000145902.uhc.com | Redhat linux 8 | decomm server | 6 | 30 | ELR |
| CMCC | Production | rp000146135.uhc.com | Redhat linux 8 | Prod Gateway App Server-ELR | 8 | 40 | ELR |
| CMCC | Production | rp000146136.uhc.com | Redhat linux 8 | Prod Gateway App Server-CTC | 8 | 40 | CTC |
| CMCC | Production | rp000146137.uhc.com | Redhat linux 8 | Prod Client App Server-ELR | 8 | 40 | ELR |
| CMCC | Production | rp000146138.uhc.com | Redhat linux 8 | Prod Client App Server-ELR | 8 | 40 | ELR |
| CMCC | Production | rp000146139.uhc.com | Redhat linux 8 | Prod Client App Server-CTC | 8 | 40 | CTC |
| CMCC | Production | rp000146140.uhc.com | Redhat linux 8 | Prod Client App Server-CTC | 8 | 40 | CTC |
| CMCC | Production | rp000146155.uhc.com | Redhat linux 8 | Prod Web Server-ELR | 8 | 40 | ELR |
| CMCC | Production | rp000146156.uhc.com | Redhat linux 8 | Prod Web Server-CTC | 8 | 40 | CTC |
| CMCC | Production | wp000132327.ms.ds.uhc.com | Microsoft windows 2022 | CMC URN Prod Batch Server | 4 | 20 | ELR |
| CMCC | Production | wp000144970.ms.ds.uhc.com | Microsoft windows 2022 | CMC URN Prod Batch DR Server | 2 | 20 | CTC |
| CMCC | Stage | apvrs97395.uhc.com | RedHat linux 8 | Gateway Stage App Server-ELR | 4 | 0 | MN053 |
| CMCC | Stage | apvrs97396.uhc.com | RedHat linux 8 | Provider Stage App Server-CTC | 4 | 0 | MN011 |
| CMCC | Stage | apvrs97400.uhc.com | RedHat linux 8 | Client Stage App Server - ELR | 4 | 0 | MN053 |
| CMCC | Stage | apvrs97438.uhc.com | RedHat linux 8 | Gateway Stage App Server-CTC | 4 | 0 | MN011 |
| CMCC | Stage | apvrs98152.uhc.com | RedHat linux 8 | Client Stage App Server - CTC | 4 | 0 | MN011 |
| CMCC | Stage | rn000146151.uhc.com | Redhat linux 8 | Stage CMC web server-ELR | 4 | 30 | ELR |
| CMCC | Stage | rn000146154.uhc.com | Redhat linux 8 | Stage CMC web server-CTC | 4 | 30 | CTC |
| CMCC | Stage | wn000132326.ms.ds.uhc.com | Microsoft windows 2022 | Stage URN Batch Server | 2 | 16 | CTC |
| CMCCP | Development | apvrd97145.uhc.com | RedHat linux 8 | Dev Claims App Server | 2 | 0 | MN011 |
| CMCCP | Development | ed23db01.uhc.com | Exadata DB Server Node | Dev Powerfactes DB | 64 | 2048 | CTC |
| CMCCP | Development | rn000116754.uhc.com | Redhat linux 9 | To be decomm | 2 | 20 | ELR |
| CMCCP | Production | ep20db03.uhc.com | Exadata DB Server Node | Prod Powerfacets DB | 48 | 1536 | ELR |
| CMCCP | Production | ep20db04.uhc.com | Exadata DB Server Node | Prod Powerfacets DB | 48 | 1536 | ELR |
| CMCCP | Production | rp000146150.uhc.com | Redhat linux 8 | Prod Claims App Server-ELR | 8 | 40 | ELR |
| CMCCP | Production | rp000146153.uhc.com | Redhat linux 8 | Prod Claims App Server-CTC | 8 | 40 | CTC |
| CMCCP | Production | wevep68172.ms.ds.uhc.com | Microsoft Windows Server 2019 | OLD LTE BATCH SERVER | 8 | 0 | CTC |
| CMCCP | Production | wp000146516.dmzmgmt.uhc.com | Microsoft windows 2022 | Prod Powicrosoft windtrcwts windows | 4 | 30 | ELR |
| CMCCP | Production | wp000146525.dmzmgmt.uhc.com | Microsoft windows 2022 | Prod Powicrosoft windtrcwts windows | 4 | 30 | ELR |
| CMCCP | Stage | apvrs97407.uhc.com | RedHat linux 8 | Stage Claims App Server-ELR | 4 | 0 | MN053 |
| CMCCP | Stage | apvrs97408.uhc.com | RedHat linux 8 | Stage Claims App Server-CTC | 4 | 0 | MN011 |
| CMCCP | Stage | rn000117638.uhc.com | Redhat linux 9 | Stag Sawedhat linux 9trSrts linux | 2 | 16 | ELR |
| CMCCP | Stage | wn000086419.ms.ds.uhc.com | Microsoft windows 2019 | Stag Sawicrosoft windtrSwts windows | 2 | 16 | CTC |
| CMCCP | Stage | wn000146508.dmzmgmt.uhc.com | Microsoft windows 2022 | Stag Sawicrosoft windtrSwts windows | 2 | 30 | CTC |
| CMCCP | Stage | wn000146522.dmzmgmt.uhc.com | Microsoft windows 2022 | Stag Sawicrosoft windtrSwts windows | 2 | 20 | CTC |
| CMCP | Development | apvrd97143.uhc.com | RedHat linux 8 | Provider Dev App Server | 2 | 0 | MN011 |
| CMCP | Development | apvrd97144.uhc.com | RedHat linux 8 | Courtyard Dev App Server | 2 | 0 | MN011 |
| CMCP | Development | apvrd97847.uhc.com | RedHat linux 8 | To be docomm | 2 | 0 | MN011 |
| CMCP | Development | ed23db01.uhc.com | Exadata DB Server Node | Powerfacets dev DB | 64 | 2048 | CTC |
| CMCP | Development | wevrd98102.uhc.com | Redhat linux 8 | To be docomm | 2 | 0 | MN053 |
| CMCP | Development | wn000033595.ms.ds.uhc.com | Windows 2019 Standard | Dev App COE DB Sever | 8 | 64 | ELR |
| CMCP | Development | wn000132312.ms.ds.uhc.com | Microsoft windows 2022 | URN Dev Batch Server | 2 | 16 | CTC |
| CMCP | Production | dbvep89028.dmzmgmt.uhc.com | Microsoft windows 2019 | Prod URN Database | 8 | 0 | MN053 |
| CMCP | Production | dbvep89028cls.dmzmgmt.uhc.com | Windows | Prod URN Database | 8 | 64 | elr |
| CMCP | Production | dbvep89029.dmzmgmt.uhc.com | Microsoft windows 2019 | Prod URN Database | 8 | 0 | MN053 |
| CMCP | Production | dbvep89030.dmzmgmt.uhc.com | Microsoft windows 2019 | Prod URN Database | 8 | 0 | MN011 |
| CMCP | Production | dbvep91368.dmzmgmt.uhc.com | Microsoft windows 2019 | Prod COE DB Server | 8 | 0 | MN053 |
| CMCP | Production | dbves95323cls.dmzmgmt.uhc.com |  | Stage URN DB | 4 | 8 | ctc |
| CMCP | Production | rp000146141.uhc.com | Redhat linux 8 | Provider Prod App Server-ELR | 8 | 40 | ELR |
| CMCP | Production | rp000146142.uhc.com | Redhat linux 8 | Provider Prod App Server-ELR | 8 | 40 | ELR |
| CMCP | Production | rp000146144.uhc.com | Redhat linux 8 | Provider Prod App Server-CTC | 8 | 40 | CTC |
| CMCP | Production | rp000146145.uhc.com | Redhat linux 8 | Provider Prod App Server-CTC | 8 | 40 | CTC |
| CMCP | Production | rp000146147.uhc.com | Redhat linux 8 | Courtyard Prod App Server-ELR | 8 | 40 | ELR |
| CMCP | Production | rp000146148.uhc.com | Redhat linux 8 | Courtyard Prod App Server-CTC | 8 | 40 | CTC |
| CMCP | Production | rp000163657.uhc.com | Redhat linux 9 | COE Prod App Server-ELR | 4 | 20 | ELR |
| CMCP | Production | rp000163658.uhc.com | Redhat linux 9 | COE Prod App Server-CTC | 4 | 20 | CTC |
| CMCP | Production | wp000132327.ms.ds.uhc.com | Microsoft windows 2022 | CMC URN Prod Batch Server | 4 | 20 | ELR |
| CMCP | Production | wp000144970.ms.ds.uhc.com | Microsoft windows 2022 | CMC URN Prod Batch DR Server | 2 | 20 | CTC |
| CMCP | Stage | apvrs97402.uhc.com | RedHat linux 8 | Provider Stage APP Server-ELR | 4 | 0 | MN053 |
| CMCP | Stage | apvrs97403.uhc.com | RedHat linux 8 | Provider Stage APP Server-ELR | 4 | 0 | MN053 |
| CMCP | Stage | apvrs97404.uhc.com | RedHat linux 8 | Provider Stage App Server-CTC | 4 | 0 | MN011 |
| CMCP | Stage | apvrs97405.uhc.com | RedHat linux 8 | Courtyard Stage App Server-ELR | 4 | 0 | MN053 |
| CMCP | Stage | apvrs97406.uhc.com | RedHat linux 8 | Courtyard Stage App Server-CTC | 4 | 0 | MN011 |
| CMCP | Stage | dbves90652.dmzmgmt.uhc.com | Microsoft windows 2019 | COE Stage DB | 4 | 0 | MN011 |
| CMCP | Stage | dbves95323.dmzmgmt.uhc.com | Microsoft windows 2019 | Stage URN DB | 4 | 0 | MN011 |
| CMCP | Stage | dbves95324.dmzmgmt.uhc.com | Microsoft windows 2019 | Stage URN DB | 4 | 0 | MN053 |
| CMCP | Stage | dbves95325.dmzmgmt.uhc.com | Microsoft windows 2019 | Stage URN DB | 4 | 0 | MN011 |
| CMCP | Stage | es20db03.uhc.com | Exadata DB Server Node | Stage Powerfacets DB | 48 | 1536 | CTC |
| CMCP | Stage | es20db04.uhc.com | Exadata DB Server Node | Stage Powerfacets DB | 48 | 1536 | CTC |
| CMCP | Stage | rn000162559.uhc.com | Redhat linux 9 | COE Stage App Server-ELR | 2 | 16 | ELR |
| CMCP | Stage | rn000162560.uhc.com | Redhat linux 9 | COE Stage App Server-CTC | 2 | 16 | CTC |