ERICSSON

ERICSSON UNIFIED DELIVERY NETWORK

Service Provider Portal User's Guide

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Legal Information

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Preface

This guide introduces Service Providers to the Unified Delivery Network (UDN) Portal, and describes how to use the Portal to view UDN Service activity and configure settings.

Audience

This guide is intended for use by Service Providers who are responsible for viewing UDN Service performance, and configuring and maintaining the UDN service through the UDN Portal. It assumes the reader has a high level understanding of UDN and content management operations.

Accessing the UDN Documentation

You can access the release notes and the guides from the documentation HOW?

QUESTION: How will we be delivering documentation? TBD

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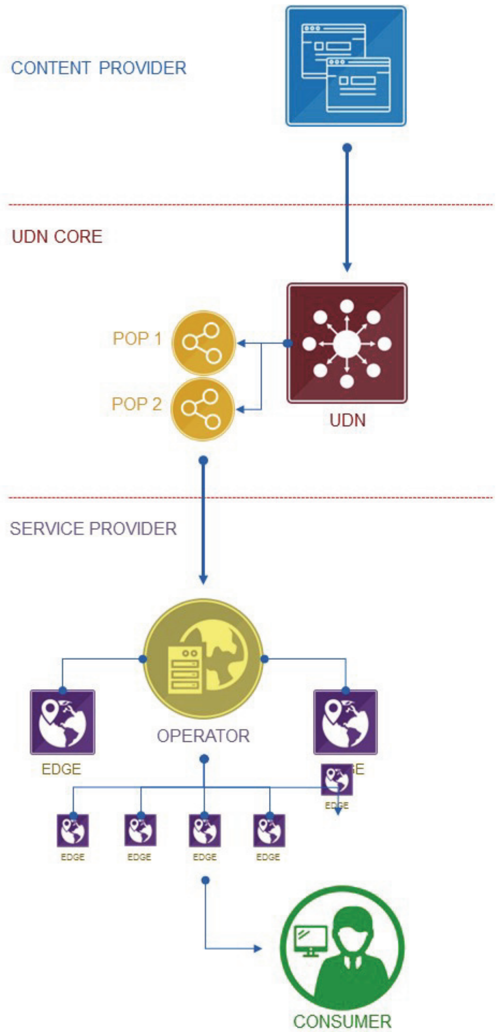
Chapter 1
UDN Overview

Ericsson's Unified Delivery Network (UDN) is a solution designed specifically to help Content Providers and Service Providers (how?).

UDN consists of two delivery networks: the UDN Core network, located at the Internet's backbone with PoPs at strategic exchange points, and UDN partners' "last mile" network at the Service Provider edge.

Figure 1-1: High-Level UDN Overview



UDN System Components

The following sections describe the components that comprise the UDN System.

The UDN Portal

The UDN Portal provides a customized experience to each of the three primary users: Content Providers, Service Providers, and Service Administrators.

Main features include:

Service Provisioning?

Analytics - reports provide real-time, historical, and billing data

Purge / content removal

Support

Content Providers can view and manage Groups and the Properties that belong to them. View reports on content sources and content distribution. Manage content caching.

Service Providers can view and manage Service Provider settings. View reports on content delivery for both on-net and off-net traffic.

Edge Delivery Nodes

Edge delivery nodes are responsible for UDN streaming content delivery. Edge delivery nodes are optimized for streaming rather than storage. They are located as close to the consumer as possible to provide geo-optimized delivery of popular content. Whenever an asset or live stream reaches a certain poularity threshold, it is automatically and instantly replicated to the appropriate number of edge delivery nodes in the desired geographical location.

Analytics

UDN System analytics provides operators with the ability to understand both the composition and the volume of their content delivery. Data is collected, aggregated, and analyzed on an ongoing basis from numerous sources within the CDN environment. Reports provide historical and current information which can help enable operators to tailor content caching and delivery as well as empowering them to make informed business decisions.

Analytics also feed billing systems across multiple revenue types. Designated billing information can be generated and delivered to Content Providers and Service Providers.

Monitoring and Availability

The UDN System uses persistent connections, intelligent content management, and both multi-site and multi-server database redundancy to provide additional layers of protection for system operation. UDN continuously and systematically monitors system and server health and availability.

Additional protection features on-the-fly failover, and can include load balancing and clustering where additional capabilities in redundancy and fault tolerance are required. The UDN system is designed to accommodate flash events where a surge due to an event causes a dramatic increase in system loads, which might ordinarily strain a CDN system. Built-in congestion and overflow handling capabilities prevent bottlenecks and ensure continuous content delivery.

UDN Core Cache

The Core Cache is a dynamically optimized, geographically distributed, extensible caching platform. It is the primary component of the UDN Service.

MediaWarp Technology

MediaWarp technology enables a highly scalable Content Delivery Network (CDN) that efficiently delivers both its own management content as well as OTT services from a common caching infrastructure. The front end of this system stores the metadata of published assets and interfaces with a storage system that hosts these assets. In addition, media upload, download, and processing, is performed by a system that communicates job processing and status information with external asset management systems.

Global and Local Load Balancing

UDN's global and local load balancing system determines the fastest and closest location from which to serve content to consumers. Continuous testing of performance and latency ensures optimized content delivery. Policy-driven routing decisions are based on geography, network and server load, and business rules. Load balancing is performed globally, at the UDN Core, and locally, at Service Provider sites. The goal is to match Content Providers' needs to the CDN's needs while ensuring high availability, high performance, and low cost.

Customer-Controlled Caching

Cache management via the UDN Portal enables content management personnel to specify policies for content caching and purge/invalidate content once it is no longer available to users. Security system multi-tenancy ensures that content generated by different Content Providers can only be accessed by its owner.

Transparent Internet Caching

Transparent Internet Caching (TIC) is used to alleviate the effects of bandwidth congestion, latency due to network issues, and unmanaged network transfer impediments, all of which require optimized control of network performance characteristics. The benefits of Transparent Internet Caching come from increasing intelligence both in the network and in the cache servers themselves. TIC automatically adjusts caching for popular content based on popularity statistics.

UDN Benefits

On top of the delivery and management system technology, UDN serves a central contracting role for global content delivery with Content Provider and Service Provider partners worldwide. Collaboration between Ericsson, Content Providers, and Service Providers increase qualify of service while decreasing delivery cost.

UDN's secure multi-tenant architecture provides a hierarchy to support different roles and permissions, enabling data security at all levels for secure visibility by Content Providers and Service Providers, and their subsidiaries, resellers, and partners.

For Content Providers, UDN provides the best quality of service for the lowest cost. Detailed data on end-user access and consumption patterns provide detailed, customized performance reports. With UDN, Ericsson removes the need to manage separate contracts with dozens of Service Providers, providing a centralized contracting organization with a global reach.

For Service Providers, UDN enables strategic placement of core and edge servers to increase capacity and lower delivery costs. In addition, Service Providers can use the UDN Portal to control how content is delivered through their network, and optimize their content delivery profits. Performance data from the content delivery platform is gathered and stored for on-demand analytics that provide dynamic, detailed information on end user access and consumption patterns.

Chapter 2
Getting Started with the Service Provider Portal

The Service Provider Portal is a Graphical User Interface (GUI) web application that enables you to monitor traffic delivery and manage settings associated with the UDN Service. This chapter introduces you to the Portal, describes its main features, and shows how to use it.

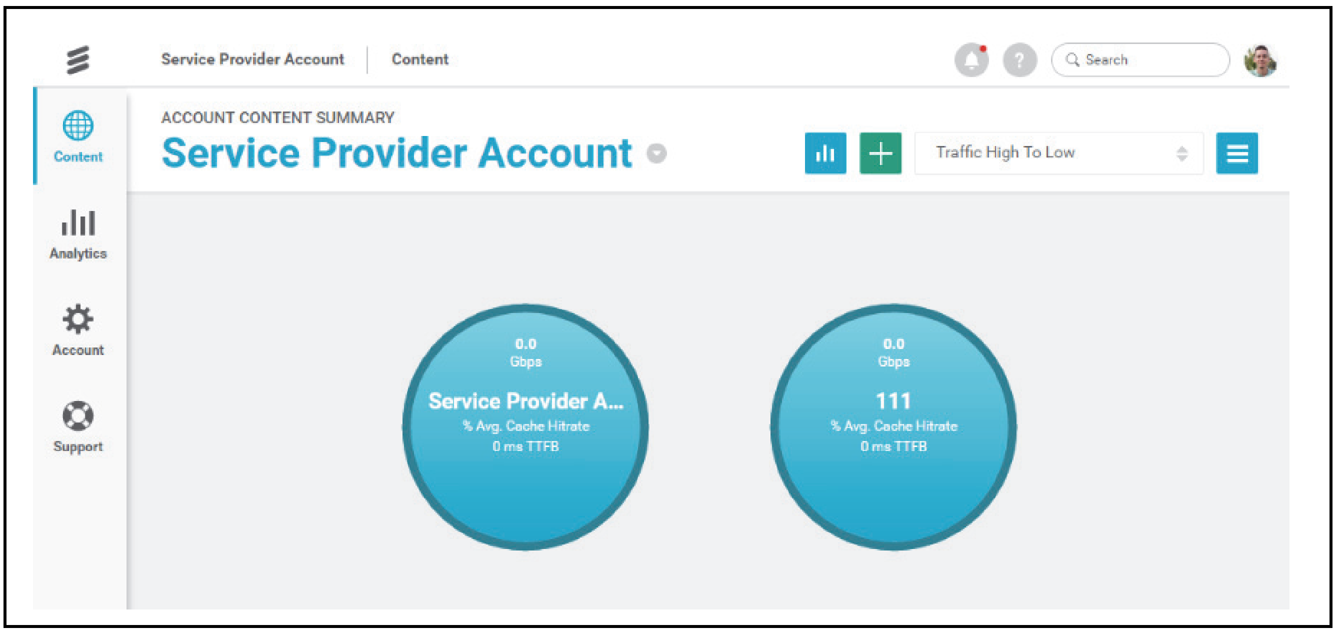
This chapter contains the following sections:

Accessing the Portal

The Service Provider Portal is a web-based interface that enables you to view and manage settings associated with UDN Services.

1. Open the browser of your choice. The following browsers are supported for Portal access at this time:
   - Chrome Version 48 or later
   - Internet Explore Version 11 or later
   - Safari Version 9 or later
   - Firefox Version 45 or later
2. To access the UDN Portal, navigate to:
   `https://portal.ericssonudn.com`
3. To log in to the Portal, enter your username and password. The Content Summary window displays (Figure 2-1).

Figure 2-1: Service Provider Portal Main Window



Exploring the Portal Interface

When you log into the UDN Portal for the first time, you will be presented with a visual representation of UDN traffic in the form of a Starburst. The Starburst feature is used to represent information associated with an entity, whether that entity is an Account (the highest level managed entity), a Group, or a Property (the lowest level managed entity).

To explore the Portal interface:

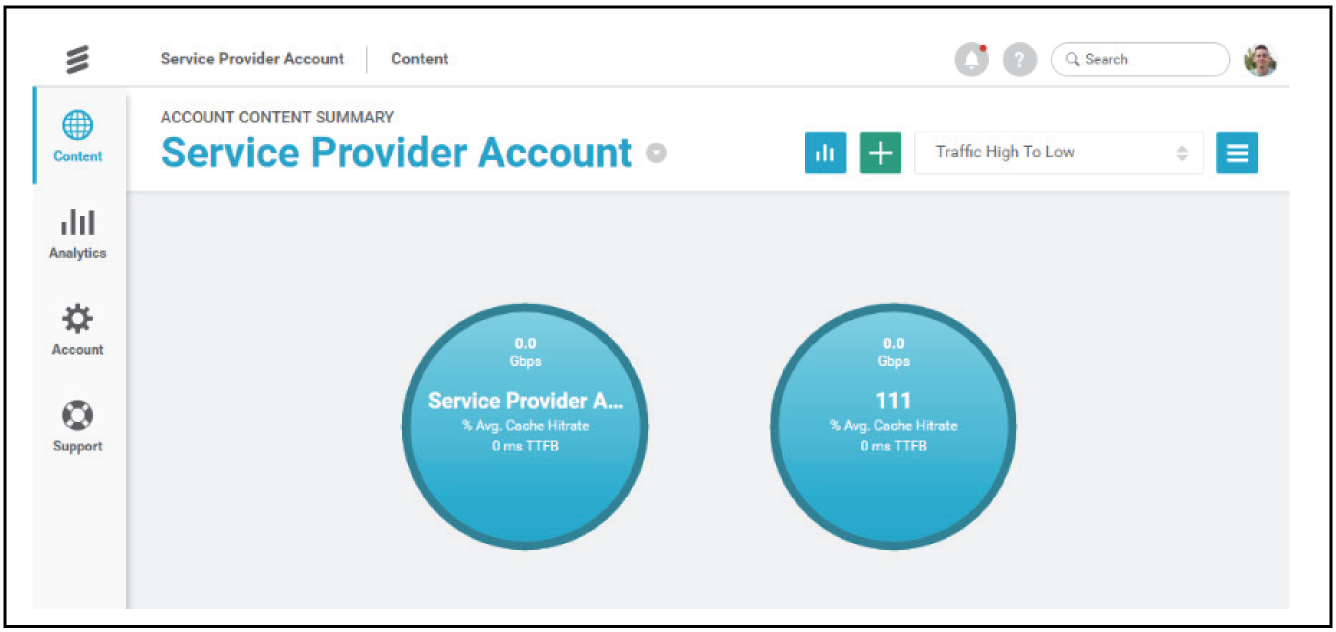
1. In the browser of your choice, navigate to:

   `https://portal.ericssonudn.com`

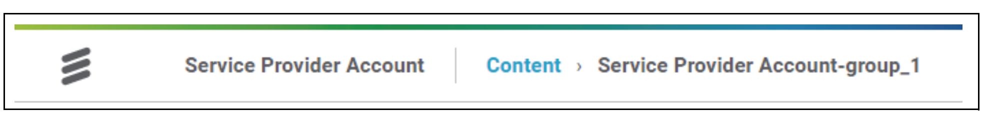
2. Log into the Portal with your username and password. The Account Content Summary page displays (Figure 2-2).

   The default landing page shows the "Starburst" view. In this view, each Group is represented by a circular Starburst. For a detailed explanation of Starbursts, see "Exploring Starbursts".

Figure 2-2: Service Provider Portal Main Window



- At the top left corner is the Ericsson icon (///) that will always bring you to the Portal's main view.
- To the right of that is an indicator showing which account type you are logged in to. To the right of the selector, you will find a breadcrumb trail of clickable links. The links that comprise this path enable you to quickly move up the navigation hierarchy to a higher level page.



NOTE

This breadcrumb path displays the direct path from the top-level Content Summary page to the current page you are viewing, rather than the path you followed to get to the current view.

3. At the top of the page on the right are icons for Alerts, Help, and Search.

   NOTE

   The Alerts, Help, and Search features will be implemented in a future release.

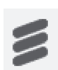
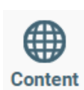
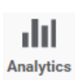
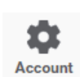
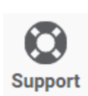
4. At the upper right is a User avatar icon. Click here to access a panel that displays user-specific settings.

   Here you can specify the UI Theme you want to view (Ericsson Light Theme and Ericsson Dark Theme), based on your preference.

5. Down the left side of the screen, you will view a number of icons you can click to access the main features of the Portal.

   Note that clicking any icon will bring you to a context-specific page associated with the icon's action. For example, if you are viewing a Group, clicking the Analytics icon will display reports for the traffic data associated with that Group.

Table 2-1: Navigation Icons

Icon	Name	Use
	Home	From any view, clicking the Home icon brings you to the highest level Portal page.
	Content	Clicking the Content icon brings you to the Content Summary page which displays information for entities associated with Content Providers.
	Analytics	Clicking the Analytics icon brings you to the Analytics page where you can view charts and generate reports. For more information, see Chapter 3, "Generating Reports".
	Account	Clicking the Account icon brings you to the Account Management page where you can view and manage Groups and Users. For more information, see Chapter 5, "Working with Groups" and Chapter 4, "Working with Users".
	Support	Clicking the Support icon brings you to a page where you can file and track support tickets, access support tools, and view documentation. For more information, see Chapter 8, "Accessing Support Resources".

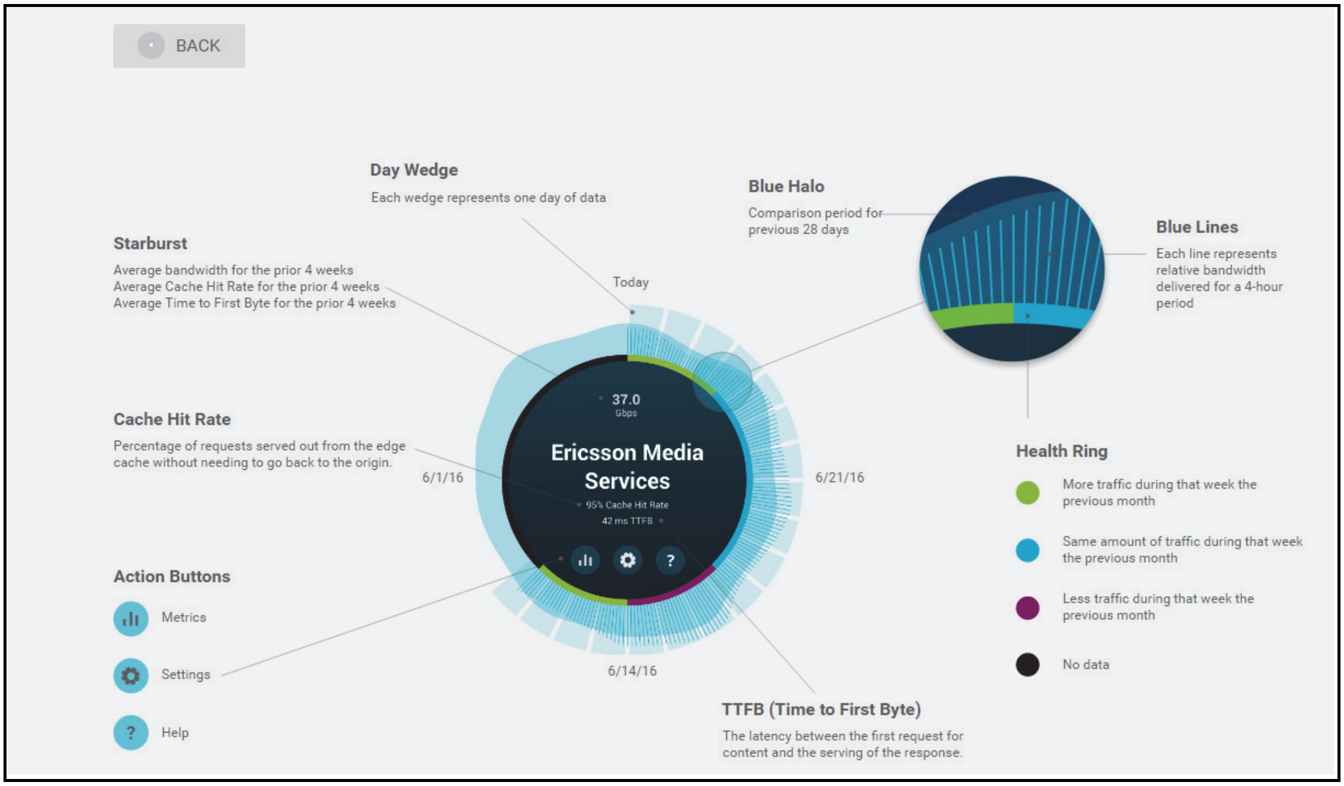
Exploring Starbursts

The Portal is used to manage and generate reports on three different levels of entity: Account, Groups, and Properties. An Account contains one or more Groups, and each Group contains one or more Properties. Analytics information for an entity is an aggregation of the data for all entities below it.

Within the Portal, each entity is graphically represented as a Starburst. Following is an overview of the rich collection of information that the Starburst data visualization provides.

You can view the Starburst Help page in the Portal (Figure 2-3) by hovering over any Starburst and clicking the Help icon (?) that displays in its center.

Figure 2-3: Starburst Help



Viewing Data Over Time

The Starburst represents the last 28 days of traffic activity for an Account, Group, or Property.

If you picture each Starburst (all Starbursts have the same layout regardless of whether they represent an Account, Group, or Property) as the circular face of a clock:

- The 12:00 position at the top of the Starburst represents today.
- The quarter-circle section between 12:00 and 3:00 represents the past week (the past 7 days).
- The quarter-circle section between 3:00 and 6:00 represents 2 weeks ago (the time between 14 days ago and 7 days ago).

- The quarter-circle section between 6:00 and 9:00 represents 3 weeks ago (the time between 21 days ago and 14 days ago).
- The quarter-circle section between 9:00 and 12:00 represents 4 weeks ago (the time between 28 days ago and 21 days ago).

You will notice a solid ring, called the Health ring, around the inner edge of each Starburst. For each week of traffic in the outer "halo", you will find the color of the inner ring represents how that week's traffic compares to traffic during the same time period four weeks earlier. When you hover over any point on the Health ring, a color key displays, enabling you to easily interpret the colored segments of the ring.

There is a "halo" of lines, or rays, radiating out from the edge of each Starburst. Each line represents the relative bandwidth delivered over a 4-hour period. Longer lines represent higher levels of traffic and shorter lines represent lower levels over the time period. You will typically notice a natural variation in bandwidth use over the course of a day (represented by 6 adjacent lines), but can also note other data trends as they appear.

As you mouse over the halo, the hover text shows the date and specific metrics for a particular day. For Property Starbursts, the rays for each day have a wedge, or slice, highlighting the day's boundaries.

Clicking on a particular wedge brings up the Property summary with the date range information preselected to match the date of the wedge you selected.

Key Performance Indicators

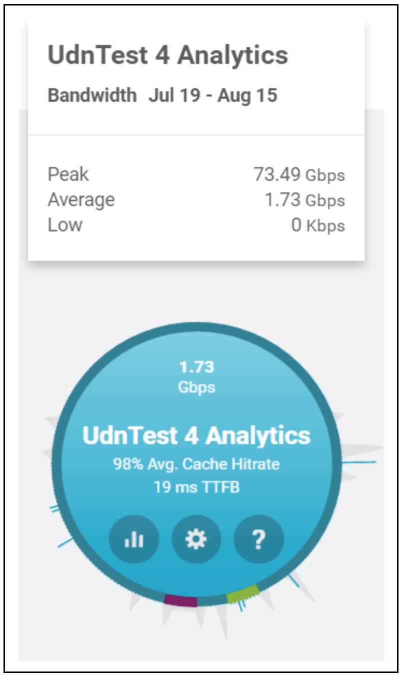
When the Starburst for an entity (Account, Group, or Property) displays, key performance indicators display automatically in the middle of the Starburst. In addition to the name of the entity, information averaged over the past month displays, including:

- The average bandwidth (in Gbps)
- The average cache hit rate for the past 28 days (as a percentage)
- The time to first byte (TTFB) in milliseconds for the past 28 days

A Starburst display provides access to additional information when you hover over different areas:

- When you hover over any point in the center of the Starburst, you can view the Peak, Average, and Low bandwidth for the most recent 28-day period.
- When you hover over any area on the solid-color health ring at the perimeter of the circle, a color key displays to assist you in interpreting the ring colors displayed.
- When you hover over any section on the halo (rays) outside the center circle, you can view the Peak, Average, and Low bandwidth for the date represented by that halo section.

Figure 2-4: Key Performance Indicators Display



Note that all metrics for an individual Starburst are an aggregate of any entities beneath that Starburst:

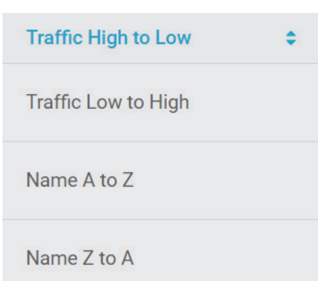
- A Group Starburst displays an aggregate of the data for all of the Properties belonging to that Group.
- A Property is the smallest entity available on the UDN Portal.

Sorting Displayed Entities

At the top of any page, to the right of the title of the entity you are viewing (Account, Group, or Property), there is a drop-down which enables you to sort the information you are displaying.

You can sort based on traffic (Traffic High to Low or Traffic Low to High), or you can sort alphabetically (Name A to Z or Name Z to A).

Figure 2-5: Sorting Entities



Displaying the Table View

As an alternative to the Starburst view, you can choose to display the same information as a series of rows in a table.

To display the Table View, click the Table View icon at the top right of the page: 

To return to the Starburst view at any time, click the Starburst View icon: 

Sample rows from the Table View are shown in (Figure 2-6).

Figure 2-6: Table View

The Table View displays the following information for a rolling 4-week period:

- The name of the entity (Account, Group, or Property).
- The last time the entity was modified, and the user who modified it.
- A chart indicating the daily bit rate over the past 28 days. Note that you can hover over the chart for detailed information.
- The Peak, Lowest, and Average bit rate for traffic over the past 28 days.
- The average cache hit rate for the past 28- days.
- The average Time to First Byte (TTFB), in milliseconds, for the past 28 days.

The Table View also provides the following icons:

- To configure settings for the displayed entity, click the Configure icon. 
- To view analytics for the displayed entity, click the Analytics icon. 

Navigating Between an Account, Groups, and Properties

This section discribes the ways you can navigate between entities (Account, Groups, and Properties) in the UDN Portal.

Top-Level View

To navigate to the top (Account) level view, click the Ericsson logo (///) in the upper left corner.

Starburst Navigation

To navigate to a lower-level entity in the UDN Portal, click on a Starburst. Clicking on a Starburst brings you to a display that shows all of the entities contained in the item you clicked.

For example, clicking on a Group Starburst brings you to a page that displays a Starburst for each of the Properties belonging to that Group.

Breadcrumb Navigation

To navigate to a higher-level entity in the UDN Portal hierarchy, you can traverse back up the path you used to navigate to your current view by clicking any item in the breadcrumb trail of links at the top of the page.

Figure 2-7: Breadcrumb Navigation

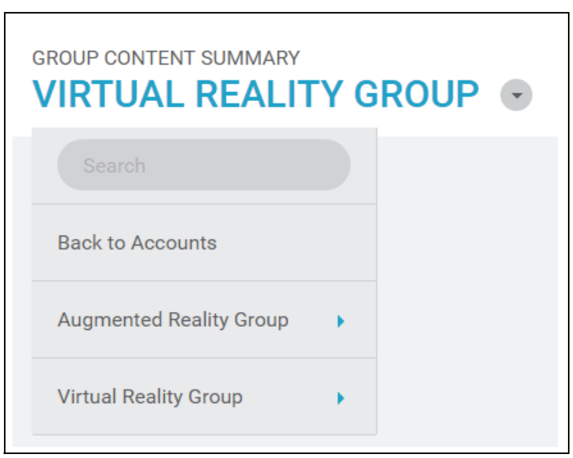
Drop-down Navigation

The UDN Portal also provides a drop-down selector that enables you to navigate either one level up from your current location, or to choose from other entities at the same level as the one you are currently viewing.

For example, if you are viewing a Group, the drop-down selector at the top of the page enables you to navigate up one level to view Accounts, or to choose to view a different Group belonging to the same Account as the Group you are viewing.

In addition, you can search for an entity using the Search field.

Figure 2-8: Drop-down Navigation Menu



Chapter 3
Generating Reports

The Analytics feature of the Portal enables you to display rich information about UDN Service traffic.

This chapter contains the following information:

Report Overview

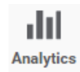
Note that when you click the Analytics icon anywhere it appears on the Portal, the Portal will display reporting information associated with the currently selected entity (Account, Group, or Property).

For example:

- If you click the Analytics icon inside a Property Starburst, the reporting information will reflect the data available for that Property.
- If you are viewing a Group and click the Analytics icon on the left navigation bar, the reporting information will reflect the data available for that Group.
- It is important to understand that the data displayed is the aggregated sum of all available data for all Properties belonging to the selected entity. So:
    - Reporting for a Property displays all data for that specific Property.
    - Reporting for a Group displays a total of all data for the Properties belonging to that Group.
    - Reporting for an Account displays a total of all data for all Properties belonging to all Groups within that Account.

Viewing Reports

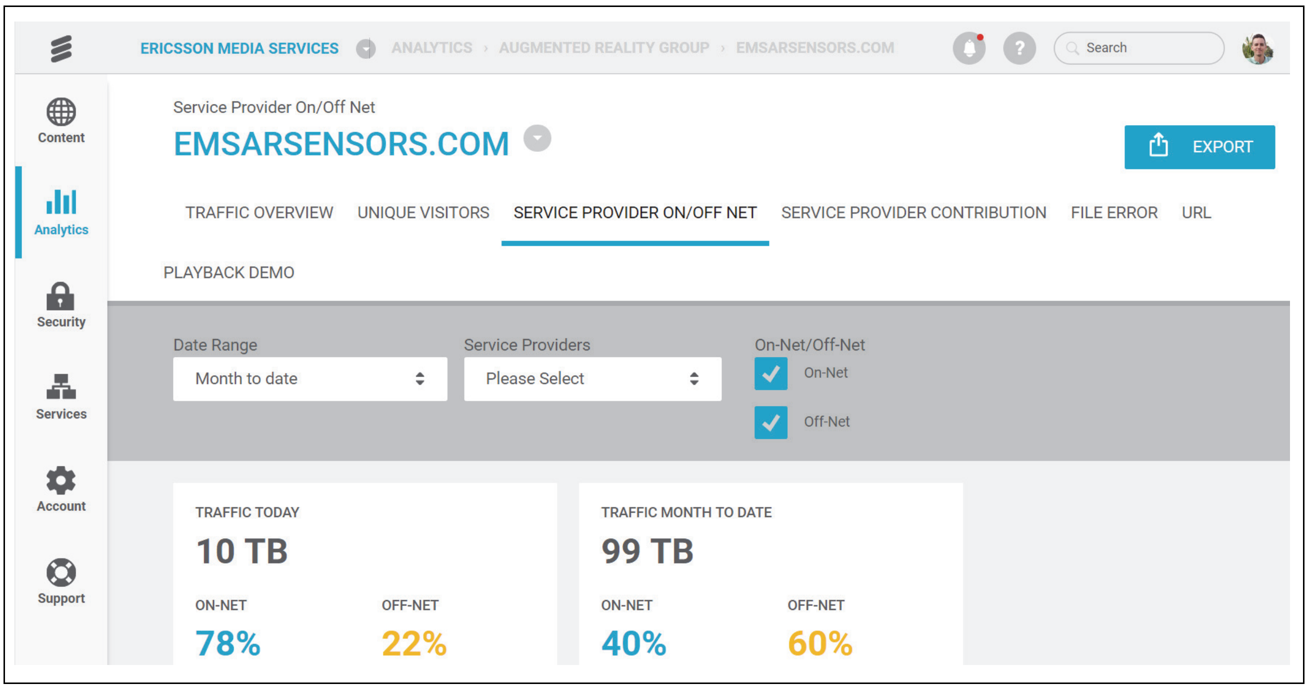
To view a report:

1. Navigate to the entity (Account, Group, or Property) whose data you want to view.
2. Do one of the following:
   - Click the Analytics icon on the left navigation bar. 

   - Click the Analytics icon inside any Starburst. Note that you need to hover the cursor in the center of the Starburst in order for this icon to display.

   A Report page displays for the entity you selected. You can select different types of reports by choosing the tabs that display above the report. Figure 3-1 shows an example of the Service Provider On/Off Net Report.

Figure 3-1: Service Provider On/Off Net Report



1. By default, each report type shows data for the Month to Date.

   You can modify this setting by selecting from a predefined list of options (Last Month, Last Week, and so forth), or you can specify a Custom Date Range.

   When you specify a date range that spans multiple days, the data displays in daily increments. When you specify a single day, the data displays in hourly increments.

   NOTE

   Each report type offers settings that allow you to generate more customized reports. Detailed information about each report type is available in the following sections.

2. When information is displayed in table form, you will see a small triangle appear next to some column headings. You can sort the table based on the column content by clicking these headings.

3. You can Export a displayed report to a CSV (comma separated variable) file format by clicking the Export button. The resulting .csv file name includes the report type and the entity (Account, Group, or Property) for which data is included.

   NOTE

   Not all report types support the export function at this time. Support will be added in a future release.

4. You can select a different Entity from the selector at the top of the page.

   When you do so, if the report is availability for the Entity type (Account, Group, or Property), the same report type will display for that Entity. If it is not available, a report available for that Entity will display.

Service Provider On / Off Net Report

The Service Provider (SP) On/Off Net Report allows Service Provider partners to see how much traffic to their subscribers is being served from their network (On Net) or being served either from the UDN Edge or another UDN Partner Network (Off Net).

A request from a subscriber might be routed to either the UDN Edge or another Service Provider range for a variety of reasons including:

- A lack of server availability for the SP that owns the subscriber
- The SP network edge's inability to satisfy the request due to issues such as SSL delivery problems
- Advanced cache control requirements that cannot be properly identified by the SP network
- Network saturation/volume

Availability is determined based on the health or load of the SP Edge servers. If there are no healthy servers to route the request to, or if the load for the SP Edge Servers is too high, routing will bring this subscriber to the UDN Edge or another SP in order to obtain the content. SP Partners are incentivized to maintain enough capacity to minimize any Off Net routing because they get more revenue share for serving their subscribers directly.

Scope

This report is available to users who have been assigned either the UDN_Admin or SP_Admin role. You can generate this type of report for an Account, Group, or Property.

Settings

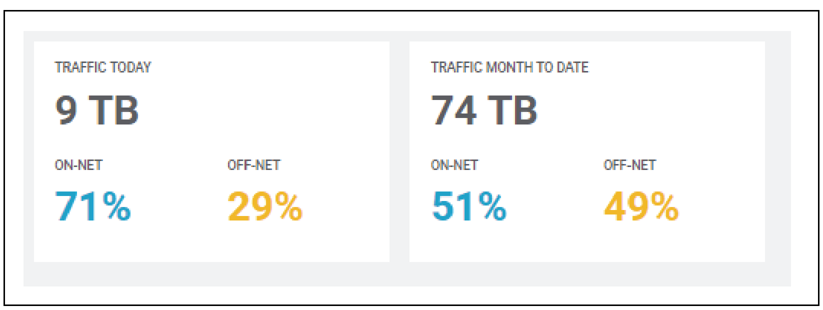
You can specify the following settings for this report:

- Date range
- Traffic type: select On-Net traffic, Off-Net traffic, or both

Content

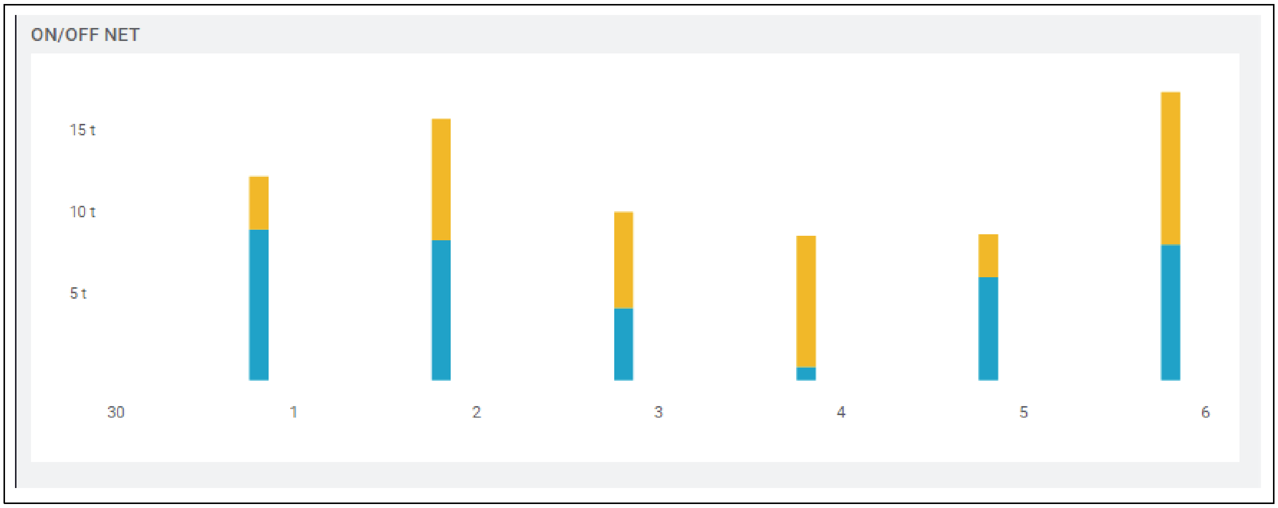
When viewing the SP On/Off Net report, the area at the top displays traffic information for both the current date and the specified date range (Figure 3-2).

Figure 3-2: SP On/Off Net Report: Traffic Overview



The next section of the report (Figure 3-3) shows the traffic volume both On and Off Net for each day in the range specified.

Figure 3-3: SP On/Off Net Report: Volume Chart



The last section of the report (Figure 3-4) displays a table with specific data for each date in the range specified.

Figure 3-4: SP On/Off Net Report: Data Table

DATE	ON NET (BYTES)	ON NET (%)	OFF NET (BYTES)	OFF NET (%)	TOTAL (BYTES)
07/05/2016	8 TB	47%	9 TB	53%	18 TB
07/04/2016	6 TB	70%	3 TB	30%	9 TB
07/03/2016	817 GB	9%	8 TB	91%	9 TB
07/02/2016	4 TB	43%	6 TB	57%	10 TB
07/01/2016	9 TB	54%	7 TB	46%	16 TB
06/30/2016	9 TB	74%	3 TB	26%	12 TB

Chapter 4
Working with Users

The Portal can only be accessed by people who have been added as Portal users. Each user is associated with a specific Portal Account. When a Portal user is added, they are assigned a user role which grants them permission to access specific Portal features.

This chapter contains the following sections:

Understanding User Roles and Permissions

In order to access the Portal, people must be added to the Portal as users, and when a U=user is created, they are given a User Role chosen from those predefined in the Portal.

Roles fall under one of two categories: Administrator or User. In addition to the ability to view information in the Portal, users who have been assigned an Administrator role can also create, modify, and delete items through the Portal interface. Those with a User role can view items in the Portal interface, but cannot create, modify, or delete them.

Each role provides specific permission to access different features of the UDN Admin Portal, as shown in Table 4-1.

Table 4-1: Predefined Portal Role Permissions

Portal Feature	SP Admin	SP User VIEW ONLY
Account	X	X
Analytics	X	X
Analytics - Daily Cache Hit Rate Report		
Analytics - File Error Report		
Analytics - SP Contribution Report	X	X
Analytics - SP On/Off Net Report	X	X
Analytics - Traffic Overview Report		
Analytics - Unique Visitors Report		
Analytics - URL Report		
Configuration		
Content	X	X
DNS		
Security		
Services		
Support	X	X

NOTE

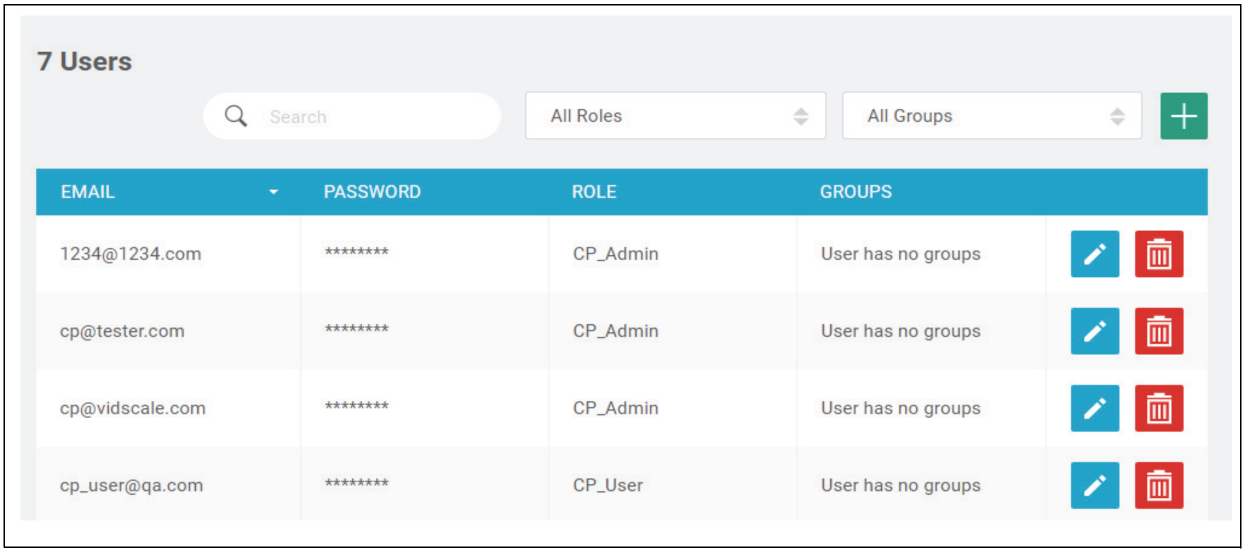
If a user attempts to access a feature that their role does not grant permission to access, a message indicating this will display.

Viewing and Managing Users

To view User information:

1. Navigate to the summary page for the desired Account.
2. Click the Users tab. A list of all current Users displays. For each User, the table lists their Email (which is also their user name), Password, Role, and any Groups they belong to.

Figure 4-1: Account Management: Users Tab



3. To search for a specific user, enter information in the Search area.
4. To view users with specific Roles, select the desired option in the Role drop-down list.

   NOTE

   Users are not assigned to Groups in this release, so searching for Users in the Groups drop-down will yield no results.

5. To add a user, click the Add (+) icon.

   NOTE

   Only Users with Admin permissions can add other Users. For more information on User Roles see “Understanding User Roles and Permissions”.

   a. Specify the user’s email (which acts as their username).
   b. Specify and confirm the user’s password. Passwords must meet the following requirements:
      - Between 8-15 characters long
      - Contain at least one uppercase letter
      - Contain at least one lowercase letter
      - Contain at least one number
      - Contain at least one special character ($, @, #, !, and so forth)

c. Select the user's Role.

d. Click Save to save your changes, or click X to cancel the operation.

6. To edit a user, locate the row associated with that user in the table, and click EDIT.

   NOTE

   Only Users with an Admin Role can edit users. For more information on User Roles see "Understanding User Roles and Permissions".

   Specify the information associated with this user by entering:

   - Their email (which acts as their username)
   - Their first name
   - Their last name
   - Their phone number
   - Their password
   - Their user role.

7. When finished, click Save to save your changes, or click Cancel to cancel the operation.

Deleting a User

TBD.

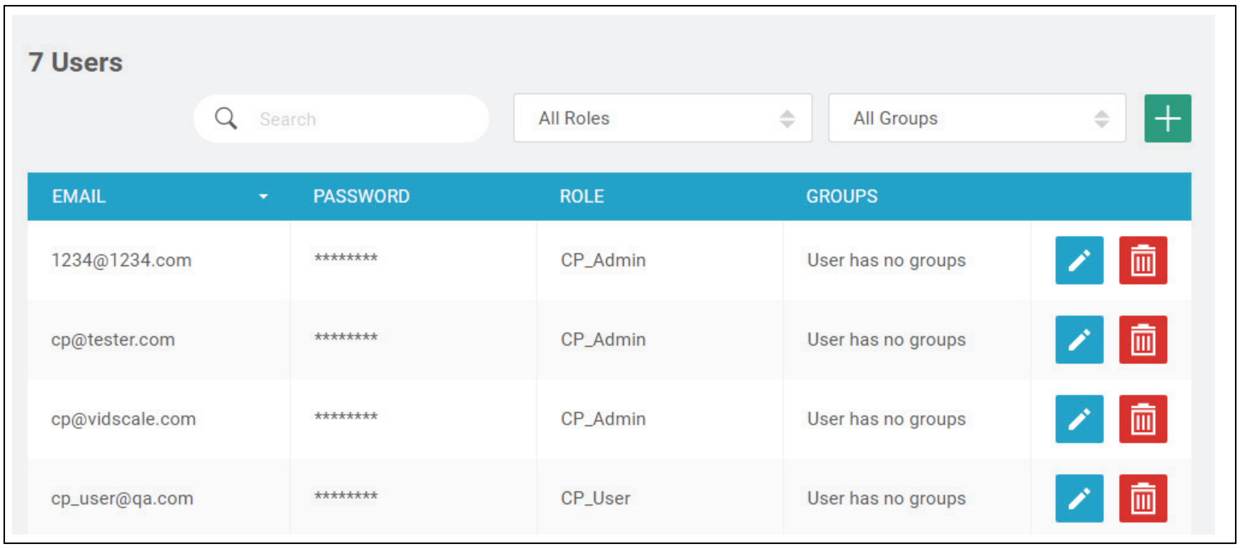
NOTE

Only Users with Admin permissions can delete users. For more information on Roles see "Understanding User Roles and Permissions".

To delete a User:

1. Navigate to the summary page for the desired Account.
2. Click the Users tab.

Figure 4-2: Accounts Page: Users Tab



3. Locate the row associated with the user in the table, and click the Delete icon on that row.
4. Confirm the deletion to complete the operation.

Chapter 5
Working with Groups

The UDN Administrator Portal is a Graphical User Interface (GUI) web application that serves as the management application for UDN administration, configuration, and monitoring.

Groups are defined as collections Properties associated with a specific Account. Groups also include a collection of Users who have permission to access that Group.

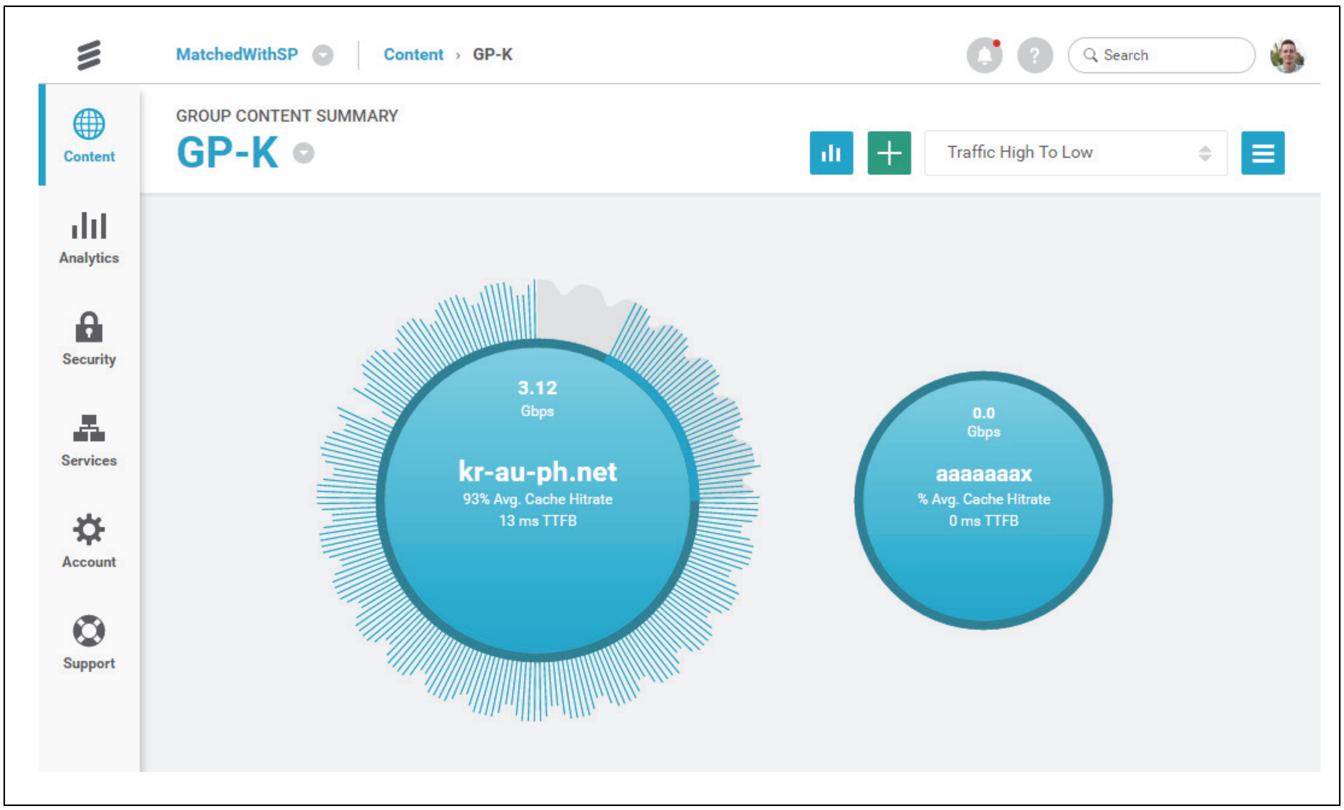
This chapter contains the following sections:

Viewing and Managing Groups

To view and manage Groups:

1. Navigate to the summary page for the desired Account.
2. Select a Group by doing one of the following:
   - Click the selection icon to choose from a drop-down list of Groups.
   - Click the desired Group Starburst to display additional information for that Group.
3. Information for the selected Group displays on the Group Content Summary page (Figure 5-1). This page displays a Starburst for each Property that belongs to the Group.

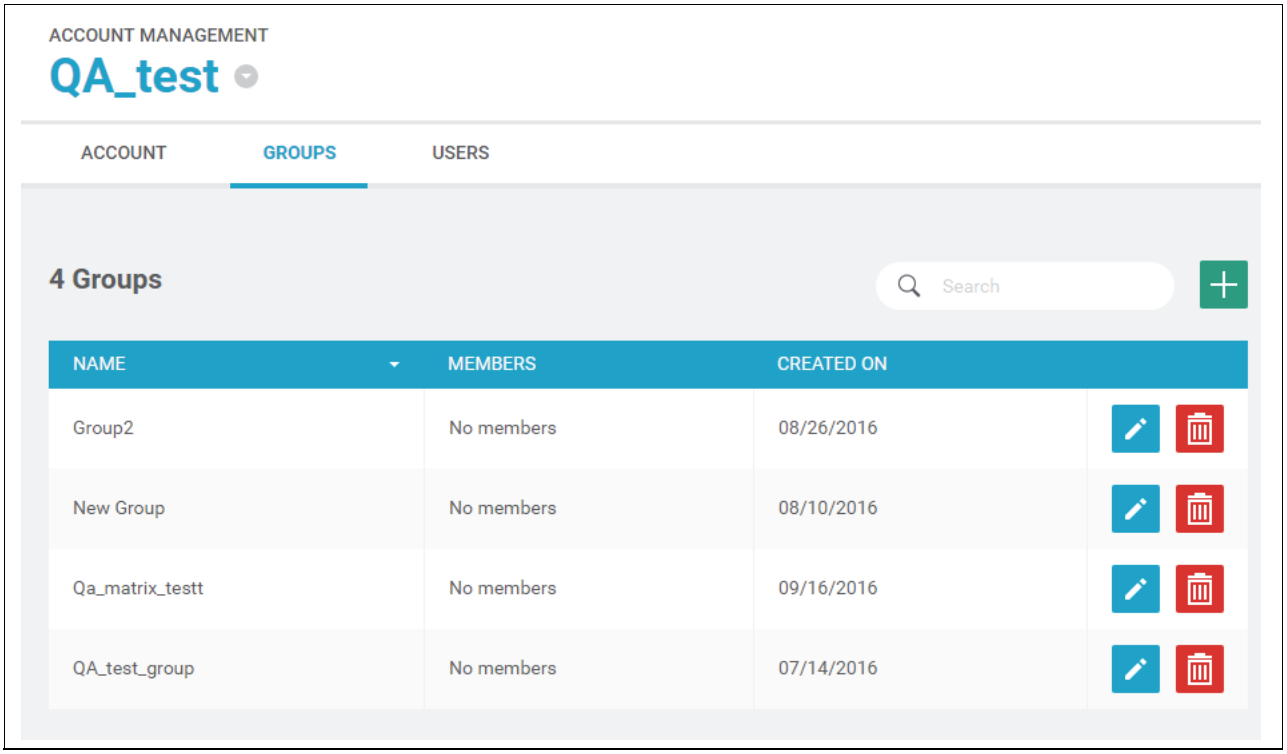
Figure 5-1: Group Content Summary Page



> NOTE
>
> If you wish to add or modify the Properties associated with this Group, refer to Chapter 6, “Working with Properties” for further information.

4. Click the Account icon in the left navigation bar. The Account Management page displays.
5. Click the Groups tab (Figure 5-2) to view information about all existing Groups associated with this Account.

Figure 5-2: Account Management: Groups Tab



6. To add a Group:

   NOTE

   Only Users with Admin permissions can add Groups. For more information on User Roles see "Understanding User Roles and Permissions".

   a. Click the Add (+) icon.
   b. Enter the Name of the Group
   c. Click Save to save your changes, or click X to cancel the operation.

7. To edit a Group:

   NOTE

   Only Users with an Admin Role can edit Groups. For more information on User Roles see "Understanding User Roles and Permissions".

   a. Locate the row associated with that Group in the table.
   b. Click the Edit icon (pencil) at the end of that row.
   c. Edit the Name of the Group.
   d. Click Save to save your changes, or click X to cancel the operation.

Deleting a Group

The Portal allows users with the appropriate privileges to delete Groups. Note that when you delete a Group, any Properties associated with that Group are also deleted.

CAUTION

Delete with caution: you cannot restore a deleted Group.

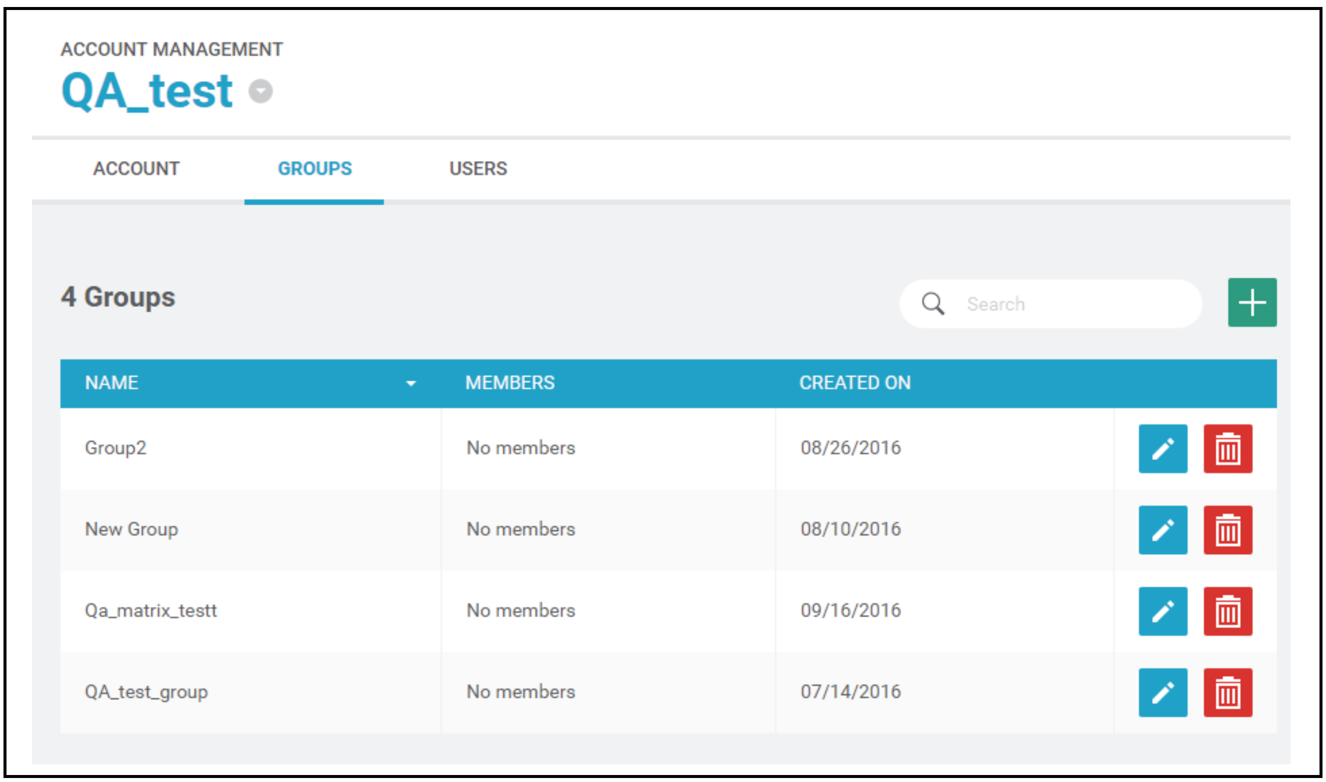
NOTE

Only Users with an Admin Role can delete Groups. For more information on User Roles see "Understanding User Roles and Permissions".

To delete a Group:

1. Navigate to the summary page for the desired Account.
2. Click the Account icon in the left navigation bar. The Account Management page displays.
3. Click the Groups tab.

Figure 5-3: Account Management: Groups Tab



1. Locate the row associated with that Group in the table.
2. Click the Delete icon (trash) at the end of that row.
3. Confirm your action to complete the operation.

Chapter 6
Working with Properties

The UDN Administrator Portal is a Graphical User Interface (GUI) web application that serves as the management application for UDN administration, configuration, and monitoring.

Each UDN Property represents a Content Provider's published host name, or the URL of the actual asset to be accelerated. The Portal provides a rich collection of settings to enable you to specify the unique parameters associated with each Content Provider's Property.

This chapter contains the following sections:

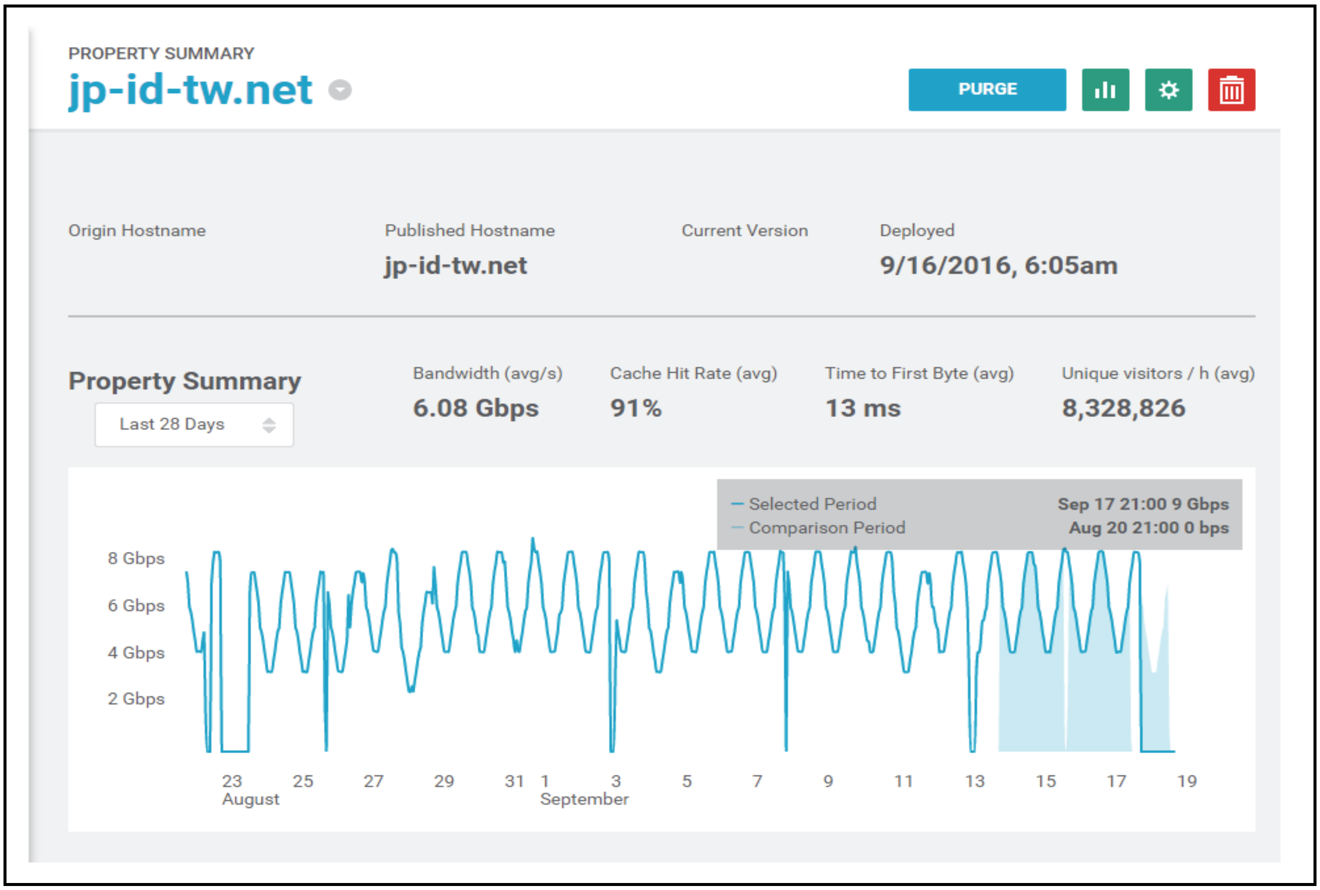
Viewing Properties

To view and manage a Property:

1. Navigate to the summary page for the desired Account.
2. Navigate to the Group to which the desired Property belongs by doing one of the following:
   - Click the selection icon to choose from a drop-down list of Groups.
   - Click the desired Group Starburst to display information for that Group.
3. Navigate to the desired Property by doing one of the following:
   - Click the selection icon to choose from a drop-down list of Properties.
   - Click the desired Property Starburst to display information for that Property.

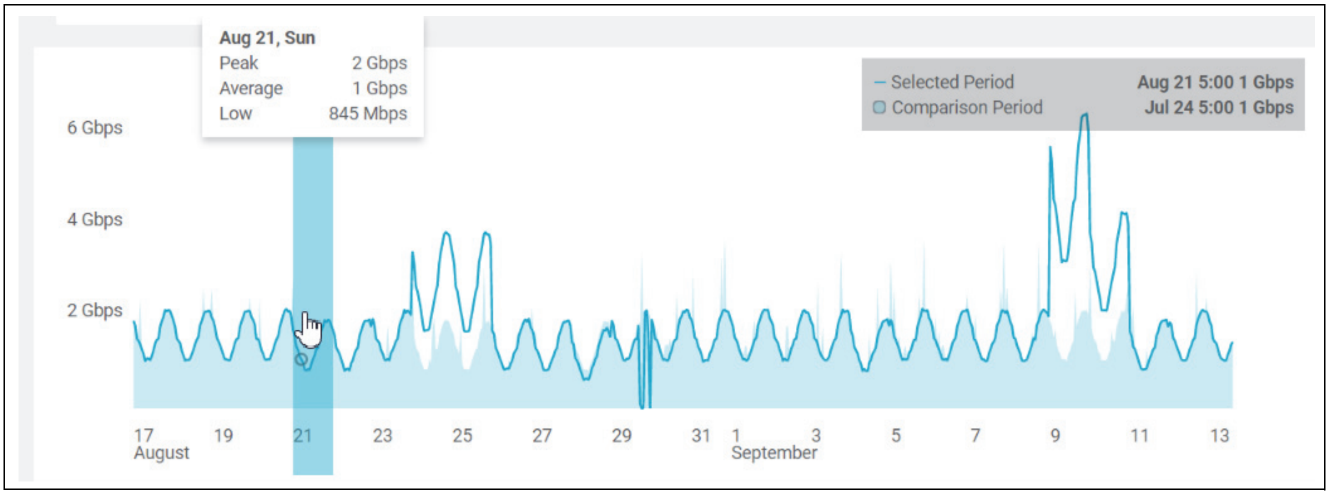
   The Property Summary page displays (Figure 6-1).

Figure 6-1: Property Summary Page



4. Just above the chart at the top of the page is a drop-down selector that enables you to choose the period of time for which you want to display data. This chart also provides additional detail on a specific day when you hover over any portion of the graph (Figure 6-2).

Figure 6-2: Property Summary Graph



NOTE

When you hover over a specific date, then click on it, the graph will zoom in to show data for that day.

The Property Summary page displays the following information about the Property:

Table 6-1: Property Summary Information

Information	Description
Property Name	The name of the Property, followed by a drop-down icon that enables you to select any other Property in that Group.
Origin Hostname	The URL of the origin associated with the Property.
Published Hostname	The hostname associated with the Property.
Current Version	TBD
Deployed date	TBD - Is this the date the Property was originally created in the Portal or the date the most recent Property configuration was deployed.
Property Summary date range selector	Enables you to specify the date range to display in the chart below. You can choose to view data for the Last 28 Days, or to specify a Custom Date Range.
Bandwidth (avg/s)	The average bandwidth over the specified date range.
Cache Hit Rate (avg)	The average cache hit rate for this Property over the specified date range.
Time to First Byte (avg)	The average TTFB over the specified date range.
Unique Visitors / hour (avg)	The average number of unique visitors per hour over the specified date range.

5. There are icons at the upper right which enable you to access other Portal features, enabling you to:
   - Purge content from the Property, as described in “Purging Cache Content” in Chapter 7.
   - Generate reports for traffic associated with this property, as described in Chapter 3, “Generating Reports”

Adding or Modifying a Property

Text TBD

NOTE

Only Users with an Admin Role can add or modify Properties. For more information on User Roles see "Understanding User Roles and Permissions".

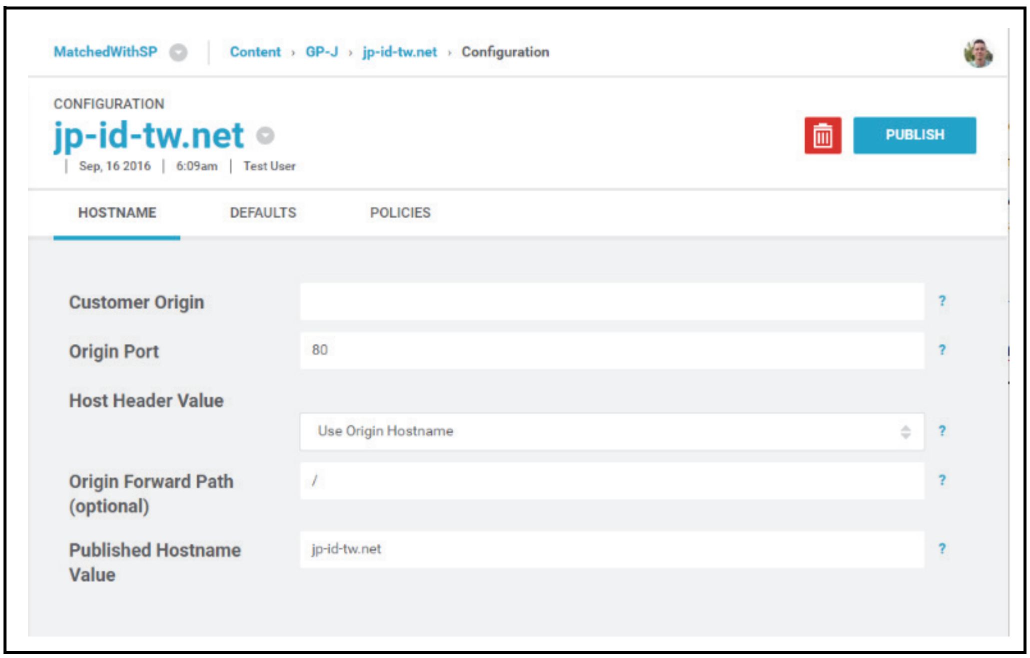
To create or modify a Property:

1. Do one of the following:
   a. To create a Property, click the Add (+) icon.
   b. To edit an existing Property, navigate to a page displaying that Property, then click the Configure icon.

      You can find this icon on the Table View row for a specific Property, or at the top of a Property Summary page. To access this icon on a Starburst page, hover over the center of the Starburst for that Property until the Configure icon displays.

   The Property Configuration page displays (Figure 6-3).

   Figure 6-3: Property Configuration Page: Hostname Tab



2. Click the Hostname tab in order to view Hostname settings for this Property. To configure Property Hostname settings:
   a. Specify the URL for the Customer Origin, which is the web server that holds the CP content.

      The Customer Origin is the publicly addressable location of the web server from which the UDN platform will retrieve content for delivery to end users.

      This address can be either a fully qualified domain name or an IP address. Typically, the customer origin is a subdomain of the delivery domain such as origin.example-domain.com.

b. Specify the Origin Port.

   By default, the UDN platform will use port 80 to fetch HTTP content and port 443 to fetch HTTPS content.

c. Specify the Host Header Value, which is the value that the UDN caching server will use for the origin host name. You can choose from three options:

   - Use Other Hostname Value (after which you specify a custom value on the following line)
   - Use Origin Hostname
   - Use Published Hostname

d. The Origin Forward Path is an optional setting that should only be used if the content on the origin does not use the same request path as the end user request path.

   By default, the Origin Forward Path will be set to the path of the end user URL request.

   If you want to specify a separate request path, do so here.

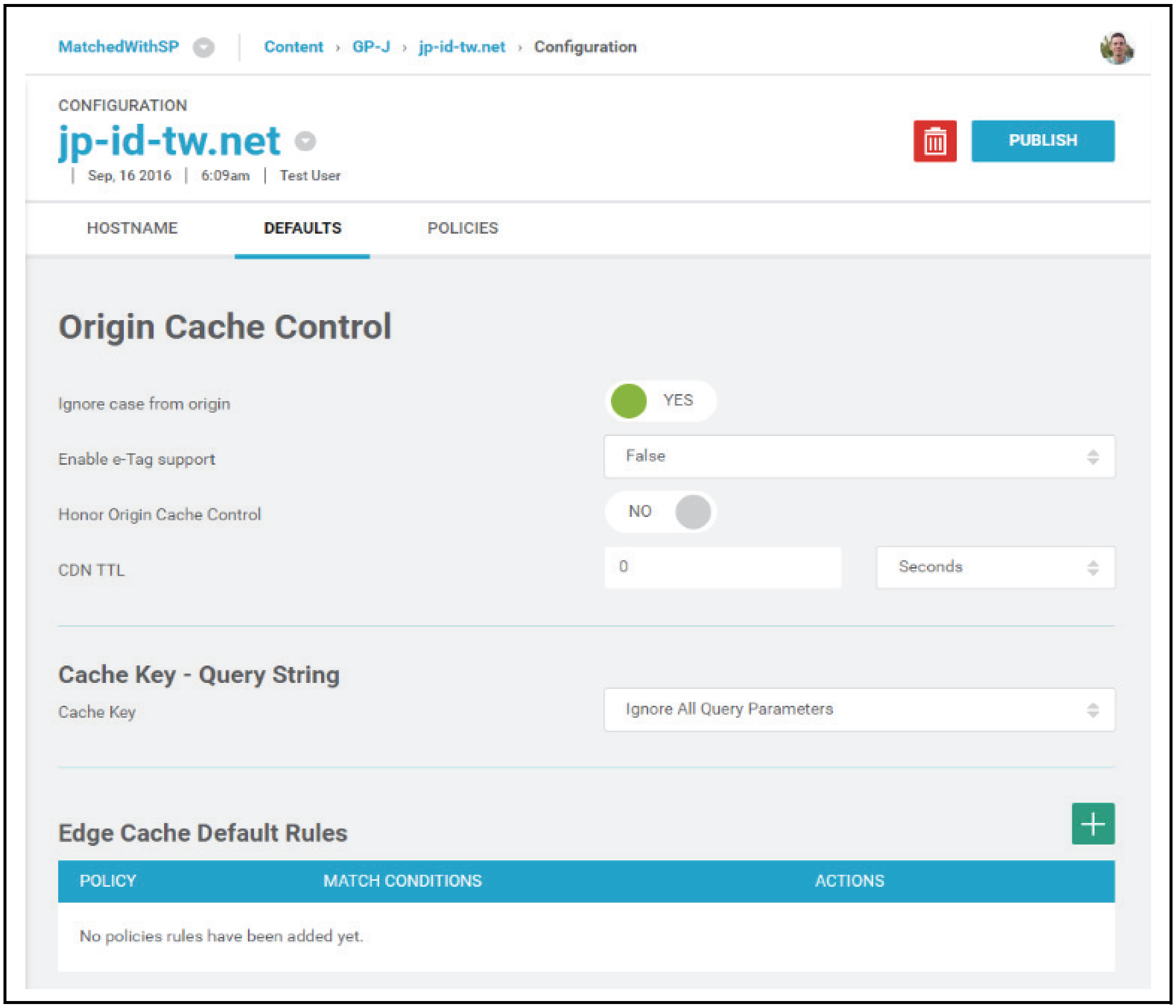
e. Specify a Published Hostname Value.

   This is the hostname used to deliver content to the end users (sometimes called a Vanity Hostname). This Published Hostname must be a sub-domain value.

f. When finished, click Save.

3. To Configure Property Default settings, click the Defaults tab.

Figure 6-4: Property Configuration: Defaults Tab



4. Settings associated with Origin Cache Control are located at the top of the Defaults tab. These settings allow you to specify how the caching server should interact with the origin.

   a. Set "Ignore Case from Origin" to either Yes or No.

      This setting provides support for situations where content received from the origin is case sensitive.

   b. Set the type of e-tag Support for the origin cache.

      This setting specifies whether the origin supports entity tags in the HTTP header. E-tag usage is one of several mechanisms that HTTP provides for web cache validation, which allows a client to make conditional requests. This allows caches to be more efficient, and saves bandwidth, as a web server does not need to send a full response if the content has not changed.

      You can choose from the following settings:

      - Strong
      - Weak
      - False

c. Specify whether or not to Honor Origin Cache Control.

   This setting determines whether cache control settings in the HTTP header, which affect control of the cache from the origin, are to be honored.

   In some cases, the Origin is used for multiple purposes, not just as a caching origin, and these values may not apply to UDN usage.

d. Specify the CDN Time To Live (TTL) value:

   This TTL setting specifies the period of time (specified in seconds, minutes, hours, or days) that the cached object will remain valid in the cache. Once a cached object is no longer valid, that object will be fetched from the origin when it is next requested.

   If no cache rule match is found in the configuration, or if UDN is instructed to use the Origin's cache control policy and there is no explicit maximum age value, the CDN Time-to-Live (TTL) value will be applied.

e. The middle section of the Defaults tab enables you to specify cache key settings to modify caching behavior. By default, the entire query string value, along with the URL path, is utilized as the cache key value.

   To specify the cache key query string, select the appropriate cache key control:

   - Include all query parameters
   - Ignore all query parameters
   - Include some parameters

   If you choose "Include Some Parameters", specify one or more Query names (parameters) associated with this caching behavior.

f. When finished, click Save.

   NOTE

   The Policies tab on the Property Configuration page enables you to specify caching policies. For more information, see Chapter 7, "Managing Cache Content".

QUESTION: The Edge Cache Default Rules section at the bottom of the Defaults tab launches the same dialog boxes as the feature available on the Policies tab. What is the difference between configuring Edge Cache Default Rules on the Defaults tab and configuring Policies on the Policies tab? TBD

Deleting a Property

Text TBD

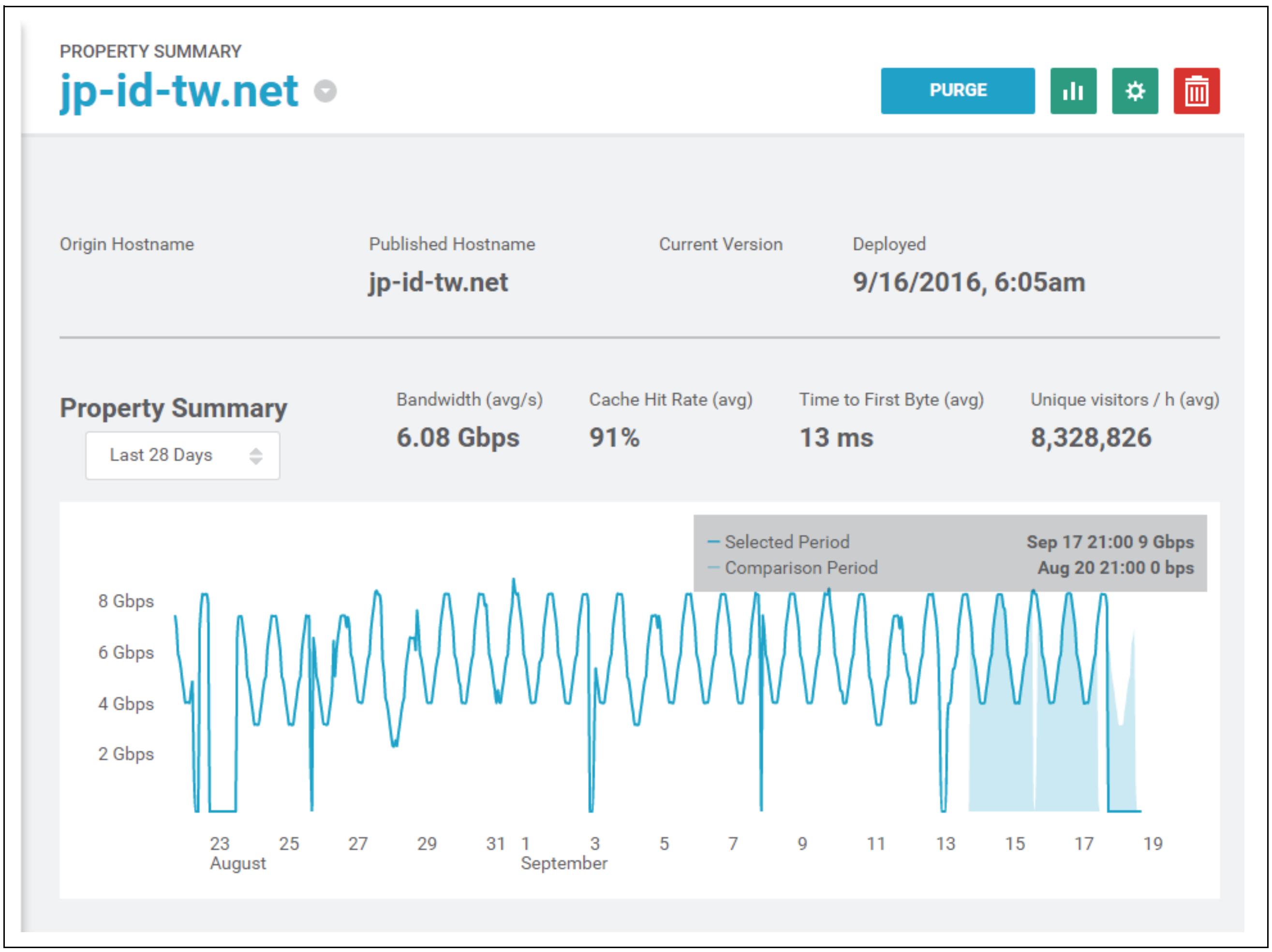
NOTE

Only Users with an Admin Role can delete Properties. For more information on User Roles see "Understanding User Roles and Permissions".

To delete a Property.

1. Navigate to a page where you can view the desired Property.
2. Click the Configure (gear) icon for the Property. The Property Summary page displays (Figure 6-5).

Figure 6-5: Property Summary Page



3. Click the Delete (trash) icon.
4. Confirm your selection to complete the operation.

QUESTION: What happens when you delete a property? Does traffic stop being delivered to it? TBD

Chapter 7
Managing Cache Content

Policies enable you to control content caching for a specific Property. You can specify conditions associated with Property content, and the actions you want UDN to take when those conditions are met. Cache Control rules defined in the Portal are pushed out to the UDN production environment.

For greater content caching control, a single Policy can include multiple match conditions and multiple actions. Note that the actions associated with a Policy Rule are not triggered unless the requested content meets ALL conditions specified for that rule.

For example, if you wanted to perform a specific action if a query string was part of the URL, then you would specify the query string and select Exists. Then you would choose the appropriate action to take when this query string is present. For example, you could specify that the cache freshness value is no-store when in the presence of a particular name-value pairing in the query string.

This chapter contains the following sections:

Managing Caching Policies

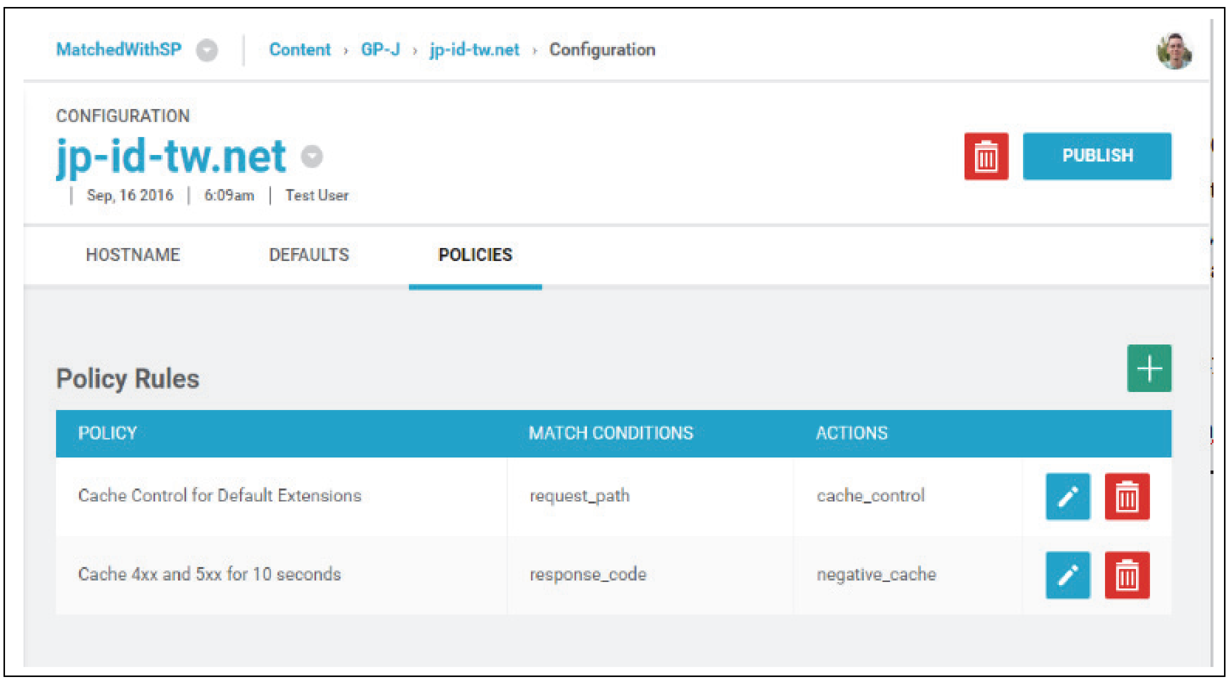
A policy is a specific action you want the UDN system to take when it encounters a particular set of circumstances. You can define policy rules in the Portal to specify these circumstances, and what you want the cache to do when they occur.

(give examples)

To manage policies:

1. Navigate to the summary page for the desired Account.
2. Click the Starburst for the Group to which the desired Property belongs.
   The Group associated with that Property displays.
3. Hover over the Starburst for the desired Property until the Configure icon displays. 
4. Click the Configure icon. The Property Configuration page displays.
5. Click the Policies tab. A list of current Policy Rules displays in table form.

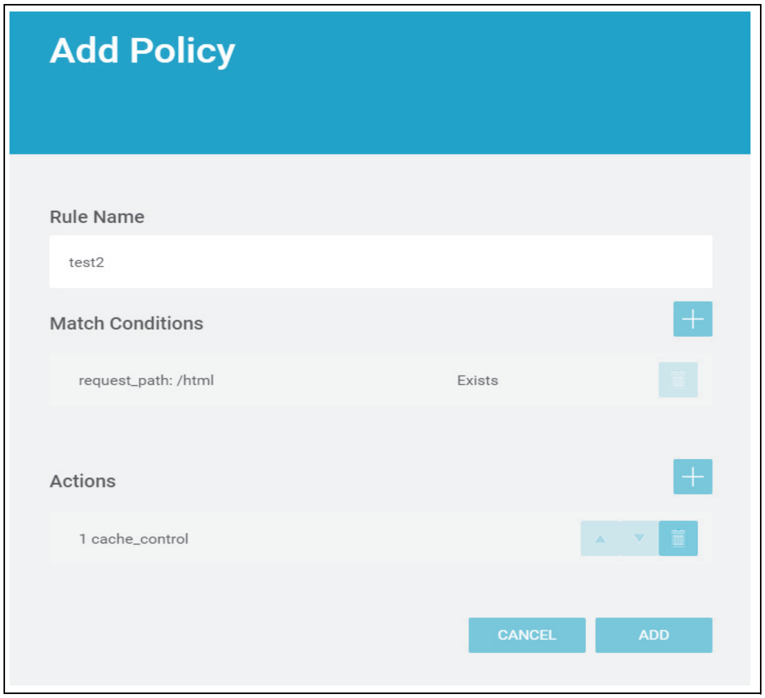
Figure 7-1: Property Configuration: Policies Tab



6. Do one of the following:
   - To add a new policy, click the Add (+) icon.
   - To modify an existing policy, locate the policy in the table and click Edit on that row.

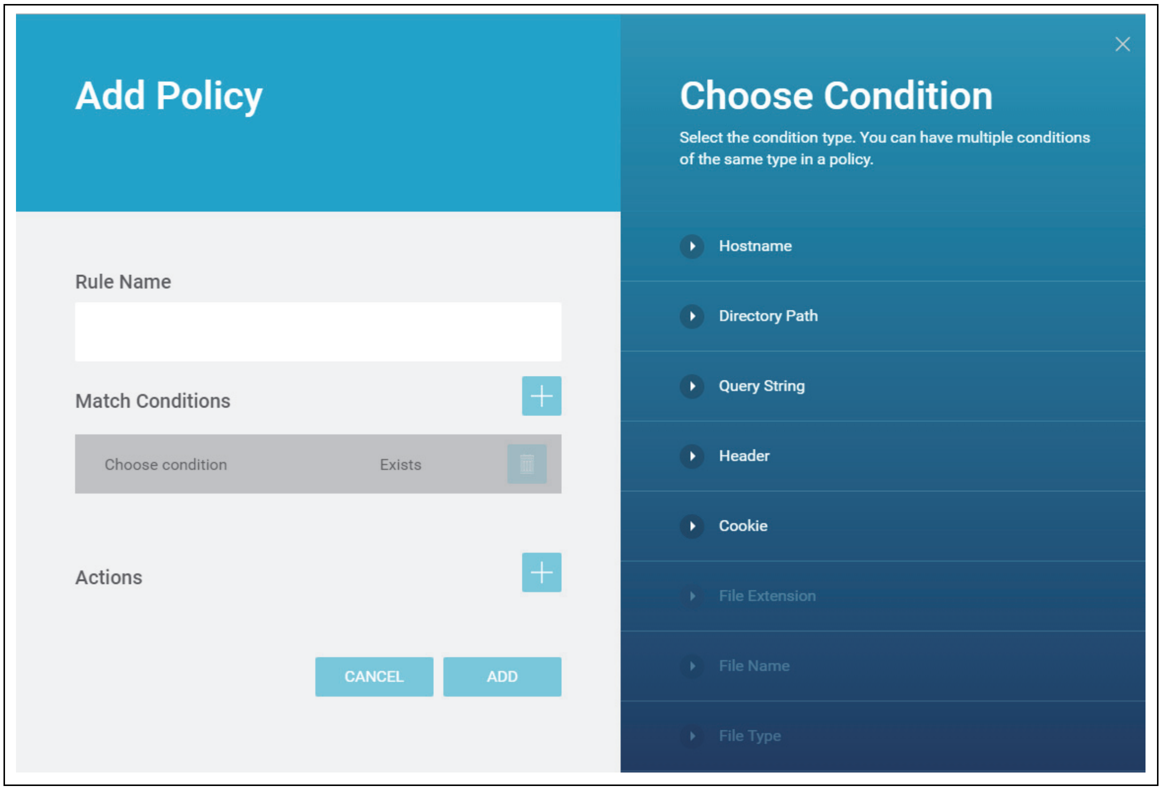
   The Add or Edit Policy dialog box displays.

Figure 7-2: Add Policy Screen



7. Specify a name for the Rule you are adding to the Policy.
8. To specify the Match Condition for this Rule:
   a. Click the Add (+) icon to the right of the Match Conditions label. The Choose Condition pane displays.

Figure 7-3: Add Policy: Choose Condition Panel



b. Click to select the condition you want associated with this rule. You can specify conditions associated with a Hostname, Directory Path, Query String, Header, or Cookie.

c. Enter the match criteria required for the condition associated with this policy rule.
When you define a condition, for each condition type, you must indicate the name (text) the system will search for, and under what conditions you want the system to trigger the policy.

Table 7-1: Specifying Policy Conditions

Condition Type	Match Types
Hostname	Does Not Exist
Directory Path	Does Not Exist
Query String	Does Not Exist, Contains, Does Not Contain
Header	Does Not Exist, Contains, Does Not Contain
Cookie	Does Not Exist, Contains, Does Not Contain

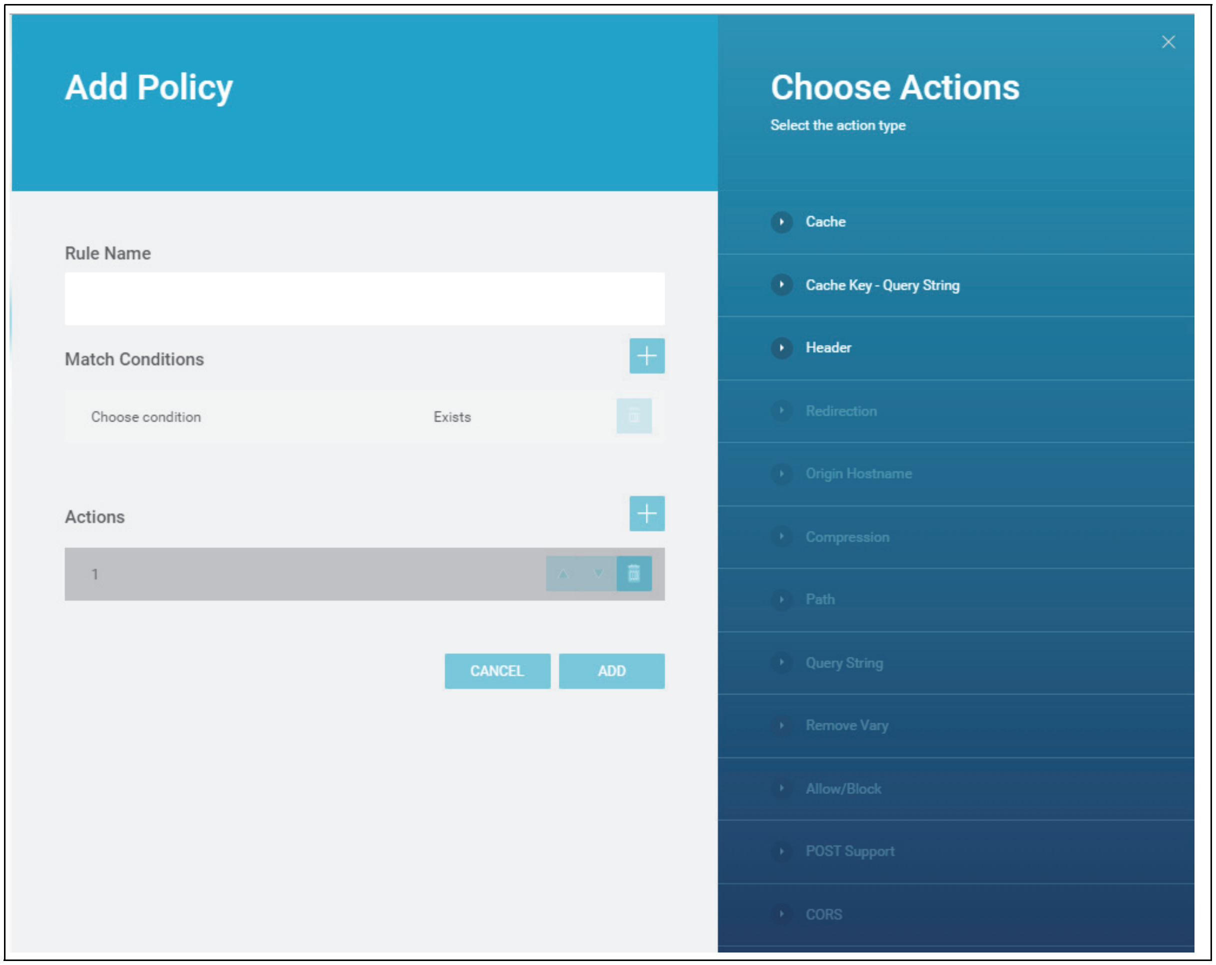
a. When finished, click Save Match.

b. Create additional matches, if needed, for this Policy Rule.

9. To specify the Action the system will take when the match condition is met:

   a. Click the Add (+) icon to the right of the Actions label. The Choose Action pane displays.

Figure 7-4: Policy Rule: Choose Action Pane



b. Select the Action Type you want associated with this rule. This selection specifies the type of action you want the UDN system to take when the match conditions are met. You can select Cache, Cache Key - Query String, or Header.

c. Enter the caching action you want taken.

d. TBD - add more information when LIGHT THEME is available for this panel.

e. When finished click Save Action.

f. If you wish, you may specify additional actions that will trigger when this Policy Rule applies.

10. When finished specifying information for this rule, click Add.

Purging Cache Content

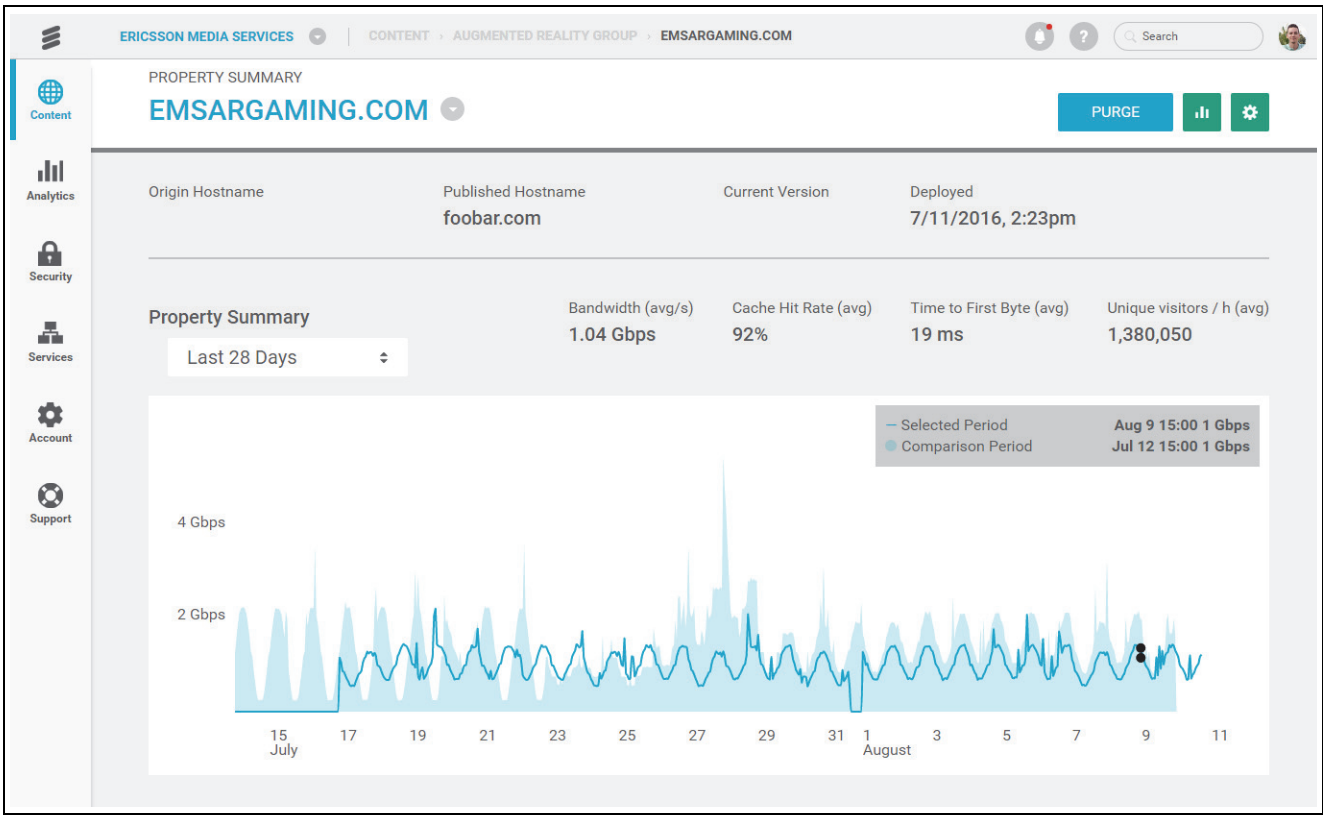
UDN will cache an asset until the asset's time-to-live (TTL) expires. After the asset's TTL expires, when a client requests the asset from the edge node, the edge node will retrieve a new version of the asset to serve the client request and refresh the cache.

Sometimes you may wish to purge cached content from a Property and force that Property to retrieve new assets. This might be due to updates to your web application, or to quickly update assets that contain incorrect information.

To purge content from a Property:

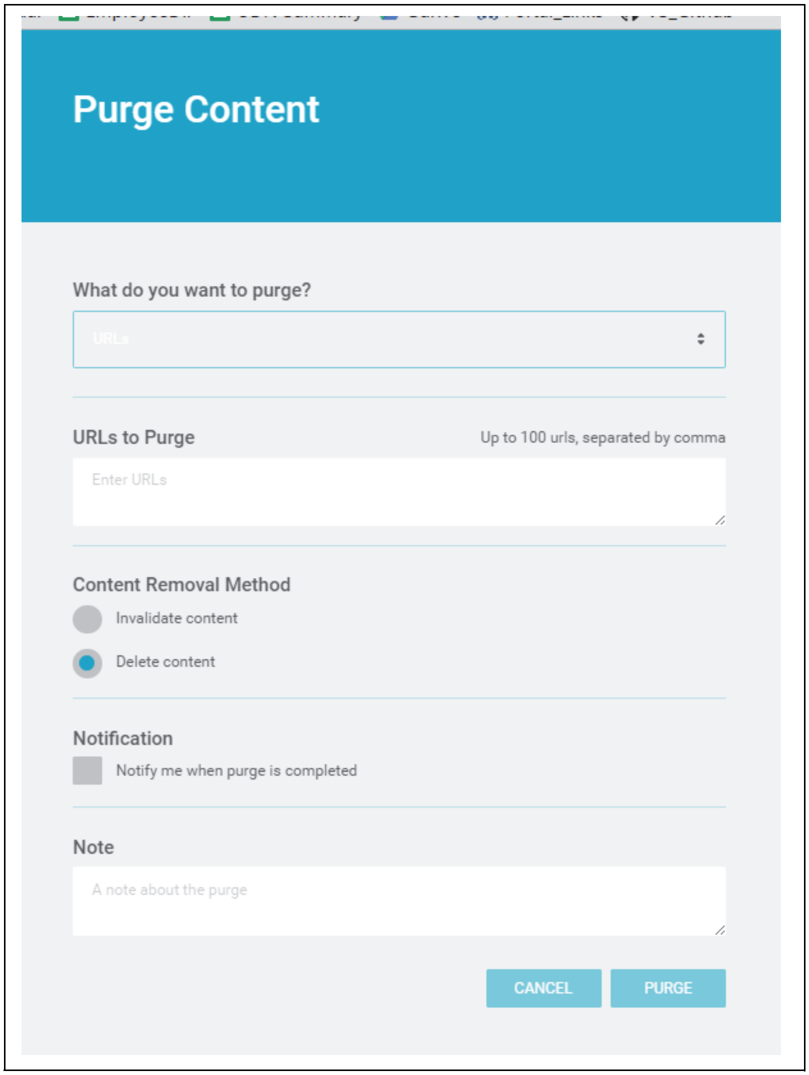
1. Navigate to the summary page for the desired Account.
2. Select the Group associated with the Property whose cache you want to purge. The Properties associated with that Group display.
3. Click the desired Property to display a Property Summary.

Figure 7-5: Property Summary Page



4. Click Purge at the top of the page. The Purge Content pane displays.

Figure 7-6: Purge Content



5. Specify the content you want to purge. Choose one of the following:
   - URLs
   - Directories

   NOTE

   Purging based on specified Hostnames or Entire Group will be supported in a future version.

6. If you choose to purge URLs, do the following:
   a. Enter one or more URLs to purge, separated by commas.
   b. Select the Content Removal Method. Choosing Invalidate makes the content unavailable, but does not remove it from the cache. Choosing Delete both makes the content unavailable and removes it from the cache.
   c. If desired, you can choose to be notified when the purge is complete.
   d. You may add a note about this purge for future reference.

e. When finished, click Purge.

7. If you choose to purge Directories, do the following:
   a. Enter one or more Directories to purge, separated by commas.
   b. Select the Content Removal Method. Choosing Invalidate makes the content unavailable, but does not remove it from the cache. Choosing Delete both makes the content unavailable and removes it from the cache.
   c. If desired, you can choose to be notified when the purge is complete.
   d. You may add a note about this purge for future reference.
   e. When finished, click Purge.

QUESTION FOR REVIEWERS: In what format should you specify directories?

Chapter 8
Accessing Support Resources

The Support page of the Portal provides access to the following features:

Support ticketing: access the support ticketing interface to create and track support tickets for UDN issues.

Diagnostic tools: access diagnostic tools including DIG, MTR, GEO Lookup, and Server Validation. (TBD - not accessible for SP users)

Documentation: access documentation for your portal

This chapter contains the following information:

Accessing the ZenDesk Support System

TBD