



ERICSSON UNIFIED DELIVERY NETWORK

Service Provider Portal User's Guide

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Chapter 1

UDN Overview

Ericsson's Unified Delivery Network (UDN) is a content distribution solution designed to benefit both content providers and service providers. UDN's network overlay uses intelligent caching, server load balancing, dynamic request routing to optimize the user experience. UDN enables content providers to connect with last-mile service providers and place content caches in the access network. Rather than focusing on content delivery optimization through points of presence outside the last mile, UDN keeps content close to the edge of the network for rapid, high-quality content delivery.

Ericsson continuously monitors UDN performance across the entire infrastructure, providing load balancing for optimized performance. UDN offers targeted, content-centric analytics focusing on content distribution and delivery data to support tuning of service offerings, which provide transparency into UDN operations and delivery. Service providers can harness real-time analytics to optimize caching, network usage, and end-user experience.

This chapter contains the following sections:

- [“About This Guide”](#)
- [“What is UDN?”](#)
- [“UDN Concepts and Terminology”](#)
- [“UDN and Service Providers”](#)
- [“UDN System Components”](#)
- [“UDN Benefits”](#)

About This Guide

The goal of this guide is to help users of the Unified Delivery Network (UDN) Portal to:

- Familiarize themselves with the Portal interface.
- Generate Portal reports that display information about UDN traffic
- View and configure UDN entities.
- View and configure cache settings, including policies and purging.

You can find instructions for viewing this guide in “[Accessing Documentation](#)” in Chapter 6.

What is UDN?

Ericsson's Unified Delivery Network (UDN) is a content distribution solution that is primarily designed to optimize content acquisition and delivery by:

- Transporting content along a dynamically optimized path from its current source to its current destination.
- Delivering cached content from a location as close to the end user as possible.
- Providing operational transparency to enable display of detailed reports and status information.

Every component of UDN's design serves these primary goals.

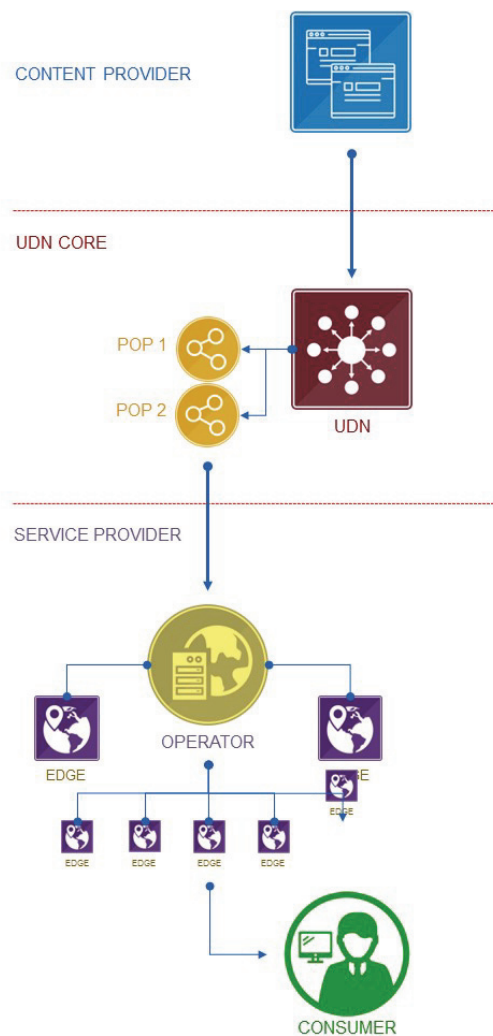
For content providers, UDN strives to provide the best quality of service for the lowest cost. Content providers identify which content they want UDN to deliver, and can designate whether they want to deliver content from their own origin or from a location within UDN core. Using the UDN Portal, content providers can then monitor end user access and consumption patterns by generating detailed, customized performance reports.

For service providers, UDN enables strategic placement of UDN service provider 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 in order to 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.

The heart of UDN is called the UDN core. Comprised of a collection of strategically placed core servers, the UDN core is designed to:

- Intelligently cache content at the UDN core and service provider edge.
- Send end-user requests for content to the optimal cache location for fulfillment.
- Gather analytics to support customer reporting and to optimize UDN operation.
- Enable custom configuration of content caching and delivery to support customer goals.
- Secure communications between UDN components and UDN customers.

Figure 1-1: High-Level View of UDN



UDN Concepts and Terminology

Before you use the Portal, please familiarize yourself with the concepts and terminology below. It will make it easier to perform the tasks described in this guide.

Portal

The UDN Portal is the web-based graphical user interface used to monitor and manage the Unified Delivery Network. This guide introduces the Portal and describes how to use it to accomplish common tasks.

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

- UDN Administrators can view and manage UDN entities, view reports on content sources and content distribution, and manage content caching.
- Content Providers can view and manage groups and the properties that belong to them, view reports on content sources and content delivery, and manage content caching.
- Service Providers can view and manage Service Provider settings, and view reports on content delivery for both on-net and off-net traffic.

Entity

One of the goals of the Portal is to enable you to create and logically organize all of the things you need to manage and monitor. An Entity is defined as something that can be managed and monitored by the Portal. Entities within the Portal refers to one of three things: an Account, a Group, or a Property.

The highest level entity in the Portal is an Account. There are two types of accounts: a Content Provider account and a Service Provider account. Within an account you can create one or more groups, and within a group you can create one or more properties. [Figure 1-2](#) shows how this hierarchy works.

Because the Portal is designed for flexibility, different customers can organize entities in different ways. For a Content Provider, a group might be a collection of television or video channels, or it might be a collection of different service types (video, gaming, or other services) associated with a specific product. For a Service Provider, a group might include properties in geographic locations that deliver the same brand of content. The goal is to identify how your organization wants to organize its properties and apply that structure to all properties you define in the Portal.

Figure 1-2: Relationship Between Account, Groups, and Properties

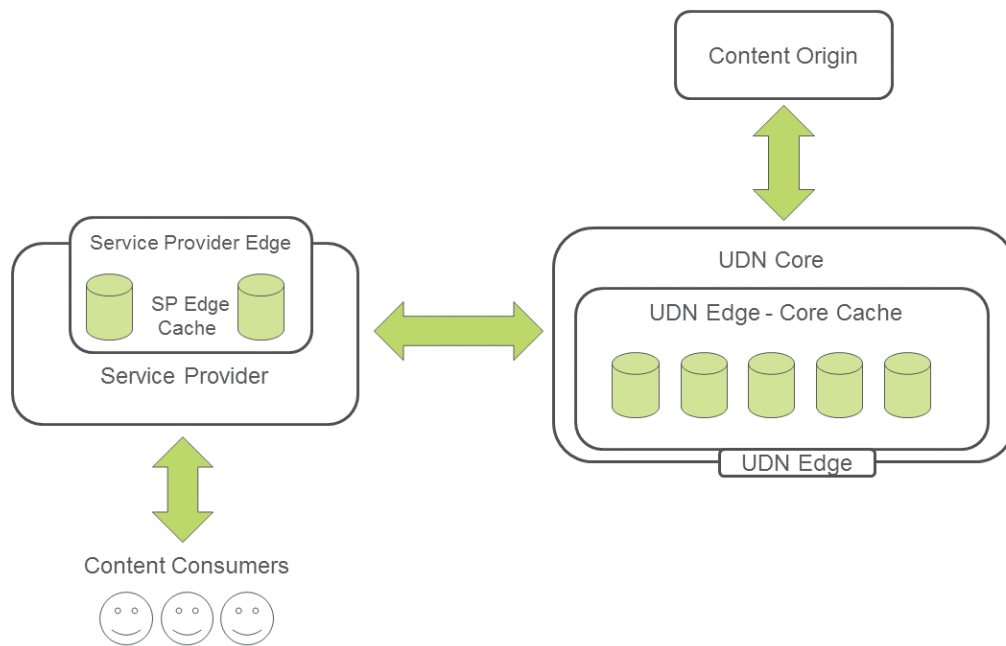
UDN Content Caching

UDN is designed to optimize content caching and delivery, delivering content from the cache closest to the end user. To optimize cache locations, When UDN caches content, it can do so in two types of places: the Service Provider Edge and the UDN Edge.

The ideal location from which to deliver content is the Service Provider Edge (SP Edge) cache because this cache is located closest to the content consumer who requested the content. The content consumer is an end user who is a Service Provider subscriber.

When content is not available at the SP Edge, UDN checks to see if the content is stored in the UDN Edge, which is a component of the UDN Core. If the content is not available in the UDN Core, UDN goes to the origin to retrieve the content and, as the content is delivered, if it is cacheable, it is cached both at the UDN Core and the SP Edge for delivery to future users. [Figure 1-3](#) shows where content is cached, and how it is delivered, in UDN.

Figure 1-3: Content Caching and Flow



UDN and Service Providers

The UDN is a partnership that links content providers with the optimal Service Provider (SP) Edge delivery platform to transport media from Content Providers to end-users. UDN is designed to deliver content from a location as close to the end user as possible. Ideally, content is delivered from a local cache at the SP site. If content is cached in the UDN Core, when requested, it can be retrieved and delivered from there. In other cases, content is retrieved from the Content Provider origin, and is then delivered through the Service Provider edge delivery platform to the end user.

As a UDN partner at the Service Provider edge, you operate a content delivery platform called the SP Edge within your network. This platform consists of one or more servers, networking equipment and software.

In order to expedite media delivery, the Ericsson UDN selectively stores a subset of the most popular content provider media on SP Edge servers. When your end-users make requests to websites that Ericsson has a contract to deliver, the UDN will steer your end-users to the servers that are the most appropriate to serve them. In most cases, the request will be sent to the Service Provider Edge content delivery platform within your network. In return, as a UDN partner, you will receive a share of the revenue based on your Ericsson delivery contract (known as a rev share).

By positioning the SP Edge close to end-users within your network, the SP Edge servers are located where there is the most bandwidth available to end-users at the lowest latency. This combination of low latency and high bandwidth provides end users rapid content delivery at a high quality of service.

Content can be delivered in one of two ways: On-Net and Off-Net.

On-Net Delivery

On-net delivery, as the name implies, refers to the times when content is served from your SP Edge Servers to your end-users within the network you operate. This is the most valuable delivery method because it offers both the lowest latency and the highest bandwidth, resulting in the highest quality. On-net delivery garners the highest rev share, financially benefiting the Service Provider. In addition, it reduces your transit costs because the content is delivered to your end-users from the SP Edge servers that reside within your network:

Off-Net Delivery

Off-net delivery occurs when you allow the SP Edge servers within your network to serve end-users outside of your network. A common use-case is if you have an under-utilized peering link with a partner you wish to monetize. Another use-case is if you wish to monetize links to a lower-tier service provider for whom you provide transit. The UDN will intelligently steer end-users on other near-by networks you have specified to the SP Edge servers in your network in return for a rev share. Typically, the off-net rev share percentage is lower than the on-net rev share because the distance and latency to those end-users is typically higher.

NOTE _____

If there are no SP Edge servers within your network capable of serving your end-users, your end-users are serviced via UDN Core delivery. This typically happens if your SP Edge servers are offline for maintenance, if they are unable to service requests due to some form of hardware error, or if they are unable to handle all of your end-user traffic. In this case there is no rev share and your end-users go outside your network to fetch content.

UDN System Components

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

Service Provider Edge Delivery Nodes

Edge delivery nodes are responsible for UDN streaming content delivery. Edge delivery nodes are built 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 popularity threshold, it is automatically 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.

Secure 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. Secure system multi-tenancy ensures that content generated by different Content Providers can only be accessed by its owner.

UDN Core Cache

The Core Cache is a dynamically optimized, geographically distributed, extensible caching platform. It is the primary component of the UDN Service. Strategic location at highly-connected Internet Points-of-Presence (PoPs) reduces bandwidth costs, ensures global availability, and speeds content delivery to end users.

Universal Cache Technology

Universal Cache technology enables a highly scalable Content Delivery Network (CDN) that efficiently delivers both its own managed 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.

This technology is comprised of two main components: the Conductor and the Provisioner.

- The Conductor accepts HTTP and HTTPS traffic, parses it, decides how to fulfill the request, and returns a result. The conductor process is responsible for discovering content regardless of its current location. In response to a request from the client, the conductor may either deliver the requested content directly from its local storage or forward the request to another node in the network acting as a caching proxy server.
- The Provisioner is the service that tracks content location within the Universal Cache, and manages purging and invalidation of cached content.

Content Acquisition Optimization

At frequent intervals, a PoP cluster in the UDN Core will send out HTTP requests to strategic targets. The latency for each response is used to create a rotating optimize path selection group for content acquisition. Path information is stored along with other route selection criteria to ensure that content acquired from the origin is retrieved as quickly as possible.

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.

UDN Benefits

UDN provides the following benefits:

- UDN enables content providers to connect with last-mile service providers and place content caches in the service provider network. Rather than focusing on content delivery optimization through points of presence outside the last mile, UDN caches content close to the end user, at the service provider edge, for rapid, high-quality content delivery.
- UDN's network overlay uses intelligent caching, server load balancing, and dynamic request routing to optimize the user experience.
- Ericsson continuously monitors UDN performance and operations across the entire infrastructure ensuring optimized operation.
- Ericsson provides coordinated deployment of software and configuration to UDN servers, along with secure remote management, resulting in the ability to increase resources on-demand.
- UDN offers customers continuous insight into content delivery by providing targeted, content-centric analytics. Reporting is focused on content distribution and delivery data to provide transparency into UDN operations and content delivery.
- 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 increases quality 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.

Chapter 2

Getting Started with the Service Provider Portal

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

This chapter introduces you to the Portal, its main features, and how to use it.

This chapter contains the following sections:

- [“Accessing the Portal”](#)
- [“Exploring Starbursts”](#)
- [“Navigating Between Your Account and Groups”](#)
- [“Managing your User Information or Password”](#)

Accessing the Portal

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

NOTE _____

For security reasons, if you leave the Portal interface idle for too long, you will automatically be logged out.

To access the Portal:

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 Portal, navigate to:

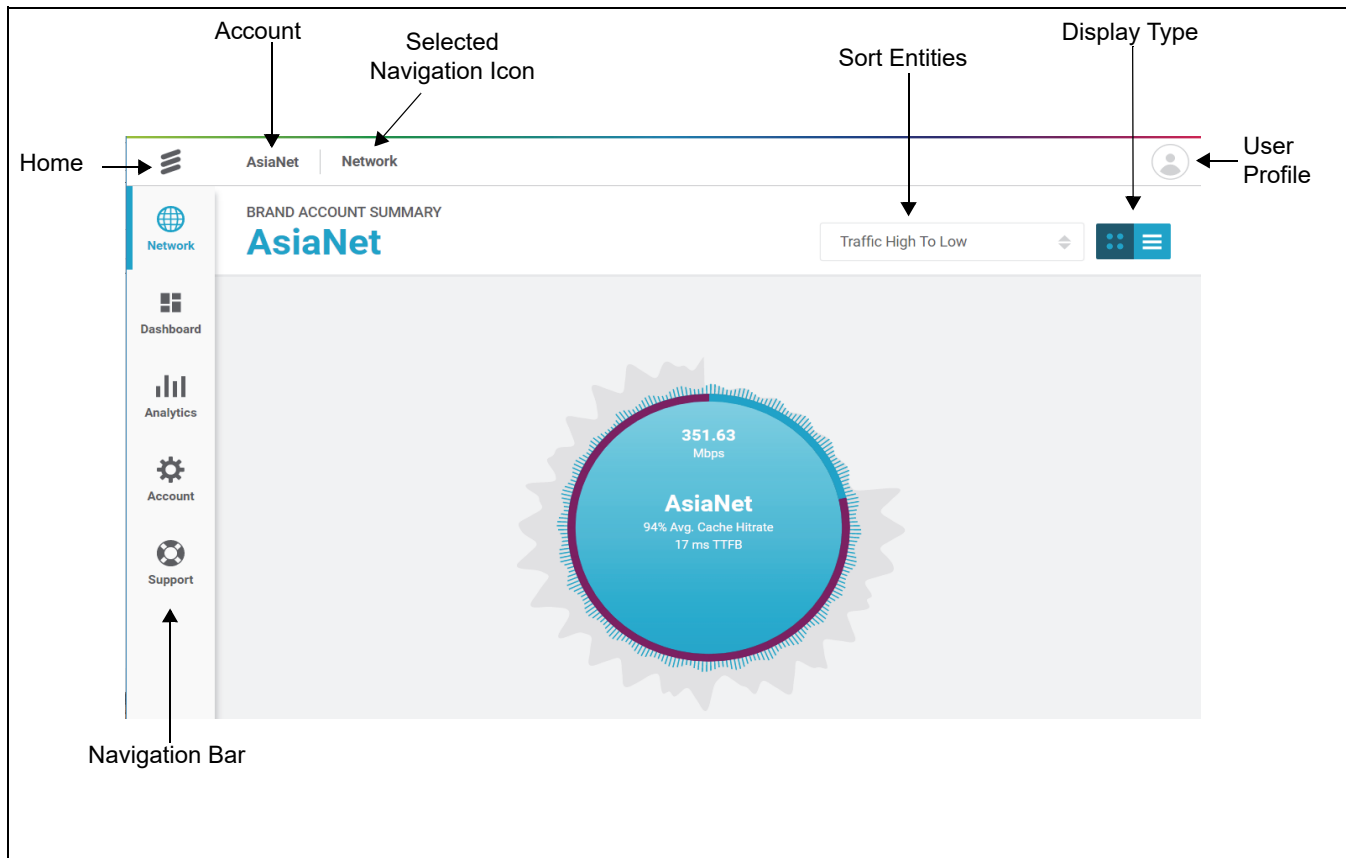
`https://portal.ericssonudn.com`

3. To log in to the Portal, enter your username and password.

NOTE _____

Username entry is not case sensitive, but password entry is.

4. The main window of the UDN Service Provider Portal displays ([Figure 2-1](#)). The features of the Portal are described in [Table 2-1](#).

Figure 2-1: Service Provider Portal Main Window

When you log into the Portal for the first time, you will be presented with a visual representation of UDN traffic in the form of one or more starbursts. The starburst feature is used to represent information associated with an entity, whether that entity is the account (the highest level managed entity), a group, or a property (the lowest level managed entity). For more information about starbursts, see [“Exploring Starbursts”](#).

The Portal interface provides the controls listed in [Table 2-1](#):

Table 2-1: Portal Interface Features

Feature	Description
Navigation Bar	The left side of the Portal window displays the Navigation Bar. Icons in the Navigation Bar are listed in Table 2-2 .
Account	The current Account is listed.
Sort Entities	You can select from several options to sort the displayed entities alphabetically, or by traffic volume. For more information, see “Sorting Displayed Entities” .
Display Type	You can choose whether to display entities as starbursts, or as table rows. For more information, see “Displaying the Table View” .
User Profile	Select this icon to view or modify your user profile. For more information, see “Managing your User Information or Password” .






Table 2-1: Portal Interface Features (Continued)

Feature	Description
Main Window	The main (working) area of each screen displays information, typically in the form of starbursts. Each starburst represents a managed entity in the form of the account, a group, or a property. See “Exploring Starbursts” for a detailed explanation of starbursts.

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. These icons are described in [Table 2-2](#).

Note that clicking any icon will bring you to a page associated with that icon’s Portal feature, and any information shown on that page will be associated with the entity in the current Portal view. For example, if you are viewing a group, clicking the Analytics icon will display reports for the traffic data associated with that group.

Table 2-2: Navigation Icons

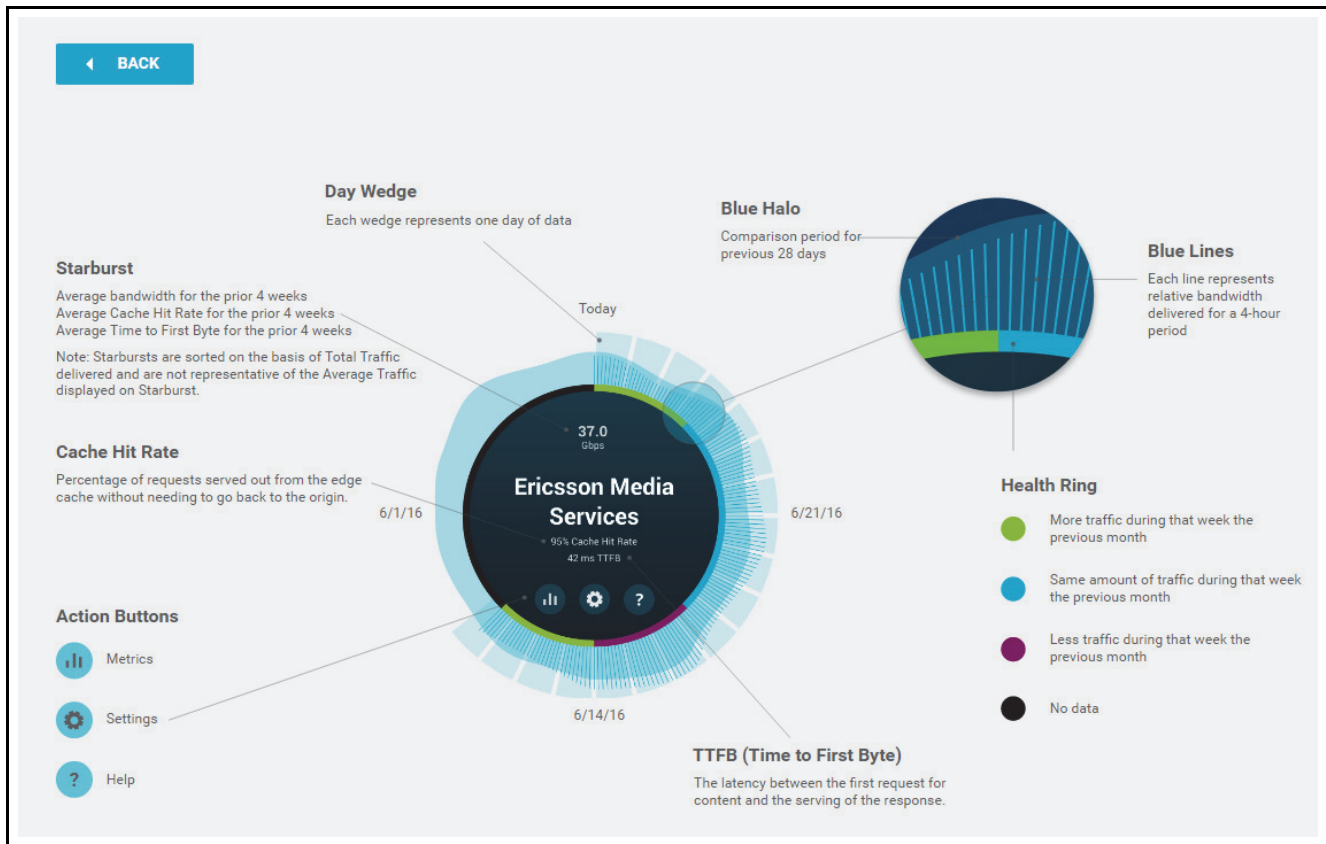
Icon	Name	Use
	Home	From any view, clicking the Home icon brings you to the highest level Portal page.
 Dashboard	Dashboard	Clicking the Dashboard icon brings you to the Dashboard page which displays traffic and operational information. For more information, see “Viewing the Dashboard” .
 Analytics	Analytics	Clicking the Analytics icon brings you to the Analytics page where you can view charts and generate reports. For more information on generating reports, see Chapter 3, “Generating Reports” .
 Account	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	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 6, “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. You can view a Help page in the Portal (Figure 2-2) by hovering over any starburst and clicking the “?” icon that displays in its center.

Figure 2-2: Starburst Help



Following is an overview of the rich collection of information that the starburst data visualization provides.

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 showing a bandwidth graph for the date of the wedge you selected.

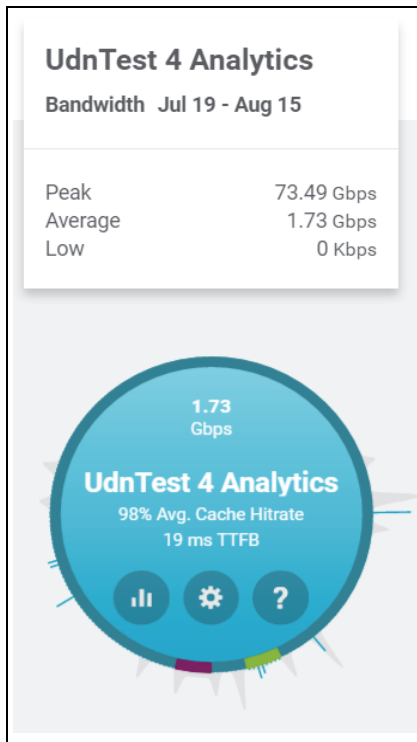
Key Performance Indicators

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 average 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 ([Figure 2-3](#)).
- 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 2-3: Key Performance Indicators Display

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

- An account starburst displays an aggregate of the data for all of the groups that belong to that account.
- 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 Portal.

Navigating Between Your Account and Groups

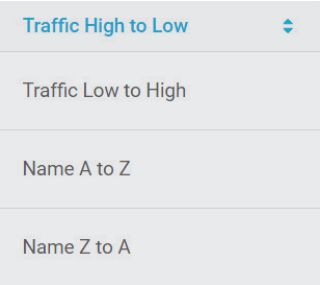
To navigate to a lower-level entity in the Portal, click on a starburst. Clicking on a starburst brings you to a display that shows a starburst for each of the entities it contains. For example, clicking on an account starburst brings you to a page that displays a starburst for each of the groups belonging to that account.

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).

Note that when you sort by traffic, the sorting is performed based on the total transfer rate but the starbursts display the average transfer rate.

Figure 2-4: Sorting Displayed 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 2-5.

Figure 2-5: Entity 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.

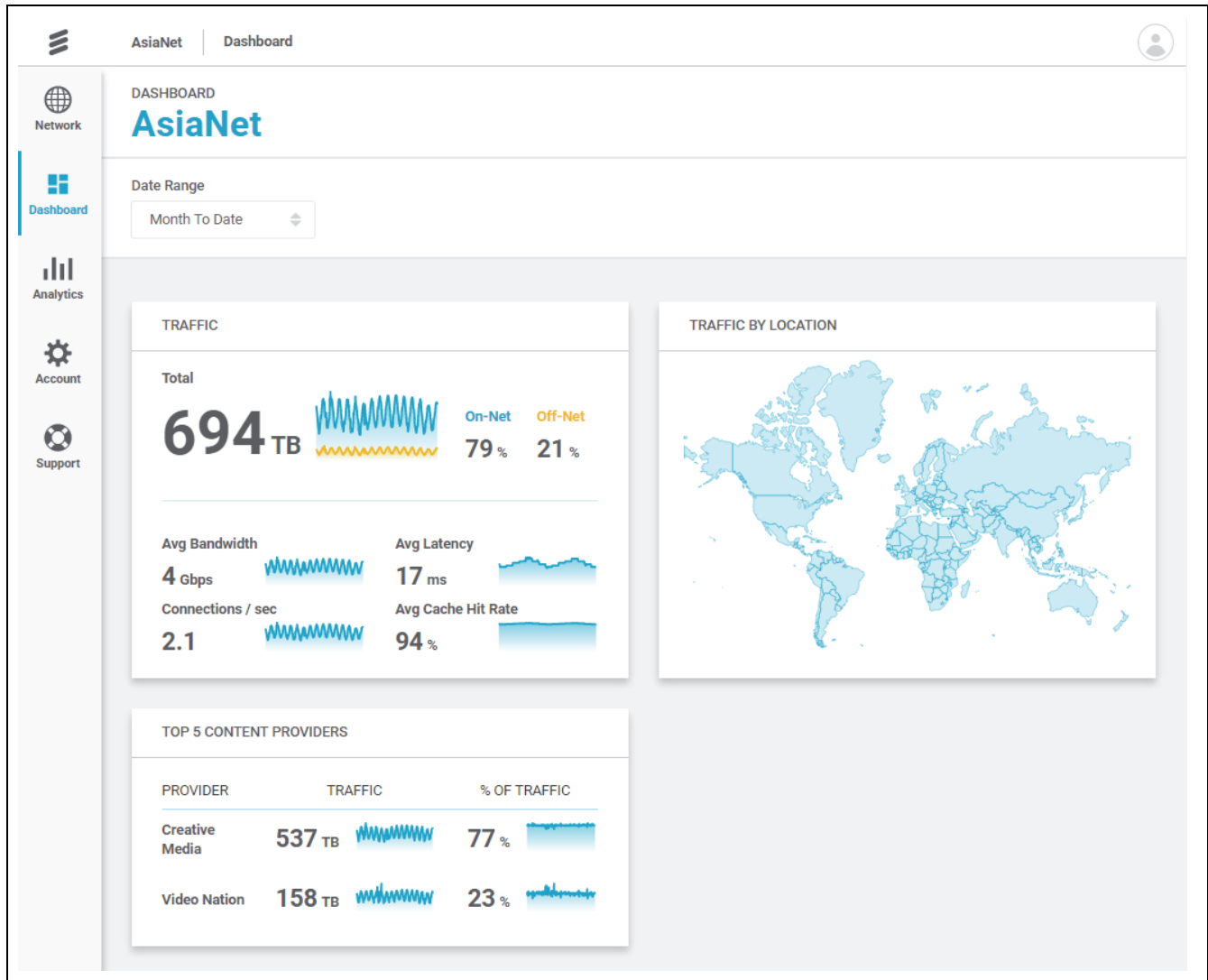


Viewing the Dashboard

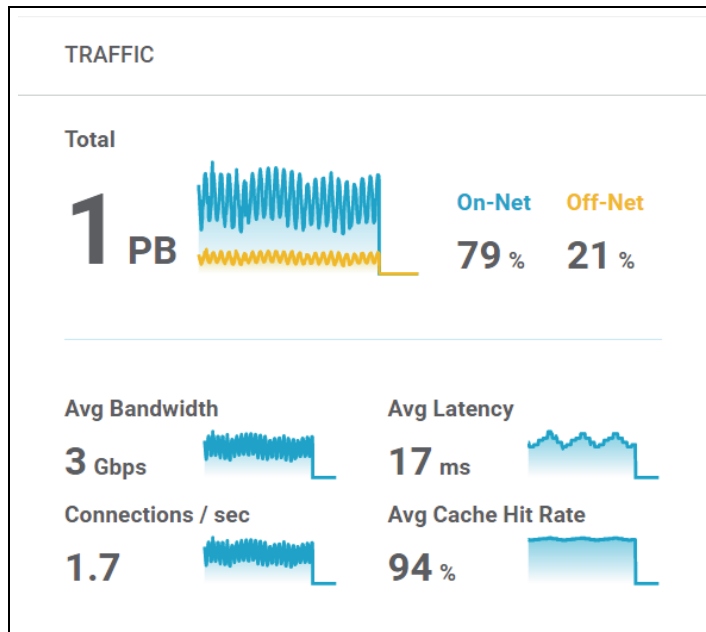
The Dashboard view provides insight into UDN operations through a number of display panels. To view the Dashboard:

1. Click the Dashboard icon on the left navigation panel. The Dashboard displays.

Figure 2-6: Service Provider Dashboard

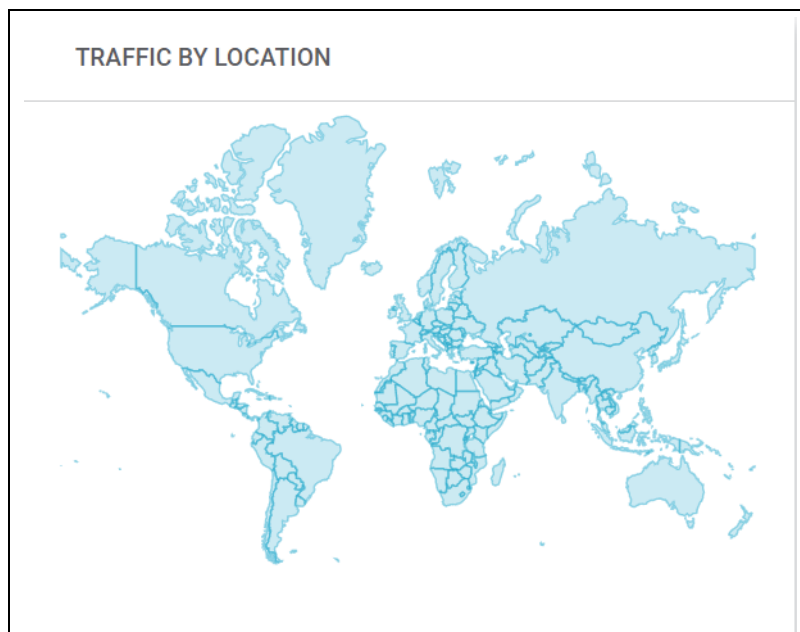


2. By default, the Dashboard displays information about traffic that was delivered in the current month. To view traffic information for another time period you can select the date range for the Dashboard display. You can choose from predefined date ranges (Today, Last Week, Last Month, and so forth), or you can specify a custom date range.
3. The Traffic panel of the Dashboard display (Figure 2-7) shows information about content delivery including the total traffic delivered, the percentage of On-Net and Off-Net traffic, and traffic information averages.

Figure 2-7: Dashboard Display: Traffic Panel**NOTE**

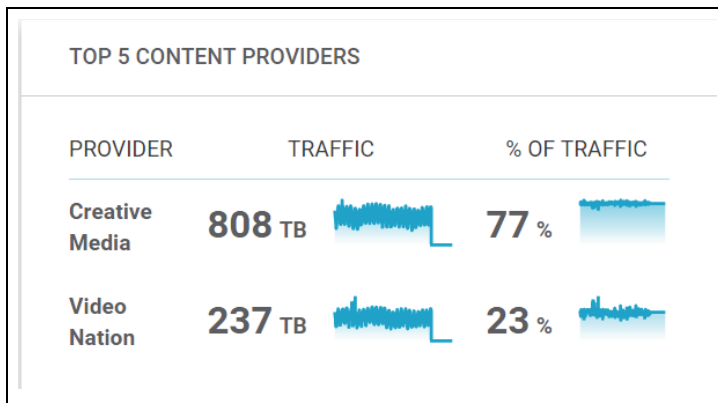
For more information about On-Net and Off-Net traffic, see “UDN and Service Providers” in Chapter 1.

4. The Traffic By Location panel of the Dashboard display (Figure 2-8) shows geographic information about content delivery.

Figure 2-8: Dashboard Display: Traffic By Location Panel

5. The Top 5 Content Providers panel of the Dashboard display ([Figure 2-9](#)) shows traffic information for the content providers for which a majority of traffic was delivered.

Figure 2-9: Dashboard Display: Top 5 Content Providers Panel



Managing your User Information or Password

In order to access the portal, you must have a user account. In order to create this user account, information about you has been entered into the UDN Service by an administrator. The Portal enables you to modify this information.

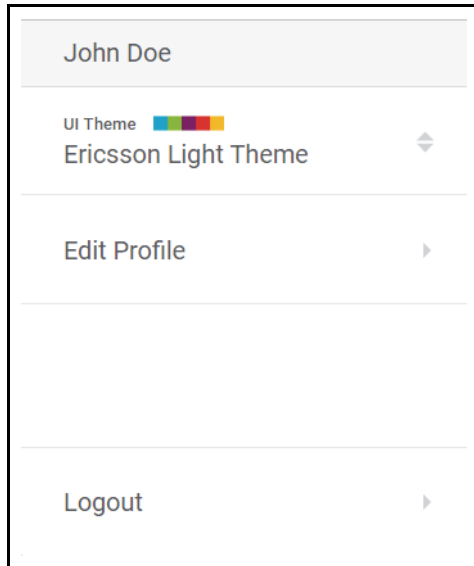
To view or modify your user profile settings:

1. Click the user avatar at the upper right corner of the Portal screen.



The User Profile modal window displays (Figure 2-10).

Figure 2-10: User Profile Modal Window



2. Under UI Theme, you can change the UI Theme you want to view (Ericsson Light Theme and Ericsson Dark Theme), based on your preference.
3. To view or modify your User settings, choose Edit Profile.

When you edit your profile, you can:

- Modify your name by entering your changes.
- Modify your contact information (telephone number) by entering your changes.
- Change your password by clicking CHANGE.

NOTE

If you change your password, you will need to log back into the system.

Chapter 3

Generating Reports

UDN analytics enable you to monitor crucial metrics that directly affect the success of your business, helping you to make timely decisions regarding content management, storage, and delivery. UDN reports are design to provide actionable and relevant information for Portal users and their management.

UDN reports provide detailed information on bandwidth delivered by provider, by time, and by geography. You can identify which URLs are most popular and which URLs are suffering content delivery failures. You can also view information on how frequently cached content is being served, to identify opportunities for cache optimization.

This chapter contains the following sections:

- [“Viewing Reports”](#)
- [“Service Provider On / Off Net Report”](#)
- [“Contribution Report”](#)

Viewing Reports

The Portal enables you to dynamically generate a number of predefined report types, specifying the desired date range for the data you want displayed.

When you click the Analytics icon, the Portal will display reporting information associated with the currently selected entity (account, group, or property) associated with that page. If you select the Analytics icon for a property starburst or summary, the report will reflect the data available for that property. If you select the Analytics icon for a group starburst or summary, the report will include aggregated data from all properties belonging to that group. Likewise, reporting for an account displays a total of all data for all properties belonging to all groups within that account.

To view a report:

1. Navigate to the entity (account, group, or property) whose data you want to view.
2. Doing 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.



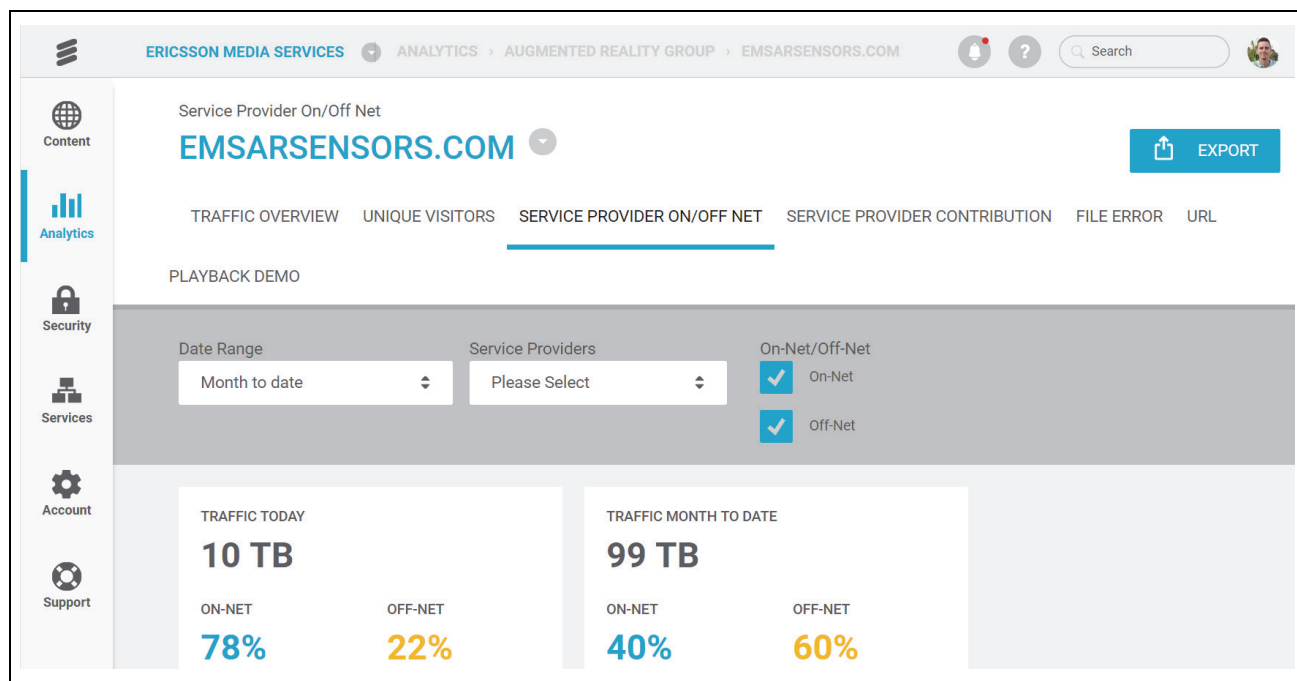
- Click the Analytics icon on any summary page.



A Report page displays for the selected entity (account, group, or property).

3. 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



4. Each report has a specified date range. 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.

5. When information is displayed in chart form, you can hover your cursor over separate parts of the graph in order to view more detailed information.
6. When information is displayed in table form, you will see a small triangle appear next to some column headings. You can sort the table rows in ascending or descending order based on the column content by clicking these headings.
7. 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.
8. Once you have generated a report, 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 the selected entity. If it is not available, a report type that is 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 to end users directly from the Service Provider edge (On Net). On-Net traffic provides the best end user experience due to the proximity of UDN SP edge servers in the SP delivery network to the user, and results in the highest revenue share for the Service Provider delivering it.

Why might traffic be served off-net? A request from a subscriber might be routed to either outside the SP Edge or to another Service Provider 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 or a lack of SSL service.
- 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 the SP Edge associated with the end user cannot fulfill the request, UDN routing will bring this subscriber to the UDN Edge (part of the UDN Core) or another SP in order to obtain the content.

Scope

This report is available to users who have been assigned either the UDN_Admin, SP_Admin, or SP_User role. You can generate this type of report for an account, group, or property.

Settings

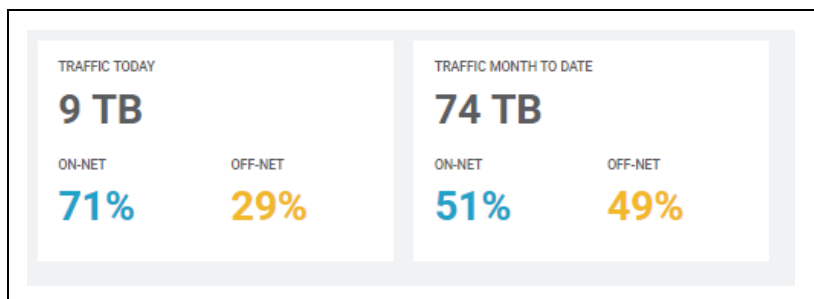
You can specify the following settings for this report:

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

Content

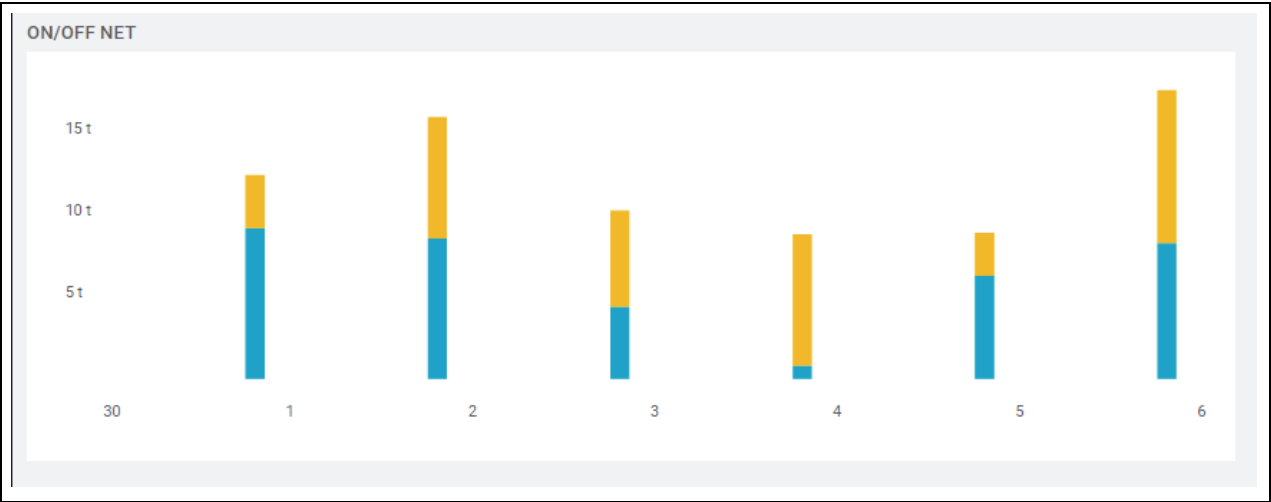
When viewing the SP On/Off Net report, the area at the top displays traffic information for both the current date and the specified date range (Figure 3-2).

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

Contribution Report

The Contribution Report provides detailed traffic information for each Service Provider (SP) or Content Provider (CP) that supported the content delivery of a particular account, group, and/or property. Information is broken down by geography.

Scope

This report is available to all users. You can generate this type of report for an account, group, or property

Settings

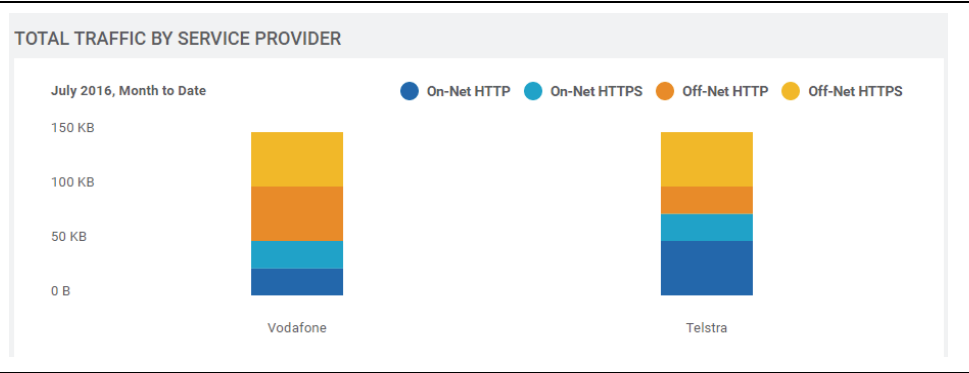
This report allows you to specify the following settings:

- Date range
- Providers and provider groups for whom data is available. You can either select the desired entity from the Provider drop-down menu, or you can type the name of the entity in the search field to filter the items in the dropdown to only those that match your search term.
- Delivery type: select On-Net, Off-Net, or both.
- Service type: select HTTP, HTTPS, or both.

Content

The top of the report displays a chart that shows traffic volume per Provider for each traffic type (based on your settings). [Figure 3-5](#) shows an example of a Contribution Report generated for a Service Provider.

Figure 3-5: Contribution Report: Traffic Chart



The following section ([Figure 3-6](#)) provides the same information in table form.

Figure 3-6: Contribution Report: Traffic Table

SERVICE PROVIDER	COUNTRY	TRAFFIC	% OF TRAFFIC
Vodafone	Germany	150 KB	35%
Telstra	Australia	150 KB	30%
Vodafone	France	150 KB	20%

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”](#)
- [“Viewing and Managing Users”](#)
- [“Deleting a User”](#)

Understanding User Roles and Permissions

In order to access the Portal, people must be added to the Portal as users, and when a 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 Portal, as shown in [Table 4-1](#).

NOTE

For users associated with Service Provider accounts, there are two types of user roles: SP Admin and SP User. SP Administrators can view, create, and modify settings for those features they have permission to access. SP Users can only view settings associated with those features.

Table 4-1: Predefined Portal Role Permissions

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

NOTE

If a user attempts to access a feature that their role does not grant permission for them to use a message 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

EMAIL	PASSWORD	ROLE	GROUPS
bryan@creativemedia.com	*****	CP_Admin	User has no groups
cm_admin@creativemedia.com	*****	CP_Admin	User has no groups
cm_user@creativemedia.com	*****	CP_Admin	User has no groups
sampo@idean.com	*****	CP_User	User has no groups

3. To search for a specific user, enter information in the Search area. Note that search terms are not case sensitive.
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 (non-alphanumeric characters)
- 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.

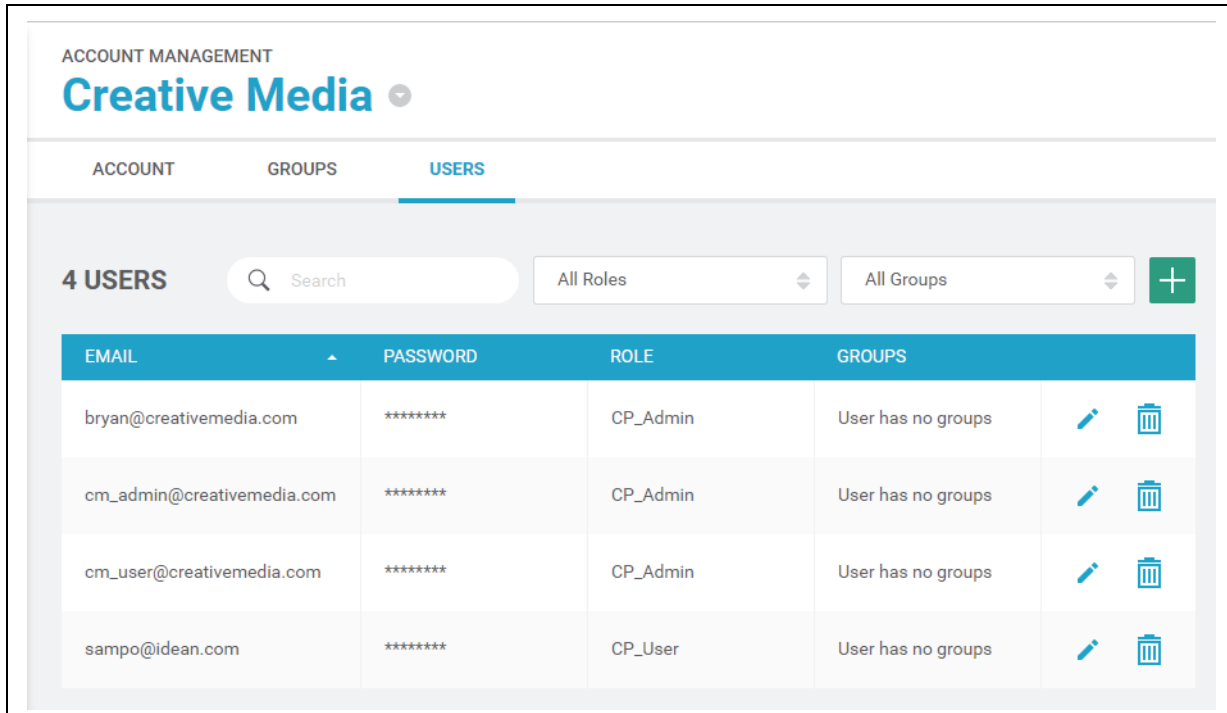
Deleting a User

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



ACCOUNT MANAGEMENT

Creative Media

ACCOUNT GROUPS **USERS**

4 USERS Search All Roles All Groups +

EMAIL	PASSWORD	ROLE	GROUPS		
bryan@creativemedia.com	*****	CP_Admin	User has no groups		
cm_admin@creativemedia.com	*****	CP_Admin	User has no groups		
cm_user@creativemedia.com	*****	CP_Admin	User has no groups		
sampo@idean.com	*****	CP_User	User has no groups		

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

Chapter 5

Working with Groups

Groups are defined as collections of properties associated with a specific account. For a Content Provider, a group might be a collection of television or video channels, or it might be a collection of different service types (video, gaming, or other services) associated with a specific product. For a Service Provider, a group might include properties in geographic locations that deliver the same brand of content.

Groups also include a collection of users who have permission to access that group.

This chapter contains the following sections:

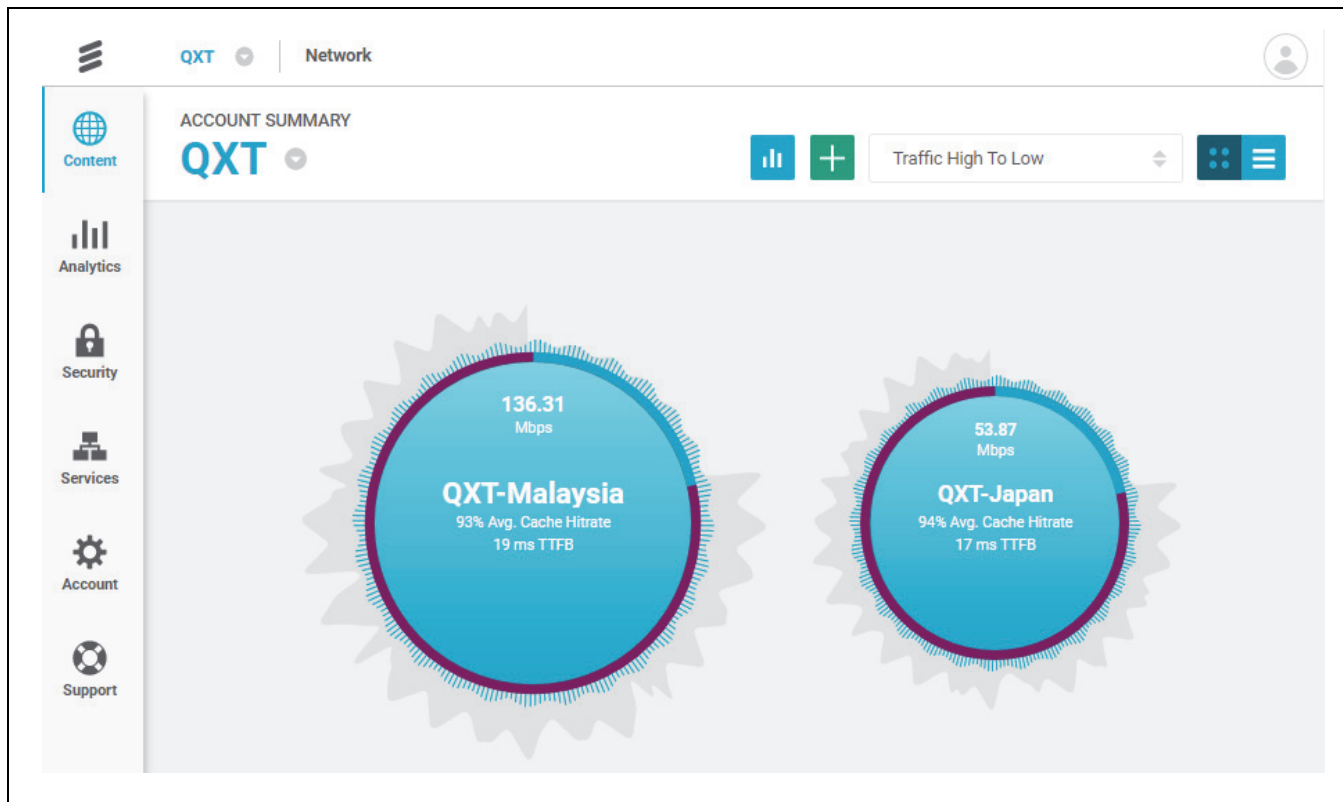
- [“Viewing and Managing Groups”](#)
- [“Deleting a Group”](#)

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.

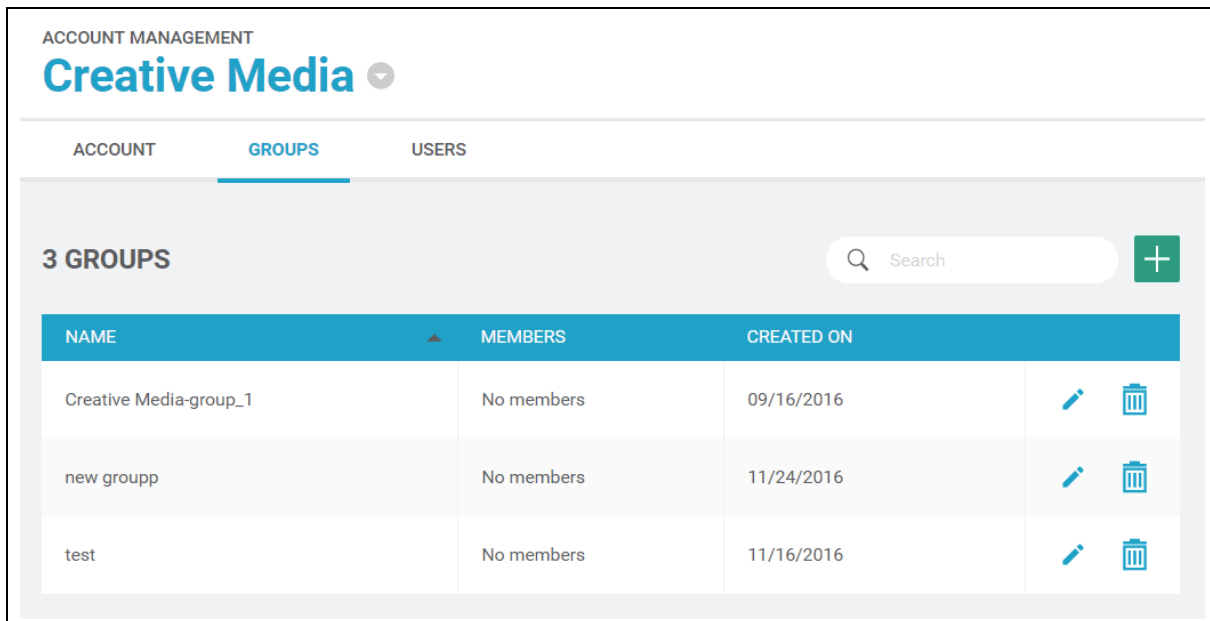
Figure 5-1: Group Content Summary Page



NOTE

If you wish to add or modify the properties associated with this group, refer to [Chapter 7, “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”](#).

- Click the Add (+) icon. The Add New Group modal window displays.
- Enter the Name of the group.
- Click Save to create the group or click Cancel 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”](#).

- Locate the row associated with that group in the table.
- Click the Edit (pencil) icon at the end of that row.
- If desired, edit the Name of the group.
-
- Click Save to save your changes or click Cancel to cancel the operation.

NOTE _____

You can also modify group settings by clicking the Configure (gear) icon on any group starburst.

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.

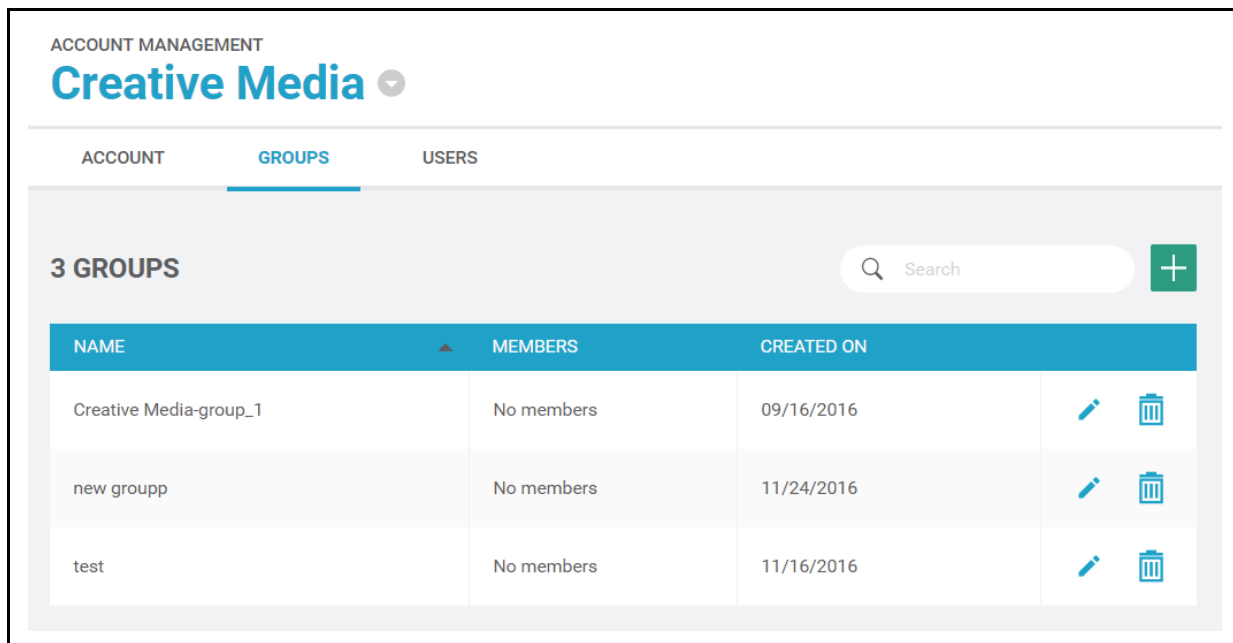
NOTE







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



ACCOUNT MANAGEMENT			
Creative Media			
ACCOUNT GROUPS USERS			
3 GROUPS Search +			
NAME	MEMBERS	CREATED ON	
Creative Media-group_1	No members	09/16/2016	 
new group	No members	11/24/2016	 
test	No members	11/16/2016	 

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

Chapter 6

Accessing Support Resources

The Support page of the Portal provides access to the ZenDesk ticketing application. it also provides access to Portal documentation. This chapter contains the following sections:

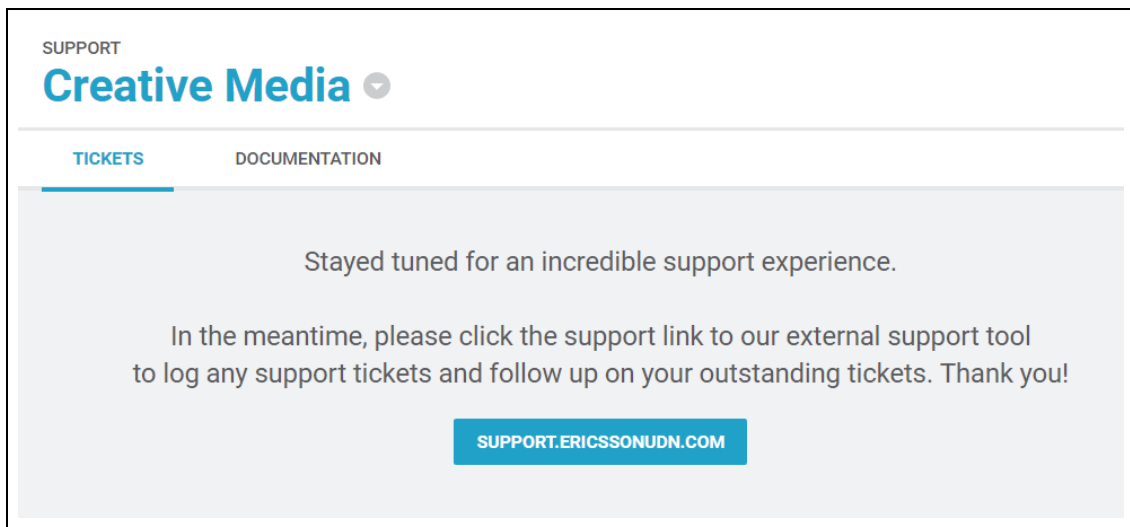
- [“Accessing Support”](#)
- [“Accessing Documentation”](#)

Accessing Support

To access Support:

1. Click the Support icon on the left navigation bar. the Support page displays (Figure 6-1).

Figure 6-1: Support: Tickets Tab



2. To access the Ericsson UDN Support Site, click the SUPPORT.ERICSSONUDN.COM button. The link will bring you to the UDN Support site. The site provides links to helpful UDN information including Frequently Asked Questions.
3. To Submit a Request for assistance, click the Submit a Request link in the upper right corner of the page. The Submit a Request page displays.
4. To file a ticket, select UDN Support Ticket.
 - a. Enter the following information for your request:
 - Subject: Enter a title for your ticket briefly describing the current issue.
 - Description: Enter a description of your current issue or need.
 - Priority: Select a priority for your issue.
 - Type: Select the issue Type (Question, Incident, Problem, Task, or Integration)
 - Service Type: Specify the Service Type associated with your request.
 - Attachments: Add any attachments that you feel would benefit the support effort.
 - b. When finished, click Submit.
5. To make a change request, select UDN Change Request
 - a. Enter the following information for your request:
 - Subject: Enter a title for your ticket briefly describing the current issue.
 - Description: Enter a description of your current issue or need.
 - Change Type: Specify whether this is a normal, standard, or emergency change.
 - Service Type: Specify the service type associated with your request.

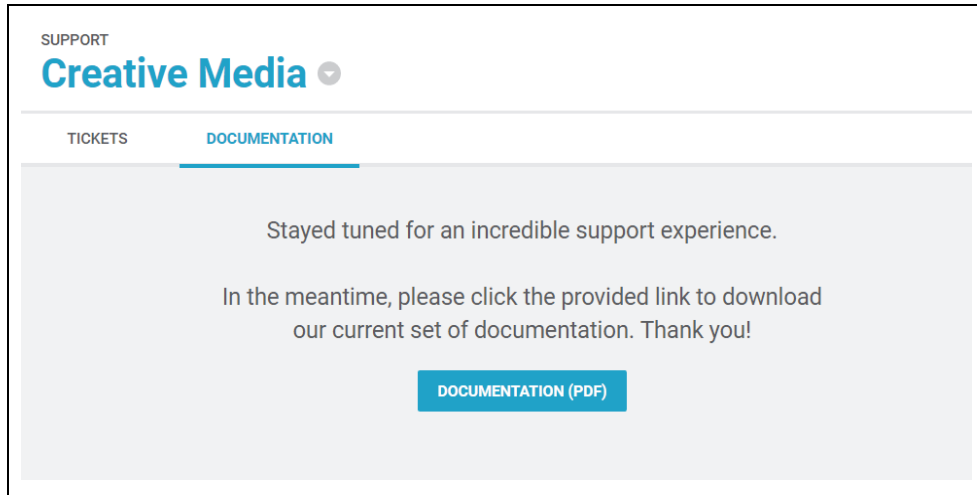
- Change Risk: Specify the risk level of the change.
 - Change Impact: Select the impact of the change on your system.
 - Attachments: Add any attachments that you feel would benefit the support effort.
- b. When finished, click Submit.

Accessing Documentation

To access the Portal User Guide associated with your User Role:

1. Click the Support icon on the left navigation bar.
2. Click the Documentation tab (Figure 6-2).

Figure 6-2: Support: Documentation Tab



3. Click the DOCUMENTATION (PDF) button. The user guide associated with your current user role launches as a PDF file.

NOTE

Adobe Acrobat Reader is required to display the User Guide. You can download Acrobat Reader free from Adobe. For more information visit <https://get.adobe.com/reader/>.