

Port yönlendirme için öncelikle Palo Alto cihazıma login oluyorum. Arayüzden **“OBJECT”** münüsüne gelip **“SERVICES”** sekmesine tıklıyorum.

Karşıma gelen menüden yeni bir servis eklemek için **“ADD”** butonuna tıklıyorum.

NAME	LOCATION	PROTOCOL	DESTINATION PORT	TAGS
http	Predefined	TCP	80	
https	Predefined	TCP	443	
ssh	Predefined	TCP	22	
telnet	Predefined	TCP	23	
smtp	Predefined	TCP	25	
pop3	Predefined	TCP	110	
imap	Predefined	TCP	143	
ldap	Predefined	TCP	389	
ldaps	Predefined	TCP	636	
radius	Predefined	TCP	1812	
radiusacct	Predefined	TCP	1813	
radiusauth	Predefined	TCP	1814	
radiusboot	Predefined	TCP	1815	
radiusch	Predefined	TCP	1816	
radiusct	Predefined	TCP	1817	
radiusda	Predefined	TCP	1818	
radiusdr	Predefined	TCP	1819	
radiusdy	Predefined	TCP	1820	
radiusgw	Predefined	TCP	1821	
radiusid	Predefined	TCP	1822	
radiusip	Predefined	TCP	1823	
radiusis	Predefined	TCP	1824	
radiuspu	Predefined	TCP	1825	
radiusse	Predefined	TCP	1826	
radiusst	Predefined	TCP	1827	
radiusur	Predefined	TCP	1828	
radiusus	Predefined	TCP	1829	
radiusut	Predefined	TCP	1830	
radiusux	Predefined	TCP	1831	
radiusuy	Predefined	TCP	1832	
radiusuz	Predefined	TCP	1833	
radiusva	Predefined	TCP	1834	
radiusvb	Predefined	TCP	1835	
radiusvc	Predefined	TCP	1836	
radiusvd	Predefined	TCP	1837	
radiusve	Predefined	TCP	1838	
radiusvf	Predefined	TCP	1839	
radiusvg	Predefined	TCP	1840	
radiusvh	Predefined	TCP	1841	
radiusvi	Predefined	TCP	1842	
radiusvj	Predefined	TCP	1843	
radiusvk	Predefined	TCP	1844	
radiusvl	Predefined	TCP	1845	
radiusvm	Predefined	TCP	1846	
radiusvn	Predefined	TCP	1847	
radiusvo	Predefined	TCP	1848	
radiusvp	Predefined	TCP	1849	
radiusvq	Predefined	TCP	1850	
radiusvr	Predefined	TCP	1851	
radiusvs	Predefined	TCP	1852	
radiusvt	Predefined	TCP	1853	
radiusvu	Predefined	TCP	1854	
radiusvv	Predefined	TCP	1855	
radiusvw	Predefined	TCP	1856	
radiusvx	Predefined	TCP	1857	
radiusvy	Predefined	TCP	1858	
radiusvz	Predefined	TCP	1859	
radiuswa	Predefined	TCP	1860	
radiuswb	Predefined	TCP	1861	
radiuswc	Predefined	TCP	1862	
radiuswd	Predefined	TCP	1863	
radiuswe	Predefined	TCP	1864	
radiuswf	Predefined	TCP	1865	
radiuswg	Predefined	TCP	1866	
radiuswh	Predefined	TCP	1867	
radiuswi	Predefined	TCP	1868	
radiuswj	Predefined	TCP	1869	
radiuswk	Predefined	TCP	1870	
radiuswl	Predefined	TCP	1871	
radiuswm	Predefined	TCP	1872	
radiuswn	Predefined	TCP	1873	
radiuswo	Predefined	TCP	1874	
radiuswp	Predefined	TCP	1875	
radiuswq	Predefined	TCP	1876	
radiuswr	Predefined	TCP	1877	
radiusws	Predefined	TCP	1878	
radiuswt	Predefined	TCP	1879	
radiuswu	Predefined	TCP	1880	
radiuswv	Predefined	TCP	1881	
radiusww	Predefined	TCP	1882	
radiuswx	Predefined	TCP	1883	
radiuswy	Predefined	TCP	1884	
radiuswz	Predefined	TCP	1885	
radiusxa	Predefined	TCP	1886	
radiusxb	Predefined	TCP	1887	
radiusxc	Predefined	TCP	1888	
radiusxd	Predefined	TCP	1889	
radiusxe	Predefined	TCP	1890	
radiusxf	Predefined	TCP	1891	
radiusxg	Predefined	TCP	1892	
radiusxh	Predefined	TCP	1893	
radiusxi	Predefined	TCP	1894	
radiusxj	Predefined	TCP	1895	
radiusxk	Predefined	TCP	1896	
radiusxl	Predefined	TCP	1897	
radiusxm	Predefined	TCP	1898	
radiusxn	Predefined	TCP	1899	
radiusxo	Predefined	TCP	1900	
radiusxp	Predefined	TCP	1901	
radiusxq	Predefined	TCP	1902	
radiusxr	Predefined	TCP	1903	
radiusxs	Predefined	TCP	1904	
radiusxt	Predefined	TCP	1905	
radiusxu	Predefined	TCP	1906	
radiusxv	Predefined	TCP	1907	
radiusxw	Predefined	TCP	1908	
radiusxx	Predefined	TCP	1909	
radiusxy	Predefined	TCP	1910	
radiusxz	Predefined	TCP	1911	
radiusya	Predefined	TCP	1912	
radiusyb	Predefined	TCP	1913	
radiusyc	Predefined	TCP	1914	
radiusyd	Predefined	TCP	1915	
radiusye	Predefined	TCP	1916	
radiusyf	Predefined	TCP	1917	
radiusyg	Predefined	TCP	1918	
radiusyh	Predefined	TCP	1919	
radiusyi	Predefined	TCP	1920	
radiusyj	Predefined	TCP	1921	
radiusyk	Predefined	TCP	1922	
radiusyl	Predefined	TCP	1923	
radiusym	Predefined	TCP	1924	
radiusyn	Predefined	TCP	1925	
radiusyo	Predefined	TCP	1926	
radiusyp	Predefined	TCP	1927	
radiusyq	Predefined	TCP	1928	
radiusyr	Predefined	TCP	1929	
radiusys	Predefined	TCP	1930	
radiusyt	Predefined	TCP	1931	
radiusyu	Predefined	TCP	1932	
radiusyv	Predefined	TCP	1933	
radiusyw	Predefined	TCP	1934	
radiusyx	Predefined	TCP	1935	
radiusyy	Predefined	TCP	1936	
radiusyz	Predefined	TCP	1937	
radiusza	Predefined	TCP	1938	
radiuszb	Predefined	TCP	1939	
radiuszc	Predefined	TCP	1940	
radiuszd	Predefined	TCP	1941	
radiusze	Predefined	TCP	1942	
radiuszf	Predefined	TCP	1943	
radiuszg	Predefined	TCP	1944	
radiuszh	Predefined	TCP	1945	
radiuszi	Predefined	TCP	1946	
radiuszj	Predefined	TCP	1947	
radiuszk	Predefined	TCP	1948	
radiuszl	Predefined	TCP	1949	
radiuszm	Predefined	TCP	1950	
radiuszn	Predefined	TCP	1951	
radiuszo	Predefined	TCP	1952	
radiuszp	Predefined	TCP	1953	
radiuszq	Predefined	TCP	1954	
radiuszr	Predefined	TCP	1955	
radiuszs	Predefined	TCP	1956	
radiuszt	Predefined	TCP	1957	
radiuszu	Predefined	TCP	1958	
radiuszv	Predefined	TCP	1959	
radiuszw	Predefined	TCP	1960	
radiuszx	Predefined	TCP	1961	
radiuszy	Predefined	TCP	1962	
radiuszz	Predefined	TCP	1963	

Karşıma gelen ekrandan santral cihazımın ilk karşılanacağı portu ekliyorum.

Açıklamak gerekirse public ip:2230 portumu browser a yazıp, adrese gittiğimde dış ip ve 2230 nolu oluşturmuş olduğum port PALO ALTO tarafından santralimin 2222 nolu portuna dönüştürülecektir.

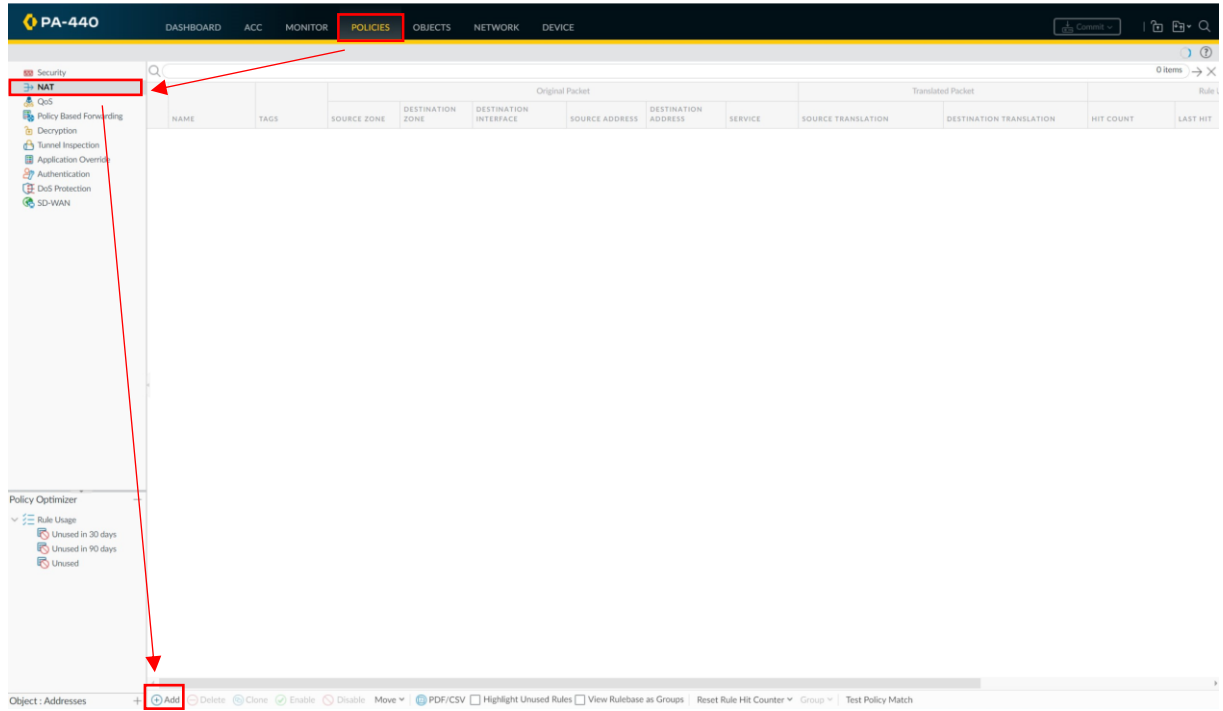
Service configuration window showing the following fields:

- Name: TCP\_2230
- Description: (empty)
- Protocol: TCP (selected), UDP (unselected)
- Destination Port: 2230
- Source Port: [ ]
- Session Timeout: Inherit from application (selected), Override (unselected)
- Tags: (empty)

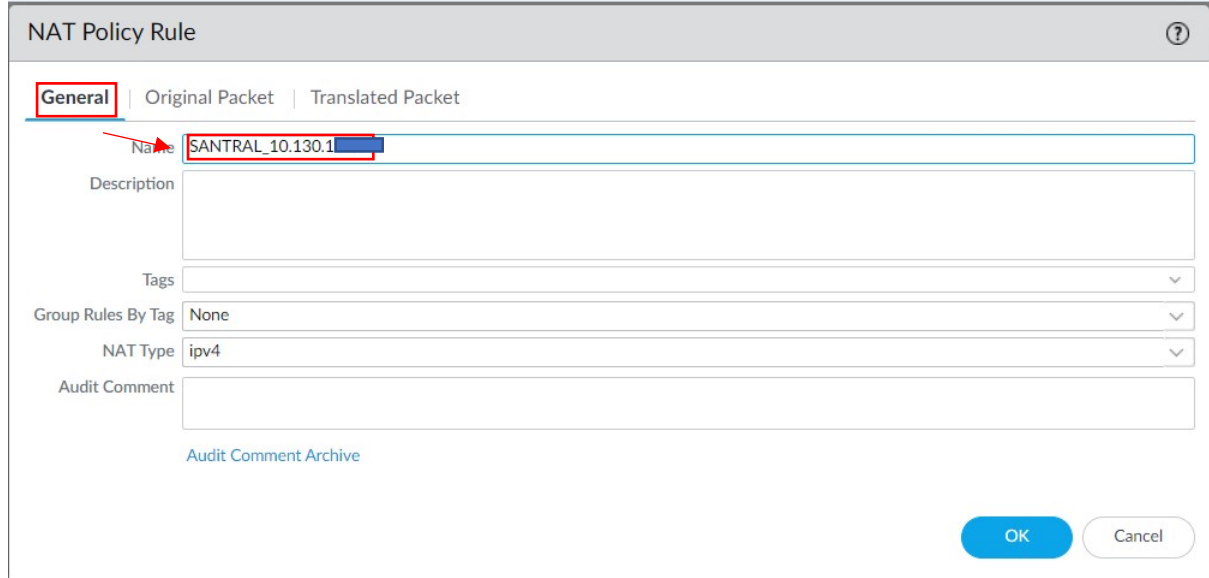
The 'OK' button is highlighted with a red box and an arrow pointing to it from the 'Destination Port' field.

Yukarıdaki fotoğrafta görüldüğü üzere servisi bir isim belirliyorum. Ardından port numaramı belirtip "OK" diyerek işlemimi tamamliyorum.

Bir sonraki adımda oluşturduğum servis için "NAT" kuralı yazacağım. Bu nedenle ana menüden "POLICIES" menüsünden " NAT" Sekmesine geliyor ve "ADD" diyorum.



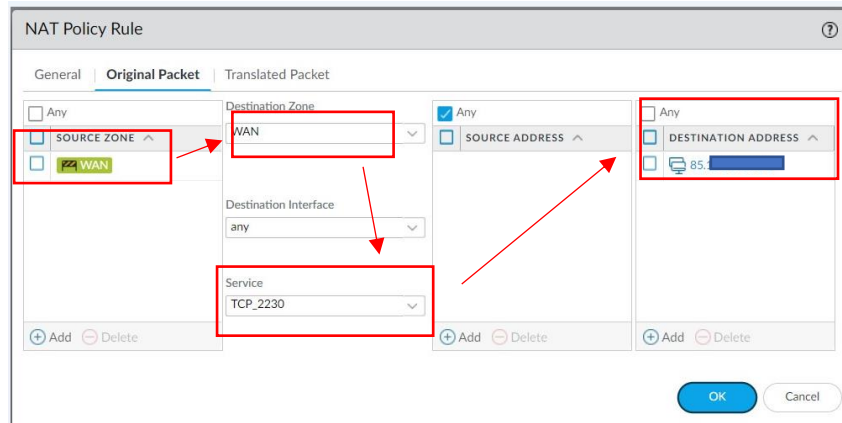
Karşıma gelen ekrandan ilk olarak NAT kuralıma bir isim belirliyorum. Ben santralimi dışarıya açacağım için yine santralle alakalı bir etiketleme yapıyorum.



The screenshot shows the 'NAT Policy Rule' window with the 'General' tab selected. The 'Name' field is highlighted with a red box and contains the text 'SANTRAL\_10.130.1'. The 'Description' field is empty. The 'Tags' field is empty. The 'Group Rules By Tag' dropdown is set to 'None'. The 'NAT Type' dropdown is set to 'ipv4'. The 'Audit Comment' field is empty. There is a link for 'Audit Comment Archive' below the field. At the bottom right, there are 'OK' and 'Cancel' buttons.

Sonraki adımda yine aynı menüden " ORIGINAL PACKET" sekmesine geliyor ve ayarlarımı aşağıdaki gibi yapıyorum.

Source zone kısmına WAN zonumu destination Zone kısmına yine WAN zonumu Service kısmına yukarıdaki adımda oluşturduğum servisi adres kısmına da public ip bilgimi giriyorum.



The screenshot shows the 'NAT Policy Rule' window with the 'Original Packet' tab selected. The 'Source Zone' dropdown is set to 'WAN'. The 'Destination Zone' dropdown is set to 'WAN'. The 'Destination Interface' dropdown is set to 'any'. The 'Service' dropdown is set to 'TCP\_2230'. The 'Source Address' dropdown is set to 'Any'. The 'Destination Address' dropdown is set to '85.'. There are 'Add' and 'Delete' buttons for each dropdown. At the bottom right, there are 'OK' and 'Cancel' buttons.

Bu işlemi tamamladıktan sonra yine aynı menüden **"TRANSLATED PACKET"** sekmesine geliyorum. Ayarlarımı aşağıdaki gibi yapıyorum. Translated adress kısmına santral cihazımın ip adresini Translated port kısmına ise santralim portunu yazıyor **"OK"** diyerek NAT işlemimi tamamlıyorum.

The image shows the 'NAT Policy Rule' configuration window with the 'Translated Packet' tab selected. The 'Source Address Translation' section has 'Translation Type' set to 'None'. The 'Destination Address Translation' section has 'Translation Type' set to 'Static IP', 'Translated Address' set to 'SANTRAL\_IP', and 'Translated Port' set to '2222'. The 'Enable DNS Rewrite' checkbox is unchecked, and the 'Direction' is set to 'reverse'. The 'OK' button is highlighted with a red box, and a red arrow points from the 'Translated Port' field to it.

Sonraki adımda dışarıdan gelen isteklerin santralime ulaşması için birde policy oluşturacağım. Arayüzden **"POLICIES"** menüsünden **"SECURITY"** Sekmesine geliyor ve **"ADD"** diyorum.

The image shows the 'PA-440' interface with the 'POLICIES' tab selected. The 'Security' sub-tab is also selected. The 'Add' button is highlighted with a red box, and a red arrow points from the 'Add' button to the 'Security' sub-tab. The 'Add' button is located at the bottom of the page, next to the 'Object: Addresses' label.

Karşıma gelen ekrandan policy isim veriyorum. Rule type olarak universal seçiyorum.

The screenshot shows the 'Security Policy Rule' configuration window with the 'General' tab selected. The 'Name' field is filled with 'SANTRAL\_10.11'. The 'Rule Type' is set to 'universal (default)'. The 'Description' field is empty. The 'Tags' field is empty. The 'Group Rules By Tag' is set to 'None'. The 'Audit Comment' field is empty. There is a link for 'Audit Comment Archive'. At the bottom right, there are 'OK' and 'Cancel' buttons.

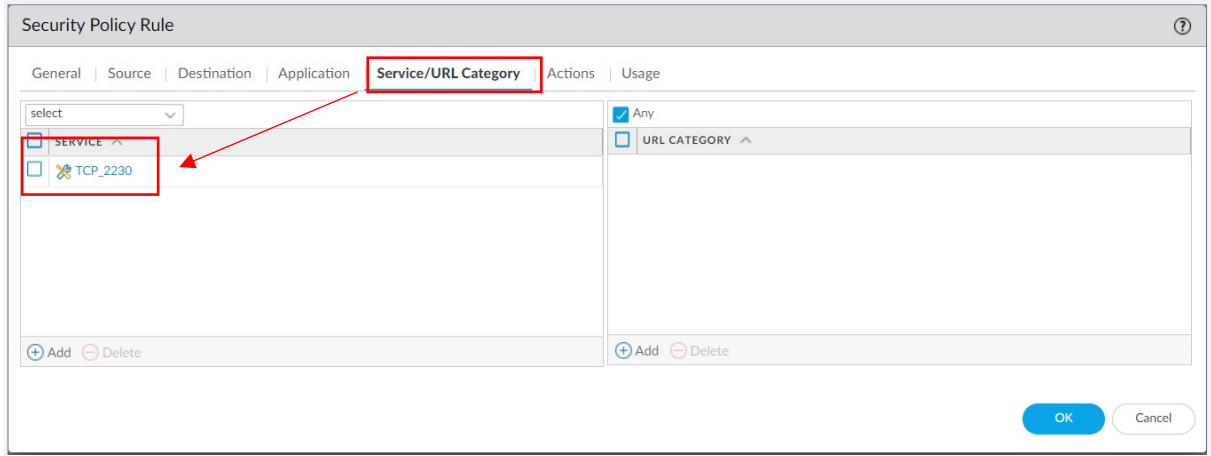
Aynı menüden "SOURCE" sekmesine geliyorum. Aşağıdaki gibi ayarları uyguluyorum.

The screenshot shows the 'Security Policy Rule' configuration window with the 'Source' tab selected. The 'Any' checkbox is checked. The 'SOURCE ZONE' dropdown is set to 'WAN'. The 'SOURCE ADDRESS' dropdown is set to 'Any'. The 'SOURCE USER' dropdown is set to 'any'. The 'SOURCE DEVICE' dropdown is set to 'any'. At the bottom, there are 'Add' and 'Delete' buttons for each field, and a 'Negate' checkbox.

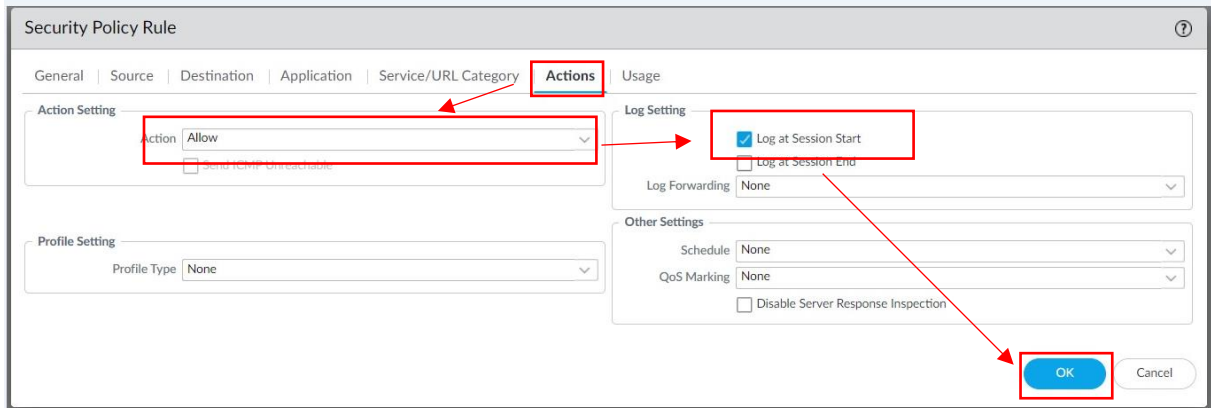
Aynı menüden "DESTINATION" sekmesine geliyorum. Aşağıdaki gibi ayarları uyguluyorum. Destination address olarak dış ip mizi seçiyoruz.

The screenshot shows the 'Security Policy Rule' configuration window with the 'Destination' tab selected. The 'select' dropdown is set to 'LAN'. The 'DESTINATION ZONE' dropdown is set to 'LAN'. The 'DESTINATION ADDRESS' dropdown is set to '8'. The 'DESTINATION DEVICE' dropdown is set to 'any'. At the bottom, there are 'Add' and 'Delete' buttons for each field, and a 'Negate' checkbox.

Yine aynı menüden “SERVICE/URL CATEGORY” sekmesine geliyor ve üst adımlarda oluşturduğum servisi seçiyorum.



Son olarak “ACTIONS” sekmesine geliyorum. Kuralım için log ayarlarını yapıp “OK” ile işlemimi tamamliyorum.



Browresı açıyorum public ip: servis portuma yazarak işlemimin başarılı olduğunu teyit ediyorum.

