



## Patents

NetApp's innovation has been recognized over many years by the issuance of thousands of patents in the U.S. and other countries. Below are U.S. patents owned by NetApp and/or its subsidiaries. New patents are typically initially published as NetApp's pending applications, which number in the hundreds, before they proceed to issuance. Older patents expire and are removed from this list periodically.

NetApp currently owns the following U.S. Patents:

5,053,945; 5,163,131; 5,175,825; 5,355,453; 5,379,389; 5,388,231; 5,465,329; 5,485,579;  
5,513,314; 5,537,592; 5,701,516; 5,761,655; 5,772,500; 5,778,411; 5,802,366; 5,819,292;  
5,819,292; 5,819,292; 5,895,493; 5,905,744; 5,908,325; 5,931,918; 5,933,824; 5,941,969;  
5,941,994; 5,948,110; 5,950,225; 5,956,723; 5,963,422; 5,963,962; 5,975,738; 5,983,296;  
5,996,086; 6,038,570; 6,042,474; 6,048,642; 6,065,037; 6,073,209; 6,073,218; 6,081,847;  
6,081,883; 6,108,684; 6,119,121; 6,119,244; 6,138,126; 6,157,963; 6,157,974; 6,166,900;  
6,253,271; 6,279,011; 6,282,610; 6,289,356; 6,310,884; 6,311,320; 6,317,844; 6,340,795;  
6,343,984; 6,345,368; 6,346,676; 6,360,282; 6,360,306; 6,363,462; 6,366,965; 6,367,033;  
6,370,584; 6,381,674; 6,384,842; 6,386,901; 6,389,432; 6,397,360; 6,422,893; 6,442,682;  
6,457,015; 6,457,098; 6,457,130; 6,466,448; 6,468,150; 6,480,901; 6,480,955; 6,480,969;  
6,480,970; 6,496,942; 6,498,890; 6,516,351; 6,553,511; 6,557,049; 6,567,889; 6,570,853;  
6,573,767; 6,574,591; 6,584,499; 6,591,337; 6,594,744; 6,604,118; 6,606,629; 6,622,302;  
6,629,203; 6,630,812; 6,636,879; 6,637,007; 6,640,233; 6,643,654; 6,654,912; 6,665,689;  
6,668,264; 6,671,773; 6,671,776; 6,675,268; 6,687,856; 6,691,245; 6,693,784; 6,715,034;  
6,718,361; 6,721,320; 6,721,764; 6,725,274; 6,728,735; 6,728,748; 6,728,897; 6,728,922;  
6,730,842; 6,732,104; 6,738,937; 6,742,082; 6,745,145; 6,747,984; 6,748,447; 6,748,510;  
6,751,635; 6,751,637; 6,751,680; 6,754,605; 6,754,853; 6,757,634; 6,757,695; 6,757,753;  
6,766,466; 6,769,022; 6,772,375; 6,775,131; 6,795,849; 6,799,284; 6,801,992; 6,813,676;  
6,813,690; 6,820,099; 6,820,171; 6,829,720; 6,834,153; 6,836,820; 6,836,821; 6,836,832;  
6,851,031; 6,851,070; 6,851,082; 6,852,924; 6,857,001; 6,862,656; 6,868,417; 6,871,317;  
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6,915,447; 6,917,990; 6,920,579; 6,920,580; 6,928,478; 6,930,869; 6,938,086; 6,938,184;  
6,944,152; 6,944,712; 6,944,785; 6,947,287; 6,948,012; 6,952,797; 6,959,007; 6,961,749;  
6,961,836; 6,965,901; 6,965,989; 6,968,345; 6,969,928; 6,973,369; 6,973,407; 6,976,146;  
6,976,189; 6,978,283; 6,981,194; 6,983,296; 6,987,674; 6,988,219; 6,990,424; 6,993,539;  
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7,043,485; 7,043,622; 7,047,321; 7,047,449; 7,051,050; 7,054,911; 7,055,014; 7,058,704;  
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7,143,235; 7,143,249; 7,143,307; 7,146,481; 7,146,522; 7,152,069; 7,155,458; 7,155,460;  
7,155,531; 7,159,080; 7,161,495; 7,162,486; 7,162,662; 7,165,079; 7,165,188; 7,171,434;  
7,171,452; 7,171,469; 7,174,099; 7,174,352; 7,174,352; 7,177,942; 7,178,137; 7,181,364;  
7,181,439; 7,185,144; 7,190,575; 7,191,290; 7,191,437; 7,193,845; 7,194,519; 7,194,578;  
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7,296,073; 7,302,520; 7,305,424; 7,308,397; 7,308,512; 7,310,747; 7,312,962; 7,312,999;  
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7,739,250; 7,739,301; 7,739,312; 7,739,318; 7,739,447; 7,739,543; 7,739,546; 7,739,605;  
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7,827,349; 7,827,350; 7,827,366; 7,827,437; 7,827,441; 7,831,864; 7,831,959; 7,836,020;  
7,836,025; 7,836,033; 7,836,331; 7,836,341; 7,836,351; 7,839,123; 7,840,755; 7,840,837;  
7,840,847; 7,840,969; 7,844,584; 7,844,646; 7,844,701; 7,847,801; 7,849,057; 7,849,180;  
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8,032,896; 8,037,524; 8,041,736; 8,041,748; 8,041,761; 8,041,888; 8,041,924; 8,042,155;  
8,042,185; 8,046,332; 8,046,333; 8,046,378; 8,046,422; 8,049,980; 8,051,113; 8,051,183;  
8,051,328; 8,051,329; 8,051,335; 8,055,613; 8,055,702; 8,060,695; 8,060,776; 8,065,346;  
8,065,398; 8,065,422; 8,065,658; 8,068,373; 8,069,149; 8,069,345; 8,069,366; 8,073,816;  
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9,921,752; 9,921,910; 9,928,148; 9,928,249; 9,930,133; 9,933,970; 9,934,008; 9,934,110;  
9,934,230; 9,934,264; 9,936,013; 9,936,017; 9,940,154; 9,940,196; 9,940,244; 9,942,325;  
9,946,484; 9,946,609; 9,946,716; 9,952,765; 9,952,767; 9,952,797; 9,952,951; 9,954,946;  
9,959,056; 9,959,064; 9,959,335; 9,960,957; 9,965,195; 9,965,196; 9,965,363; 9,965,383;  
9,967,204; 9,973,394; 9,974,203; 9,977,692; 9,977,721; 9,978,419; 9,983,810; 9,983,817;  
9,983,958; 9,984,095; 9,990,151; 9,990,257; 9,990,260; 9,990,261; 9,990,262; 9,996,275;  
9,996,422; 9,996,436; 9,996,470; 10,001,942; 10,002,055; 10,002,098; 10,003,645; 10,007,540;  
10,009,426; 10,013,311; 10,015,283; 10,019,192; 10,019,502; 10,021,218; 10,031,682;  
10,031,822; 10,031,933; 10,037,146; 10,042,853; 10,048,896; 10,049,118; 10,055,154;  
10,055,162; 10,055,268; 10,055,305; 10,055,317; 10,057,350; 10,061,840; 10,067,841;  
10,073,774; 10,078,473; 10,079,693; 10,084,861; 10,095,415; 10,102,076; 10108547;  
10,114,715; 10,127,117; 10,133,511; 10,135,922; 10,140,021; 10,140,029; 10,140,306;  
10,142,234; 10,142,416; 10,146,462; 10,148,758; 10,152,377; 10,158,710; 10,162,686;  
10,162,714; 10,162,718; 10,168,903; 10,175,895; 10,176,064; 10,178,079; 10,180,871;  
10,180,885; 10,185,681; 10,187,256; 10,187,488; 10,191,674; 10,198,307; 10,200,473;  
10,203,902; 10,205,782; 10,210,023; 10,210,056; 10,210,082; 10,210,192; 10,216,450;  
10,216,531; 10,216,597; 10,216,966; 10,223,223; 10,223,361; 10,223,375; 10,223,586;  
10,228,871; 10,228,964; 10,229,009; 10,229,010; 10,229,178; 10,230,579; 10,235,059;  
10,235,288; 10,241,950; 10,242,025; 10,244,050; 10,248,341; 10,248,646; 10,248,660;  
10,250,684; 10,254,990; 10,255,146; 10,255,180; 10,255,236; 10,256,947; 10,257,237;  
10,257,273; 10,261,696; 10,268,375; 10,268,410; 10,270,620; 10,275,155; 10,282,099;  
10,282,137; 10,282,262; 10,282,379; 10,289,501; 10,289,506; 10,291,723; 10,303,362;  
10,310,945; 10,313,251; 10,313,439; 10,318,476; 10,320,906; 10,320,907; 10,324,652;  
10,324,663; 10,324,814; 10,331,613; 10,339,017; 10,339,111; 10,339,132; 10,346,194;  
10,346,254; 10,346,354; 10,348,562; 10,353,585; 10,353,642; 10,353,740; 10,353,870;  
10,353,884; 10,353,921; 10,355,919; 10,360,056; 10,360,099; 10,360,119; 10,360,120;  
10,360,237; 10,360,251; 10,365,838; 10,365,848; 10,365,973; 10,366,065; 10,372,552;  
10,372,676; 10,374,877; 10,379,742; 10,379,919; 10,382,343; 10,387,263; 10,389,809;  
10,394,660; 10,397,053; 10,397,324; 10,402,100; 10,404,711; 10,409,702; 10,417,093;  
10,417,189; 10,423,499; 10,423,584; 10,423,641; 10,430,081; 10,430,397; 10,437,510;  
10,437,521; 10,439,900; 10,452,477; 10,452,489; 10,452,608; 10,452,633; 10,459,640;  
10,459,649; 10,459,651; 10,459,759; 10,460,124; 10,466,922; 10,466,935; 10,467,188;  
10,469,272; 10,469,582; 10,474,519; 10,474,624; 10,481,835; 10,482,026; 10,482,066;

10,484,471; 10,484,472; 10,489,073; 10,489,210; 10,489,254; 10,489,268; 10,489,345;  
10,489,346; 10,491,634; 10,496,296; 10,496,314; 10,496,320; 10,496,488; 10,496,501;  
10,496,676; 10,498,815; 10,503,443; 10,503,445; 10,503,619; 10,503,621; 10,509,564;  
10,509,668; 10,509,702; 10,511,511; 10,514,984; 10,515,055; 10,516,582; 10,521,127;  
10,521,143; 10,521,159; 10,521,269; 10,521,276; 10,521,316; 10,521,345; 10,521,401;  
10,523,573; 10,523,751; 10,523,754; 10,523,757; 10,523,786; 10,528,382; 10,530,855;  
10,530,880; 10,534,805; 10,536,396; 10,540,279; 10,552,057; 10,552,064; 10,552,275;  
10,552,389; 10,554,754; 10,558,375; 10,558,531; 10,558,538; 10,558,547; 10,565,165;  
10,565,230; 10,579,540; 10,585,611; 10,585,768; 10,587,469; 10,587,685; 10,587,688;  
10,592,464; 10,606,500; 10,606,795; 10,606,803; 10,613,944; 10,620,834; 10,620,843;  
10,620,844; 10,620,852; 10,621,056; 10,621,058; 10,621,146; 10,621,151; 10,621,162;  
10,628,194; 10,628,227; 10,628,380; 10,628,443; 10,635,548; 10,642,763; 10,649,668;  
10,649,954; 10,664,255; 10,664,366; 10,664,412; 10,684,786; 10,684,876; 10,684,918;  
10,684,985; 10,684,994; 10,685,013; 10,685,128; 10,686,906; 10,691,337; 10,691,339;  
10,691,366; 10,691,553; 10,693,955; 10,693,970; 10,698,607; 10,698,818; 10,701,151;  
10,712,944; 10,712,975; 10,719,403; 10,719,419; 10,719,479; 10,725,691; 10,725,806;  
10,725,866; 10,733,144; 10,740,302; 10,747,620; 10,761,750; 10,761,768; 10,761,944;  
10,762,041; 10,762,070; 10,768,817; 10,768,834; 10,769,024; 10,769,037; 10,769,212;  
10,778,771; 10,785,304; 10,789,134; 10,795,789; 10,796,092; 10,798,159; 10,798,207;  
10,802,740; 10,812,313; 10,817,348; 10,817,393; 10,819,702; 10,824,462; 10,824,589;  
10,824,815; 10,826,848; 10,831,369; 10,838,630; 10,838,642; 10,841,157; 10,848,555;  
10,852,958; 10,852,961; 10,852,976; 10,852,984; 10,852,985; 10,852,994; 10,853,166;  
10,853,203; 10,853,210; 10,853,323; 10,853,328; 10,853,333; 10,853,339; 10,855,515;  
10,855,522; 10,855,556; 10,855,688; 10,855,791; 10,860,529; 10,860,542; 10,862,966;  
10,866,928; 10,872,036; 10,880,377; 10,895,984; 10,901,844; 10,901,958; 10,904,339;  
10,911,328; 10,915,246; 10,915,405; 10,929,022; 10,929,043; 10,929,341; 10,929,419;  
10,936,540; 10,938,938; 10,942,813; 10,944,679; 10,949,309; 10,949,312; 10,951,488;  
10,956,072; 10,963,289; 10,965,753; 10,970,310; 10,970,595; 10,972,348; 10,977,134;  
10,983,709; 10,983,955; 10,997,098; 11,003,583; 11,005,894; 11,005,924; 11,005,972;  
11,010,078; 11,010,335; 11,016,864; 11,016,866; 11,016,943; 11,023,340; 11,025,728;  
11,029,862; 11,032,143; 11,036,420; 11,036,423; 11,036,600; 11,044,148; 11,048,430;  
11,055,005; 11,068,171; 11,068,182; 11,068,350; 11,068,503; 11,070,479; 11,070,619;  
and other patents pending.