

Key changes proposed – IT and Computing qualifications review 2019

Major changes to qualifications pathways for Computing and IT:

It is proposed that:

1. The New Zealand Certificate in Computing (User Fundamentals) (Level 2) [2591] increase from 40 to 60 credits.
2. The New Zealand Diploma in Networking (Level 6) [2600] and the New Zealand Diploma in Systems Administration (Level 6) [2601] be replaced by the New Zealand Diploma in IT Infrastructure (Level 6) with strands in Networking and Systems Administration.
3. The New Zealand Diploma in Database Administration (Level 6) [2602] be expired, and replaced by the addition of a Data Analysis strand in the New Zealand Diploma in Information Systems (Level 6) [2603].

The table below provides more detailed information on the changes made in each reviewed qualification.

General changes across the suite

- The number of graduate profile outcomes (GPOs) and the conditions for GPOs have been reduced, where possible, to enable greater flexibility for programme development.
- The strategic purpose statements and the education pathways have been amended to include contribution to community outcomes.
- Qualification specifications use standardised statements for qualification award, consistency requirements, minimum standard of achievement, and other requirements (including legislation and relevant codes). They have been adjusted to reflect the new listing requirements.
- General conditions for programme also use many standardised statements under sub-headings for programme design, diversity and inclusion, professional practice, practical experience, and technical. Statements for programme design include the need to incorporate current and emerging technologies (e.g. Cloud, Virtualisation, Internet of Things (IoT), Artificial Intelligence (AI) technologies, Agile, and DevOps), and to include cultural awareness of and perspectives in accordance with ngā kaupapa o te Tiriti o Waitangi (the principles of the Treaty of Waitangi), and in a multi-cultural environment. The new headings generally reflect a strengthened emphasis in these areas, and enable the removal of some outcome specific conditions. Additional statements, such as those involving embedded learning, have been added where appropriate.
- The intent of embedding the Level 5 Certificates in the Level 5 Diplomas, and the core outcomes across Level 6 Diplomas has been retained. This is slightly less visible (specific mention removed from individual GPO conditions in diplomas).
- Some changes have been made to the core skills areas of the Level 4, 5 and 6 qualifications, which include a shift in outcome weightings at Levels 4 and 5 (from 20 to 15 and 18 credits respectively), still 30 credits at Level 6. These changes have been informed from stakeholder and working group member feedback, and at level 6 by the 2018 approved content in the New Zealand Diploma in Cybersecurity (Level 6) [3837].

The following table provides a summary of the more detailed changes made in each reviewed qualification.

Key changes proposed – IT and Computing qualifications review 2019		
Qual #	Qualification Title	Key changes proposed
2591	NZ Certificate in Computing (User Fundamentals) (Level 2) (40 credits)	<ul style="list-style-type: none"> • 2 versions provided – 40 credit and 60 credit; minor wording changes • proposed increase from 40 to 60 credits - with inclusion of two additional soft skills GPOs - problem solving and critical thinking 5cr; communications and self-management 8cr; along with increasing credits to GPO1 re learning to use the tools (+5cr) and GPO4 security (+2)
2592	NZ Certificate in Computing (Intermediate User) (Level 3) (60 credits)	<ul style="list-style-type: none"> • combining outcomes 3 & 4 • adjust credits: add 5 to outcome 1 and minus 5 from outcome 2; minus 2 from outcome 6 • add 2 to adjusted outcome 5 – shift focus to <i>Manage own learning and work effectively in a digital context</i>
2593	NZ Certificate in Computing (Advanced User) (Level 4) (60 credits)	<ul style="list-style-type: none"> • very minor changes – mainly reducing conditions associated with each outcome
2594	NZ Certificate in Information Technology Essentials (Level 4) (60 credits)	<ul style="list-style-type: none"> • adjusted credits to better reflect the learning required in the technical areas • added 2 credits to outcomes 1 & 3 (infrastructure and Ux/Interface design), added 5 credits to outcome 4 (coding) • reducing outcome 2 (database) by 4 credits; and outcome 5 project mgmt. by 5 credits • shift of focus for outcome 3 from web to Ux/interface design for interactive digital media
2595	NZ Certificate in Information Technology (Level 5) (60 credits)	<ul style="list-style-type: none"> • the principle of this Level 5 Cert being embedded in the Level 5 Diplomas retained • outcomes adjusted to incorporate conditions so they could be removed/reduced • adjusted credits to better reflect the learning required in the technical areas • reducing credits for outcome 2 (data) by 2 credits to add to outcome 3 (Ux/Interface design); adding 2 credits to outcome 4 (coding) with one credit from each of outcomes 5 (legal/professional & communications)
2596	NZ Diploma in Information Technology Technical Support (Level 5) (120 credits)	<ul style="list-style-type: none"> • Level 5 Cert is embedded, including changes mentioned for 2595 • reduced from 13 to 10 outcomes • combined outcomes 1 & 3 (35 credits) and spread outcome 5 (troubleshooting) and outcome 6 (security) across outcomes 1 & 2
2597	NZ Diploma in Information Systems (Level 5) (120 credits)	<ul style="list-style-type: none"> • Level 5 Cert is embedded, including changes mentioned for 2595 • reduced from 12 to 8 outcomes • combined outcomes 1 & 5 (project mgmt. and technical documentation), 2 & 4 (modelling & info systems), 3 & 8 (design & HCI), 6 & 9 (build & deploy software, and 'core' coding) • credits adjusted to reflect combined outcomes

Qual #	Qualification Title	Key changes proposed
2598	NZ Diploma in Web Development and Design (Level 5) (120 credits)	<ul style="list-style-type: none"> • Level 5 Cert is embedded, including changes mentioned for 2595 • still 10 outcomes, but strengthened coding by addition of outcome 4 from Cert 2595 (no longer embedded in scripting outcome 2) & associated credits • combined current outcomes 1 & 9 (analysis & info sys/data ex GPO2 from Cert 2595); combined outcomes 2 & 4 (writing scripts and plugins) for new outcome 3 (27 cr); separated critical analysis & problem-solving Cert 2595 outcome 7 from current outcome 1 • credits adjusted to reflect changes to Cert and changed outcomes
2599	NZ Certificate in Information Technology Practitioner (Level 6) (with strands in Server Administration, Network Administration, and Information Technology Security) (40 credits)	<ul style="list-style-type: none"> • reviewed server admin and network admin strands (IT Security and Software Testing reviewed/developed late 2018 in version 2) • adjusted wording in core outcomes to encompass some conditions • Server admin strand – no changes • Network admin strand – combined two outcomes to one new outcome – focus on emerging and updated expertise (25 credits)
2600	NZ Diploma in Networking (Level 6) (120 credits)	<ul style="list-style-type: none"> • Reviewed as standalone, but significant changes to reflect commonality with sysadmin and a shift in focus from traditional to virtual/cloud and automation perspectives • reduced from 11 to 9 outcomes – including Level 6 common core (3 outcomes, 30 credits) • Two new outcomes common to this and SysAdmin quals – automate deployment and mgmt. of infrastructure (20 cr), and services in the cloud (15cr); reviewed security & troubleshooting, and IT Service and change mgmt outcomes (5 & 8) - also both common to SysAdmin & networking quals • Reviewed unique networking outcome 1 (wireless networks) & outcome 2 (routing, switching and maintenance): 10 + 25 = 35cr • credits adjusted to reflect new and reviewed Diploma outcomes
2601	NZ Diploma in Systems Administration (Level 6) (120 credits)	<ul style="list-style-type: none"> • Reviewed as standalone, but significant changes to reflect commonality with networking and a shift in focus from traditional to virtual/cloud and automation perspectives • reduced from 12 to 9 outcomes – including Level 6 common core (3 outcomes, 30 credits) • Two new outcomes common to this and networking quals – automate deployment and mgmt. of infrastructure (20 cr), and services in the cloud (15cr); reviewed security & troubleshooting, and IT Service and change mgmt outcomes (5 & 8) - also both common to SysAdmin & networking quals • Reviewed unique sysadmin outcomes – combined outcomes 1, 3, 6 (new outcome 1 - resilient & secure systems, services and networks), outcome 5 (virtualisation infrastructure): 20 + 15 = 35cr • credits adjusted to reflect new and reviewed Diploma outcomes
NEW	NZ Diploma in IT Infrastructure (Level 6) with strands in Networking and Systems Administration (120 credits)	<ul style="list-style-type: none"> • A new combined diploma with overlap around the full infrastructure stack and specialist learning in networking and sysadmin (as strands) • Alternative approach to two-standalone quals in networking and sysadmin – recognising high degree of overlap with 85 credits for common technical and core skills outcomes 1-7, and each strand of specialist learning (35 credits)

Qual #	Qualification Title	Key changes proposed
2602	NZ Diploma in Database Administration (Level 6) (120 credits)	<ul style="list-style-type: none"> • proposed to expire this Database Admin qual due to no/low uptake • recognising the importance of data mgmt. and 'big data', a data analysis strand has been developed and proposed to be added to the Level 6 info systems qual 2603 • database admin retained at lower levels (2-5) but stronger move to data analysis at Level 6
2603	NZ Diploma in Information Systems (Level 6) (with strands in Business Analysis, User Experience, IT Project Management, Information Systems Innovation) (120 credits)	<ul style="list-style-type: none"> • common Level 6 core skills outcomes (6-8), and changes to existing outcomes to embed and reduce the conditions where possible • new strand in data analysis proposed: <i>Explore, analyse, design and deliver a relevant data solution for an organisation (40 credits)</i> – with proposed expiry of 2602
2604	NZ Diploma in Software Development (Level 6) (240 credits)	<ul style="list-style-type: none"> • common Level 5/6 core skills outcomes and changes to existing outcomes to embed and reduce the conditions where possible • Outcome 2 (programming) increased from 60 to 70 credits; outcome 3 (QA) and outcome 4 (data mgmt) both reduced from 25 to 20 credits