

2019 Review of IT and Computing Qualifications

Consultation on the changes in the draft reviewed Qualifications

September 2019

Consultation closes at 5pm on 30 September 2019

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1. Introduction

IT Professionals New Zealand (ITPNZ) and NZQA National Qualifications Services are co-developers of all computing and IT-related qualifications from levels 2-6 on the NZ Qualifications Framework.

The co-leads have recently commenced a scheduled review of the original qualifications (created as part of the Mandatory Review of Qualifications and listed in 2015).

Based on feedback from an initial consultation process and recommendations from specialist Working Groups, a number of changes are being proposed to the existing suite of qualifications. The proposed changes include:

- Updating all qualifications to better match current industry practice and needs
- Merging the NZ Diploma of Networking and NZ Diploma of Systems Administration into a new NZ Diploma of IT Infrastructure (Level 6)
- Changing the NZ Certificate in Computing (User Fundamentals) (Level 2) from 40 credits to 60 credits
- Refreshing the Networking and Systems Administration diplomas (whether separate or merged) with a focus shift towards virtual/cloud and automation perspectives
- Expiring the NZ Diploma in Database Administration (Level 6), and creating a new Data Analysis strand in the NZ Diploma in Information Systems (level 6).
- A number of other smaller changes across the qualification suite.

We have now opened consultation on these proposed changes and would love your feedback. You can provide feedback by completing the [online consultation form](#) (recommended) or emailing comments to ictquals.review@nzqa.govt.nz

You can find more details about the proposed changes from the "IT and computing qualifications review 2019" section on [this page](#).

This consultation closes 5pm on Monday 30 September 2019

Please submit your response online at <https://itp.nz/quals> (this will redirect to the consultation input form). A list of consultation questions is included in Appendix A, or you can comment on any other matter related to the review.

You may choose to respond to some or all of the consultation questions or leave any other comment.

If you would prefer, additional comments and submissions in relation to the consultation may be sent to ICTQuals.Review@nzqa.govt.nz.

1.1 Scope of review and consultation

The project scope includes:

- the review of the suite of fourteen IT and Computing qualifications listed on the NZQF in May 2015, as a result of the 2013-2015 mandatory review, and scheduled for review by 31 December 2019;
- the examination of current and probable future job roles, training and qualification needs across the IT sector, including pathways into and through the sector, to ensure the qualifications meet current and future workforce requirements.

The qualifications included in this scope are listed below.

The suite of 14 IT and computing qualifications listed in April 2015			
Qual #	Qualification Title	Level	Credits
2591	NZ Certificate in Computing (User Fundamentals)	2	40
2592	NZ Certificate in Computing (Intermediate User)	3	60
2593	NZ Certificate in Computing (Advanced User)	4	60
2594	NZ Certificate in Information Technology Essentials	4	60
2595	NZ Certificate in Information Technology	5	60
2596	NZ Diploma in Information Technology Technical Support	5	120
2597	NZ Diploma in Information Systems	5	120
2598	NZ Diploma in Web Development and Design	5	120
2599 v1	NZ Certificate in Information Technology Practitioner (with strands in Server Administration, Network Administration, and Information Technology Security)	6	40
2600	NZ Diploma in Networking	6	120
2601	NZ Diploma in Systems Administration	6	120
2602	NZ Diploma in Database Administration	6	120
2603	NZ Diploma in Information Systems (with strands in Business Analysis, User Experience, IT Project Management, Information Systems Innovation)	6	120
2604	NZ Diploma in Software Development	6	240

Note: The review **excludes** the two new IT qualifications listed in November 2018, however it will include the review of version 2 of 2599 (which had a software testing strand added in November 2018).

Two new IT qualifications listed in November 2018 – excluded from the 2019 review

Qual #	Qualification Title	Level	Credits
3837	NZ Diploma in Cybersecurity	6	120
3849	NZ Diploma in Software Testing	6	120
2599 v2	NZ Certificate in Information Technology Practitioner (with strands in Server Administration, Network Administration, and Information Technology Security, and Software Testing)	6	40

The following pages contain a high-level outline of key changes.

We recommend reviewing this in conjunction with the draft reviewed qualifications shown on the [NZQA website](#).

2. Key Changes proposed in Reviewed Qualifications

The following are the key changes being proposed, however please review the draft qualifications for an exhaustive list.

2.1 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.

2.2 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].

2.3 Specific changes to qualifications

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>

Qual #	Qualification Title	Key changes proposed
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 has been 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
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

Qual #	Qualification Title	Key changes proposed
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 • Option for alternative outcome 9 for the Business Analysis strand (shift focus to embed design thinking)
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

Appendix A: Consultation Questions

Please consider the detailed qualification documents [on the NZQA website](#) before answering the following questions.

Please visit <https://itp.nz/quals> to provide your consultation response.

A.1 Review of IT and Computing Qualifications

Thanks for agreeing to provide your feedback on the draft reviewed Computing/IT qualifications, and you are welcome to comment on as many or few of these as you choose.

The draft qualifications and a summary of the key changes are available from the *IT and Computing qualifications review 2019* section of the [webpage](#).

Your views are important and will influence the final makeup of these qualifications.

Are you:

- From an Institute of Technology/Polytechnic
- From a Private Training Establishment
- From a Wānanga
- From a school
- An IT/tech industry professional
- Other (please specify)

Would you like to provide:

- Just high-level feedback about the direction of these qualifications
- Detailed feedback on one or more of the reviewed qualifications

[NOTE: Selection of questions asked will depend on answers above]

A.2 Feedback on reviewed User-level qualification changes

What do you think about the changes for the reviewed NZ Certificates in Computing qualifications (Levels 2-4) outlined below?

NZ Certificate in Computing (User Fundamentals) (Level 2) [2591+]

We have received feedback indicating that the 40-credit weighting for this qualification is not sufficient for the content which needs to be covered to maximise the usefulness of this qualification.

The Review Steering Group and Working Groups have considered whether to (1) reduce the content, or (2) increase the credit weighting, and it is being proposed to increase the credits for this qualification from 40 credits to 60 credits.

1. Do you agree in principle with increasing the size of this qualification from **40 to 60 credits**?
[Y/N/No view]

The reviewed 60-credit qualification includes two additional soft skills GPOs: Problem solving and critical thinking (5 credits); and communications and self-management (8 credits); along with increasing credits to GPO1 (learning to use the tools) (+5 credits) and Security (+2 credits).

2. Do you support this approach? (yes/no/I don't have a view on this)
3. Do you have any other feedback on the draft reviewed NZ Certificate in Computing (User Fundamentals) (Level 2) qualification?

NZ Certificate in Computing (Intermediate User) (Level 3) [2592]

4. Do you have any feedback on the draft reviewed NZ Certificate in Computing (Intermediate User) (Level 3) [2592]?

NZ Certificate in Advanced User (Level 4) [2593]

5. Do you have any feedback on the draft reviewed NZ Certificate in Computing (Advanced User) (Level 4) [2593]?

General – user level qualifications

6. Overall, do you support the changes in the draft reviewed User-level computing qualifications at levels 2-4? (yes/no/I don't have a view on this)

Why or Why not?

7. Do you have any other feedback on the changes to the reviewed user-level qualifications on the framework?

A.3 Feedback on reviewed Industry-prep qualification changes

What do you think about the proposed changes for the qualifications outlined below?

NZ Certificate in Information Technology Essentials (Level 4) [2594]

8. Do you have any feedback on the proposed changes to the credit weightings in the draft reviewed NZ Certificate of IT Essentials (Level 4) [2594]?
9. Do you have any feedback on the significant reduction in the number of conditions in the NZ Certificate in IT Essentials (Level 4) [2594]?
10. Do you have any other feedback on the draft reviewed NZ Certificate in Information Technology Essentials (Level 4) [2594]?

NZ Certificate in Information Technology (Level 5) [2595]

11. Do you have any feedback on the draft reviewed NZ Certificate in Information Technology (Level 5) [2595]?

NZ Diploma in IT Technical Support (Level 5) [2596]

12. Do you have any feedback on the draft reviewed NZ Diploma in IT Technical Support (Level 5) [2596]?

NZ Diploma in Information Systems (Level 5) [2597]

13. Do you have any feedback on the draft reviewed NZ Diploma in Information Systems (Level 5) [2597]?

NZ Diploma in Web Development and Design (Level 5) [2598]

14. Do you have any feedback on the draft reviewed NZ Diploma in Web Development and Design (Level 5) [2598]?

NZ Certificate in Information Technology Practitioner (Level 6) [2599]

15. Do you have any feedback on the draft reviewed NZ Certificate in Information Technology Practitioner (Level 6) (with strands in Server Administration, Network Administration, Information Technology Security, Software Testing) [2599]?

NZ Diploma in Software Development (Level 6) [2604]

16. Do you have any feedback on the draft reviewed NZ Diploma in Software Development (Level 6) [2604]?

17. Overall, do you support the changes in the draft reviewed industry-preparation qualifications at levels 4-6 (2594 – 2599, 2604)? (yes/no/I don't have a view on this)

Why or Why not?

NZ Diploma in Database Administration (Level 6) [2602]

Due to very low take-up of the NZ Diploma in Database Administration (Level 6), it has been proposed to withdraw this qualification while adding a new Data Analysis strand in the NZ Diploma in Information Systems (Level 6) (See below).

18. In principle, do you support the **proposal to expire** the NZ Diploma in Database Administration (Level 6) [2602]? (yes/no/I don't have a view on this)

19. Do you have any other feedback on the NZ Diploma in Database Administration (Level 6)?

NZ Diploma in Information Systems (Level 6) [2603]

This qualification has current strands in Business Analysis, User Experience, IT Project Management, and Information Systems Innovation.

It is proposed to add a new strand in Data Analysis: Explore, analyse, design and deliver a relevant data solution for an organisation (40 credits).

20. Do you support the inclusion of the proposed **new Data Analysis strand**? (yes/no/I don't have a view on this)

Why or why not?

21. Do you have any other feedback on the draft reviewed NZ Diploma in Information Systems (Level 6) [2603]?

NZ Diplomas in IT Infrastructure - Networking / Systems Administration (Level 6)

Due to industry practice changes, we are of the view that the industry outcomes for the NZ Diploma in Networking and NZ Diploma in Systems Administration have become more closely aligned since the qualifications were originally created.

It is proposed that these two qualifications are merged into a new qualification: the **NZ Diploma in IT Infrastructure** which would have two strands, Networking and Systems Administration.

This means that a large part of the content would be common across both of these areas, with a smaller amount of specialisation into either Networking or Systems Administration.

22. Do you support combining these qualifications into one diploma, in principle? [Y/N/No View]

Why / Why not?

The draft new combined qualification includes 85 credits for common technical and core skills outcomes and 35 credits of specialist learning in either Networking or Systems Administration.

23. Do you think this amount of specialist learning (not common to both strands) is: [Not enough | About right | Too much | No View]

24. If it is listed, do you agree with the proposed name, NZ Diploma in IT Infrastructure? [Y/N/No view]

[If no] What would you propose this qualification be named instead?

25. *[If edu institution]* From a practical delivery perspective, which option do you think would be preferred by your institution?

NZ Diploma in IT Infrastructure (with strands in Networking and SysAdmin)

Separate Diplomas in Networking and Systems Administration

No preference

Unsure

26. Do you have any other feedback on the draft reviewed NZ Diploma in IT Infrastructure?

Merging these qualifications is a proposal only at this stage and the review website has draft updated qualifications for both the NZ Diplomas in Networking and Systems Administration as well. These will only be used if the decision is made not to merge the qualifications.

The reviewed NZ Diploma in Networking and NZ Diploma in Systems Administration include a significant shift from traditional networking to virtual/cloud and automation perspectives of networking and systems administration.

27. *[If industry:]* Do you think this change reflects the changing needs of industry? [Y/N]

28. *[Otherwise:]* Do you think this change is appropriate? [Y/N]

Why or why not?

29. Do you have any other feedback on the draft reviewed NZ Diploma in Networking [2600] (if these qualifications are not merged)?

30. Do you have any feedback on the draft reviewed NZ Diploma in Systems Administration [2601] (if these qualifications are not merged)?

General

31. Overall, do you support the changes in the draft reviewed Industry-preparation qualifications at levels 4-6? (yes/no/I don't have a view on this)

Why or why not?

32. Do you have any other feedback on the reviewed changes to the Industry-preparation qualifications at levels 4-6 on the framework?

A.4 General questions

Some changes have been made to the common core skill areas of the Level 5 and 6 qualifications, which include a shift in credits and fewer conditions for these outcomes (with some intent now captured in the qualification specifications section). These are outlined in the qualification documents on the review website.

33. Do you have any feedback on Level 5 or Level 6 common core skill changes (common to all qualifications at each of level 5 and 6)?

Some changes have been made to the qualification specifications, including a recommendation that programmes enable learners to complete at least half of the study in real or realistic practical settings.

34. Do you have any feedback on this, or any other, specification change?

35. Do you have any other feedback, not already stated, on the reviewed qualifications?

36. Overall, assuming any matters you have raised are adequately dealt with, do you support the proposed qualification changes? [Y/N/No View]

Why / Why not?

Thanks for completing the survey.

Key:

* - Compulsory

- Only shown for those wishing to provide detailed feedback

Appendix B: NZQF Level Descriptor Table

The following tables are intended to provide an overview of the qualification types and levels on New Zealand Qualifications Framework (NZQF). More information is available at: <http://www.nzqa.govt.nz/studying-in-new-zealand/nzqf/understand-nz-quals/>

B.1 Qualification Types

The NZQF has 10 levels, with level 1 being the least complex and level 10 the most complex. Certificates and Diplomas are defined by an agreed set of criteria, and the table below describes the types of qualifications listed on the NZQF at level 1 to 6.

Diploma	Purpose	Outcomes	Credit reqs
Level 6	A diploma at level 6 qualifies individuals with theoretical and/or technical knowledge and skills in specialised/strategic contexts.	A graduate of a level 6 diploma programme is able to: <ul style="list-style-type: none"> demonstrate specialised technical or theoretical knowledge with depth in a field of work or study analyse and generate solutions to familiar and unfamiliar problems select and apply a range of standard and non-standard processes relevant to the field of work or study demonstrate complete self-management of learning and performance within dynamic contexts demonstrate responsibility for leadership within dynamic contexts. 	This diploma is listed at level 6. It must contain 72 credits at level 6 and have at least 120 of all credits contributing to the qualification at level 5 or above.
	A diploma at level 5 qualifies individuals with theoretical and/or technical knowledge and skills within a specific field of work or study.	A graduate of a level 5 diploma is able to: <ul style="list-style-type: none"> demonstrate broad operational or technical and theoretical knowledge within a specific field of work or study select and apply a range of solutions to familiar and sometimes unfamiliar problems select and apply a range of standard and non-standard processes relevant to the field of work or study demonstrate complete self-management of learning and performance within defined contexts demonstrate some responsibility for the management of learning and performance of others 	This diploma is listed at level 5. It must contain 72 credits at level 5 and have at least 120 of all credits contributing to the qualification at level 4 or above.
Certificate	Purpose	Outcomes	Credit reqs
	Level 6 A certificate at level 6 qualifies individuals with theoretical and/or technical knowledge and skills within an aspect(s) of a specialised/strategic context.	A graduate of a level 6 certificate is able to: <ul style="list-style-type: none"> demonstrate specialised technical or theoretical knowledge with depth within an aspect(s) of a field of work or study analyse and generate solutions to familiar and unfamiliar problems select and apply a range of standard and non-standard processes relevant to the field of work or study demonstrate complete self-management of learning and performance within dynamic contexts demonstrate responsibility for leadership within dynamic contexts 	This certificate is listed at level 6 and must comprise a minimum of 40 credits at level 6 or above.

Certificate	Purpose	Outcomes	Credit reqs
Level 5	A certificate at level 5 qualifies individuals with theoretical and/or technical knowledge and skills within an aspect(s) of a specific field of work or study.	A graduate of a level 5 certificate is able to: <ul style="list-style-type: none"> • demonstrate broad operational or technical and theoretical knowledge within an • aspect(s) of a specific field of work or study • select and apply a range of solutions to familiar and sometimes unfamiliar problems • select and apply a range of standard and non-standard processes relevant to the field of • work or study • demonstrate complete self-management of learning and performance within defined • contexts • demonstrate some responsibility for the management of learning and performance of others. 	This certificate is listed at level 5 and must comprise a minimum of 40 credits at level 5 or above.
	A certificate at level 4 qualifies individuals to work or study in broad or specialised field(s)/areas.	A graduate of a level 4 certificate is able to: <ul style="list-style-type: none"> • demonstrate broad operational and theoretical knowledge in a field of work or study • select and apply solutions to familiar and sometimes unfamiliar problems • select/apply a range of standard and non-standard processes relevant to the field of work or study • apply a range of communication skills relevant to the field of work or study • demonstrate the self-management of learning and performance under broad guidance • demonstrate some responsibility for performance of others. 	This certificate is listed at level 4 and must comprise of a minimum of 40 credits at level 4 or above.
	A certificate at level 3 qualifies individuals with knowledge and skills for a specific role(s) within fields/areas of work and/or preparation for further study.	A graduate of a level 3 certificate is able to: <ul style="list-style-type: none"> • demonstrate some operational and theoretical knowledge in a field of work or study • select from and apply a range of known solutions to familiar problems • apply a range of standard processes relevant to the field of work or study • apply a range of communication skills relevant to the role in the field of work or study • apply literacy and numeracy skills relevant to the role in the field of work or study • work under limited supervision • require major responsibility for own learning and performance • adapt own behaviour when interacting with others • contribute to group performance. 	This certificate is listed at level 3 and must comprise of a minimum of 40 credits at level 3 or above.
	A certificate at level 2 qualifies individuals with introductory knowledge and skills for a field(s)/areas of work or study.	A graduate of a level 2 certificate is able to: <ul style="list-style-type: none"> • demonstrate basic factual and/or operational knowledge of a field of work or study • apply known solutions to familiar problems • apply standard processes relevant to the field of work or study • apply literacy and numeracy skills relevant to the role in the field of work or study • work under general supervision • require some responsibility for own learning and performance • collaborate with others. 	This certificate is listed at level 2 and must comprise of a minimum of 40 credits at level 2 or above.

Certificate	Purpose	Outcomes	Credit reqs
Level 1	A certificate at level 1 qualifies individuals with basic knowledge and skills for work, further learning and/or community involvement.	A graduate of a level 1 certificate is able to: <ul style="list-style-type: none"> demonstrate basic general and/or foundation knowledge apply basic skills required to carry out simple tasks apply basic solutions to simple problems apply literacy and numeracy skills for participation in everyday life work in a highly structured context require some responsibility for own learning interact with others. 	This certificate is listed at level 1 and must comprise of a minimum of 40 credits at level 1 or above.

B.2 Level descriptors

The table below provides a detailed description of each level in terms of learning outcomes, using common domains and dimensions of progression. Knowledge, skills and application describe what a graduate at a particular level is expected to know, do and be. The term application encompasses responsibility, behaviours, attitudes, attributes and competence.

LVL	KNOWLEDGE	SKILLS	APPLICATION
1	Basic general and/or foundation knowledge	Apply basic solutions to simple problems Apply basic skills required to carry out simple tasks	Highly structured contexts Requiring some responsibility for own learning Interacting with others
2	Basic factual and/or operational knowledge of a field of work or study	Apply known solutions to familiar problems Apply standard processes relevant to the field of work or study	General supervision Requiring some responsibility for own learning and performance Collaborating with others
3	Some operational and theoretical knowledge in a field of work or study	Select and apply from a range of known solutions to familiar problems Apply a range of standard processes relevant to the field of work or study	Limited supervision Requiring major responsibility for own learning and performance Adapting own behaviour when interacting with others Contributing to group performance
4	Broad operational and theoretical knowledge in a field of work or study	Select and apply solutions to familiar and sometimes unfamiliar problems Select and apply a range of standard and non-standard processes relevant to the field of work or study	Self-management of learning and performance under broad guidance Some responsibility for performance of others
5	Broad operational or technical and theoretical knowledge within a specific field of work or study	Select and apply a range of solutions to familiar and sometimes unfamiliar problems Select and apply a range of standard and non-standard processes relevant to the field of work or study	Complete self-management of learning and performance within defined contexts Some responsibility for the management of learning and performance of others

LVL	KNOWLEDGE	SKILLS	APPLICATION
6	Specialised technical or theoretical knowledge with depth in a field of work or study	Analyse and generate solutions to familiar and unfamiliar problems Select and apply a range of standard and non-standard processes relevant to the field of work or study	Complete self-management of learning and performance within dynamic contexts Responsibility for leadership within dynamic contexts
7	Specialised technical or theoretical knowledge with depth in one or more fields of work or study	Analyse, generate solutions to unfamiliar and sometimes complex problems Select, adapt and apply a range of processes relevant to the field of work or study	Advanced generic skills and/or specialist knowledge and skills in a professional context or field of study
8	Advanced technical and/or theoretical knowledge in a discipline or practice, involving a critical understanding of the underpinning key principles	Analyse, generate solutions to complex and sometimes unpredictable problems Evaluate and apply a range of processes relevant to the field of work or study	Developing identification with a profession and/or discipline through application of advanced generic skills and/or specialist knowledge and skills Some responsibility for integrity of profession or discipline
9	Highly specialised knowledge, some of which is at the forefront of knowledge, and a critical awareness of issues in a field of study or practice	Develop and apply new skills and techniques to existing or emerging problems Mastery of the field of study or practice to an advanced level	Independent application of highly specialised knowledge and skills within a discipline or professional practice Some responsibility for leadership within the profession or discipline
10	Knowledge at the most advanced frontier of a field of study or professional practice	Critical reflection on existing knowledge or practice and the creation of new knowledge	Sustained commitment to the professional integrity and to the development of new ideas or practices at the forefront of discipline or professional practice

<http://www.nzqa.govt.nz/studying-in-new-zealand/nzqf/understand-nz-quals/>

Appendix C: Review Steering Group Members

The following make up the Steering Group for the IT Qualifications Review:

Appointed by:	Name:	Sector:
Co-leads	Paul Matthews	Chair of Steering Group. ITPNZ (Co-lead)
NZQA NQS	Diana Garrett	NZQA (Co-lead)
CITRENZ	Aaron Steele	Institute of Technology and Polytech sector
CITRENZ	Mary Proctor	Institute of Technology and Polytech sector
From PTEs	Raymond Young	Private Training Establishments
ITENZ	Patrick Dowling	Private Training Establishments
<i>Wānanga</i>	<i>TBC</i>	<i>Wānanga</i>
ITPNZ	Gareth Cronin	Industry
ITPNZ	Sam Jarman	Industry
NZTech	Diane Edwards	Industry
NZRise	Shane Ross	Industry
DTTA	Gerard MacManus	Secondary School teaching profession

Secretariat to Steering Group: **Jess Malaulau** (ITPNZ)